2024 STATUS REPORT AND ASSOCIATED COMPLIANCE FILINGS

MINNESOTA ELECTRIC & NATURAL GAS ENERGY CONSERVATION & OPTIMIZATION PROGRAM DOCKET NO. E,G002/CIP-23-92

Xcel Energy®

414 Nicollet Mall
Minneapolis, MN 55401

April 1, 2025

—Via Electronic Filing—

Pete Wyckoff
Deputy Commissioner
Minnesota Department of Commerce
85 7th Place East Suite 500
St. Paul, MN 55101-2198

Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

RE: 2024 ENERGY CONSERVATION & OPTIMIZATION CONSOLIDATED FILING
DOCKET NOS. E,G002/CIP-23-92, E002/M-25-50, AND G002/M-25-47

Dear Deputy Commissioner Wyckoff and Mr. Seuffert:

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission (MPUC) and Minnesota Department of Commerce (Department) this 2024 Status Report and the Associated Public Utility Commission Compliance Filings for its Minnesota Electric and Natural Gas Energy Conservation and Optimization Plan. This filing is made pursuant to Minn. Statute §216B.241, §216B.2401 and is in compliance with the MPUC and Department rules and orders relating to annual filings associated with conservation program activities including Minnesota R. 7690.0050.

The Company has consolidated the status report filing with our Rider Compliance for the first time for ease of future review. We include in this filing the following: 2024 electric and natural gas Conservation Improvement Program (CIP) Tracker account, Shared Savings Financial Incentive Report, our proposed 2024/2025 CIP Adjustment Factor, and 2024 ECO Status Report.

Copies of the filing have been served to the parties on the attached service list. Please contact Luke Anderson at 612-216-9238 or Luke.Anderson@xcelenergy.com or contact me at 612-216-7972 or Jessica.K.Peterson@xcelenergy.com if you have any questions regarding this filing.

Parties wishing to access our 2024 ECO Status Report can access the eDockets system through the websites of the Department, the MPUC, or by going to the eDockets homepage and searching for docket E,G002/CIP-23-92. We provide a direct link to the eDockets website: MN DOC efiling (state.mn.us)

Sincerely,

/s/

JESSICA PETERSON
MANAGER, PROGRAM POLICY

Enclosures
c: Service Lists

I. SUMMARY OF FILING

A one-paragraph summary is attached to this filing pursuant to Minn. R. 7829.1300, subp. 1.

II. SERVICE ON OTHER PARTIES

Pursuant to Minn. R. 7829.1300, subp. 2, the Company has served a copy of this filing to the Office of the Attorney General – Antitrust and Utilities Division. A summary of the filing has been served to all parties on the enclosed service list.

III. GENERAL FILING INFORMATION

Pursuant to Minn. R. 7829.1300, subp. 3, the Company provides the following information.

A. Name, Address, and Telephone Number of Utility

Northern States Power Company doing business as:
Xcel Energy
414 Nicollet Mall
Minneapolis, MN 55401
612-330-5500

B. Name, Address, and Telephone Number of Utility Attorney

Lauren Steinhaeuser
Assistant General Counsel
Xcel Energy
414 Nicollet Mall, 401 – 8th Floor
Minneapolis, Minnesota 55401
Lauren.Steinhaeuser@xcelenergy.com

C. Date of Filing

The date of this filing is April 1, 2025. The Company requests the Commission approve this Petition with an effective date of October 1, 2025 for the 2025/2026 CIP Adjustment Factor. Approval by this date would ensure that the implemented rate is based on a 12-month recovery period.

D. Statute Controlling Schedule for Processing the Filing

Minn. Stat. § 216B.16, subds. 6b and 6c allow public utilities to file rate schedules providing for annual recovery of actual conservation costs and approved incentives. Minn. Stat. § 216B.16 subd. 1 requires 60-day notice to the Commission of a proposed tariff change. Under the Commission's rules, the proposed tariff change discussed in this Petition falls within the definition of a miscellaneous filing under Minn. R. 7829.0100, subp. 11, since no determination of Xcel Energy's general revenue requirement is necessary. Minn. R. 7829.1400, subp. 1, permits initial comments on miscellaneous filings to be made within 30 days of filing and reply comments 10 days thereafter.

E. Utility Employee Responsible for Filing

Jessica Peterson
Manager, Program Policy
Xcel Energy
414 Nicollet Mall, 401 – 6th Floor
Minneapolis, MN 55401
612-216-7972

IV. MISCELLANEOUS INFORMATION

Pursuant to Minn. R. 7829.0700, the Company requests that the following persons be placed on the Commission's official service list for this proceeding:

Lauren Steinhaeuser
Assistant General Counsel
Xcel Energy
414 Nicollet Mall, 401 – 8th Floor
Minneapolis, Minnesota 55401
Lauren.Steinhaeuser@xcelenergy.com

Christine Schwartz
Regulatory Administrator
Xcel Energy
414 Nicollet Mall, 401 – 7th Floor
Minneapolis, MN 55401
Regulatory.Records@xcelenergy.com

Any information requests in this proceeding should be submitted to Ms. Schwartz at the Regulatory Records email address above.

CERTIFICATE OF SERVICE

I, Christine Schwartz, hereby certify that I have this day served copies of the foregoing document on the attached list of persons.

xx by depositing a true and correct copy thereof, properly enveloped with postage paid in the United States mail at Minneapolis, Minnesota

xx electronic filing

DOCKET NOS. E,G002/CIP-23-92, E002/M-25-50, G002/M-25-47

Dated this 1st day of April 2025

/s/

Christine Schwartz
Regulatory Administrator

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
1	Julie	Ambach	juliea@cmmpa.org	Shakopee Public Utilties		255 Sarazin St Shakopee MN, 55379 United States	Electronic Service		No	23-92CIP-23-92
2	Tom	Balster	tombalster@alliantenergy.com	Interstate Power & Light Company		PO Box 351 200 1st St SE Cedar Rapids IA, 52406-0351 United States	Electronic Service		No	23-92CIP-23-92
3	Lisa	Beckner	lbeckner@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802 United States	Electronic Service		No	23-92CIP-23-92
4	William	Black	bblack@mmua.org	MMUA		Suite 200 3131 Fernbrook Lane North Plymouth MN, 55447 United States	Electronic Service		No	23-92CIP-23-92
5	Matthew	Brodin	mbrodin@allete.com	Minnesota Power		30 West Superior Street Duluth MN, 55802 United States	Electronic Service		No	23-92CIP-23-92
6	Christina	Brusven	cbrusven@fredlaw.com	Fredrikson Byron		60 S 6th St Ste 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	23-92CIP-23-92
7	Ray	Choquette	rchoquette@agp.com	Ag Processing Inc.		12700 West Dodge Road PO Box 2047 Omaha NE, 68103-2047 United States	Electronic Service		No	23-92CIP-23-92
8	Generic	Commerce Attorneys	commerce.attorneys@ag.state.mn.us		Office of the Attorney General - Department of Commerce	445 Minnesota Street Suite 1400 St. Paul MN, 55101 United States	Electronic Service		Yes	23-92CIP-23-92
9	Brandon	Crawford	brandonc@cubminnesota.org	Citizens Utility Board of Minnesota		332 Minnesota St Ste W1360 St. Paul MN, 55101 United States	Electronic Service		No	23-92CIP-23-92
10	George	Crocker	gwillc@nawo.org	North American Water Office		5093 Keats Avenue Lake Elmo MN, 55042 United States	Electronic Service		No	23-92CIP-23-92
11	Patrick	Deal	pdeal@mnchamber.com	Minnesota Chamber of Commerce		400 Robert St N Ste 1500 Saint Paul MN, 55101 United States	Electronic Service		No	23-92CIP-23-92
12	Charles	Drayton	charles.drayton@enbridge.com	Enbridge Energy Company, Inc.		7701 France Ave S Ste 600 Edina MN, 55435 United States	Electronic Service		No	23-92CIP-23-92
13	Jim	Erchul	jerchul@dbnhs.org	Daytons Bluff Neighborhood Housing Sv.		823 E 7th St St. Paul MN,	Electronic Service		No	23-92CIP-23-92

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						55106 United States				
14	Greg	Ernst	gaernst@q.com	G. A. Ernst & Associates, Inc.		2377 Union Lake Trl Northfield MN, 55057 United States	Electronic Service		No	23-92CIP-23-92
15	Melissa S	Feine	melissa.feine@semcac.org	SEMCAC		PO Box 549 204 S Elm St Rushford MN, 55971 United States	Electronic Service		No	23-92CIP-23-92
16	Sharon	Ferguson	sharon.ferguson@state.mn.us		Department of Commerce	85 7th Place E Ste 280 Saint Paul MN, 55101-2198 United States	Electronic Service		No	23-92CIP-23-92
17	Karolanne	Foley	karolanne.foley@dairylandpower.com	Dairyland Power Cooperative		PO Box 817 La Crosse WI, 54602-0817 United States	Electronic Service		No	23-92CIP-23-92
18	Kristen	Funk	kfunk@mncee.org	Center for Energy and Environment		212 3rd Ave N Ste 560 Minneapolis MN, 55401 United States	Electronic Service		No	23-92CIP-23-92
19	Tyler	Glewwe	tyler.glewwe@centerpointenergy.com	CenterPoint Energy		505 Nicollet Mall Minneapolis MN, 55402 United States	Electronic Service		No	23-92CIP-23-92
20	Jenny	Glumack	jenny@mrea.org	Minnesota Rural Electric Association		11640 73rd Ave N Maple Grove MN, 55369 United States	Electronic Service		No	23-92CIP-23-92
21	Jason	Grenier	jgrenier@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	23-92CIP-23-92
22	Jeffrey	Haase	jhaase@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	23-92CIP-23-92
23	Joe	Hoffman	ja.hoffman@smmpa.org	SMMPA		500 First Ave SW Rochester MN, 55902-3303 United States	Electronic Service		No	23-92CIP-23-92
24	Dave	Johnson	dave.johnson@aeoa.org	Arrowhead Economic Opportunity Agency		702 3rd Ave S Virginia MN, 55792 United States	Electronic Service		No	23-92CIP-23-92
25	Martin	Kapsch	martin.kapsch@centerpointenergy.com	CenterPoint Energy Minnesota Gas		505 Nicollet Mall Minneapolis MN, 55402 United States	Electronic Service		No	23-92CIP-23-92
26	Deborah	Knoll	dknoll@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802 United States	Electronic Service		No	23-92CIP-23-92
27	Kathryn	Knudson	kathryn.knudson@centerpointenergy.com	CenterPoint Energy		null null, null United States	Electronic Service		No	23-92CIP-23-92

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
				Minnesota Gas						
28	Tina	Koecher	tkoecher@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802-2093 United States	Electronic Service		No	23-92CIP-23-92
29	Martin	Lepak	martin.lepak@aeoa.org	Arrowhead Economic Opportunity		702 S 3rd Ave Virginia MN, 55792 United States	Electronic Service		No	23-92CIP-23-92
30	Corey	Lubovich	coreyl@hpuc.com	Hibbing Public Utilities Commission		1902 6th Ave E Hibbing MN, 55746 United States	Electronic Service		No	23-92CIP-23-92
31	Josh	Mason	jmason@rpu.org	Rochester Public Utilities		4000 E River Rd NE Rochester MN, 55906 United States	Electronic Service		No	23-92CIP-23-92
32	Scot	McClure	scotmcclure@alliantenergy.com	Interstate Power And Light Company		4902 N Biltmore Ln PO Box 77007 Madison WI, 53707-1007 United States	Electronic Service		No	23-92CIP-23-92
33	David	Moeller	dmoeller@allete.com	Minnesota Power			Electronic Service		No	23-92CIP-23-92
34	Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP		33 South Sixth St Ste 4200 Minneapolis MN, 55402 United States	Electronic Service		No	23-92CIP-23-92
35	Carl	Nelson	cnelson@mncee.org	Center for Energy and Environment		212 3rd Ave N Ste 560 Minneapolis MN, 55401 United States	Electronic Service		No	23-92CIP-23-92
36	Samantha	Norris	samanthanorris@alliantenergy.com	Interstate Power and Light Company		200 1st Street SE PO Box 351 Cedar Rapids IA, 52406-0351 United States	Electronic Service		No	23-92CIP-23-92
37	Audrey	Partridge	audrey.peer@centerpointenergy.com	CenterPoint Energy Minnesota Gas		212 3rd Ave. N. Suite 560 Minneapolis MN, 55401 United States	Electronic Service		No	23-92CIP-23-92
38	Lisa	Pickard	lseverson@minnkota.com	Minnkota Power Cooperative		5301 32nd Ave S Grand Forks ND, 58201 United States	Electronic Service		No	23-92CIP-23-92
39	Bill	Poppert	info@technologycos.com	Technology North		2433 Highwood Ave St. Paul MN, 55119 United States	Electronic Service		No	23-92CIP-23-92
40	Dave	Reinke	dreinke@dakotaelectric.com	Dakota Electric Association		4300 220th St W Farmington MN, 55024-9583 United States	Electronic Service		No	23-92CIP-23-92
41	Generic Notice	Residential Utilities	residential.utilities@ag.state.mn.us		Office of the Attorney	1400 BRM Tower	Electronic Service		Yes	23-92CIP-23-92

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
		Division			General - Residential Utilities Division	445 Minnesota St St. Paul MN, 55101-2131 United States				
42	Jean	Schafer	jeans@bepc.com	Basin Electric Power Cooperative		1717 E Interstate Ave Bismarck ND, 58501 United States	Electronic Service		No	23-92CIP-23-92
43	Christine	Schwartz	regulatory.records@xcelenergy.com	Xcel Energy		414 Nicollet Mall FL 7 Minneapolis MN, 55401-1993 United States	Electronic Service		No	23-92CIP-23-92
44	Will	Seuffert	will.seuffert@state.mn.us		Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul MN, 55101 United States	Electronic Service		Yes	23-92CIP-23-92
45	Rick	Sisk	rsisk@trccompanies.com	Lockheed Martin		1000 Clark Ave. St. Louis MO, 63102 United States	Electronic Service		No	23-92CIP-23-92
46	Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.		76 W Kellogg Blvd St. Paul MN, 55102 United States	Electronic Service		No	23-92CIP-23-92
47	Anna	Sommer	asommer@energyfuturesgroup.com	Energy Futures Group		PO Box 692 Canton NY, 13617 United States	Electronic Service		No	23-92CIP-23-92
48	Russ	Stark	russ.stark@ci.stpaul.mn.us	City of St. Paul		Mayor's Office 15 W. Kellogg Blvd., Suite 390 Saint Paul MN, 55102 United States	Electronic Service		No	23-92CIP-23-92
49	Kodi	Verhalen	kverhalen@taftlaw.com	Taft Stettinius & Hollister LLP		80 S 8th St Ste 2200 Minneapolis MN, 55402 United States	Electronic Service		No	23-92CIP-23-92
50	Michael	Volker	mvolker@eastriver.coop	East River Electric Power Coop		211 S. Harth Ave Madison SD, 57042 United States	Electronic Service		No	23-92CIP-23-92
51	Ethan	Warner	ethan.warner@centerpointenergy.com	CenterPoint Energy		505 Nicollet Mall Minneapolis MN, 55402 United States	Electronic Service		No	23-92CIP-23-92
52	Robyn	Woeste	robynwoeste@alliantenergy.com	Interstate Power and Light Company		200 First St SE Cedar Rapids IA, 52401 United States	Electronic Service		No	23-92CIP-23-92

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
1	Julie	Ambach	juliea@cmmpa.org	Shakopee Public Utilties		255 Sarazin St Shakopee MN, 55379 United States	Electronic Service		No	M-25-47
2	Tom	Balster	tombalster@alliantenergy.com	Interstate Power & Light Company		PO Box 351 200 1st St SE Cedar Rapids IA, 52406-0351 United States	Electronic Service		No	M-25-47
3	Lisa	Beckner	lbeckner@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802 United States	Electronic Service		No	M-25-47
4	William	Black	bblack@mmua.org	MMUA		Suite 200 3131 Fernbrook Lane North Plymouth MN, 55447 United States	Electronic Service		No	M-25-47
5	Matthew	Brodin	mbrodin@allete.com	Minnesota Power		30 West Superior Street Duluth MN, 55802 United States	Electronic Service		No	M-25-47
6	Christina	Brusven	cbrusven@fredlaw.com	Fredrikson Byron		60 S 6th St Ste 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	M-25-47
7	Ray	Choquette	rchoquette@agp.com	Ag Processing Inc.		12700 West Dodge Road PO Box 2047 Omaha NE, 68103-2047 United States	Electronic Service		No	M-25-47
8	John	Coffman	john@johncoffman.net	AARP		871 Tuxedo Blvd. St, Louis MO, 63119-2044 United States	Electronic Service		No	M-25-47
9	Generic	Commerce Attorneys	commerce.attorneys@ag.state.mn.us		Office of the Attorney General - Department of Commerce	445 Minnesota Street Suite 1400 St. Paul MN, 55101 United States	Electronic Service		Yes	M-25-47
10	George	Crocker	gwillc@nawo.org	North American Water Office		5093 Keats Avenue Lake Elmo MN, 55042 United States	Electronic Service		No	M-25-47
11	Patrick	Deal	pdeal@mnchamber.com	Minnesota Chamber of Commerce		400 Robert St N Ste 1500 Saint Paul MN, 55101 United States	Electronic Service		No	M-25-47
12	Charles	Drayton	charles.drayton@enbridge.com	Enbridge Energy Company, Inc.		7701 France Ave S Ste 600 Edina MN, 55435 United States	Electronic Service		No	M-25-47
13	Jim	Erchul	jerchul@dbnhs.org	Daytons Bluff Neighborhood Housing Sv.		823 E 7th St St. Paul MN, 55106 United States	Electronic Service		No	M-25-47

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
14	Greg	Ernst	gaernst@q.com	G. A. Ernst & Associates, Inc.		2377 Union Lake Trl Northfield MN, 55057 United States	Electronic Service		No	M-25-47
15	Melissa S	Feine	melissa.feine@semcac.org	SEMCAC		PO Box 549 204 S Elm St Rushford MN, 55971 United States	Electronic Service		No	M-25-47
16	Sharon	Ferguson	sharon.ferguson@state.mn.us		Department of Commerce	85 7th Place E Ste 280 Saint Paul MN, 55101-2198 United States	Electronic Service		No	M-25-47
17	Karolanne	Foley	karolanne.foley@dairylandpower.com	Dairyland Power Cooperative		PO Box 817 La Crosse WI, 54602-0817 United States	Electronic Service		No	M-25-47
18	Tyler	Glewwe	tyler.glewwe@centerpointenergy.com	CenterPoint Energy		505 Nicollet Mall Minneapolis MN, 55402 United States	Electronic Service		No	M-25-47
19	Jenny	Glumack	jenny@mrea.org	Minnesota Rural Electric Association		11640 73rd Ave N Maple Grove MN, 55369 United States	Electronic Service		No	M-25-47
20	Jason	Grenier	jgrenier@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	M-25-47
21	Todd J.	Guerrero	todd.guerrero@kutakrock.com	Kutak Rock LLP		Suite 1750 220 South Sixth Street Minneapolis MN, 55402-1425 United States	Electronic Service		No	M-25-47
22	Jeffrey	Haase	jhaase@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	M-25-47
23	Annete	Henkel	mui@mnutilityinvestors.org	Minnesota Utility Investors		413 Wacouta Street #230 St.Paul MN, 55101 United States	Electronic Service		No	M-25-47
24	Joe	Hoffman	ja.hoffman@smmpa.org	SMMPA		500 First Ave SW Rochester MN, 55902-3303 United States	Electronic Service		No	M-25-47
25	Michael	Hoppe	lu23@ibew23.org	Local Union 23, I.B.E.W.		445 Etna Street Ste. 61 St. Paul MN, 55106 United States	Electronic Service		No	M-25-47
26	Dave	Johnson	dave.johnson@aeoa.org	Arrowhead Economic Opportunity Agency		702 3rd Ave S Virginia MN, 55792 United States	Electronic Service		No	M-25-47
27	Richard	Johnson	rick.johnson@lawmoss.com	Moss & Barnett		150 S. 5th Street Suite 1200	Electronic Service		No	M-25-47

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						Minneapolis MN, 55402 United States				
28	Sarah	Johnson Phillips	sjphillips@stoel.com	Stoel Rives LLP		33 South Sixth Street Suite 4200 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-47
29	Martin	Kapsch	martin.kapsch@centerpointenergy.com	CenterPoint Energy Minnesota Gas		505 Nicollet Mall Minneapolis MN, 55402 United States	Electronic Service		No	M-25-47
30	Deborah	Knoll	dknoll@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802 United States	Electronic Service		No	M-25-47
31	Kathryn	Knudson	kathryn.knudson@centerpointenergy.com	CenterPoint Energy Minnesota Gas		null null, null United States	Electronic Service		No	M-25-47
32	Tina	Koecher	tkoecher@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802-2093 United States	Electronic Service		No	M-25-47
33	Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.		8300 Norman Center Drive Suite 1000 Bloomington MN, 55437 United States	Electronic Service		No	M-25-47
34	Martin	Lepak	martin.lepak@aeoa.org	Arrowhead Economic Opportunity		702 S 3rd Ave Virginia MN, 55792 United States	Electronic Service		No	M-25-47
35	Corey	Lubovich	coreyl@hpuc.com	Hibbing Public Utilities Commission		1902 6th Ave E Hibbing MN, 55746 United States	Electronic Service		No	M-25-47
36	Josh	Mason	jmason@rpu.org	Rochester Public Utilities		4000 E River Rd NE Rochester MN, 55906 United States	Electronic Service		No	M-25-47
37	Scot	McClure	scotmcclure@alliantenergy.com	Interstate Power And Light Company		4902 N Biltmore Ln PO Box 77007 Madison WI, 53707-1007 United States	Electronic Service		No	M-25-47
38	David	Moeller	dmoeller@allete.com	Minnesota Power			Electronic Service		No	M-25-47
39	Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP		33 South Sixth St Ste 4200 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-47
40	Carl	Nelson	cnelson@mncee.org	Center for Energy and Environment		212 3rd Ave N Ste 560 Minneapolis MN, 55401 United States	Electronic Service		No	M-25-47
41	David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency		220 South Sixth Street Suite 1300 Minneapolis	Electronic Service		No	M-25-47

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						MN, 55402 United States				
42	Samantha	Norris	samanthanorris@alliantenergy.com	Interstate Power and Light Company		200 1st Street SE PO Box 351 Cedar Rapids IA, 52406-0351 United States	Electronic Service		No	M-25-47
43	Audrey	Partridge	audrey.peer@centerpointenergy.com	CenterPoint Energy Minnesota Gas		212 3rd Ave. N. Suite 560 Minneapolis MN, 55401 United States	Electronic Service		No	M-25-47
44	Lisa	Pickard	lseverson@minnkota.com	Minnkota Power Cooperative		5301 32nd Ave S Grand Forks ND, 58201 United States	Electronic Service		No	M-25-47
45	Bill	Poppert	info@technologycos.com	Technology North		2433 Highwood Ave St. Paul MN, 55119 United States	Electronic Service		No	M-25-47
46	Dave	Reinke	dreinke@dakotaelectric.com	Dakota Electric Association		4300 220th St W Farmington MN, 55024-9583 United States	Electronic Service		No	M-25-47
47	Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	1400 BRM Tower 445 Minnesota St St. Paul MN, 55101-2131 United States	Electronic Service		Yes	M-25-47
48	Jean	Schafer	jeans@bepc.com	Basin Electric Power Cooperative		1717 E Interstate Ave Bismarck ND, 58501 United States	Electronic Service		No	M-25-47
49	Christine	Schwartz	regulatory.records@xcelenergy.com	Xcel Energy		414 Nicollet Mall FL 7 Minneapolis MN, 55401-1993 United States	Electronic Service		Yes	M-25-47
50	Will	Seuffert	will.seuffert@state.mn.us		Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul MN, 55101 United States	Electronic Service		Yes	M-25-47
51	Rick	Sisk	rsisk@trccompanies.com	Lockheed Martin		1000 Clark Ave. St. Louis MO, 63102 United States	Electronic Service		No	M-25-47
52	Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.		76 W Kellogg Blvd St. Paul MN, 55102 United States	Electronic Service		No	M-25-47
53	Anna	Sommer	asommer@energyfuturesgroup.com	Energy Futures Group		PO Box 692 Canton NY, 13617 United States	Electronic Service		No	M-25-47
54	Russ	Stark	russ.stark@ci.stpaul.mn.us	City of St. Paul		Mayor's Office 15 W. Kellogg Blvd., Suite 390 Saint Paul	Electronic Service		No	M-25-47

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						MN, 55102 United States				
55	James M	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered		150 S 5th St Ste 700 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-47
56	Kodi	Verhalen	kverhalen@taftlaw.com	Taft Stettinius & Hollister LLP		80 S 8th St Ste 2200 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-47
57	Michael	Volker	mvolker@eastriver.coop	East River Electric Power Coop		211 S. Harth Ave Madison SD, 57042 United States	Electronic Service		No	M-25-47
58	Ethan	Warner	ethan.warner@centerpointenergy.com	CenterPoint Energy		505 Nicollet Mall Minneapolis MN, 55402 United States	Electronic Service		No	M-25-47
59	Robyn	Woeste	robynwoeste@alliantenergy.com	Interstate Power and Light Company		200 First St SE Cedar Rapids IA, 52401 United States	Electronic Service		No	M-25-47

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
1	Julie	Ambach	juliea@cmmpa.org	Shakopee Public Utilties		255 Sarazin St Shakopee MN, 55379 United States	Electronic Service		No	M-25-50
2	Tom	Balster	tombalster@alliantenergy.com	Interstate Power & Light Company		PO Box 351 200 1st St SE Cedar Rapids IA, 52406-0351 United States	Electronic Service		No	M-25-50
3	Lisa	Beckner	lbeckner@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802 United States	Electronic Service		No	M-25-50
4	James J.	Bertrand	james.bertrand@stinson.com	STINSON LLP		50 S 6th St Ste 2600 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50
5	William	Black	bblack@mmua.org	MMUA		Suite 200 3131 Fernbrook Lane North Plymouth MN, 55447 United States	Electronic Service		No	M-25-50
6	Matthew	Brodin	mbrodin@allete.com	Minnesota Power		30 West Superior Street Duluth MN, 55802 United States	Electronic Service		No	M-25-50
7	Christina	Brusven	cbrusven@fredlaw.com	Fredrikson Byron		60 S 6th St Ste 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	M-25-50
8	Ray	Choquette	rchoquette@agp.com	Ag Processing Inc.		12700 West Dodge Road PO Box 2047 Omaha NE, 68103-2047 United States	Electronic Service		No	M-25-50
9	John	Coffman	john@johncoffman.net	AARP		871 Tuxedo Blvd. St, Louis MO, 63119-2044 United States	Electronic Service		No	M-25-50
10	Generic	Commerce Attorneys	commerce.attorneys@ag.state.mn.us		Office of the Attorney General - Department of Commerce	445 Minnesota Street Suite 1400 St. Paul MN, 55101 United States	Electronic Service		Yes	M-25-50
11	George	Crocker	gwillc@nawo.org	North American Water Office		5093 Keats Avenue Lake Elmo MN, 55042 United States	Electronic Service		No	M-25-50
12	Patrick	Deal	pdeal@mnchamber.com	Minnesota Chamber of Commerce		400 Robert St N Ste 1500 Saint Paul MN, 55101 United States	Electronic Service		No	M-25-50
13	Charles	Drayton	charles.drayton@enbridge.com	Enbridge Energy Company, Inc.		7701 France Ave S Ste 600 Edina MN,	Electronic Service		No	M-25-50

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						55435 United States				
14	Christopher	Droske	christopher.droske@minneapolismn.gov	Northern States Power Company dba Xcel Energy-Elec		661 5th Ave N Minneapolis MN, 55405 United States	Electronic Service		No	M-25-50
15	Jim	Erchul	jerchul@dbnhs.org	Daytons Bluff Neighborhood Housing Sv.		823 E 7th St St. Paul MN, 55106 United States	Electronic Service		No	M-25-50
16	Greg	Ernst	gaernst@q.com	G. A. Ernst & Associates, Inc.		2377 Union Lake Trl Northfield MN, 55057 United States	Electronic Service		No	M-25-50
17	John	Farrell	jfarrell@ilsr.org	Institute for Local Self-Reliance		2720 E. 22nd St Institute for Local Self-Reliance Minneapolis MN, 55406 United States	Electronic Service		No	M-25-50
18	Melissa S	Feine	melissa.feine@semcac.org	SEMCAC		PO Box 549 204 S Elm St Rushford MN, 55971 United States	Electronic Service		No	M-25-50
19	Sharon	Ferguson	sharon.ferguson@state.mn.us		Department of Commerce	85 7th Place E Ste 280 Saint Paul MN, 55101-2198 United States	Electronic Service		No	M-25-50
20	Karolanne	Foley	karolanne.foley@dairylandpower.com	Dairyland Power Cooperative		PO Box 817 La Crosse WI, 54602-0817 United States	Electronic Service		No	M-25-50
21	Tyler	Glewwe	tyler.glewwe@centerpointenergy.com	CenterPoint Energy		505 Nicollet Mall Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50
22	Jenny	Glumack	jenny@mrea.org	Minnesota Rural Electric Association		11640 73rd Ave N Maple Grove MN, 55369 United States	Electronic Service		No	M-25-50
23	Jason	Grenier	jgrenier@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	M-25-50
24	Jeffrey	Haase	jhaase@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	M-25-50
25	Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association		4300 220th St W Farmington MN, 55024 United States	Electronic Service		No	M-25-50
26	Joe	Hoffman	ja.hoffman@smmpa.org	SMMPA		500 First Ave SW Rochester MN, 55902-3303 United States	Electronic Service		No	M-25-50

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
27	Michael	Hoppe	lu23@ibew23.org	Local Union 23, I.B.E.W.		445 Etna Street Ste. 61 St. Paul MN, 55106 United States	Electronic Service		No	M-25-50
28	Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law		2950 Yellowtail Ave. Marathon FL, 33050 United States	Electronic Service		No	M-25-50
29	Dave	Johnson	dave.johnson@aeoa.org	Arrowhead Economic Opportunity Agency		702 3rd Ave S Virginia MN, 55792 United States	Electronic Service		No	M-25-50
30	Richard	Johnson	rick.johnson@lawmoss.com	Moss & Barnett		150 S. 5th Street Suite 1200 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50
31	Sarah	Johnson Phillips	sjphillips@stoel.com	Stoel Rives LLP		33 South Sixth Street Suite 4200 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50
32	Martin	Kapsch	martin.kapsch@centerpointenergy.com	CenterPoint Energy Minnesota Gas		505 Nicollet Mall Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50
33	Deborah	Knoll	dknoll@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802 United States	Electronic Service		No	M-25-50
34	Kathryn	Knudson	kathryn.knudson@centerpointenergy.com	CenterPoint Energy Minnesota Gas		null null, null United States	Electronic Service		No	M-25-50
35	Tina	Koecher	tkoecher@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802-2093 United States	Electronic Service		No	M-25-50
36	Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.		8300 Norman Center Drive Suite 1000 Bloomington MN, 55437 United States	Electronic Service		No	M-25-50
37	Martin	Lepak	martin.lepak@aeoa.org	Arrowhead Economic Opportunity		702 S 3rd Ave Virginia MN, 55792 United States	Electronic Service		No	M-25-50
38	Corey	Lubovich	coreyl@hpuc.com	Hibbing Public Utilities Commission		1902 6th Ave E Hibbing MN, 55746 United States	Electronic Service		No	M-25-50
39	Kavita	Maini	kmaini@wi.rr.com	KM Energy Consulting, LLC		961 N Lost Woods Rd Oconomowoc WI, 53066 United States	Electronic Service		No	M-25-50

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
40	Josh	Mason	jmason@rpu.org	Rochester Public Utilities		4000 E River Rd NE Rochester MN, 55906 United States	Electronic Service		No	M-25-50
41	Scot	McClure	scotmcclure@alliantenergy.com	Interstate Power And Light Company		4902 N Biltmore Ln PO Box 77007 Madison WI, 53707-1007 United States	Electronic Service		No	M-25-50
42	Stacy	Miller	stacy.miller@minneapolismn.gov	City of Minneapolis		350 S. 5th Street Room M 301 Minneapolis MN, 55415 United States	Electronic Service		No	M-25-50
43	David	Moeller	dmoeller@allete.com	Minnesota Power			Electronic Service		No	M-25-50
44	Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP		33 South Sixth St Ste 4200 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50
45	Carl	Nelson	cnelson@mncee.org	Center for Energy and Environment		212 3rd Ave N Ste 560 Minneapolis MN, 55401 United States	Electronic Service		No	M-25-50
46	David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency		220 South Sixth Street Suite 1300 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50
47	Samantha	Norris	samanthanorris@alliantenergy.com	Interstate Power and Light Company		200 1st Street SE PO Box 351 Cedar Rapids IA, 52406-0351 United States	Electronic Service		No	M-25-50
48	Carol A.	Overland	overland@legalectric.org	Legalectric - Overland Law Office		1110 West Avenue Red Wing MN, 55066 United States	Electronic Service		No	M-25-50
49	Audrey	Partridge	audrey.peer@centerpointenergy.com	CenterPoint Energy Minnesota Gas		212 3rd Ave. N. Suite 560 Minneapolis MN, 55401 United States	Electronic Service		No	M-25-50
50	Lisa	Pickard	lseverson@minnkota.com	Minnkota Power Cooperative		5301 32nd Ave S Grand Forks ND, 58201 United States	Electronic Service		No	M-25-50
51	Bill	Poppert	info@technologycos.com	Technology North		2433 Highwood Ave St. Paul MN, 55119 United States	Electronic Service		No	M-25-50
52	Dave	Reinke	dreinke@dakotaelectric.com	Dakota Electric Association		4300 220th St W Farmington MN, 55024-9583 United States	Electronic Service		No	M-25-50

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
53	Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	1400 BRM Tower 445 Minnesota St St. Paul MN, 55101-2131 United States	Electronic Service		Yes	M-25-50
54	Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy		26 E Exchange St, Ste 206 St. Paul MN, 55101-1667 United States	Electronic Service		No	M-25-50
55	Jean	Schafer	jeans@bepc.com	Basin Electric Power Cooperative		1717 E Interstate Ave Bismarck ND, 58501 United States	Electronic Service		No	M-25-50
56	Christine	Schwartz	regulatory.records@xcelenergy.com	Xcel Energy		414 Nicollet Mall FL 7 Minneapolis MN, 55401-1993 United States	Electronic Service		No	M-25-50
57	Will	Seuffert	will.seuffert@state.mn.us		Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul MN, 55101 United States	Electronic Service		Yes	M-25-50
58	Rick	Sisk	rsisk@trccompanies.com	Lockheed Martin		1000 Clark Ave. St. Louis MO, 63102 United States	Electronic Service		No	M-25-50
59	Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.		76 W Kellogg Blvd St. Paul MN, 55102 United States	Electronic Service		No	M-25-50
60	Anna	Sommer	asommer@energyfuturesgroup.com	Energy Futures Group		PO Box 692 Canton NY, 13617 United States	Electronic Service		No	M-25-50
61	Russ	Stark	russ.stark@ci.stpaul.mn.us	City of St. Paul		Mayor's Office 15 W. Kellogg Blvd., Suite 390 Saint Paul MN, 55102 United States	Electronic Service		No	M-25-50
62	Byron E.	Starns	byron.starns@stinson.com	STINSON LLP		50 S 6th St Ste 2600 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50
63	Lauren	Steinhaeuser	lauren.steinheauser@xcelenergy.com	Northern States Power Company dba Xcel Energy		414 Nicollet Mall, 401-08 Minneapolis MN, 55401 United States	Electronic Service		No	M-25-50
64	James M	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered		150 S 5th St Ste 700 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50
65	Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine		225 S 6th St Ste 3500 Capella Tower Minneapolis MN, 55402-4629 United States	Electronic Service		No	M-25-50

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
66	Kodi	Verhalen	kverhalen@taftlaw.com	Taft Stettinius & Hollister LLP		80 S 8th St Ste 2200 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50
67	Carla	Vita	carla.vita@state.mn.us	MN DEED		Great Northern Building 12th Floor 180 East Fifth Street St. Paul MN, 55101 United States	Electronic Service		No	M-25-50
68	Michael	Volker	mvolker@eastriver.coop	East River Electric Power Coop		211 S. Harth Ave Madison SD, 57042 United States	Electronic Service		No	M-25-50
69	Ethan	Warner	ethan.warner@centerpointenergy.com	CenterPoint Energy		505 Nicollet Mall Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50
70	Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine		225 South Sixth Street, Suite 3500 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50
71	Robyn	Woeste	robynwoeste@alliantenergy.com	Interstate Power and Light Company		200 First St SE Cedar Rapids IA, 52401 United States	Electronic Service		No	M-25-50
72	Kurt	Zimmerman	kwz@ibew160.org	Local Union #160, IBEW		2909 Anthony Ln St Anthony Village MN, 55418-3238 United States	Electronic Service		No	M-25-50
73	Patrick	Zomer	pat.zomer@lawmoss.com	Moss & Barnett PA		150 S 5th St #1200 Minneapolis MN, 55402 United States	Electronic Service		No	M-25-50

Table of Contents

	Page #
Section 1: Executive Summary	**1**
Executive Summary	1
Section 2: CIP Adjustment Factor Filings	**16**
2024 Cost Recovery Petition - Natural Gas	18
2024 Cost Recovery Petition - Electric	29
Section 3: Conservation Cost Recovery Report	**40**
Conservation Cost Recovery Report	42
Section 4: CIP Adjustment Rate Report	**48**
Electric & Natural Gas CIP Adjustment Rate Report	50
Section 5: CIP Financial Incentive Calculations	**57**
2024 Electric Incentive Calculation	61
2024 Natural Gas Incentive Calculation	63
Section 6: Compliance Reports	**65**
Statutory Requirements	68
Low-Income and Multi-Family Compliance	80
Other Regulatory Requirements	89
Section 7: Status Report	**97**
Portfolio Summary	99
Residential Segment	101
Business Segment	108
Income Qualified Segment	116
Demand Response Segment	120
Efficient Fuel Switching Segment	125
Indirect Products & Services Segment	128
Research, Evaluations, & Pilots Segment	133
Assessments Segment	137
Alternative Filings Segment	138
Section 8: Appendices	**141**
Appendix A: Compliance Matrix	143
Appendix B: Workforce Development & Education	155
Appendix C: Cost Effectiveness Analyses	169
Appendix D: Detailed Technical Assumptions	193
Appendix E: Natural Gas Innovation Act (NGIA) Projects	227
Appendix F: Energy Action Days Report	230
Appendix G: Behavioral Demand Response Welcome Email	271
Appendix H: Behavioral Demand Response Customer Messaging	274
Appendix I: Efficient Fuel Switching	280

SECTION 1: EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Northern States Power Company, doing business as Xcel Energy, respectfully submits the following comprehensive report of its electric and natural gas ECO achievements for 2024. The Company is pleased to report its 2024 energy conservation program results:

- The Company achieved energy savings of 1.90**%** of gross annual retail energy sales[1], exceeding the 1.75% energy savings goals required by Minnesota Statute §216B.241.
- For our natural gas business, the Company achieved 1.67**%** of our gross annual retail energy sales, exceeding the 1.0% natural gas savings goal required by Minnesota Statute §216B.241.
- Over 8,391 customers participated in efficient fuel switching. The Company has claimed dekatherm (dth) savings for the projects in our natural gas service territory and spending for those only in our electric service territory.
- The Company achieved savings of 294 megawatts (MW), 516 gigawatt hours (GWh) (83% of the approved electric savings goal) and 1,298,039 Dth[2] (114% of the natural gas savings goal).
- Expenditures totaled $168 million to achieve the results above. Specifically, the Company spent $139 million on electric programs and approximately $29 million on natural gas programs.[3] Electric spending was 88 percent, and natural gas spending was 98 percent, of the approved regulatory budget.

The Company's ECO portfolio remains highly cost effective, driving $519 million in net benefits ($411 million electric and $108 million natural gas[4]). The Company's 2024 achievements are summarized in Tables 1a and 1b.

Table 1a: Xcel Energy's 2024 ECO Expenditures and Energy Savings

	Expenditures ($)	Energy Savings (kWh or Dth)	Demand Savings (kW)
Total Electric ECO	$135,650,728	516,355,477	294,347
Total Gas ECO	$26,206,674	1,243,874	
Total Expenditures	$161,857,402		

[1] In accordance with Minnesota Rules part 7690.1200, weather-normalized average retail energy sales were used to calculate the electric savings goal for Xcel Energy's 2024–2026 ECO Triennial Plan.
[2] Includes both energy efficiency and Efficient Fuel Switching.
[3] Totals include Efficient Fuel Switching expenditures as described in Table 1b.
[4] This was derived using the MN test.

Table 1b: Xcel Energy's 2024 ECO Expenditures and Energy Savings - Efficient Fuel Switching

	Expenditures ($)	Energy Savings (kWh or Dth)	Demand Savings (kW)
Total Electric ECO	$3,611,921	0	0
Total Gas ECO	$3,078,917	54,166	
Total Expenditures	$6,690,838		

Figures 1 and 2 highlight total achievements and spending for electric and natural gas programs from 2014 to 2024.

Figure 1: Xcel Energy's 2014-2024 Electric CIP Achievements

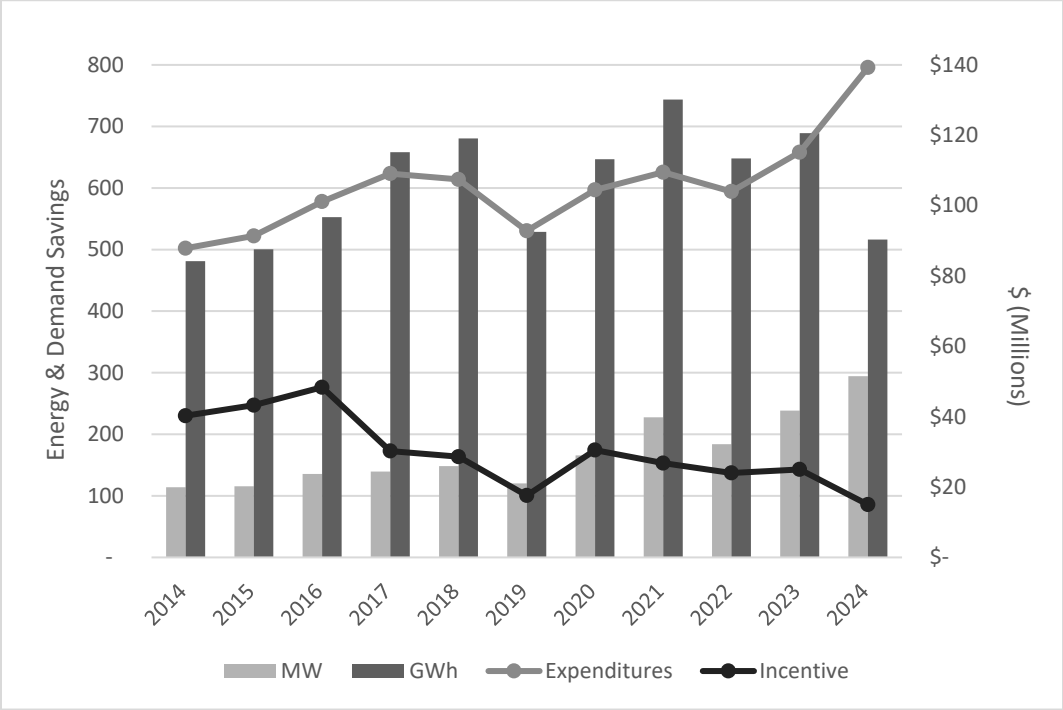
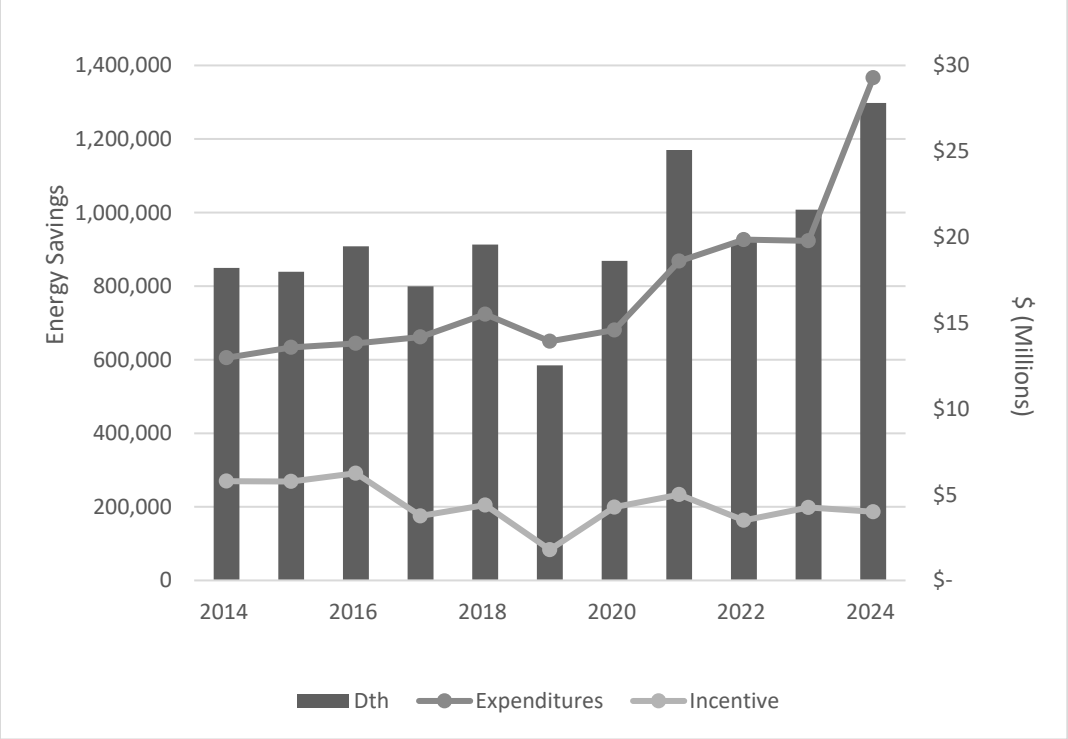


Figure 2: Xcel Energy's 2014-2024 Natural Gas CIP Achievements



2024 Energy Efficiency Executive Summary - Target

Program Name	Electric Participants	Electric Budget	Gen kW Savings	Gen kWh Savings	Gas Participants	Gas Budget	Dth Savings
Consumer Education	481,500	$ 963,000	-	-	321,000	$ 642,000	-
Efficient New Home Construction	2,925	$ 1,674,872	1,208	4,317,702	1,630	$ 2,298,437	39,684
Energy Efficient Showerheads	4,860	$ 146,428	118	1,440,811	6,840	$ 244,642	13,004
Home Energy Audit	13,843	$ 2,294,658	-	-	5,105	$ 1,518,714	-
Home Energy Insights	1,119,270	$ 1,312,724	5,604	28,289,302	277,060	$ 328,553	63,598
Home Energy Squad	11,322	$ 3,317,595	1,449	8,289,858	4,160	$ 1,017,806	33,827
Home Lighting	341,439	$ 6,620,626	7,852	68,948,746	-	$ -	-
Insulation Rebates	2,355	$ 353,741	388	221,656	2,313	$ 1,172,318	32,321
Lamp Recycling	471,787	$ 326,986	-	-	-	$ -	-
Refrigerator & Freezer Recycling	7,000	$ 1,535,915	866	7,414,303	-	$ -	-
Residential Heating & Cooling	41,862	$ 10,131,631	15,605	9,586,628	25,968	$ 5,393,065	205,540
School Education Kits	42,000	$ 1,704,759	2,189	7,885,093	21,500	$ 398,520	51,598
Whole Home Efficiency	215	$ 87,218	61	302,054	202	$ 166,618	3,666
Residential Segment Total	**2,540,378**	**$ 30,470,153**	**35,338**	**136,696,152**	**665,778**	**$ 13,180,671**	**443,238**
Business Education	20,191	$ 242,300	-	-	2,562	$ 30,750	-
Business Energy Assessments	453	$ 4,372,896	4,601	28,011,279	95	$ 418,929	27,552
Business New Construction	320	$ 11,757,153	13,859	65,579,288	32	$ 557,897	50,009
Compressed Air Efficiency	172	$ 979,183	1,291	9,016,793	-	$ -	-
Custom Efficiency	37	$ 1,162,191	859	6,115,321	9	$ 202,236	20,518
Data Center Efficiency	91	$ 1,236,777	922	15,070,217	-	$ -	-
Efficiency Controls	85	$ 629,119	320	8,206,755	24	$ 64,744	7,945
Empower Facilities	24	$ 964,662	-	-	6	$ 107,185	-
Empower Intelligence	386	$ 539,517	-	2,697,511	2	$ 53,947	61
Foodservice Equipment	55	$ 62,937	46	325,451	69	$ 96,189	5,566
HVAC+R	2,799	$ 4,121,836	6,069	34,073,550	692	$ 1,638,749	133,232
Lighting Efficiency	7,429	$ 12,125,825	19,028	115,570,903	-	$ -	-
Load Strategy Analysis	46	$ 745,263	622	6,455,982	6	$ 30,917	5,341
Multi-Family Building Efficiency	7,920	$ 2,279,354	477	3,314,283	1,293	$ 859,806	32,216
Non-Profit Energy Savings Program	210,924	$ 1,711,686	992	9,096,643	110,143	$ 922,643	158,528
Process & Commercial Efficiency	969	$ 11,655,440	20,298	124,477,870	54	$ 1,415,421	165,470
Self-Direct	1	$ 179,372	221	1,000,327	-	$ -	-
Business Segment Total	**251,902**	**$ 54,765,511**	**69,606**	**429,012,175**	**114,987**	**$ 6,399,413**	**606,438**
Affordable Efficient New Home Construction	25	$ 414,778	10	110,585	11	$ 198,213	460
Home Energy Savings Program	4,864	$ 2,923,838	406	1,659,600	754	$ 2,886,643	8,963
Low Income Home Energy Squad	2,521	$ 1,138,295	289	1,655,817	945	$ 363,402	6,702
Low Income Multi-Family Building Efficiency	3,691	$ 2,299,813	682	2,116,334	1,126	$ 162,118	13,556
Workforce Development & Education	87	$ 2,438,368	-	-	13	$ 435,008	-
Income Qualified Segment Total	**11,188**	**$ 9,215,092**	**1,387**	**5,542,337**	**2,849**	**$ 4,045,383**	**29,681**
Battery Connect	130	$ 259,372	308	-	-	$ -	-
Commercial AC Control	4,017	$ 3,287,549	5,883	359,116	83	$ 32,765	639
Critical Peak Pricing	30	$ 216,200	22,910	90,259	-	$ -	-
Electric Rate Savings	60	$ 764,536	9,467	18,661	-	$ -	-
Peak Day Partners	102	$ 3,107,450	137,230	2,162,488	-	$ -	-
Peak Partner Rewards	65	$ 1,355,116	19,843	117,235	-	$ -	-
Residential Demand Response	824,430	$ 12,522,236	42,860	42,450	-	$ -	-
Demand Response Segment Total	**828,834**	**$ 21,512,459**	**238,501**	**2,790,209**	**83**	**$ 32,765**	**639**
Efficient Fuel Switching Training & Support	-	$ -	-	-	-	$ -	-
Outdoor Equipment	-	$ -	-	-	-	$ -	-
Efficient Fuel Switching Total	**-**	**$ -**	**-**	**-**	**-**	**$ -**	**-**
Advertising & Promotion	-	$ 7,097,042	-	-	-	$ 1,610,483	-
Application Development & Maintenance	-	$ 3,485,264	-	-	-	$ 712,737	-
CIP Training	-	$ 359,484	-	-	-	$ 146,397	-
Community Energy Reporting	229	$ 40,858	-	-	149	$ 13,625	-
Electric Utility Infrastructure	-	$ -	-	-	-	$ -	-
Energy Benchmarking	7,265	$ 126,771	-	-	2,325	$ 31,427	-
Partners in Energy	690,000	$ 1,332,871	-	-	345,000	$ 340,504	-
Planning & Regulatory Affairs	-	$ 900,000	-	-	-	$ 350,000	-
Indirect Products & Services Total	**697,494**	**$ 13,342,290**	**-**	**-**	**347,474**	**$ 3,205,173**	**-**
Market Research	-	$ 2,146,287	-	-	-	$ 525,579	-
Product Development	-	$ 5,232,917	-	-	-	$ 198,051	-
Research, Evaluations & Pilots Total	**-**	**$ 7,379,204**	**-**	**-**	**-**	**$ 723,630**	**-**
Portfolio Total	**4,329,796**	**$ 136,684,709**	**344,832**	**574,040,873**	**1,131,170**	**$ 27,587,035**	**1,079,996**
Minnesota Assessments	-	$ 1,932,291	-	-	-	$ 294,738	-
Minnesota Efficient Technology Accelerator	-	$ 3,041,550	-	-	-	$ 602,088	-
Assessments Segment Total	**-**	**$ 4,973,841**	**-**	**-**	**-**	**$ 896,826**	**-**
EnerChange	-	$ 551,304	-	-	-	$ 61,256	-
EnergySmart	-	$ 635,250	-	-	-	$ 46,725	-
One Stop Shop	1,957	$ 14,504,032	9,050	50,463,630	219	$ 99,099	10,676
Trillion BTU	-	$ 171,727	-	-	-	$ 21,877	-
Alternative Filings Total	**1,957**	**$ 15,862,313**	**9,050**	**50,463,630**	**219**	**$ 228,957**	**10,676**
Portfolio Total w Alternative Filings	**4,331,753**	**$ 157,520,863**	**353,882**	**624,504,503**	**1,131,389**	**$ 28,712,818**	**1,090,672**

Tables are in terms of energy savings. Negative numbers indicate increases in energy consumption.

2024 Energy Efficiency Executive Summary - Actual

Program Name	Electric Participants	Electric Budget	Gen kW Savings	Gen kWh Savings	Gas Participants	Gas Budget	Dth Savings
Consumer Education	532,244	$ 1,011,105	-	-	418,192	$ 618,286	-
Efficient New Home Construction	3,098	$ 1,869,948	1,746	5,810,530	1,795	$ 3,432,175	53,933
Energy Efficient Showerheads	918	$ 49,596	23	285,145	2,503	$ 237,950	5,842
Home Energy Audit	3,199	$ 1,312,567	-	-	1,503	$ 1,061,710	-
Home Energy Insights	1,029,459	$ 1,980,170	8,378	30,487,220	779,195	$ 290,697	55,686
Home Energy Squad	4,180	$ 1,700,172	413	2,611,752	1,557	$ 602,760	6,667
Home Lighting	311,032	$ 7,947,406	7,303	59,080,494	-	$ -	-
Insulation Rebates	940	$ 270,889	354	307,696	660	$ 837,392	20,797
Lamp Recycling	524,970	$ 321,836	-	-	-	$ -	-
Refrigerator & Freezer Recycling	2,062	$ 936,528	188	1,564,280	-	$ -	-
Residential Heating & Cooling	2,702	$ 8,088,617	11,346	8,397,171	3,483	$ 3,710,162	191,251
School Education Kits	40,799	$ 1,765,181	3,012	11,260,248	19,653	$ 403,169	61,004
Whole Home Efficiency	19	$ 45,215	17	20,287	18	$ 108,347	1,364
Residential Segment Total	**2,455,622**	**$ 27,299,230**	**32,780**	**119,824,823**	**1,228,559**	**$ 11,302,647**	**396,544**
Business Education	15,126	$ 203,732	-	-	1,681	$ 37,559	-
Business Energy Assessments	407	$ 3,140,968	2,995	19,008,292	57	$ 170,259	11,934
Business New Construction	284	$ 8,018,212	7,634	34,611,494	54	$ 852,529	66,129
Compressed Air Efficiency	93	$ 953,139	908	6,791,095	-	$ -	-
Custom Efficiency	8	$ 729,226	399	3,064,289	1	$ 105,438	15,570
Data Center Efficiency	2	$ 112,896	15	159,754	-	$ -	-
Efficiency Controls	24	$ 320,058	206	2,013,787	8	$ 34,957	4,285
Empower Facilities	8	$ 995,527	-	-	1	$ 111,768	-
Empower Intelligence	386	$ 4,858	-	-	2	$ (5,773)	-
Foodservice Equipment	17	$ 43,114	32	218,731	26	$ 71,826	4,467
HVAC+R	944	$ 3,691,943	3,531	18,048,710	397	$ 1,060,839	64,608
Lighting Efficiency	2,621	$ 7,882,320	10,125	63,675,438	-	$ -	-
Load Strategy Analysis	4	$ 302,287	525	2,158,444	-	$ 60,960	-
Multi-Family Building Efficiency	21,016	$ 2,500,227	8,407	2,596,674	4,560	$ 302,322	4,154
Non-Profit Energy Savings Program	210,924	$ 8,241,418	6,278	67,417,447	110,143	$ 1,931,438	420,180
Process & Commercial Efficiency	629	$ 13,460,738	23,424	116,344,247	45	$ 628,060	237,232
Self-Direct	1	$ 257,221	289	2,143,227	-	$ -	-
Business Segment Total	**252,494**	**$ 50,857,885**	**64,769**	**338,251,629**	**116,975**	**$ 5,362,181**	**828,558**
Affordable Efficient New Home Construction	25	$ 144,479	9	96,600	17	$ 335,399	432
Home Energy Savings Program	2,602	$ 2,693,731	305	1,412,068	313	$ 4,198,976	10,082
Low Income Home Energy Squad	1,598	$ 533,346	137	786,231	647	$ 295,588	2,998
Low Income Multi-Family Building Efficiency	9,949	$ 1,105,183	207	1,303,956	2,319	$ 144,362	2,227
Workforce Development & Education	80	$ 2,083,139	-	-	15	$ 438,030	-
Income Qualified Segment Total	**14,254**	**$ 6,559,879**	**658**	**3,598,855**	**3,311**	**$ 5,412,356**	**15,738**
Battery Connect	130	$ -	-	-	-	$ -	-
Commercial AC Control	598	$ 2,263,456	3,867	22,879	83	$ 6,783	-
Critical Peak Pricing	-	$ 40,807	-	-	-	$ -	-
Electric Rate Savings	1	$ 344,933	152	153	-	$ -	-
Peak Day Partners	87	$ 284,769	113,607	-	-	$ -	-
Peak Partner Rewards	86	$ 1,010,263	20,864	34,974	-	$ -	-
Residential Demand Response	551,130	$ 12,079,333	49,050	51,324	-	$ -	-
Demand Response Segment Total	**552,032**	**$ 16,023,561**	**187,541**	**109,331**	**83**	**$ 6,783**	**-**
Efficient Fuel Switching Training & Support	-	$ -	-	-	-	$ -	-
Outdoor Equipment	-	$ -	-	-	-	$ -	-
Efficient Fuel Switching Total	**-**	**$ -**	**-**	**-**	**-**	**$ -**	**-**
Advertising & Promotion	-	$ 6,452,391	-	-	-	$ 1,512,304	-
Application Development & Maintenance	-	$ 608,563	-	-	-	$ 276,878	-
CIP Training	-	$ 95,686	-	-	-	$ 36,785	-
Community Energy Reporting	229	$ 29,370	-	-	149	$ 16,168	-
Electric Utility Infrastructure	-	$ -	-	-	-	$ -	-
Energy Benchmarking	8,550	$ 197,540	-	-	2,666	$ 48,513	-
Partners in Energy	621,732	$ 1,174,806	-	-	198,448	$ 241,977	-
Planning & Regulatory Affairs	-	$ 678,577	-	-	-	$ 262,506	-
Indirect Products & Services Total	**630,511**	**$ 9,236,933**	**-**	**-**	**201,263**	**$ 2,395,131**	**-**
Market Research	-	$ 1,555,240	-	-	-	$ 350,786	-
Product Development	-	$ 2,109,911	-	-	-	$ 189,414	-
Research, Evaluations & Pilots Total	**-**	**$ 3,665,151**	**-**	**-**	**-**	**$ 540,200**	**-**
Portfolio Total	**3,904,913**	**$ 113,642,639**	**285,748**	**461,784,638**	**1,550,191**	**$ 25,019,298**	**1,240,840**
Minnesota Assessments	-	$ 1,859,102	-	-	-	$ 390,117	-
Minnesota Efficient Technology Accelerator	-	$ 3,044,149	-	-	-	$ 604,140	-
Assessments Segment Total	**-**	**$ 4,903,251**	**-**	**-**	**-**	**$ 994,257**	**-**
EnerChange	69	$ 621,986	-	-	22	$ 68,156	-
EnergySmart	350	$ 626,451	-	-	77	$ 28,695	-
One Stop Shop	1,867	$ 15,713,802	8,599	54,570,839	105	$ 75,010	3,034
Trillion BTU	13	$ 142,598	-	-	2	$ 21,258	-
Alternative Filings Total	**2,299**	**$ 17,104,838**	**8,599**	**54,570,839**	**206**	**$ 193,119**	**3,034**
Portfolio Total w Alternative Filings	**3,907,212**	**$ 135,650,728**	**294,347**	**516,355,477**	**1,550,397**	**$ 26,206,674**	**1,243,874**

Tables are in terms of energy savings. Negative numbers indicate increases in energy consumption.

2024 Efficient Fuel Switching Executive Summary - Target

Program Name	Electric Participants	Electric Budget	Gen kW Savings	Gen kWh Savings	Gas Participants	Gas Budget	Dth Savings	Claimable Dth Savings
Consumer Education	-	$ -	-	-	-	$ -	-	-
Efficient New Home Construction	-	$ -	-	-	-	$ -	-	-
Energy Efficient Showerheads	-	$ -	-	-	-	$ -	-	-
Home Energy Audit	-	$ -	-	-	-	$ -	-	-
Home Energy Insights	-	$ -	-	-	-	$ -	-	-
Home Energy Squad	-	$ -	-	-	-	$ -	-	-
Home Lighting	-	$ -	-	-	-	$ -	-	-
Insulation Rebates	-	$ -	-	-	-	$ -	-	-
Lamp Recycling	-	$ -	-	-	-	$ -	-	-
Refrigerator & Freezer Recycling	-	$ -	-	-	-	$ -	-	-
Residential Heating & Cooling	707	$ 186,469	(6)	(1,702,732)	707	$ 658,489	15,417	9,608
School Education Kits	-	$ -	-	-	-	$ -	-	-
Whole Home Efficiency	19	$ -	(1)	(86,513)	12	$ 14,167	441	146
Residential Segment Total	**726**	**$ 186,469**	**(6)**	**(1,789,245)**	**719**	**$ 672,657**	**15,859**	**9,754**
Business Education	-	$ -	-	-	-	$ -	-	-
Business Energy Assessments	22	$ 24,692	-	(126,496)	22	$ 66,355	1,873	1,442
Business New Construction	-	$ -	-	-	-	$ -	-	-
Compressed Air Efficiency	1	$ 5,315	(4)	(37,387)	-	$ -	-	-
Custom Efficiency	3	$ 23,734	-	(13,315)	2	$ 863	99	76
Data Center Efficiency	-	$ -	-	-	-	$ -	-	-
Efficiency Controls	-	$ -	-	-	-	$ -	-	-
Empower Facilities	-	$ -	-	-	-	$ -	-	-
Empower Intelligence	-	$ -	-	-	-	$ -	-	-
Foodservice Equipment	-	$ -	-	-	-	$ -	-	-
HVAC+R	35	$ -	(2)	(182,674)	34	$ 8,275	866	243
Lighting Efficiency	-	$ -	-	-	-	$ -	-	-
Load Strategy Analysis	-	$ -	-	-	-	$ -	-	-
Multi-Family Building Efficiency	-	$ -	-	-	-	$ -	-	-
Non-Profit Energy Savings Program	-	$ -	-	-	-	$ -	-	-
Process & Commercial Efficiency	5	$ 36,881	-	(13,315)	5	$ 3,142	197	152
Self-Direct	-	$ -	-	-	-	$ -	-	-
Business Segment Total	**66**	**$ 90,622**	**(6)**	**(373,187)**	**63**	**$ 78,634**	**3,035**	**1,912**
Affordable Efficient New Home Construction	-	$ -	-	-	-	$ -	-	-
Home Energy Savings Program	4	$ -	-	(25,416)	2	$ 13,475	79	(7)
Low Income Home Energy Squad	-	$ -	-	-	-	$ -	-	-
Low Income Multi-Family Building Efficiency	1	$ -	-	(6,089)	1	$ 134,589	44	24
Workforce Development & Education	-	$ -	-	-	-	$ -	-	-
Income Qualified Segment Total	**5**	**$ -**	**-**	**(31,505)**	**3**	**$ 148,064**	**124**	**16**
Battery Connect	-	$ -	-	-	-	$ -	-	-
Commercial AC Control	-	$ -	-	-	-	$ -	-	-
Critical Peak Pricing	-	$ -	-	-	-	$ -	-	-
Electric Rate Savings	-	$ -	-	-	-	$ -	-	-
Peak Day Partners	-	$ -	-	-	-	$ -	-	-
Peak Partner Rewards	-	$ -	-	-	-	$ -	-	-
Residential Demand Response	-	$ -	-	-	-	$ -	-	-
Demand Response Segment Total	**-**	**$ -**	**-**	**-**	**-**	**$ -**	**-**	**-**
Efficient Fuel Switching Training & Support	550	$ 1,700,000	-	-	-	$ -	-	-
Outdoor Equipment	1,382	$ 227,290	(4)	(61,560)	-	$ -	-	-
Efficient Fuel Switching Total	**1,932**	**$ 1,927,290**	**(4)**	**(61,560)**	**-**	**$ -**	**-**	**-**
Advertising & Promotion	-	$ -	-	-	-	$ -	-	-
Application Development & Maintenance	-	$ -	-	-	-	$ -	-	-
CIP Training	-	$ -	-	-	-	$ -	-	-
Community Energy Reporting	-	$ -	-	-	-	$ -	-	-
Electric Utility Infrastructure	-	$ -	-	-	-	$ -	-	-
Energy Benchmarking	-	$ -	-	-	-	$ -	-	-
Partners in Energy	-	$ -	-	-	-	$ -	-	-
Planning & Regulatory Affairs	-	$ -	-	-	-	$ -	-	-
Indirect Products & Services Total	**-**	**$ -**	**-**	**-**	**-**	**$ -**	**-**	**-**
Market Research	-	$ -	-	-	-	$ -	-	-
Product Development	-	$ 523,291	-	-	-	$ 130,051	-	-
Research, Evaluations & Pilots Total	**-**	**$ 523,291**	**-**	**-**	**-**	**$ 130,051**	**-**	**-**
Portfolio Total	**2,729**	**$ 2,727,673**	**(16)**	**(2,255,497)**	**785**	**$ 1,029,405**	**19,018**	**11,682**
Minnesota Assessments	-	$ -	-	-	-	$ -	-	-
Minnesota Efficient Technology Accelerator	-	$ -	-	-	-	$ -	-	-
Assessments Segment Total	**-**	**$ -**	**-**	**-**	**-**	**$ -**	**-**	**-**
EnerChange	-	$ -	-	-	-	$ -	-	-
EnergySmart	-	$ -	-	-	-	$ -	-	-
One Stop Shop	-	$ -	-	-	-	$ -	-	-
Trillion BTU	-	$ -	-	-	-	$ -	-	-
Alternative Filings Total	**-**	**$ -**	**-**	**-**	**-**	**$ -**	**-**	**-**
Portfolio Total w Alternative Filings	**2,729**	**$ 2,727,673**	**(16)**	**(2,255,497)**	**785**	**$ 1,029,405**	**19,018**	**11,682**

Tables are in terms of energy savings. Negative numbers indicate increases in energy consumption.

2024 Efficient Fuel Switching Executive Summary - Actual

Program Name	Electric Participants	Electric Budget	Gen kW Savings	Gen kWh Savings	Gas Participants	Gas Budget	Dth Savings	Claimable Dth Savings
Consumer Education	-	$ -	-	-	-	$ -	-	-
Efficient New Home Construction	-	$ -	-	-	-	$ -	-	-
Energy Efficient Showerheads	-	$ -	-	-	-	$ -	-	-
Home Energy Audit	-	$ -	-	-	-	$ -	-	-
Home Energy Insights	-	$ -	-	-	-	$ -	-	-
Home Energy Squad	-	$ -	-	-	-	$ -	-	-
Home Lighting	-	$ -	-	-	-	$ -	-	-
Insulation Rebates	-	$ -	-	-	-	$ -	-	-
Lamp Recycling	-	$ -	-	-	-	$ -	-	-
Refrigerator & Freezer Recycling	-	$ -	-	-	-	$ -	-	-
Residential Heating & Cooling	4,154	$ 3,298,684	(6)	(10,166,323)	2,189	$ 3,078,683	88,853	54,166
School Education Kits	-	$ -	-	-	-	$ -	-	-
Whole Home Efficiency	-	$ -	-	-	-	$ -	-	-
Residential Segment Total	**4,154**	**$ 3,298,684**	**(6)**	**(10,166,323)**	**2,189**	**$ 3,078,683**	**88,853**	**54,166**
Business Education	-	$ -	-	-	-	$ -	-	-
Business Energy Assessments	-	$ -	-	-	-	$ -	-	-
Business New Construction	-	$ 840	-	-	-	$ -	-	-
Compressed Air Efficiency	-	$ 582	-	-	-	$ -	-	-
Custom Efficiency	-	$ -	-	-	-	$ -	-	-
Data Center Efficiency	-	$ -	-	-	-	$ -	-	-
Efficiency Controls	-	$ 7,560	-	-	-	$ 228	-	-
Empower Facilities	-	$ -	-	-	-	$ -	-	-
Empower Intelligence	-	$ -	-	-	-	$ -	-	-
Foodservice Equipment	-	$ -	-	-	-	$ -	-	-
HVAC+R	-	$ -	-	-	-	$ -	-	-
Lighting Efficiency	-	$ -	-	-	-	$ -	-	-
Load Strategy Analysis	-	$ 51,329	-	-	-	$ -	-	-
Multi-Family Building Efficiency	-	$ -	-	-	-	$ 6	-	-
Non-Profit Energy Savings Program	-	$ -	-	-	-	$ -	-	-
Process & Commercial Efficiency	-	$ 333	-	-	-	$ -	-	-
Self-Direct	-	$ -	-	-	-	$ -	-	-
Business Segment Total	**-**	**$ 60,645**	**-**	**-**	**-**	**$ 234**	**-**	**-**
Affordable Efficient New Home Construction	-	$ -	-	-	-	$ -	-	-
Home Energy Savings Program	-	$ -	-	-	-	$ -	-	-
Low Income Home Energy Squad	-	$ -	-	-	-	$ -	-	-
Low Income Multi-Family Building Efficiency	-	$ -	-	-	-	$ -	-	-
Workforce Development & Education	-	$ -	-	-	-	$ -	-	-
Income Qualified Segment Total	**-**	**$ -**	**-**	**-**	**-**	**$ -**	**-**	**-**
Battery Connect	-	$ -	-	-	-	$ -	-	-
Commercial AC Control	-	$ -	-	-	-	$ -	-	-
Critical Peak Pricing	-	$ -	-	-	-	$ -	-	-
Electric Rate Savings	-	$ -	-	-	-	$ -	-	-
Peak Day Partners	-	$ -	-	-	-	$ -	-	-
Peak Partner Rewards	-	$ -	-	-	-	$ -	-	-
Residential Demand Response	-	$ -	-	-	-	$ -	-	-
Demand Response Segment Total	**-**	**$ -**	**-**	**-**	**-**	**$ -**	**-**	**-**
Efficient Fuel Switching Training & Support	-	$ 2,176	-	-	-	$ -	-	-
Outdoor Equipment	2,047	$ 201,359	(74)	(727,127)	-	$ -	-	-
Efficient Fuel Switching Total	**2,047**	**$ 203,535**	**(74)**	**(727,127)**	**-**	**$ -**	**-**	**-**
Advertising & Promotion	-	$ -	-	-	-	$ -	-	-
Application Development & Maintenance	-	$ -	-	-	-	$ -	-	-
CIP Training	-	$ -	-	-	-	$ -	-	-
Community Energy Reporting	-	$ -	-	-	-	$ -	-	-
Electric Utility Infrastructure	-	$ -	-	-	-	$ -	-	-
Energy Benchmarking	-	$ -	-	-	-	$ -	-	-
Partners in Energy	-	$ -	-	-	-	$ -	-	-
Planning & Regulatory Affairs	-	$ -	-	-	-	$ -	-	-
Indirect Products & Services Total	**-**	**$ -**	**-**	**-**	**-**	**$ -**	**-**	**-**
Market Research	-	$ -	-	-	-	$ -	-	-
Product Development	-	$ 47,343	-	-	-	$ -	-	-
Research, Evaluations & Pilots Total	**-**	**$ 47,343**	**-**	**-**	**-**	**$ -**	**-**	**-**
Portfolio Total	**6,201**	**$ 3,610,207**	**(80)**	**(10,893,450)**	**2,189**	**$ 3,078,917**	**88,853**	**54,166**
Minnesota Assessments	-	$ -	-	-	-	$ -	-	-
Minnesota Efficient Technology Accelerator	-	$ -	-	-	-	$ -	-	-
Assessments Segment Total	**-**	**$ -**	**-**	**-**	**-**	**$ -**	**-**	**-**
EnerChange	-	$ -	-	-	-	$ -	-	-
EnergySmart	-	$ -	-	-	-	$ -	-	-
One Stop Shop	1	$ 1,714	-	-	-	$ -	-	-
Trillion BTU	-	$ -	-	-	-	$ -	-	-
Alternative Filings Total	**1**	**$ 1,714**	**-**	**-**	**-**	**$ -**	**-**	**-**
Portfolio Total w Alternative Filings	**6,202**	**$ 3,611,921**	**(80)**	**(10,893,450)**	**2,189**	**$ 3,078,917**	**88,853**	**54,166**

Tables are in terms of energy savings. Negative numbers indicate increases in energy consumption.

2024 Electric Energy Efficiency Cost-Effectivness Summary - Target					
Program Name	**Participant Test Ratio**	**Utility Test Ratio**	**Electric Rate Impact Test Ratio**	**Societal Test Ratio**	**Minnesota Test Ratio**
Consumer Education	-	-	-	-	-
Efficient New Home Construction	5.05	2.37	0.41	1.63	3.12
Energy Efficient Showerheads	132.30	3.31	0.31	9.21	4.20
Home Energy Audit	-	-	-	-	-
Home Energy Insights	-	3.57	0.39	4.56	4.56
Home Energy Squad	14.29	1.75	0.33	1.92	2.34
Home Lighting	12.20	4.31	0.36	3.02	5.78
Insulation Rebates	0.69	1.80	0.85	0.73	2.15
Lamp Recycling	-	-	-	-	-
Refrigerator & Freezer Recycling	24.14	1.66	0.31	1.90	2.08
Residential Heating & Cooling	2.33	2.84	1.04	1.91	3.43
School Education Kits	17.90	3.10	0.45	3.43	3.94
Whole Home Efficiency	3.05	2.38	0.38	1.18	3.10
Residential Segment Total	**7.65**	**2.78**	**0.45**	**2.24**	**3.58**
Business Education	-	-	-	-	-
Business Energy Assessments	4.66	3.46	0.48	2.03	4.49
Business New Construction	4.07	3.95	0.53	2.13	5.20
Compressed Air Efficiency	7.73	4.01	0.47	2.90	5.34
Custom Efficiency	5.14	3.17	0.46	4.27	4.19
Data Center Efficiency	4.01	4.67	0.42	1.93	6.32
Efficiency Controls	3.56	4.20	0.37	1.61	5.67
Empower Facilities	-	-	-	-	-
Empower Intelligence	5.24	1.19	0.28	0.98	1.58
Foodservice Equipment	8.88	2.86	0.47	3.03	3.75
HVAC+R	5.37	4.53	0.52	2.52	5.86
Lighting Efficiency	5.09	4.77	0.52	2.51	6.29
Load Strategy Analysis	6.90	3.84	0.41	2.52	5.12
Multi-Family Building Efficiency	10.02	0.58	0.25	0.97	0.74
Non-Profit Energy Savings Program	22.32	2.90	0.32	3.10	3.94
Process & Commercial Efficiency	5.91	5.48	0.52	3.05	7.16
Self-Direct	3.23	3.81	0.50	1.70	4.88
Business Segment Total	**5.19**	**4.29**	**0.50**	**2.57**	**5.64**
Affordable Efficient New Home Construction	-	0.04	0.04	1.00	0.05
Home Energy Savings Program	2.39	0.32	0.19	0.64	0.41
Low Income Home Energy Squad	23.89	1.07	0.29	1.43	1.43
Low Income Multi-Family Building Efficiency	3.34	0.53	0.24	0.89	0.68
Workforce Development & Education	-	-	-	-	-
Income Qualified Segment Total	**3.98**	**0.38**	**0.20**	**0.69**	**0.49**
Battery Connect	-	0.59	0.59	0.65	0.61
Commercial AC Control	10.08	1.75	0.91	1.88	1.96
Critical Peak Pricing	-	11.26	10.48	11.26	11.26
Electric Rate Savings	-	6.13	1.60	6.37	6.37
Peak Day Partners	-	4.71	4.19	5.62	4.72
Peak Partner Rewards	-	1.56	1.53	2.14	1.56
Residential Demand Response	71.14	2.07	1.42	2.44	2.30
Demand Response Segment Total	**40.28**	**2.59**	**1.69**	**2.98**	**2.77**
Efficient Fuel Switching Training & Support	-	-	-	-	-
Outdoor Equipment	-	-	-	-	-
Efficient Fuel Switching Total	**-**	**-**	**-**	**-**	**-**
Advertising & Promotion	-	-	-	-	-
Application Development & Maintenance	-	-	-	-	-
CIP Training	-	-	-	-	-
Community Energy Reporting	-	-	-	-	-
Electric Utility Infrastructure	-	-	-	-	-
Energy Benchmarking	-	-	-	-	-
Partners in Energy	-	-	-	-	-
Planning & Regulatory Affairs	-	-	-	-	-
Indirect Products & Services Total	**-**	**-**	**-**	**-**	**-**
Market Research	-	-	-	-	-
Product Development	-	-	-	-	-
Research, Evaluations & Pilots Total	**-**	**-**	**-**	**-**	**-**
Portfolio Total	**5.72**	**2.96**	**0.51**	**2.29**	**3.78**
Minnesota Assessments	-	-	-	-	-
Minnesota Efficient Technology Accelerator	-	-	-	-	-
Assessments Segment Total	**-**	**-**	**-**	**-**	**-**
EnerChange	-	-	-	-	-
EnergySmart	-	-	-	-	-
One Stop Shop	-	1.95	1.95	3.02	2.51
Trillion BTU	-	-	-	-	-
Alternative Filings Total	**-**	**1.78**	**1.78**	**2.77**	**2.29**
Portfolio Total w Alternative Filings	**5.76**	**2.78**	**0.53**	**2.28**	**3.55**

2024 Electric Energy Efficiency Cost-Effectivness Summary - Actual

Program Name	Participant Test Ratio	Utility Test Ratio	Electric Rate Impact Test Ratio	Societal Test Ratio	Minnesota Test Ratio
Consumer Education	-	-	-	-	-
Efficient New Home Construction	5.72	2.99	0.44	1.92	3.92
Energy Efficient Showerheads	137.62	2.20	0.30	6.65	2.80
Home Energy Audit	-	-	-	-	-
Home Energy Insights	-	3.23	0.44	4.03	4.00
Home Energy Squad	45.64	1.13	0.29	1.52	1.52
Home Lighting	17.19	3.74	0.35	3.37	5.02
Insulation Rebates	1.45	2.41	0.82	1.19	2.93
Lamp Recycling	-	-	-	-	-
Refrigerator & Freezer Recycling	-	0.62	0.23	0.91	0.78
Residential Heating & Cooling	0.31	2.68	0.94	0.38	3.24
School Education Kits	25.50	4.22	0.43	4.37	5.42
Whole Home Efficiency	3.41	0.83	0.44	0.85	1.03
Residential Segment Total	**2.20**	**2.79**	**0.44**	**1.03**	**3.59**
Business Education	-	-	-	-	-
Business Energy Assessments	3.92	3.54	0.48	2.18	4.60
Business New Construction	2.85	3.49	0.53	1.64	4.58
Compressed Air Efficiency	7.23	3.96	0.47	2.81	5.30
Custom Efficiency	1.29	2.63	0.41	0.79	3.53
Data Center Efficiency	10.61	0.85	0.32	1.11	1.10
Efficiency Controls	4.54	3.01	0.38	1.88	3.98
Empower Facilities	-	-	-	-	-
Empower Intelligence	-	-	-	-	-
Foodservice Equipment	9.08	2.98	0.47	2.70	3.92
HVAC+R	3.20	3.22	0.51	1.65	4.12
Lighting Efficiency	4.27	4.39	0.50	2.13	5.78
Load Strategy Analysis	39.40	1.41	0.43	1.89	1.73
Multi-Family Building Efficiency	4.47	5.43	2.24	4.70	6.40
Non-Profit Energy Savings Program	12.58	3.28	0.34	2.86	4.30
Process & Commercial Efficiency	4.79	5.54	0.55	3.42	7.20
Self-Direct	6.72	4.70	0.41	2.64	6.32
Business Segment Total	**4.69**	**4.17**	**0.51**	**2.65**	**5.42**
Affordable Efficient New Home Construction	3.29	0.49	0.21	0.91	0.67
Home Energy Savings Program	2.42	0.37	0.20	0.68	0.48
Low Income Home Energy Squad	35.82	1.09	0.29	1.48	1.46
Low Income Multi-Family Building Efficiency	3.31	0.67	0.27	0.90	0.87
Workforce Development & Education	-	-	-	0.27	-
Income Qualified Segment Total	**3.55**	**0.37**	**0.20**	**0.69**	**0.48**
Battery Connect	-	-	-	-	-
Commercial AC Control	4.24	1.57	0.91	1.52	1.75
Critical Peak Pricing	-	-	-	-	-
Electric Rate Savings	-	0.22	0.20	0.23	0.23
Peak Day Partners	-	42.36	42.36	42.31	42.36
Peak Partner Rewards	-	2.19	2.18	2.56	2.19
Residential Demand Response	23,386.62	3.26	1.85	3.87	3.64
Demand Response Segment Total	**37.83**	**3.57**	**2.13**	**3.99**	**3.89**
Efficient Fuel Switching Training & Support	-	-	-	-	-
Outdoor Equipment	-	-	-	-	-
Efficient Fuel Switching Total	**-**	**-**	**-**	**-**	**-**
Advertising & Promotion	-	-	-	-	-
Application Development & Maintenance	-	-	-	-	-
CIP Training	-	-	-	-	-
Community Energy Reporting	-	-	-	-	-
Electric Utility Infrastructure	-	-	-	-	-
Energy Benchmarking	-	-	-	-	-
Partners in Energy	-	-	-	-	-
Planning & Regulatory Affairs	-	-	-	-	-
Indirect Products & Services Total	**-**	**-**	**-**	**-**	**-**
Market Research	-	-	-	-	-
Product Development	-	-	-	0.10	-
Research, Evaluations & Pilots Total	**-**	**-**	**-**	**0.06**	**-**
Portfolio Total	**3.76**	**3.14**	**0.53**	**2.02**	**3.98**
Minnesota Assessments	-	-	-	-	-
Minnesota Efficient Technology Accelerator	-	-	-	-	-
Assessments Segment Total	**-**	**-**	**-**	**-**	**-**
EnerChange	-	-	-	-	-
EnergySmart	-	-	-	-	-
One Stop Shop	4.09	2.03	0.44	1.56	2.63
Trillion BTU	-	-	-	-	-
Alternative Filings Total	**4.09**	**1.88**	**0.43**	**1.50**	**2.44**
Portfolio Total w Alternative Filings	**3.78**	**2.89**	**0.52**	**1.95**	**3.66**

2024 Gas Energy Efficiency Cost-Effectivness Summary - Target					
Program Name	**Participant Test Ratio**	**Utility Test Ratio**	**Gas Rate Impact Test Ratio**	**Societal Test Ratio**	**Minnesota Test Ratio**
Consumer Education	-	-	-	-	-
Efficient New Home Construction	1.77	1.43	0.49	1.41	2.76
Energy Efficient Showerheads	66.79	2.37	0.57	16.37	4.29
Home Energy Audit	-	-	-	-	-
Home Energy Insights	-	2.81	0.59	1.33	4.76
Home Energy Squad	13.71	1.56	0.51	1.26	2.83
Home Lighting	-	-	-	-	-
Insulation Rebates	1.15	1.72	0.52	1.21	3.23
Lamp Recycling	-	-	-	-	-
Refrigerator & Freezer Recycling	-	-	-	-	-
Residential Heating & Cooling	1.95	2.67	0.59	1.37	5.08
School Education Kits	101.82	4.88	0.65	4.97	8.82
Whole Home Efficiency	2.35	1.58	0.51	1.95	3.01
Residential Segment Total	**2.48**	**1.97**	**0.55**	**1.26**	**3.71**
Business Education	-	-	-	-	-
Business Energy Assessments	5.84	4.18	0.69	1.16	7.97
Business New Construction	1.63	5.45	0.71	0.58	10.50
Compressed Air Efficiency	-	-	-	-	-
Custom Efficiency	7.31	5.85	0.72	3.10	11.23
Data Center Efficiency	-	-	-	-	-
Efficiency Controls	1.20	5.05	0.70	0.78	9.29
Empower Facilities	-	-	-	-	-
Empower Intelligence	927.69	0.04	0.04	0.01	0.07
Foodservice Equipment	3.46	3.00	0.64	3.16	5.51
HVAC+R	3.64	3.66	0.67	2.10	6.94
Lighting Efficiency	-	-	-	-	-
Load Strategy Analysis	2.52	6.36	0.73	0.69	11.82
Multi-Family Building Efficiency	9.11	2.70	0.63	2.06	5.20
Non-Profit Energy Savings Program	46.81	6.24	0.68	15.04	11.42
Process & Commercial Efficiency	3.50	5.49	0.71	1.53	10.24
Self-Direct	-	-	-	-	-
Business Segment Total	**5.93**	**4.62**	**0.69**	**1.64**	**8.67**
Affordable Efficient New Home Construction	-	0.21	0.16	0.64	0.41
Home Energy Savings Program	1.44	0.23	0.18	0.68	0.44
Low Income Home Energy Squad	18.91	0.90	0.41	0.78	1.63
Low Income Multi-Family Building Efficiency	6.83	5.10	0.70	0.96	9.83
Workforce Development & Education	-	-	-	-	-
Income Qualified Segment Total	**2.33**	**0.54**	**0.32**	**0.61**	**1.03**
Battery Connect	-	-	-	-	-
Commercial AC Control	8.39	0.95	0.44	0.02	1.71
Critical Peak Pricing	-	-	-	-	-
Electric Rate Savings	-	-	-	-	-
Peak Day Partners	-	-	-	-	-
Peak Partner Rewards	-	-	-	-	-
Residential Demand Response	-	-	-	-	-
Demand Response Segment Total	**8.39**	**0.95**	**0.44**	**0.00**	**1.71**
Efficient Fuel Switching Training & Support	-	-	-	-	-
Outdoor Equipment	-	-	-	-	-
Efficient Fuel Switching Total	**-**	**-**	**-**	**-**	**-**
Advertising & Promotion	-	-	-	-	-
Application Development & Maintenance	-	-	-	-	-
CIP Training	-	-	-	-	-
Community Energy Reporting	-	-	-	-	-
Electric Utility Infrastructure	-	-	-	-	-
Energy Benchmarking	-	-	-	-	-
Partners in Energy	-	-	-	-	-
Planning & Regulatory Affairs	-	-	-	-	-
Indirect Products & Services Total	**-**	**-**	**-**	**-**	**-**
Market Research	-	-	-	-	-
Product Development	-	-	-	-	-
Research, Evaluations & Pilots Total	**-**	**-**	**-**	**-**	**-**
Portfolio Total	**3.75**	**2.26**	**0.58**	**1.08**	**4.26**
Minnesota Assessments	-	-	-	-	-
Minnesota Efficient Technology Accelerator	-	-	-	-	-
Assessments Segment Total	**-**	**-**	**-**	**-**	**-**
EnerChange	-	-	-	-	-
EnergySmart	-	-	-	-	-
One Stop Shop	-	5.09	5.09	0.07	9.55
Trillion BTU	-	-	-	-	-
Alternative Filings Total	**-**	**2.20**	**2.20**	**0.06**	**4.13**
Portfolio Total w Alternative Filings	**3.75**	**2.20**	**0.58**	**0.98**	**4.14**

2024 Gas Energy Efficiency Cost-Effectivness Summary - Actual

Program Name	Participant Test Ratio	Utility Test Ratio	Gas Rate Impact Test Ratio	Societal Test Ratio	Minnesota Test Ratio
Consumer Education	-	-	-	-	-
Efficient New Home Construction	5.65	1.30	0.48	2.15	2.52
Energy Efficient Showerheads	73.23	1.18	0.46	6.65	2.13
Home Energy Audit	-	-	-	-	-
Home Energy Insights	-	2.79	0.59	4.73	4.73
Home Energy Squad	52.89	0.55	0.32	1.77	0.99
Home Lighting	-	-	-	-	-
Insulation Rebates	2.63	1.67	0.52	1.75	3.17
Lamp Recycling	-	-	-	-	-
Refrigerator & Freezer Recycling	-	-	-	-	-
Residential Heating & Cooling	3.16	3.48	0.62	2.50	6.64
School Education Kits	136.10	5.49	1.00	12.58	9.93
Whole Home Efficiency	4.01	0.96	0.42	1.66	1.83
Residential Segment Total	**4.19**	**2.13**	**0.58**	**2.49**	**4.02**
Business Education	-	-	-	-	-
Business Energy Assessments	2.68	3.24	0.65	2.41	5.92
Business New Construction	1.91	4.93	0.70	2.27	9.49
Compressed Air Efficiency	-	-	-	-	-
Custom Efficiency	3.09	7.34	0.74	3.35	14.06
Data Center Efficiency	-	-	-	-	-
Efficiency Controls	4.43	5.97	0.72	4.22	11.16
Empower Facilities	-	-	-	-	-
Empower Intelligence	-	-	-	-	-
Foodservice Equipment	3.43	3.30	0.66	2.86	6.12
HVAC+R	2.36	2.74	0.63	2.16	5.19
Lighting Efficiency	-	-	-	-	-
Load Strategy Analysis	-	-	-	-	-
Multi-Family Building Efficiency	9.35	0.65	0.35	2.09	1.18
Non-Profit Energy Savings Program	94.98	7.00	0.68	24.28	12.66
Process & Commercial Efficiency	4.07	7.43	0.74	4.16	13.50
Self-Direct	-	-	-	-	-
Business Segment Total	**10.21**	**5.44**	**0.68**	**7.26**	**10.00**
Affordable Efficient New Home Construction	4.54	0.12	0.10	0.97	0.23
Home Energy Savings Program	1.85	0.18	0.15	0.69	0.35
Low Income Home Energy Squad	31.75	0.51	0.30	1.48	0.92
Low Income Multi-Family Building Efficiency	5.17	0.96	0.44	2.24	1.78
Workforce Development & Education	-	-	-	0.22	-
Income Qualified Segment Total	**2.26**	**0.20**	**0.16**	**0.76**	**0.38**
Battery Connect	-	-	-	-	-
Commercial AC Control	-	-	-	-	-
Critical Peak Pricing	-	-	-	-	-
Electric Rate Savings	-	-	-	-	-
Peak Day Partners	-	-	-	-	-
Peak Partner Rewards	-	-	-	-	-
Residential Demand Response	-	-	-	-	-
Demand Response Segment Total	**-**	**-**	**-**	**-**	**-**
Efficient Fuel Switching Training & Support	-	-	-	-	-
Outdoor Equipment	-	-	-	-	-
Efficient Fuel Switching Total	**-**	**-**	**-**	**-**	**-**
Advertising & Promotion	-	-	-	-	-
Application Development & Maintenance	-	-	-	-	-
CIP Training	-	-	-	-	-
Community Energy Reporting	-	-	-	-	-
Electric Utility Infrastructure	-	-	-	-	-
Energy Benchmarking	-	-	-	-	-
Partners in Energy	-	-	-	-	-
Planning & Regulatory Affairs	-	-	-	-	-
Indirect Products & Services Total	**-**	**-**	**-**	**-**	**-**
Market Research	-	-	-	-	-
Product Development	-	-	-	-	-
Research, Evaluations & Pilots Total	**-**	**-**	**-**	**-**	**-**
Portfolio Total	**6.71**	**2.42**	**0.59**	**3.78**	**4.50**
Minnesota Assessments	-	-	-	-	-
Minnesota Efficient Technology Accelerator	-	-	-	-	-
Assessments Segment Total	**-**	**-**	**-**	**-**	**-**
EnerChange	-	-	-	-	-
EnergySmart	-	-	-	-	-
One Stop Shop	-	1.86	0.57	3.68	3.37
Trillion BTU	-	-	-	-	-
Alternative Filings Total	**-**	**0.77**	**0.40**	**1.52**	**1.39**
Portfolio Total w Alternative Filings	**6.71**	**2.33**	**0.59**	**3.71**	**4.33**

2024 Efficient Fuel Switching Cost-Effectivness Summary - Target						
Program Name	**Participant Test Ratio**	**Utility Test Ratio**	**Electric Rate Impact Test Ratio**	**Gas Rate Impact Test Ratio**	**Societal Test Ratio**	**Minnesota Test Ratio**
Consumer Education	-	-	-	-	-	-
Efficient New Home Construction	-	-	-	-	-	-
Energy Efficient Showerheads	-	-	-	-	-	-
Home Energy Audit	-	-	-	-	-	-
Home Energy Insights	-	-	-	-	-	-
Home Energy Squad	-	-	-	-	-	-
Home Lighting	-	-	-	-	-	-
Insulation Rebates	-	-	-	-	-	-
Lamp Recycling	-	-	-	-	-	-
Refrigerator & Freezer Recycling	-	-	-	-	-	-
Residential Heating & Cooling	0.83	0.70	1.94	0.52	0.91	1.12
School Education Kits	-	-	-	-	-	-
Whole Home Efficiency	0.40	0.57	2.35	0.56	0.55	0.84
Residential Segment Total	**0.81**	**0.70**	**1.96**	**0.52**	**0.90**	**1.11**
Business Education	-	-	-	-	-	-
Business Energy Assessments	0.56	0.98	1.97	0.60	0.81	1.63
Business New Construction	-	-	-	-	-	-
Compressed Air Efficiency	1.49	-	1.29	-	1.87	2.27
Custom Efficiency	1.60	0.28	0.64	0.72	1.40	2.01
Data Center Efficiency	-	-	-	-	-	-
Efficiency Controls	-	-	-	-	-	-
Empower Facilities	-	-	-	-	-	-
Empower Intelligence	-	-	-	-	-	-
Foodservice Equipment	-	-	-	-	-	-
HVAC+R	0.24	0.63	1.85	0.72	0.41	0.89
Lighting Efficiency	-	-	-	-	-	-
Load Strategy Analysis	-	-	-	-	-	-
Multi-Family Building Efficiency	-	-	-	-	-	-
Non-Profit Energy Savings Program	-	-	-	-	-	-
Process & Commercial Efficiency	1.13	0.37	0.45	0.69	0.83	0.68
Self-Direct	-	-	-	-	-	-
Business Segment Total	**0.54**	**0.68**	**1.52**	**0.64**	**0.75**	**1.35**
Affordable Efficient New Home Construction	-	-	-	-	-	-
Home Energy Savings Program	0.49	0.21	2.28	0.27	0.50	0.33
Low Income Home Energy Squad	-	-	-	-	-	-
Low Income Multi-Family Building Efficiency	1.27	0.03	2.25	0.03	0.15	0.05
Workforce Development & Education	-	-	-	-	-	-
Income Qualified Segment Total	**0.72**	**0.06**	**2.28**	**0.06**	**0.23**	**0.10**
Battery Connect	-	-	-	-	-	-
Commercial AC Control	-	-	-	-	-	-
Critical Peak Pricing	-	-	-	-	-	-
Electric Rate Savings	-	-	-	-	-	-
Peak Day Partners	-	-	-	-	-	-
Peak Partner Rewards	-	-	-	-	-	-
Residential Demand Response	-	-	-	-	-	-
Demand Response Segment Total	**-**	**-**	**-**	**-**	**-**	**-**
Efficient Fuel Switching Training & Support	-	-	-	-	0.59	-
Outdoor Equipment	1.10	-	0.22	-	0.90	2.28
Efficient Fuel Switching Total	**2.86**	**-**	**0.03**	**-**	**0.69**	**0.30**
Advertising & Promotion	-	-	-	-	-	-
Application Development & Maintenance	-	-	-	-	-	-
CIP Training	-	-	-	-	-	-
Community Energy Reporting	-	-	-	-	-	-
Electric Utility Infrastructure	-	-	-	-	-	-
Energy Benchmarking	-	-	-	-	-	-
Partners in Energy	-	-	-	-	-	-
Planning & Regulatory Affairs	-	-	-	-	-	-
Indirect Products & Services Total	**-**	**-**	**-**	**-**	**-**	**-**
Market Research	-	-	-	-	-	-
Product Development	-	-	-	-	-	-
Research, Evaluations & Pilots Total	**-**	**-**	**-**	**-**	**-**	**-**
Portfolio Total	**0.98**	**0.31**	**0.68**	**0.49**	**0.72**	**0.68**
Minnesota Assessments	-	-	-	-	-	-
Minnesota Efficient Technology Accelerator	-	-	-	-	-	-
Assessments Segment Total	**-**	**-**	**-**	**-**	**-**	**-**
EnerChange	-	-	-	-	-	-
EnergySmart	-	-	-	-	-	-
One Stop Shop	-	-	-	-	-	-
Trillion BTU	-	-	-	-	-	-
Alternative Filings Total	**-**	**-**	**-**	**-**	**-**	**-**
Portfolio Total w Alternative Filings	**0.98**	**0.31**	**0.68**	**0.49**	**0.72**	**0.68**

2024 Efficient Fuel Switching Cost-Effectivness Summary - Actual

Program Name	Participant Test Ratio	Utility Test Ratio	Electric Rate Impact Test Ratio	Gas Rate Impact Test Ratio	Societal Test Ratio	Minnesota Test Ratio
Consumer Education	-	-	-	-	-	-
Efficient New Home Construction	-	-	-	-	-	-
Energy Efficient Showerheads	-	-	-	-	-	-
Home Energy Audit	-	-	-	-	-	-
Home Energy Insights	-	-	-	-	-	-
Home Energy Squad	-	-	-	-	-	-
Home Lighting	-	-	-	-	-	-
Insulation Rebates	-	-	-	-	-	-
Lamp Recycling	-	-	-	-	-	-
Refrigerator & Freezer Recycling	-	-	-	-	-	-
Residential Heating & Cooling	1.55	0.60	1.37	0.55	1.40	0.97
School Education Kits	-	-	-	-	-	-
Whole Home Efficiency	-	-	-	-	-	-
Residential Segment Total	**1.55**	**0.60**	**1.37**	**0.55**	**1.40**	**0.97**
Business Education	-	-	-	-	-	-
Business Energy Assessments	-	-	-	-	-	-
Business New Construction	-	-	-	-	-	-
Compressed Air Efficiency	-	-	-	-	-	-
Custom Efficiency	-	-	-	-	-	-
Data Center Efficiency	-	-	-	-	-	-
Efficiency Controls	-	-	-	-	-	-
Empower Facilities	-	-	-	-	-	-
Empower Intelligence	-	-	-	-	-	-
Foodservice Equipment	-	-	-	-	-	-
HVAC+R	-	-	-	-	-	-
Lighting Efficiency	-	-	-	-	-	-
Load Strategy Analysis	-	-	-	-	-	-
Multi-Family Building Efficiency	-	-	-	-	-	-
Non-Profit Energy Savings Program	-	-	-	-	-	-
Process & Commercial Efficiency	-	-	-	-	-	-
Self-Direct	-	-	-	-	-	-
Business Segment Total	**-**	**-**	**-**	**-**	**-**	**-**
Affordable Efficient New Home Construction	-	-	-	-	-	-
Home Energy Savings Program	-	-	-	-	-	-
Low Income Home Energy Squad	-	-	-	-	-	-
Low Income Multi-Family Building Efficiency	-	-	-	-	-	-
Workforce Development & Education	-	-	-	-	-	-
Income Qualified Segment Total	**-**	**-**	**-**	**-**	**-**	**-**
Battery Connect	-	-	-	-	-	-
Commercial AC Control	-	-	-	-	-	-
Critical Peak Pricing	-	-	-	-	-	-
Electric Rate Savings	-	-	-	-	-	-
Peak Day Partners	-	-	-	-	-	-
Peak Partner Rewards	-	-	-	-	-	-
Residential Demand Response	-	-	-	-	-	-
Demand Response Segment Total	**-**	**-**	**-**	**-**	**-**	**-**
Efficient Fuel Switching Training & Support	-	-	-	-	0.69	-
Outdoor Equipment	6.73	-	1.08	-	7.21	10.63
Efficient Fuel Switching Total	**6.73**	**-**	**1.08**	**-**	**7.19**	**10.59**
Advertising & Promotion	-	-	-	-	-	-
Application Development & Maintenance	-	-	-	-	-	-
CIP Training	-	-	-	-	-	-
Community Energy Reporting	-	-	-	-	-	-
Electric Utility Infrastructure	-	-	-	-	-	-
Energy Benchmarking	-	-	-	-	-	-
Partners in Energy	-	-	-	-	-	-
Planning & Regulatory Affairs	-	-	-	-	-	-
Indirect Products & Services Total	**-**	**-**	**-**	**-**	**-**	**-**
Market Research	-	-	-	-	-	-
Product Development	-	-	-	-	-	-
Research, Evaluations & Pilots Total	**-**	**-**	**-**	**-**	**-**	**-**
Portfolio Total	**1.96**	**0.57**	**1.33**	**0.55**	**1.77**	**1.39**
Minnesota Assessments	-	-	-	-	-	-
Minnesota Efficient Technology Accelerator	-	-	-	-	-	-
Assessments Segment Total	**-**	**-**	**-**	**-**	**-**	**-**
EnerChange	-	-	-	-	-	-
EnergySmart	-	-	-	-	-	-
One Stop Shop	-	-	-	-	1.00	-
Trillion BTU	-	-	-	-	-	-
Alternative Filings Total	**-**	**-**	**-**	**-**	**1.00**	**-**
Portfolio Total w Alternative Filings	**1.96**	**0.57**	**1.33**	**0.55**	**1.77**	**1.39**

SECTION 2: CIP ADJUSTMENT FACTOR FILINGS – ELECTRIC AND NATURAL GAS

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Hwikwon Ham	Commissioner
Audrey Partridge	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

IN THE MATTER OF THE PETITION OF NORTHERN STATES POWER COMPANY APPROVAL OF A NATURAL GAS CONSERVATION IMPROVEMENT PROGRAM ADJUSTMENT FACTOR	DOCKET NO. G002/M-25-47 **PETITION**

OVERVIEW

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission (Commission) this Petition for approval of its natural gas Conservation Improvement Program (CIP) Adjustment Factor for 2025-2026.

The Company conserved 1,298,039[1] Dth of natural gas though our 2024 ECO activities. This achievement is 1.67% of our retail sales which exceeds the energy targets established in Minnesota Statute §216B.241. These results were achieved while spending approximately $29 million (98 percent of our approved budget).

Specifically, we request that the Commission:

- Approve the Company's 2024 natural gas CIP Tracker account;
- Approve the incentive of $4,313,292 earned for 2024 performance; and
- Approve the proposed 2025/2026 natural gas CIP Adjustment Factor of $0.023370 per therm.

[1] This savings value includes savings from both Energy Efficiency and the claimable savings from Efficient Fuel Switching. The Company saved 1,243,874 Dth through Energy Efficiency and claimed 54,166 Dth through Efficient Fuel Switching. The Efficient Fuel Switching savings are the net site savings which also accounts for the added electricity from these activities. The Company reduced gas usage by 88,853 Dth with a corresponding increase of 10,166,323 kWh on the electric system.

I. DESCRIPTION AND PURPOSE OF FILING

A. Background

Minn. Stat. § 216B.241 sets forth Minnesota's policy on utility investments in energy conservation. Generally, this statute provides that qualifying energy conservation improvements are utility investments or expenses that result in a net reduction in energy use. The statute provides a multi-step process for selecting qualifying programs subject to approval by the Minnesota Department of Commerce Division of Energy Resources (Department). Minnesota Rules 7690.0550 requires that by May 1 of each year, natural gas utilities file with the Department a status report on each program undertaken during the previous year.

While the Deputy Commissioner approves the ECO programs to be offered, the Commission has the authority to allow recovery of approved expenses and incentives under Minn. Stat. § 216B.16, subd. 6b and 216B.241, subd. 2b. These statutes provide for recovery of CIP expenses through a rate rider mechanism without a general rate case proceeding. Under Minn. Stat. § 216B.16, subds. 6b and 6c, the Commission also has the authority to allow Xcel Energy to earn an incentive designed to encourage vigorous participation and compensate the utility for its efforts.

In 2010, the Commission approved a shared savings incentive mechanism (Docket No. E,G999/CIP-08-133). The shared savings incentive mechanism awards a percentage of the net benefits created by a utility's energy conservation program, beginning once a utility surpasses its earnings threshold. On January 25, 2024 the Commission issued an order (2024 Order) creating a revised incentive mechanism taking into account a number of changes to conservation programs, including adoption of the Minnesota Test as the primary test and Efficient Fuel Switching (EFS) programming for both electric and gas utilities. Specifically, the 2024 Order sets the Minnesota Test net benefits as the source of a utility's incentive, allowing electric utilities to earn up to 5.5 percent of these net benefits and allowing gas utilities to earn up to 4 percent of these net benefits. The percentage of sales to earn an incentive also increased for electric utilities given the new 1.75 percent minimum savings threshold in Minn. Stat. § 216B.241 Subd. 1(c). Finally, the Commission also laid out guidelines for including the net benefits of EFS programing. While both electric and gas utilities can include the spending towards these programs in the expenditures cap calculations, only gas utilities may include the net benefits and savings from EFS Programs in their incentive calculations and they may only do so after they meet 1 percent savings through energy conservation.

B. Purpose of Filing

In this filing, the Company requests approval of its 2024 natural gas CIP Tracker account, its incentive earned for 2024 natural gas program performance, and the 2025/2026 natural gas CIP Adjustment Factor.

C. 2024 Natural Gas CIP Tracker Account

The Company spent approximately $29 million on our natural gas CIP programs in 2024. The Executive Summary summarizes our overall 2024 ECO expenditures and energy savings. The

Conservation Cost Recovery Report provided in Section 3 includes our 2024 electric and natural gas CIP Trackers, which reflect actual 2024 expenditures and revenues, including carrying charges.

As part of its review of utilities' 2009 CIP Cost Recovery and Incentive petitions, the Department proposed employee expense guidelines, including a recommended cap on employee expenses of 0.50 percent of total annual budgets or expenses.[2] In 2024, the Company's ECO portfolio included $42,992 in employee expenses related to natural gas. The table below summarizes our employee expenses for 2024. These expenses comprise about 0.16 percent of our total natural gas CIP spending for 2024, which is below the Department's proposed cap of 0.50 percent of total annual budgets or expenses.

These expenses were incurred consistent with our employee expense policies, which provide guidance on the types of charges that are recoverable and non-recoverable through ECO. We report these expenses at the level of detail available from a query of our accounting system.[3]

Table 2: Summary of 2024 ECO Expenses – Natural Gas

Employee Expense Category	Natural Gas Amount
Airfare	$ 6,484
Car Rental	$ 406
Taxi/bus	$ 1,177
Mileage	$ 4,800
Conferences/Seminars/Training	$ 11,184
Hotel	$ 10,173
Business Meals- Employees Only	$ 3,982
Business Meals- Including Non-Employees	$ 1,460
Parking	$ 1,328
Personal Communication	$ 1,587
Other Employee Expenses	$ 411
Safety Equipment	$ --
Total	**$ 42,992**

D. 2024 Financial Incentive

Based on achieved savings of 1,298,039 Dth, or 118 percent of our 2024 savings goal, and net benefits of nearly $108 million, we propose a natural gas performance incentive of $4,313,292. If

[2] Attachment to the Department's August 13, 2010 Comments in Docket No. E002/M-10-296.
[3] As noted in our August 23, 2010 Reply Comments in Docket No. E002/M-10-296, our accounting system has object codes dedicated to several categories of employee expenses, including Business Meals-Employees Only, Business Meals-Non Employees, and Travel Meals. Documentation of the business purpose of the meal and attendees is required as part of the Company's existing expense policy. However, while our current system includes documentation of these details, the system does not provide query access to these details. Further documentation on a specific expense is available upon request.

approved, the financial incentive would be included in the Tracker and recovered through the 2025/2026 CIP Adjustment Factor. We provide our 2024 incentive calculation in Section 5.

E. Proposed CIP Adjustment Factor

The Company seeks approval to update its natural gas CIP Adjustment Factor to $0.023370 per therm, effective October 1, 2025 through September 30, 2026. This factor allows the Company to recover program costs, its financial incentive, and the projected unrecovered Tracker balance.

1. Projected Unrecovered Tracker Balance

We project an over-recovered CIP Tracker balance of $2,566,818 on September 30, 2025. This balance represents the program costs and incentive not recovered through the Conservation Cost Recovery Charge (CCRC) and the existing natural gas CIP Adjustment Factor.[4]

2. Proposed CIP Adjustment Factor

With this filing, we propose a decrease in the CIP Adjustment Factor from $0.030554 per therm to $0.023370 per therm to recover the Tracker balance over the October 1, 2025 to September 30, 2026 time period. If approved as proposed and implemented October 1, 2026 the average residential natural gas customer using 66 therms per month would pay approximately $1.54 per month.

Table 3: Proposed and Current CIP Adjustment Factor

Natural Gas CIP Adjustment Factor	
Proposed ($/therm)	**Current ($/therm)**
$0.023370	$0.030554

Section 4 provides the calculation of the CIP Adjustment Factor for 2025-2026 and the 2025 and 2026 CIP Tracker Forecast, assuming we implement the proposed factor on October 1, 2025. The Company proposes to continue to set the CIP Adjustment Factor to reduce the Tracker balance to $0 by September 30 of the following year. The September 2026 forecasted balance is $242.

As with previous filings, we propose to update the CIP Adjustment Factor using actual revenue recovery and actual expense available at the time of the Company's Reply Comments. Additionally, if the timing of the approval process suggests the implementation of the 2025/2026 CIP Adjustment Factor will occur after October 1, 2025, we will update the implementation date and adjust the proposed factor to recover the approved revenue requirements over the remaining months of the period, through September 2026.

3. Proposed Customer Notice

We propose to implement the below bill message, effective the first month the 2025/2026 CIP Adjustment Factor takes effect, notifying customers of the change in their monthly bills, as follows**:**

[4] The CCRC is recovered in base rates, and it is expected to change with final rates from the Company's Gas rate case G002/GR-23-413.

Effective Oct. 1, 2025, the Resource Adjustment line item on your bill has decreased due to a change in the Conservation Improvement Program (CIP) factor. The natural gas CIP portion of the Resource Adjustment is $0.023370 per therm.

4. Flexible Rate Customers

Please note that Xcel Energy continues to offer flexible rates. However, such rates always include, at a minimum, the Commission-approved CCRC rate and CIP Adjustment Factor. Therefore, the Company has no ECO costs that remain unrecovered due to rate discounting.

F. Description of the Proposed Tariff

As noted above, we propose to decrease the natural gas CIP Adjustment Factor from $0.030554 per therm to $0.023370 per therm. We provide as Attachment A to this filing, redline and clean versions of the following proposed tariff sheet:

Minnesota Natural Gas Rate Book – MPUC No. 2
Sheet No. 5-43, revision 38

G. Public Interest Review

We take seriously our commitment to DSM and recognize the ECO programs' value to our customers and the State of Minnesota. The programs approved by the Deputy Commissioner and implemented in 2024 resulted in 1,298,039 Dth of energy savings and nearly $108 million in net benefits.

As described in this Petition and detailed in Section 4, our calculations and approach to applying the proposed CIP Adjustment Factor to customers' bills follows the methods previously approved by the Commission. We have calculated our incentive pursuant to the Commission's approved formula in Docket No. E,G999/CI-08-133, and have provided all schedules and information necessary to audit our calculations.

The public interest is served by ensuring that the proposed natural gas CIP Adjustment Factor closely tracks costs as they are incurred, keeping rates as accurate as possible. Commission approval of our proposed CIP Adjustment Factor will allow the Company to closely match expenses with the benefits received and keep the Tracker account in balance, thus avoiding potentially large future rate increases for customers. Therefore, we respectfully request that the Commission approve our proposal.

VI. EFFECT OF CHANGE UPON XCEL ENERGY REVENUE

For the period of October 2025 to September 2026, the proposed natural gas CIP Adjustment Factor of $0.023370 per therm and the CCRC charged in base rates are forecasted to recover

approximately $37 million,[5] assuming normal weather. These revenues are necessary to recover the costs incurred to deliver the approved ECO program, the carrying charges associated with previous under-recovery of costs, and the incentive earned on 2024 performance.

CONCLUSION

Xcel Energy respectfully requests that the Commission:

- Approve the Company's 2024 natural gas CIP Tracker account;
- Approve the incentive of $4,313,292 earned for 2024 performance; and
- Approve the proposed 2025/2026 natural gas CIP Adjustment Factor of $0.023370 per therm.

This request is based on achieving 1,298,039 Dth of natural gas savings and generating over $108 million in net benefits.

Dated: April 1, 2025

Northern States Power Company

[5] This is the sum of the forecasted CCRC recovery ($18,616,685) and the forecasted CIP Adjustment Factor recovery ($18,168,119).

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Hwikwon Ham	Commissioner
Audrey Partridge	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

IN THE MATTER OF THE PETITION OF NORTHERN STATES POWER COMPANY FOR APPROVAL OF A NATURAL GAS CONSERVATION IMPROVEMENT PROGRAM ADJUSTMENT FACTOR	DOCKET NO. G002/M-25-47 **PETITION**

SUMMARY OF FILING

Please take notice that on April 1, 2025, Northern States Power Company doing business as Xcel Energy filed with the Minnesota Public Utilities Commission a Petition for approval of its 2024 natural gas CIP Tracker account, financial incentive on 2024 performance, and 2025/2026 natural gas Conservation Improvement Program Adjustment Factor. The Company proposed to implement a natural gas CIP Adjustment Factor of $0.023370 per therm effective October 1, 2025 through September 30, 2026.

Redline

CONSERVATION IMPROVEMENT PROGRAM ADJUSTMENT RIDER

Section No. 5
~~37th~~38th Revised Sheet No. 43

APPLICABILITY

Applicable to bills for gas and/or transportation service provided under the Company's retail rate schedules. Exemptions are as follows:

"Large Energy Facility," as defined in Minn. Stat. 216B.2421 customers shall receive a monthly exemption from conservation improvement program charges pursuant to Minn. Stat. 216B.16, subd. 6b Energy Conservation Improvement. Upon exemption from conservation program charges, the "Large Energy Facility" customers can no longer participate in any utility's Energy Conservation Improvement Program.

"Large Customer Facility" customers that have been exempted from the Company's Conservation Improvement program charges pursuant to Minn. Stat. 216B.241 subd. 1a (b) shall receive a monthly exemption from conservation improvement program charges pursuant to Minn. Stat. 216B.16, subd. 6b Energy Conservation Improvement. Such monthly exemption will be effective beginning January 1 of the year following the grant of exemption. Upon exemption from conservation program charges, the "Large Customer Facility" customers can no longer participate in the Company's Energy Conservation Improvement Program.

"Commercial Gas Customers" that have been exempted from the Company's Conservation Improvement Program charges pursuant to Minn. Stat. 216B.241, subd. 1a (c) shall receive a monthly exemption from conservation improvement program charges pursuant to Minn. Stat. 216B.16, subd. 6b Energy Conservation Improvement. Such monthly exemption will be effective beginning January 1 of the year following the grant of exemption. Upon exemption from conservation program charges, the "Commercial Gas Customers" can no longer participate in the Company's Energy Conservation Improvement Program. The Company has fewer than 600,000 natural gas customers in Minnesota, thus making the Company subject to this Minnesota Statute.

RIDER

There shall be included on each non-exempt customer's monthly bill a Conservation Improvement Program (CIP) Adjustment, which shall be calculated by multiplying the monthly applicable billing therms for gas service by the CIP Adjustment Factor.

DETERMINATION OF CONSERVATION IMPROVEMENT PROGRAM ADJUSTMENT FACTOR

The CIP Adjustment Factor shall be calculated for each customer class by dividing the Recoverable Conservation Improvement Program Expense by the Projected Retail Sales for a designated recovery period. The factor may be adjusted annually with approval of the Minnesota Public Utilities Commission. The CIP Adjustment Factor for all rate schedules is:

All Classes	$~~0.030554~~0.023370 per therm	R

Recoverable Conservation Improvement Program Expense shall be the CIP expense not recovered through base rates as determined from the CIP Tracker account balance for a designated period. All costs appropriately charged to the CIP Tracker Account shall be eligible for recovery through this Rider. All revenues received from the CIP Adjustment Factor shall be credited to the CIP Tracker Account.

Projected Retail Sales shall be estimated therm sales to all non-exempt customers for the designated recovery period.

(Continued on Sheet No. 5-43.1)

Clean

CONSERVATION IMPROVEMENT PROGRAM Section No. 5
ADJUSTMENT RIDER 38th Revised Sheet No. 43

APPLICABILITY
Applicable to bills for gas and/or transportation service provided under the Company's retail rate schedules. Exemptions are as follows:

"Large Energy Facility," as defined in Minn. Stat. 216B.2421 customers shall receive a monthly exemption from conservation improvement program charges pursuant to Minn. Stat. 216B.16, subd. 6b Energy Conservation Improvement. Upon exemption from conservation program charges, the "Large Energy Facility" customers can no longer participate in any utility's Energy Conservation Improvement Program.

"Large Customer Facility" customers that have been exempted from the Company's Conservation Improvement program charges pursuant to Minn. Stat. 216B.241 subd. 1a (b) shall receive a monthly exemption from conservation improvement program charges pursuant to Minn. Stat. 216B.16, subd. 6b Energy Conservation Improvement. Such monthly exemption will be effective beginning January 1 of the year following the grant of exemption. Upon exemption from conservation program charges, the "Large Customer Facility" customers can no longer participate in the Company's Energy Conservation Improvement Program.

"Commercial Gas Customers" that have been exempted from the Company's Conservation Improvement Program charges pursuant to Minn. Stat. 216B.241, subd. 1a (c) shall receive a monthly exemption from conservation improvement program charges pursuant to Minn. Stat. 216B.16, subd. 6b Energy Conservation Improvement. Such monthly exemption will be effective beginning January 1 of the year following the grant of exemption. Upon exemption from conservation program charges, the "Commercial Gas Customers" can no longer participate in the Company's Energy Conservation Improvement Program. The Company has fewer than 600,000 natural gas customers in Minnesota, thus making the Company subject to this Minnesota Statute.

RIDER
There shall be included on each non-exempt customer's monthly bill a Conservation Improvement Program (CIP) Adjustment, which shall be calculated by multiplying the monthly applicable billing therms for gas service by the CIP Adjustment Factor.

DETERMINATION OF CONSERVATION IMPROVEMENT PROGRAM ADJUSTMENT FACTOR
The CIP Adjustment Factor shall be calculated for each customer class by dividing the Recoverable Conservation Improvement Program Expense by the Projected Retail Sales for a designated recovery period. The factor may be adjusted annually with approval of the Minnesota Public Utilities Commission. The CIP Adjustment Factor for all rate schedules is:

All Classes	$0.023370 per therm	R

Recoverable Conservation Improvement Program Expense shall be the CIP expense not recovered through base rates as determined from the CIP Tracker account balance for a designated period. All costs appropriately charged to the CIP Tracker Account shall be eligible for recovery through this Rider. All revenues received from the CIP Adjustment Factor shall be credited to the CIP Tracker Account.

Projected Retail Sales shall be estimated therm sales to all non-exempt customers for the designated recovery period.

(Continued on Sheet No. 5-43.1)

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Hwikwon Ham	Commissioner
Audrey Partridge	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

IN THE MATTER OF THE PETITION OF NORTHERN STATES POWER COMPANY FOR APPROVAL OF AN ELECTRIC CONSERVATION IMPROVEMENT PROGRAM ADJUSTMENT FACTOR	DOCKET NO. E002/M-25-50 **PETITION**

OVERVIEW

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission (Commission) this Petition for approval of its electric Conservation Improvement Program (CIP) Adjustment Factor for 2025-2026.

In 2024, our electric ECO portfolio surpassed the 1.75 percent energy savings target established in Minn. Statute §216B.241. This is the twelfth year in a row the Company has exceeded this energy savings targets. In 2024, we achieved over 516 GWh of electric savings or 1.90 percent of sales and generated over $411 million in net benefits for our electric customers. The results were achieved while spending roughly $139 million (88 percent of our approved budget).

Specifically, we request that the Commission:

- Approve the Company's 2024 electric CIP Tracker account;
- Approve the $15,133,727 electric incentives earned for 2024 program performance; and
- Approve the proposed 2025-2026 electric CIP Adjustment Factor of $0.001396 per kWh.

I. DESCRIPTION AND PURPOSE OF FILING

A. Background

Minn. Stat. § 216B.241 sets forth Minnesota's policy on utility investments in energy conservation. Generally, this statute provides that qualifying energy conservation improvements are utility investments or expenses that result in a net reduction in energy use. The statute provides a multi-step process for selecting qualifying programs subject to approval by the Minnesota Department of Commerce, Division of Energy Resources (Department). Minnesota Rules part 7690.0550 requires

that by April 1 of each year, electric utilities file with the Department a status report on each program undertaken during the previous year.

While the Deputy Commissioner approves the ECO programs to be offered, the Commission has the authority to allow recovery of approved expenses and incentives under Minn. Stat. § 216B.16, subd. 6b and 216B.241, subd. 2b. These statutes provide for recovery of CIP expenses through a rate rider mechanism without a general rate case proceeding. Under Minn. Stat. § 216B.16, subds. 6b and 6c, the Commission also has the authority to allow Xcel Energy to earn an incentive designed to encourage vigorous participation and compensate the utility for its efforts. On or before each April 1, Xcel Energy submits a filing that seeks approval of the allowed incentive calculated in accordance with the approved formula.

In 2010, the Commission approved a shared savings incentive mechanism (Docket No. E,G999/CIP-08-133). The shared savings incentive mechanism awards a percentage of the net benefits created by a utility's energy conservation program, beginning once a utility surpasses its earnings threshold. On January 25, 2024, the Commission issued an order (2024 Order) creating a revised incentive mechanism taking into account a number of changes to conservation programs, including adoption of the Minnesota Test as the primary test and Efficient Fuel Switching (EFS) programming for both electric and natural gas utilities. Specifically, the 2024 Order sets the Minnesota Test net benefits as the source of a utility's incentive, allowing electric utilities to earn up to 5.5 percent of these net benefits and allowing gas utilities to earn up to 4 percent of these net benefits. The percentage of sales to earn an incentive also increased for electric utilities given the new 1.75 percent minimum savings threshold in Minn. Stat. § 216B.241 Subd. 1(c). Finally, the Commission also laid out guidelines for including the net benefits of EFS programing. While both electric and gas utilities can include the spending towards these programs in the expenditures cap calculations, only gas utilities may include the net benefits and savings from EFS Programs in their incentive calculations, and they may only do so after they meet 1 percent savings through energy conservation.

B. Purpose of Filing

In this filing, the Company requests approval of its 2024 electric CIP Tracker account, its incentives earned for 2024 electric program performance, and the 2025/2026 electric CIP Adjustment Factor.

C. 2024 Electric CIP Tracker Account

The Company spent $139 million on our electric ECO programs in 2024. As part of the review of utilities' 2009 CIP Cost Recovery and Incentive petitions, the Department proposed employee expense guidelines, including a recommended cap on employee expenses of 0.50 percent of the total annual budget or expenses.[1] In 2024, the Company's ECO portfolio included $172,954 in employee expenses related to electric ECO programs. We summarize our employee expenses for 2024 in the table below. These expenses comprise about 0.13 percent of our total electric ECO spending for 2024, which is below the Department's proposed cap of 0.50 percent of total annual budget or expenses.

[1] Attachment to the Department's August 13, 2010 Comments in Docket No. E002/M-10-296.

These expenses were incurred consistent with our employee expense policies, which provide guidance on the types of charges that are recoverable and non-recoverable through ECO. We report these expenses at the level of detail available from a query of our accounting system.[2]

Table 4: Summary of 2024 ECO Employee Expenses – Electric

Employee Expense Category	Electric Amount
Airfare	$ 21,929
Car Rental	$ 2,206
Taxi/bus	$ 4,205
Mileage	$ 23,908
Conferences/Seminars/Training	$ 44,331
Hotel	$ 32,171
Business Meals- Employees Only	$ 18,404
Business Meals- Including Non-Employees	$ 10,036
Parking	$ 4,781
Personal Communication	$ 9,993
Other Employee Expenses	$ 871
Safety Equipment	$ 120
Total	**$ 172,954**

D. 2024 Financial Incentive

Based on our 2024 ECO savings achievement of over 516 GWh at the generator, and net benefits of over $411 million, we propose an ECO electric performance incentive of $15,133,727. If approved, the ECO financial incentive would be included in the electric CIP Tracker and recovered through the 2025/2026 CIP Adjustment Factor. We provide our ECO incentive calculation in Section 5.

E. Proposed CIP Adjustment Factor

The Company seeks approval to update its electric CIP Adjustment Factor to $0.001396 per kWh, effective October 1, 2025 through September 30, 2026. This factor allows the Company to recover program costs, its financial incentive, and the projected unrecovered Tracker balance.

[2] As noted in our August 23, 2010 Reply Comments in Docket No. E002/M-10-296, our accounting system has object codes dedicated to several categories of employee expenses, including Business Meals-Employees Only, Business Meals-Non Employees, and Travel Meals. Documentation of the business purpose of the meal and attendees is required as part of the Company's existing expense policy. However, while our current system includes documentation of these details, the system does not provide query access to these details. Further documentation on a specific expense is available upon request.

1. Projected Over Recovered Tracker Balance

We project a CIP Tracker balance on September 30, 2025 of negative $18.5 million. This balance represents an over recovery through the Conservation Cost Recovery Charge (CCRC) and the existing electric CIP Adjustment Factor.[3]

2. Proposed CIP Adjustment Factor

With this filing, we propose to increase the CIP Adjustment Factor from ($0.000389) per kWh to $0.001396 per kWh over the October 1, 2025 to September 30, 2026 time period. If approved as proposed and implemented on October 1, 2025, the average residential electric customer using 616 kWh per month would pay approximately $0.86 per month.

Table 5: Proposed and Current CIP Adjustment Factor

Electric CIP Adjustment Factor	
Proposed ($/kWh)	**Current** ($/kWh)
$0.001396	($0.000389)

Section 4 provides the calculation of the CIP Adjustment Factor for 2025-2026 and the 2025 and 2026 CIP Tracker Forecasts, assuming we implement the proposed factor October 1, 2025. The Company proposes to continue to set the CIP Adjustment Factor to reduce the Tracker balance to approximately $0 by September 30 of the following year. The September 30, 2026 forecasted balance is $24,029.

As with previous filings, we propose to update the CIP Adjustment Factor using actual revenue recovery and actual expenses available at the time of the Company's Reply Comments. Additionally, if the timing of the approval process suggests the implementation of the 2025-2026 CIP Adjustment Factor will occur after October 1, 2025. We will update the implementation date and adjust the proposed factor to recover the approved revenue requirements over the remaining months of the period, through September 2026.

3. Proposed Customer Notice

We propose to implement the below bill message, effective the first month the 2025/2026 CIP Adjustment Factor takes effect, notifying customers of the change in their monthly bills, as follows**:**

> Effective Oct. 1, 2025, the Resource Adjustment line item on your bill has increased due to a change in the Conservation Improvement Program (CIP) factor. The electric CIP portion of the Resource Adjustment is $0.001396 per kilowatt-hour (kWh).

[3] The CCRC is recovered in base rates.

4. Provision of Forecast Data

The Provision of Forecast Data clause contained in the electric CIP Adjustment Factor tariff sheet (Sheet No. 5-92.1) requires the Company to annually make available on April 1, a 24-month forecast of the CIP Adjustment Factor applicable to demand billed Commercial & Industrial (C&I) customers under this Rider. The forecast period begins January 1 of the following year. We provide in Section 4, the forecasted CIP Adjustment Factor rates for 24 months beginning January 1, 2025.

F. Description of the Proposed Tariff

As noted above, we propose to increase the electric CIP Adjustment Factor from ($0.000389) per kWh to $0.001396 per kWh. We provide as Attachment B to this filing, redline and clean versions of the following proposed tariff sheet:

Minnesota Electric Rate Book—MPUC No. 2
Sheet No. 5-92, revision 26

G. Public Interest Review

We take seriously our commitment to DSM and recognize the ECO programs' value to our customers and the State of Minnesota. The programs approved by the Deputy Commissioner and implemented in 2024 resulted in more than 294 MW of demand savings, 516 GWh of energy savings and nearly $411 million in net benefits.

As described in this Petition and detailed in Section 4, our calculations and approach to applying the proposed CIP Adjustment Factor to customers' bills follows methods previously approved by the Commission. We have calculated our incentives pursuant to the Commission's approved formulas in Docket No. E,G999/CI-08-133, and have provided all schedules and information necessary to audit our calculations.

The public interest is served by ensuring that the CIP Adjustment Factor closely tracks costs as they are incurred, keeping rates as accurate as possible. Commission approval of our proposed CIP Adjustment Factor will allow the Company to closely match expenses with the benefits received and keep the Tracker account in balance, thus avoiding potentially large future rate increases for customers. Therefore, we respectfully request that the Commission approve our proposal.

II. EFFECT OF CHANGE UPON XCEL ENERGY REVENUE

For the period of October 2025 to September 2026, the proposed electric CIP Adjustment Factor of $0.001396 per kWh and the CCRC charged in base rates are forecasted to recover approximately $175 million,[4] assuming normal weather. These revenues are necessary to recover the costs incurred to deliver the approved ECO programs and the incentive earned on 2024 performance.

[4] This is the sum of the forecasted CCRC recovery ($136,438,826) and the forecasted CIP Adjustment Factor Recovery ($38,439,677).

CONCLUSION

Xcel Energy respectfully requests that the Commission:

- Approve the Company's 2024 electric CIP Tracker account;
- Approve the CIP incentive of $15,133,727 earned for 2024 program performance;
- Approve the proposed 2025/2026 electric CIP Adjustment Factor of $0.001396 per kWh.

This request is based on achieving 516 GWh of electric savings and 294 MW of demand saving and generating nearly $411 million in net benefits.

Dated: April 1, 2025

Northern States Power Company

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Hwikwon Ham	Commissioner
Audrey Partridge	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

IN THE MATTER OF THE PETITION OF NORTHERN STATES POWER COMPANY FOR APPROVAL OF AN ELECTRIC CONSERVATION IMPROVEMENT PROGRAM ADJUSTMENT FACTOR	DOCKET NO. G002/M-25-50 **PETITION**

SUMMARY OF FILING

Please take notice that on April 1, 2025, Northern States Power Company doing business as Xcel Energy filed with the Minnesota Public Utilities Commission a Petition for approval of its 2024 electric CIP Tracker account, financial incentive on 2024 performance, and 2025/2026 electric Conservation Improvement Program (CIP) Adjustment Factor. The Company proposed to implement an electric CIP Adjustment Factor of $0.001396 per kWh effective October 1, 2025 through September 30, 2026.

Redline

APPLICABILITY
Applicable to bills for electric service provided under the Company's retail rate schedules. Exemptions are as follows:

"Large Customer Facility" customers that have been exempted from the Company's Conservation Improvement Program charges pursuant to Minn. Stat. 216B.241 subd. 1a (b) shall receive a monthly exemption from conservation improvement program charges pursuant to Minn. Stat. 216B.16, subd. 6b Energy Conservation Improvement. Such monthly exemption will be effective beginning January 1 of the year following the grant of exemption. Upon exemption from conservation program charges, the "Large Customer Facility" customers can no longer participate in the Company's Energy Conservation Improvement Program.

RIDER
There shall be included on each non-exempt customer's monthly bill a Conservation Improvement Program (CIP) Adjustment, which shall be calculated by multiplying the monthly applicable billing kilowatt hours (kWh) by the CIP Adjustment Factor.

DETERMINATION OF CONSERVATION IMPROVEMENT PROGRAM ADJUSTMENT FACTOR
The CIP Adjustment Factor shall be calculated for each customer class by dividing the Recoverable Conservation Improvement Program Expense by the Projected Retail Sales for a designated recovery period. The factor may be adjusted annually with approval of the Minnesota Public Utilities Commission. The CIP Adjustment Factor for all rate schedules is:

All Classes	~~$0.000389~~$0.001396 per kWh	R

Recoverable Conservation Improvement Program Expense shall be the CIP expense not recovered through base rates as determined from the CIP Tracker account balance for a designated period. All costs appropriately charged to the CIP Tracker Account shall be eligible for recovery through this Rider. All revenues received from the CIP Adjustment Factor shall be credited to the CIP Tracker Account.

Projected Retail Sales shall be the estimated kilowatt-hour sales to all non-exempt customers for the designated recovery period.

(Continued on Sheet No. 5-92.1)

Clean

CONSERVATION IMPROVEMENT PROGRAM ADJUSTMENT RIDER

Section No. 5
26th Revised Sheet No. 92

APPLICABILITY

Applicable to bills for electric service provided under the Company's retail rate schedules. Exemptions are as follows:

"Large Customer Facility" customers that have been exempted from the Company's Conservation Improvement Program charges pursuant to Minn. Stat. 216B.241 subd. 1a (b) shall receive a monthly exemption from conservation improvement program charges pursuant to Minn. Stat. 216B.16, subd. 6b Energy Conservation Improvement. Such monthly exemption will be effective beginning January 1 of the year following the grant of exemption. Upon exemption from conservation program charges, the "Large Customer Facility" customers can no longer participate in the Company's Energy Conservation Improvement Program.

RIDER

There shall be included on each non-exempt customer's monthly bill a Conservation Improvement Program (CIP) Adjustment, which shall be calculated by multiplying the monthly applicable billing kilowatt hours (kWh) by the CIP Adjustment Factor.

DETERMINATION OF CONSERVATION IMPROVEMENT PROGRAM ADJUSTMENT FACTOR

The CIP Adjustment Factor shall be calculated for each customer class by dividing the Recoverable Conservation Improvement Program Expense by the Projected Retail Sales for a designated recovery period. The factor may be adjusted annually with approval of the Minnesota Public Utilities Commission. The CIP Adjustment Factor for all rate schedules is:

All Classes	$0.001396 per kWh	R

Recoverable Conservation Improvement Program Expense shall be the CIP expense not recovered through base rates as determined from the CIP Tracker account balance for a designated period. All costs appropriately charged to the CIP Tracker Account shall be eligible for recovery through this Rider. All revenues received from the CIP Adjustment Factor shall be credited to the CIP Tracker Account.

Projected Retail Sales shall be the estimated kilowatt-hour sales to all non-exempt customers for the designated recovery period.

(Continued on Sheet No. 5-92.1)

SECTION 3: 2024 CONSERVATION COST RECOVERY REPORT

SECTION 3: 2024 CONSERVATION COST RECOVERY REPORT REFERENCE DOCKET NO. E002/GR-92-1185

Northern States Power Company, doing business as Xcel Energy, submits this Conservation Improvement Program (CIP) Cost Recovery Report.

Cost-effective conservation benefits all customers by reducing the need to build new power plants or other generation facilities to meet our customers' electricity needs. Conservation also has environmental benefits, including a reduction in air pollution and greenhouse gas emissions associated with using fossil fuels. This section reports the actual 2024 spending and cost recovery, as well as the electric tax and rate base factors and calculation of the cost of capital, of the conservation benefits received through the Company's ECO programs.

Electric Achievements

In 2024, Xcel Energy spent $139,262,649 on its electric ECO efforts.[1] Included within these costs are two adjustments to spend as outlined in Table 6.

- Adjustment of $1.14 million dollars from 2023 to 2024 because of a business lighting audit. The Company completed this audit and found that some projects were not completed as reported and funds were returned to the business lighting program. These returned funds reduced the CIP Program Expenditures in the months that they were received; and
- Adjustment of $48,697 as a result of a reclassification of projects from electric to natural gas. (There is a corresponding adjustment in the natural gas spend as well).

The Company's 2024 expenditures supported an overall reduction of over 516 GWh. The Company requests recovery of $139,262,649 in CIP expenditures, as well as recovery of $15,133,727 in financial incentives earned for our 2024 electric CIP performance for total electric recovery of $154,396,376.

Natural Gas Achievements

Xcel Energy conserved 1,298,039[2] Dth through its 2024 natural gas ECO efforts at a cost of $29,285,591. The Company requests recovery of $29,285,591 in ECO expenditures, as well as $4,313,292 in financial incentive earned for our 2024 natural gas ECO performance for total natural gas recovery of $33,598,883.

[1] This includes electric spending of $135,649,998 and efficient fuel switching spending of $3,612,650.
[2] This savings value includes savings from both Energy Efficiency and the claimable savings from Efficient Fuel Switching. The Company saved 1,243,874 Dth through Energy Efficiency and claimed 54,166 Dth through Efficient Fuel Switching. The Efficient Fuel Switching savings are the net site savings which also accounts for the added electricity from these activities. The Company reduced gas usage by 88,853 Dth with a corresponding increase of 10,166,323 kWh on the electric system.

The tables on the following pages include:

- Xcel Energy's 2024 electric Table 6 and natural gas Table 7 CIP Trackers, which document monthly CIP expenditures and recovered costs;
- Summary of the electric tax and rate base factors for 2025 (Table 8) used in the electric CIP Tracker; and
- Calculation of the Cost of Capital for both 2024 and 2025 (Table 9) provides the tax factors and capital structure used to determine cost recovery and return on rate base in the gas CIP Trackers.

Northern States Power Company, a Minnesota corporation
State of Minnesota- Electric Utility
DSM Cost Recovery & Incentive Mechanism - Total
2024 Actuals

	EXPENSES	Jan Actual	Feb Actual	Mar Actual	Apr Actual	May Actual	Jun Actual	Jul Actual	Aug Actual	Sep Actual	Oct Actual	Nov Actual	Dec Actual	Annual
1.	Balance	(22,036,468)	(32,729,344)	(40,431,769)	(46,805,649)	(50,341,300)	(53,979,158)	(60,389,272)	(67,239,841)	(72,265,768)	(77,196,577)	(76,390,900)	(48,932,973)	(41,453,010)
1a.	Other Adjustments	1,151,630	(3,120)	(3,112)	(3,417)	(3,041)	(2,204)	(1,885)	(3,781)	(7,624)	(7,450)	(5,204)	(4,187)	
2.	CIP Program Expenditures	4,619,363	6,732,161	8,623,154	10,047,204	11,265,586	9,747,918	12,089,677	13,187,829	11,900,907	16,207,186	15,578,774	18,156,283	138,156,042
3.	2023 Performance Incentive											26,478,641		26,478,641
4.	Total Expenses + Incentive (Line 1b + 2 + 3)	(16,265,475)	(26,000,302)	(31,811,727)	(36,761,863)	(39,078,755)	(44,233,444)	(48,301,479)	(54,055,794)	(60,372,484)	(60,996,840)	(34,338,689)	(30,780,878)	123,181,673
	RECOVERY													
5.	CCRC Rate ($/MWh)	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	
6.	CCRC Cost Recovery (CCRC times Sales)	11,368,450	9,891,710	10,269,177	9,287,112	10,192,640	11,048,301	12,957,099	12,446,022	11,481,361	10,495,827	9,989,825	11,472,301	130,899,825
7.	CIP Adjustment Factor Rate ($/MWh)	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	1.396	
8.	CIP Adjustment Factor Recovery (Factor times Sales)	5,016,083	4,441,750	4,611,288	4,170,298	4,576,917	4,961,144	5,818,273	5,588,779	5,155,606	4,713,061	4,485,845	(900,651)	52,638,392
9.	Sub-Balance (Line 4 - 6 - 8)	(32,650,007)	(40,333,762)	(46,692,192)	(50,219,272)	(53,848,312)	(60,242,888)	(67,076,851)	(72,090,595)	(77,009,452)	(76,205,728)	(48,814,359)	(41,352,528)	
10.	Accum Deferred Tax (Line 9 * 28.742%)	(9,384,265)	(11,592,730)	(13,420,270)	(14,434,023)	(15,477,082)	(17,315,011)	(19,279,229)	(20,720,279)	(22,134,057)	(21,903,050)	(14,030,223)	(11,885,544)	
11.	Net Investment (Line 9 - 10)	(23,265,742)	(28,741,032)	(33,271,922)	(35,785,249)	(38,371,230)	(42,927,877)	(47,797,622)	(51,370,316)	(54,875,395)	(54,302,678)	(34,784,136)	(29,466,984)	
12.	Carrying Charge (Line 11 * Carrying Charge Rate)	(79,336)	(98,007)	(113,457)	(122,028)	(130,846)	(146,384)	(162,990)	(175,173)	(187,125)	(185,172)	(118,614)	(100,482)	(1,619,614)
13.	End of Month Balance (Line 9 + 12)	(32,729,344)	(40,431,769)	(46,805,649)	(50,341,300)	(53,979,158)	(60,389,272)	(67,239,841)	(72,265,768)	(77,196,577)	(76,390,900)	(48,932,973)	(41,453,010)	

Table 6: 2024 Electric CIP Tracker (DSM Cost Recovery)

Northern States Power Company, a Minnesota corporation
State of Minnesota - Gas Utility
DSM Cost Recovery and Incentive Mechanism
Tracker and Balance ($)
2024 Actual

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
EXPENSES	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	
1. Balance	($5,587,806)	($7,771,851)	($8,966,441)	($9,706,050)	($8,855,135)	($7,583,351)	($6,850,322)	($4,447,664)	($2,541,793)	($566,756)	$1,144,569	$5,809,007	**($5,587,806)**
1a. Other Adjustments	3,674	3,120	3,112	3,417	3,041	2,204	1,885	3,781	7,624	7,450	5,204	4,187	
1b. Adj. Beginning Balance	(5,584,132)	(7,768,731)	(8,963,329)	(9,702,633)	(8,852,094)	(7,581,147)	(6,848,437)	(4,443,882)	(2,534,169)	(559,306)	1,149,773	5,813,195	
2. CIP Program Expenditures	1,842,054	1,962,062	2,031,189	2,515,559	2,130,836	1,438,676	2,999,362	2,556,556	2,668,760	2,855,792	2,829,596	3,406,453	29,236,894
3. 2022 Performance Incentive											4,253,188		4,253,188
4. **Total Expenses** (Line 1b. + 2 + 3)	**(3,742,078)**	**(5,806,669)**	**(6,932,140)**	**(7,187,074)**	**(6,721,258)**	**(6,142,471)**	**(3,849,075)**	**(1,887,327)**	**134,591**	**2,296,485**	**8,232,557**	**9,219,648**	**27,902,276**
RECOVERY													
5. CCRC Rate ($/Dth)	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	
6. CCRC Cost Recovery	2,913,123	2,278,143	1,996,074	1,193,954	610,723	500,140	425,776	470,416	508,660	839,818	1,774,087	2,734,566	16,245,481
7. CIP Adjustment Factor Rate ($/Dth)	0.08994	0.08994	0.08994	0.08994	0.08994	0.08994	0.08994	0.08994	0.08994	0.08994	0.08994	0.30554	
8. CIP Adjustment Factor Recovery	1,094,109	855,624	749,684	448,425	229,375	187,842	159,913	176,678	191,042	315,418	666,311	3,489,036	8,563,457
9. **Total Recovery** (Line 6 + 8)	**4,007,232**	**3,133,766**	**2,745,758**	**1,642,379**	**840,099**	**687,983**	**585,689**	**647,094**	**699,703**	**1,155,236**	**2,440,397**	**6,223,602**	**24,808,938**
10. Rate Refund	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Sub-Balance (Line 4-9+10)	(7,749,310)	(8,940,436)	(9,677,899)	(8,829,452)	(7,561,357)	(6,830,454)	(4,434,764)	(2,534,421)	(565,112)	1,141,249	5,792,159	2,996,046	
12. Accum Deferred Tax (Line 11 * 28.742%)	(2,227,307)	(2,569,660)	(2,781,622)	(2,537,761)	(2,173,285)	(1,963,209)	(1,274,640)	(728,443)	(162,425)	328,018	1,664,782	861,123	(13,564,428)
13. Net Investment (Line 11-12)	(5,522,003)	(6,370,776)	(6,896,277)	(6,291,691)	(5,388,072)	(4,867,245)	(3,160,124)	(1,805,978)	(402,688)	813,231	4,127,377	2,134,922	(33,629,323)
14. Carrying Charge (a) (Line 13 * Carrying Charge Rate)	(22,540.818)	(26,005.506)	(28,150.604)	(25,682.683)	(21,994.109)	(19,868.093)	(12,899.627)	(7,372.001)	(1,643.771)	3,319.610	16,847.952	8,714.753	(137,274.90)
15. **End of Month Balance** (Line 11+14)	**(7,771,851)**	**(8,966,441)**	**(9,706,050)**	**(8,855,135)**	**(7,583,351)**	**(6,850,322)**	**(4,447,664)**	**(2,541,793)**	**(566,756)**	**1,144,569**	**5,809,007**	**3,004,761**	

Table 7: 2024 Gas CIP Tracker (DSM Cost Recovery)

Table 8: 2024 Summary of Electric Tax and Rate Base Factors

The following variables were used in the electric CIP Tracker for 2024. These values were established in the Xcel Energy 2021 Multi-Year rate case (E002/GR-21-630) based off the 2024 test year.

Variables	2024
Number of Months =	12
Monthly Carrying Charge =	0.3410%
Annual Amortization Fctr =	20.00%

Common Equity % =	52.50%
Preferred Equity % =	0.00%
Total Debt % =	47.50%

Weighted Cost Common Equity =	5.18%
Weighted Cost Pref Equity =	0.00%
Weighted Cost Total Debt =	2.09%

Normal ROI =	7.27%

CCRC ($/MWh)	$4.955

Tax Rates	2024
Tax Factor =	2.09%

Accumulated Deferred Tax =	28.74%
Tax Rate =	28.74%

Rate Base Factor =	9.36%

Table 9: Calculation of the 2024 Cost of Capital

This table shows the tax factors and capital structure used for the electric cost recovery and return on rate base calculations in Tables 10 and 11 (2025 and 2026 Electric CIP Trackers) and Table 8 (Summary of Electric Tax and Rate Base Factors).

Capital Structure	Capitalization	Cost of Capital	Weighted Average
	2024 Test Yr	2024 Test Yr	2024 Test Yr
Long-Term Debt	47.08%	4.40%	2.07%
Short-Term Debt	0.42%	4.17%	0.02%
TOTAL DEBT	47.50%		2.09%
Common Equity	52.50%	9.87%	5.18%
TOTAL EQUITY	52.50%		5.18%
TOTAL CAPITAL	100.00%		7.27%
MN Tax Rate =			28.74%
Normal Return =			7.27%
Rate Base Factor =	{ROI - (WTD Cost Debt x Tax Rate)} / (1-Tax Rate)		9.36%
Tax Factor =	Rate Base Factor - ROI		2.09%
Monthly Carrying Charge Rate Calculation			
Annual Revenue Requirements Factor =			9.36%
	{ROI - (WTD Cost Debt x Tax Rate)} / (1-Tax Rate)		
Monthly Revenue Requirements Factor =			0.3410%
	{(1 + short term debt) to the 1/12 Power} -1		
CCRC Tracker Rate ($/MWh)			$4.955

SECTION 4: 2024 CIP ADJUSTMENT RATE REPORT – ELECTRIC AND NATURAL GAS

SECTION 4: 2024 ELECTRIC AND NATURAL GAS CIP ADJUSTMENT RATE REPORT

Northern States Power Company, doing business as Xcel Energy, submits this Conservation Improvement Program (CIP) Electric and Natural Gas Adjustment Rate Report.

On March 20, 1995, the Commission approved Xcel Energy's request to implement a CIP Adjustment Factor (Docket No. E002/M-94-1016). This bill rider, adjusted annually, provides the Company with a secondary cost recovery method above the amounts included in base rates (Conservation Cost Recovery Charge or CCRC). The CIP Adjustment Factor is normally approved by the Commission for a 12-month period beginning in the month following the Commission's approval and is calculated by dividing the forecasted CIP tracker balance by the forecasted sales (kWh or therms) for the period over which the adjustment will be in place. Xcel Energy is required to file a recalculation of its CIP Adjustment Factors each April in conjunction with its financial incentive and CIP status report filings.

The current electric CIP Adjustment Factor of ($0.000389) per customer kWh was approved by the Commission on October 31, 2024 in Docket No. E002/M-24-50. This rate was implemented on December 1, 2024 and is designed to reduce the electric CIP Tracker balance to $0 by September 30, 2025. The current natural gas CIP Adjustment Factor of $0.030554 per therm was approved by the Commission in Docket No. G002/M-24-47 and implemented on December 1, 2024. It was also designed to reduce the natural gas CIP Tracker to $0 by September 30, 2025.

Xcel Energy submits this compliance filing and report to support our request of the following:

- Recovery of $15,133,727 for our 2024 electric DSM financial incentive;
- Recovery of $4,313,292 for our 2024 natural gas DSM financial incentive;
- A change in the electric CIP Adjustment Factor from ($0.000389) to $0.001396 per kWh effective the first billing cycle beginning October 1, 2025 through September 30, 2026; and
- A change in the natural gas CIP Adjustment Factor from $0.030554 per therm to $0.023370 per therm effective the first billing cycle beginning October 1, 2025 through September 30, 2026.

Proposed Electric CIP Adjustment Factor for Period October 2025 Through September 2026

Xcel Energy requests a new electric CIP Adjustment Factor of $0.001396 per customer kWh to be effective with the first billing cycle of October 2025 and to remain in effect through the September 2026 billing period. This proposed factor is calculated to reduce the electric CIP Tracker balance to $0 by the end of September 2026. It is based on the forecasted September 2026 unrecovered balance in the Company's electric CIP Tracker account. This forecasted balance is based on the forecasted October 2025 beginning balance, October 2025 through September 2026 approved and projected expenditures, forecasted 2025 incentives and forecasted CCRC recovery at the current CCRC rate. The inputs and calculation are shown below.

Forecasted beginning balance (Oct 2025)	-$18,550,932
Approved expenditures (Oct 2025 - Sept 2026)	$169,956,173
Forecasted 2025 incentive	$23,873,552
Less forecasted CCRC recovery (Oct 2025 - Sept 2026)	$136,438,826
Forecasted October 2026 beginning of month balance	$38,839,967

As in the past, Xcel Energy will include a message referencing the change in the CIP Adjustment Factor in customers' bills. If Commission approval of the proposed adjustment is delayed beyond September 20, 2025 (to implement the rate change by October 1), the Company will continue to apply the current CIP Adjustment of ($0.000389) per kWh up to the first cycle of the first full billing period following Commission approval of a revised factor.

Calculation of Revised Electric CIP Adjustment Factor

(1) Forecasted Oct 2026 Electric CIP Tracker Balance	$38,839,967
(2) Forecasted Electric Sales (MWh)– Oct 2025 through Sept 2026[1]	27,535,585
(3) Recalculated Electric CIP Adjustment Rate = (1)/(2)	$1.411/MWh
	$0.001411/kWh

Our above forecasted balance does not include carrying charges. To include carrying charges, we used the CIP Trackers to calculate the optimal rate of **$0.001396** per kWh, which results in a $24,029 end-of-month balance for September 2026. This is the positive balance closest to zero that we can model, given the digit limitations in our billing system. The projected 2025/2026 electric CIP Trackers are shown in Table 37 and Table 38.

Proposed Natural Gas CIP Adjustment Factor for Period October 2024 Through September 2025

Xcel Energy requests a new natural gas CIP Adjustment Factor of $0.023370 per therm to be effective with the first billing cycle of October 2025 and remaining in effect through the September 2026 billing period. The proposed factor is based on the forecasted October 1, 2026 unrecovered balance in the Company's natural gas CIP Tracker account. The forecasted balance is based on the forecasted October 2025 beginning balance, October 2025 through September 2026 approved and projected expenditures, forecasted 2025 incentive and forecasted CCRC recovery at the current CCRC rate. The inputs and calculation are shown below.

Forecasted beginning balance (Oct 2025)	($2,566,818)
Program Budget (Oct 2025 - Sept 2026)	$35,833,808
Forecasted 2025 incentive	$3,732,430
Less forecasted CCRC recovery (Oct 2025 - Sept 2026)	$18,616,685
Forecasted October 2026 beginning of month balance	$18,382,735

[1] Forecasted sales exclude the customers exempted from electric CIP charges.

As in the past, Xcel Energy will include in customers' bills a message referencing the change in the CIP Adjustment Factor. If Commission approval of the proposed factor is delayed beyond September 20, 2025 (to implement the rate change by October 1), the Company will continue to apply the current CIP Adjustment Factor of $0.030554 per therm up to the first cycle of the first full billing period following Commission approval of a revised factor.

Calculation of Revised Natural Gas CIP Adjustment Rate

(1) Forecasted Oct 2024 Natural Gas CIP Tracker Balance	$18,382,735
(2) Forecasted Gas Sales[2] – October 2023 through September 2024	77,741,201
(3) Recalculated Gas CIP Adjustment Rate = (1)/(2)	$0.23646/dth
	$0.023646/therm

Our above forecasted balance does not include carrying charges. To include carrying charges, we used the CIP Trackers to calculate the optimal rate of **$0.023370** per therm, which results in a $242 end-of-month balance for September 2026. This is the positive balance closest to zero that we can model, given the digit limitations in our billing system. The projected 2025/2026 natural gas CIP Trackers are shown in Table 39 and Table 40.

[2] Forecasted sales exclude the exempt customers and natural gas sales to qualifying large energy facilities.

Northern States Power Company, a Minnesota corporation
State of Minnesota- Electric Utility
DSM Cost Recovery & Incentive Mechanism - Total
2025 Actual and Forecast

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
	EXPENSES	Actual	Actual	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	
1.	Balance	(41,453,010)	(46,296,738)	(48,117,259)	(47,756,677)	(45,540,034)	(44,195,125)	(41,624,401)	(41,947,562)	(40,054,324)	(18,550,932)	(17,937,355)	(15,457,171)	(806,663)
1a.	Other Adjustments													
2.	CIP Program Expenditures	6,084,463	7,225,237	10,642,880	10,731,891	10,926,545	13,399,177	12,392,557	14,016,607	16,342,419	14,045,427	15,449,676	29,188,947	160,445,826
3.	2024 Performance Incentive									**15,133,727**				15,133,727
4.	Total Expenses + Incentive (Line 1b + 2 + 3)	(35,368,547)	(39,071,501)	(37,474,379)	(37,024,786)	(34,613,489)	(30,795,947)	(29,231,844)	(27,930,956)	(8,578,179)	(4,505,505)	(2,487,679)	13,731,776	174,772,890
	RECOVERY													
5.	CCRC Rate ($/MWh)	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	
6.	CCRC Cost Recovery (CCRC times Sales)	11,737,433	9,689,837	11,032,672	9,120,910	10,281,686	11,641,490	13,688,688	13,050,855	10,773,583	10,445,500	10,089,463	11,341,249	132,893,366
7.	CIP Adjustment Factor Rate ($/MWh)	(0.389)	(0.389)	(0.389)	(0.389)	(0.389)	(0.389)	(0.389)	(0.389)	(0.389)	1.396	1.396	1.396	
8.	CIP Adjustment Factor Recovery (Factor times Sales)	(921,465)	(760,716)	(866,137)	(716,051)	(807,180)	(913,933)	(1,074,652)	(1,024,578)	(845,797)	2,942,869	2,842,561	3,195,234	1,050,155
9.	Sub-Balance (Line 4 - 6 - 8)	(46,184,515)	(48,000,622)	(47,640,914)	(45,429,645)	(44,087,995)	(41,523,504)	(41,845,881)	(39,957,232)	(18,505,965)	(17,893,874)	(15,419,703)	(804,708)	
10.	Accum Deferred Tax (Line 9 * 28.742%)	(13,274,353)	(13,796,339)	(13,692,952)	(13,057,388)	(12,671,772)	(11,934,685)	(12,027,343)	(11,484,508)	(5,318,984)	(5,143,057)	(4,431,931)	(231,289)	
11.	Net Investment (Line 9 - 10)	(32,910,162)	(34,204,283)	(33,947,962)	(32,372,257)	(31,416,223)	(29,588,819)	(29,818,538)	(28,472,724)	(13,186,981)	(12,750,817)	(10,987,772)	(573,419)	
12.	Carrying Charge (Line 11 * Carrying Charge Rate)	(112,224)	(116,637)	(115,763)	(110,389)	(107,129)	(100,898)	(101,681)	(97,092)	(44,968)	(43,480)	(37,468)	(1,955)	(989,684)
13.	End of Month Balance (Line 9 + 12)	(46,296,738)	(48,117,259)	(47,756,677)	(45,540,034)	(44,195,125)	(41,624,401)	(41,947,562)	(40,054,324)	(18,550,932)	(17,937,355)	(15,457,171)	(806,663)	

Table 10: 2025 Electric CIP Tracker Forecast, With Cost Recovery in 2025

Northern States Power Company, a Minnesota corporation
State of Minnesota- Electric Utility
DSM Cost Recovery & Incentive Mechanism - Total
2026 Forecast

	EXPENSES	Jan Forecast	Feb Forecast	Mar Forecast	Apr Forecast	May Forecast	Jun Forecast	Jul Forecast	Aug Forecast	Sep Forecast
1.	Balance	(806,663)	(5,556,953)	(8,310,309)	(11,973,082)	(13,113,042)	(15,639,497)	(17,415,475)	(22,968,246)	(26,068,685)
2.	CIP Program Expenditures	10,445,181	10,334,606	10,888,372	10,979,435	11,178,580	13,708,247	12,678,407	14,339,918	16,719,378
3.	2025 Performance Incentive									23,873,552
4.	Total Expenses + Incentive (Line 1 + 2 + 3)	9,638,517	4,777,653	2,578,063	(993,647)	(1,934,462)	(1,931,251)	(4,737,068)	(8,628,328)	14,524,245
	RECOVERY									
5.	CCRC Rate ($/MWh)	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955	4.955
6.	CCRC Cost Recovery (CCRC times Sales)	11,844,876	10,195,408	11,330,045	9,430,657	10,662,983	12,047,734	14,180,384	13,557,527	11,312,999
7.	CIP Adjustment Factor Rate ($/MWh)	$1.396	$1.396	$1.396	$1.396	$1.396	$1.396	$1.396	$1.396	$1.396
8.	CIP Adjustment Factor Recovery (Factor times Sales)	3,337,124	2,872,410	3,192,077	2,656,952	3,004,142	3,394,276	3,995,119	3,819,638	3,187,275
9.	Sub-Balance (Line 4 - 6 - 8)	(5,543,482)	(8,290,165)	(11,944,059)	(13,081,256)	(15,601,587)	(17,373,260)	(22,912,571)	(26,005,494)	23,971
10.	Accum Deferred Tax (Line 9 * 28.742%)	(1,593,308)	(2,382,759)	(3,432,962)	(3,759,815)	(4,484,208)	(4,993,422)	(6,585,531)	(7,474,499)	6,890
11.	Net Investment (Line 9 - 10)	(3,950,175)	(5,907,406)	(8,511,098)	(9,321,441)	(11,117,379)	(12,379,838)	(16,327,040)	(18,530,995)	17,081
12.	Carrying Charge (Line 11 * Carrying Charge Rate)	(13,470)	(20,144)	(29,023)	(31,786)	(37,910)	(42,215)	(55,675)	(63,191)	58
13.	End of Month Balance (Line 9 + 12)	(5,556,953)	(8,310,309)	(11,973,082)	(13,113,042)	(15,639,497)	(17,415,475)	(22,968,246)	(26,068,685)	24,029

Table 11: 2026 Electric CIP Tracker Forecast, With Cost Recovery in 2026

Northern States Power Company, a Minnesota corporation
State of Minnesota - Gas Utility
DSM Cost Recovery and Incentive Mechanism
Tracker and Balance ($)
2025 Actual and Forecast

	EXPENSES	Jan Actual	Feb Actual	Mar Forecast	Apr Forecast	May Forecast	Jun Forecast	Jul Forecast	Aug Forecast	Sept Forecast	Oct Forecast	Nov Forecast	Dec Forecast	Total
1.	Beginning Balance	3,004,761	(2,010,811)	(6,649,327)	(10,776,270)	(12,555,674)	(12,618,742)	(11,651,488)	(10,332,112)	(8,591,784)	(2,566,818)	(1,356,329)	(1,306,287)	
1a	Other Adjustments													
2.	CIP Program Expenditures	2,632,939	1,925,288	2,384,480	2,448,315	2,311,659	2,417,660	2,307,546	2,793,078	2,942,929	2,729,976	2,555,426	4,901,606	32,350,903
3.	2024 Performance Incentive									**4,313,292**				4,313,292
4.	**Total Expenses** (Line 1b + 2 + 3)	**5,637,699**	**(85,524)**	**(4,264,846)**	**(8,327,954)**	**(10,244,015)**	**(10,201,082)**	**(9,343,942)**	**(7,539,034)**	**(1,335,563)**	**163,158**	**1,199,097**	**3,595,319**	
	RECOVERY													
5.	CCRC Rate ($/Dth)	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	
6.	CCRC Cost Recovery	3,358,089	2,875,572	2,847,298	1,841,602	1,027,342	622,441	421,022	451,615	537,726	767,017	1,266,050	2,622,773	18,638,548
7.	CIP Adjustment Factor Rate ($/Dth)	0.30554	0.30554	0.30554	0.30554	0.30554	0.30554	0.30554	0.30554	0.30554	0.23370	0.23370	0.23370	
8.	CIP Adjustment Factor Recovery	4,284,589	3,668,946	3,632,870	2,349,702	1,310,786	794,173	537,182	576,217	686,085	748,536	1,235,545	2,559,578	22,384,209
9.	**Total Recovery** (Line 6 + 8)	**7,642,679**	**6,544,518**	**6,480,169**	**4,191,305**	**2,338,128**	**1,416,613**	**958,204**	**1,027,832**	**1,223,810**	**1,515,554**	**2,501,595**	**5,182,351**	
10.	Rate Refund	0	0	0	0	0	0	0	0	0	0	0	0	0
11.	Sub-Balance (Line 4-9)	(2,004,979)	(6,630,042)	(10,745,015)	(12,519,259)	(12,582,143)	(11,617,695)	(10,302,145)	(8,566,865)	(2,559,373)	(1,352,395)	(1,302,498)	(1,587,032)	
12.	Accum Deferred Tax (Line 11 * 28.742%)	(576,271)	(1,905,607)	(3,088,332)	(3,598,285)	(3,616,360)	(3,339,158)	(2,961,043)	(2,462,288)	(735,615)	(388,706)	(374,364)	(456,145)	(23,502,173)
13.	Net Investment (Line 11-12)	(1,428,708)	(4,724,435)	(7,656,683)	(8,920,974)	(8,965,784)	(8,278,537)	(7,341,103)	(6,104,577)	(1,823,758)	(963,690)	(928,134)	(1,130,887)	(58,267,269)
14.	Carrying Charge (a) (Line 13 * Carrying Charge Rate)	(5,832)	(19,285)	(31,255)	(36,415)	(36,598)	(33,793)	(29,966)	(24,919)	(7,445)	(3,934)	(3,789)	(4,616)	(237,847)
15.	**End of Month Balance** (Line 11+14)	**(2,010,811)**	**(6,649,327)**	**(10,776,270)**	**(12,555,674)**	**(12,618,742)**	**(11,651,488)**	**(10,332,112)**	**(8,591,784)**	**(2,566,818)**	**(1,356,329)**	**(1,306,287)**	**(1,591,648)**	

Table 12: 2025 Gas CIP Tracker Forecast, With Cost Recovery in 2025

Northern States Power Company, a Minnesota corporation
State of Minnesota - Gas Utility

DSM Cost Recovery and Incentive Mechanism
Tracker and Balance ($)
2026 Forecast

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
	EXPENSES	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
1.	Balance	($1,591,648)	($4,391,646)	($7,580,055)	($10,752,759)	($11,639,590)	($11,247,855)	($9,813,998)	($8,214,600)	($6,019,564)
2.	CIP Program Expenditures	3,204,062	2,810,720	2,658,925	2,730,108	2,577,723	2,695,924	2,573,137	3,114,552	3,281,650
3.	2025 Performance Incentive									3,732,430
4.	**Total Expenses** (Line 1 + 2 + 3)	**1,612,414**	**(1,580,926)**	**(4,921,130)**	**(8,022,652)**	**(9,061,867)**	**(8,551,931)**	**(7,240,861)**	**(5,100,048)**	**994,516**
	RECOVERY									
5.	CCRC Rate ($/Dth)	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395	0.2395
6.	CCRC Cost Recovery	3,032,192	3,025,016	2,935,588	1,813,437	1,089,812	624,323	480,749	456,529	503,199
7.	CIP Adjustment Factor Rate ($/Dth)	0.23370	0.23370	0.23370	0.23370	0.23370	0.23370	0.23370	0.23370	0.23370
8.	CIP Adjustment Factor Recovery	2,959,131	2,952,128	2,864,855	1,769,743	1,063,553	609,280	469,165	445,529	491,075
9.	**Total Recovery** (Line 6 + 8)	**5,991,323**	**5,977,144**	**5,800,443**	**3,583,180**	**2,153,366**	**1,233,603**	**949,914**	**902,057**	**994,274**
10.	Rate Refund	0	0	0	0	0	0	0	0	0
11.	Sub-Balance (Line 4-9)	(4,378,909)	(7,558,071)	(10,721,573)	(11,605,831)	(11,215,233)	(9,785,534)	(8,190,775)	(6,002,105)	242
12.	Accum Deferred Tax (Line 11 * 28.742%)	(1,258,586)	(2,172,341)	(3,081,594)	(3,335,748)	(3,223,482)	(2,812,558)	(2,354,192)	(1,725,125)	69
13.	Net Investment (Line 11-12)	(3,120,323)	(5,385,730)	(7,639,978)	(8,270,083)	(7,991,751)	(6,972,976)	(5,836,582)	(4,276,980)	172
14.	Carrying Charge (a) (Line 13 * Carrying Charge Rate)	(12,737)	(21,985)	(31,186)	(33,758)	(32,622)	(28,464)	(23,825)	(17,459)	1
15.	**End of Month Balance** (Line 11+14)	**(4,391,646)**	**(7,580,055)**	**(10,752,759)**	**(11,639,590)**	**(11,247,855)**	**(9,813,998)**	**(8,214,600)**	**(6,019,564)**	**242**

Table 13: 2026 Gas CIP Tracker Forecast, With Cost Recovery in 2026

SECTION 5: 2024 CIP FINANCIAL INCENTIVE CALCULATIONS – ELECTRIC AND NATURAL GAS

SECTION 5: 2024 CIP FINANCIAL INCENTIVE CALCULATIONS

Northern States Power Company, doing business as Xcel Energy, submits this Conservation Improvement Program (CIP) Electric and Natural Gas CIP Incentive Calculation and Cost-Effectiveness & Performance Mechanism Report as required by Docket No. E,G999/CI-08-133.

In 2023, the Commission approved a new Shared Savings incentive mechanism that better reflects changes to energy conservation programing as a result of the 2021 Energy Conservation and Optimization (ECO) Act. The new mechanism uses the Minnesota Test net benefits as the basis of the incentive mechanism and sets new guidelines for inclusion of Efficient Fuel Switching (EFS) and Load Management (LM) programing. The updated details of the incentive mechanism are as follows:

- Electric utilities' incentives start at energy savings of 1.5% of retail sales; 5.5% of net benefits is awarded at energy savings of 2.2% of retail sales and above.
- Gas utilities' incentives start at energy savings of 0.7% of retail sales; 4% of net benefits is awarded at energy savings of 1.2% of retail sales and above.
- Sets an expenditures cap for all utilities at 20%, which increases to 25% if the utility achieves the high achievement threshold.
- Sets the high achievement threshold at 2.2% of retail sales for electric utilities.
- Sets the high achievement threshold at 1.5% of retail sales for gas utilities.
- Allows all utilities to include EFS expenditures towards calculation of the expenditures cap.
- Allows gas utilities that have achieved energy savings at or above 1% of retail sales, excluding savings achieved through fuel-switching programs, to count net benefits and energy savings derived from their efficient fuel-switching programs towards calculating their financial incentive.
- Prevents electric utilities from counting net benefit and savings towards their financial incentive.
- Allows all utilities who achieved energy savings at or above 1% of retail sales to count the net benefits from LM programs toward their financial incentive.

Additionally, during the 2013 Legislature, a provision was added to Minnesota Statute 216B.241, subdivision 7, which allows utilities the option to exclude the net benefits of low-income programs, if negative, from the calculation of the DSM financial incentive.

Xcel Energy's 2024 ECO portfolio achieved electric energy savings of 516 GWh which provide net benefits of $411 million to Xcel Energy electric customers. The Company also achieved natural gas savings of 1,298,039[1] Dth, which provide Xcel Energy customers with net benefits of nearly $108

[1] This savings value includes savings from both Energy Efficiency and the claimable savings from Efficient Fuel Switching. The Company saved 1,243,874 Dth through Energy Efficiency and claimed 54,166 Dth through Efficient Fuel Switching. The Efficient Fuel Switching savings are the net site savings which also accounts for the added electricity from these activities. The Company reduced gas usage by 88,853 Dth with a corresponding increase of 10,166,323 kWh on the electric system.

million. As a result of these achievements, we request approval of a 2024 ECO electric financial incentive of $15,133,727 and a 2024 ECO natural gas financial incentive of $4,313,292.

The performance measurements of Xcel Energy's individual electric and natural gas ECO programs, including indirect impact programs, are reported in Tables 2 and 3, respectively. The cost-effectiveness of individual segments is reported in the Cost-Effectiveness Report included in this filing.

NORTHERN STATES POWER COMPANY
A MINNESOTA CORPORATION
2024 ELECTRIC INCENTIVE CALCULATIONS

In accordance with the Commission Order dated January 25, 2024 (Docket No. E,G999/CI-08-133) (2024 Order), Xcel Energy respectfully submits these financial incentive calculations. In 2024, the Company achieved electric energy savings of 516,355,477 kWh at the generator at a cost of $132,968,362. As a result, we respectfully request approval of our ECO electric financial incentive in the amount of $15,133,727.

CIP Electric Financial Incentive Calculation

According to Orders in Docket No. E,G999/CI-08-133, certain expenses and savings are excluded from the incentive calculation, including regulatory assessments, electric utility infrastructure projects, qualifying solar projects, and third-party projects not selected for inclusion in the annual incentive compliance filing. As first stated in our January 30, 2013 incentive compliance filing and continued through the 2024-2026 filing, we elected to include the One Stop Shop program administered by the Center for Energy and the Environment (CEE).[2] The indirect impact third-party programs—EnerChange, Energy Smart, and Trillion Btu—are not included in the calculation of the incentive. All calculations below use unrounded values from the Company's cost effectiveness model.

Model Year Inputs	
3-year Weather Normalized Sales Average (kWh)	27,228,994,609
Incentive Mechanism	
Max Percent of Net Benefits Awarded	5.50%
Max Percent Expenditures Awarded (up to 2% achievement)	20.00%
Max Percent Expenditures Awarded (more than, equal to 2% achievement)	25.00%
Earnings Threshold	1.50%
Net Benefits Cap Achievement Level	2.20%
Increase in Net Benefits Awarded Per 0.1% Increase in Achievement Level	0.60%
Summary of Achievements	
Actual Spending for Incentive[3]	$132,968,362
Actual Energy Savings (kWh)[4]	516,355,477
Net Benefits Achieved[5]	$426,592,582

[2] Docket No. E,G999/CI-08-133 and Docket No. E,G002/CI-10-81.
[3] Portfolio Subtotal spend plus CEE One-Stop Shop spend for both energy efficiency and EFS. Excludes Assessments and other alternative filings that are included in the total cost of ECO.
[4] Portfolio Subtotal energy savings plus CEE One-Stop Shop energy savings.
[5] The net benefits are equal to the Minnesota test net benefits excluding financial incentives shown on Electric CIP Total cost-benefit analysis plus the Minnesota test net benefits excluding financial incentives shown on the CEE One Stop Shop cost-benefit analysis, included in the Cost-Effectiveness Section. Excludes any net costs from low-income programs that failed the Minnesota Test excluding financial incentives.

2024 Financial Incentive Mechanism

To calculate the CIP financial incentive, it is necessary to calculate the percent of net benefits awarded. The following calculations and incentive table detail Xcel Energy's financial incentive.

Percent of Sales Achievement Level =

Actual Energy Savings (kWh) / 3-year Weather Normalized Sales Average (kWh) =

516,355,477 / 27,228,994,609 = **1.90%**

Percent of Net Benefits Awarded = Max Percent of Net Benefits Awarded – Increase in Net Benefits Awarded Per 0.1% Increase in Achievement Level * (Amount the % of Sales Achievement is below the Net Benefits Cap Achievement) / 0.1% =

5.50% - 0.60% * (2.20% - 1.90%) / 0.10% = **3.68%**

Expenditures Award Cap (for <2.20%) achievement =

Max Percent Expenditures Awarded * Actual Spend for Incentive =
20.00% * $132,968,362 = **$26,593,672**

Incentive Awarded =

(Net Benefits Achieved - Incentive Awarded[6]) * Percent of Net Benefits Awarded =
($426,592,582 - $15,133,727) * 3.68% = **$15,133,727**

2024 Electric Incentive Request
Based on the above calculation, Xcel Energy respectfully requests approval of a CIP financial incentive of $15,133,727 for its 2024 electric achievements.

[6] As per the Minnesota test, utility financial incentives are considered a cost in calculating the net benefits of a program or portfolio. This circular calculation is achieved using iterative calculations in Microsoft Excel.

NORTHERN STATES POWER COMPANY
A MINNESOTA CORPORATION
2024 NATURAL GAS INCENTIVE CALCULATION

In accordance with the Commission's 2024 Order, Xcel Energy respectfully submits these financial incentive calculations.

In 2024, Xcel Energy achieved energy savings of 1,298,039 Dth at a cost of $28,173,224. As a result, we respectfully request approval of our financial incentive in the amount of $4,313,292.

According to Orders in Docket No. E,G999/CI-08-133, certain expenses and savings are excluded from the natural gas incentive calculation, including regulatory assessments and third party projects not selected for inclusion in the annual incentive compliance filing. As stated in our January 30, 2013 incentive compliance filing and maintained through our 2024-2026 filing, we elected to include the One Stop Shop program administered by the Center for Energy and the Environment (CEE).[7] The indirect impact third-party programs—Enerchange, Energy Smart, and Trillion Btu—are not included in the calculation of the incentive.[8]

Model Year Inputs	
3-yr Weather Normalized Sales Average (Dth)	77,587,031
Incentive Mechanism	
Max Percent of Net Benefits Awarded	4.00%
Max Percent Expenditures Awarded (up to 1.2% achievement)	20.00%
Max Percent Expenditures Awarded (more than, equal to 1.2% achievement)	25.00%
Earnings Threshold	0.7%
Net Benefits Cap Achievement Level	1.2%
Increase in Net Benefits Awarded Per 0.1% Increase in Achievement Level	0.42%
Summary of Achievements	
Actual Spending for Incentive[9]	$28,173,224
Actual Energy Savings (Dth)	1,243,874
Energy Efficiency Net Benefits Achieved[10]	$108,828,849
Claimable Efficient Fuel Switching Energy Savings	54,166
54,166	
Efficient Fuel Switching Net Benefits Achieved	$3,316,735

[7] Docket No. E,G999/CI-08-133 and Docket No. E,G002/CI-10-81.
[8] Docket No. E,G999/CI-08-133 and Docket No. G002/M-16-108.
[9] Portfolio Subtotal spend plus CEE One-Stop Shop spend for both energy efficiency and EFS. Excludes Assessments and other alternative filings that are included in the total cost of ECO.
[10] The net benefits are equal to the Minnesota test net benefits excluding financial incentives shown on Gas CIP Total cost-benefit analysis plus the Minnesota test net benefits excluding financial incentives shown on the CEE One Stop Shop cost-benefit analysis, included in the Cost-Effectiveness Section. Excludes any net costs from low-income programs that failed the Minnesota Test excluding financial incentives.

2024 Financial Incentive Mechanism
To calculate the financial incentive achieved, it is necessary to calculate the percent of net benefits awarded. The following calculations and incentive table detail Xcel Energy's financial incentive.

Percent of Sales Achievement Level =

Actual Energy Savings (Dth) / 3-year Weather Normalized Sales Average (Dth) =

1,243,874 / 77,587,031 = **1.32%**

Percent of Sales Achievement Level with Efficient Fuel Switching =

(Actual Energy Efficiency Energy Savings (Dth) + Claimable Efficient Fuel Switching Energy Savings (Dth)) / 3-year Weather Normalized Sales Average (Dth) =

(1,243,874 + 54,166) / 77,587,031 = **1.67%**

Percent of Net Benefits Awarded =

Max Percent of Net Benefits Awarded – Increase in Net Benefits Awarded Per 0.1% Increase in Achievement Level * (% of Sales Achievement Level less than Net Benefits Cap Achievement Level) / 0.1% =

4.00% - 0.42% * 0[11] / 0.10% =

= 4.00%

Expenditures Award Cap (for >=1.2%) achievement =

Max Percent Expenditures Awarded * Actual Spend for Incentive =
25.00% * $28,173,224 **= $7,043,306.08**

Incentive Awarded =

(Energy Efficiency Net Benefits Achieved + Efficient Fuel Switching Net Benefits Achieved - Incentive Awarded[12]) * Percent of Net Benefits Awarded =

($108,828,849 + $3,316,735 -$4,313,292) * 4.00% = **$4,313,292**

2024 Natural Gas Incentive Request
Based on the above calculation, Xcel Energy respectfully requests approval of a CIP financial incentive of $4,313,292 for its 2024 natural gas achievements.

[11] Percent of Sales Achievement is greater than Net Benefits Cap Achievement Level. Therefore, no adjustment is made to the Percent of Net Benefits Awarded.
[12] As per the Minnesota test, utility financial incentives are considered a cost in calculating the net benefits of a program or portfolio. This circular calculation is achieved using iterative calculations in Microsoft Excel.

SECTION 6: COMPLIANCE REPORTS

SECTION 6: OVERVIEW OF COMPLIANCE REPORTS

Northern States Power Company doing business as Xcel Energy submits its 2024 ECO Plan Status Report and associated compliance reports. The purpose of this filing is to report 2024 ECO project activity, to request approval to allocate the 2024 Financial Incentive to our CIP Tracker, to update CIP Tracker activity from January 1, 2024 through December 31, 2024, to request approval of the CIP Tracker balance, and to request approval of the Company's proposed Conservation Cost Recovery Adjustment.

SECTION 6: 2024 COMPLIANCE WITH RULES AND STATUTES

Northern States Power Company, doing business as Xcel Energy, submits this 2024 Compliance Report in compliance with the Minnesota Department of Commerce (Department) Rules and the Deputy Commissioner's Decisions. This report covers January 1 through December 31, 2024. This section provides information to satisfy provisions in Minnesota Statutes sections 216B.2401, 216B.241, and 216B.2411, including spending requirements and caps. This section also includes all other ordered compliance requirements, including those required by the Deputy Commissioner's December 1, 2023, Decision and subsequent Decisions in E,G 002/CIP-23-92.

COMPLIANCE REPORT

Statutory Requirements

Achievements as a Percentage of Sales (Minn. Stat. § 216B.421, subd. 1c)

The table below shows our 2024 achievements as a percentage of our 2020-2022 weather-normalized retail sales, adjusted for exempt customers.

Table 14: Achievements as Percent of Sales

	Energy Savings Achieved (MWh)	Energy Savings Achieved (Dth)	Total Adjusted Sales (MWh or Dth)	Savings as % of Retail Sales
Electric	516,855	-	27,228,995	1.90%
Natural Gas	-	1,243,874	77,587,032	1.60%
Efficient Fuel Switching	-	54,166	-	-
Natural Gas + Efficient Fuel Switching	-	1,298,040	77,587,032	1.67%

Efficient Fuel-Switching (Minn. Stat. § 216B.421, subd. 1c (g))

Minnesota Statute limits public utility spending on efficient fuel-switching (EFS) improvements to 0.35 percent per year, averaged over three years of the public utility's gross annual energy retail energy sales. In the Deputy Commissioner's Decision issued on March 15, 2022, the Department of Commerce provided further guidance on this metric to include, "Consistent with other CIP spending caps and requirements, spending on EFS improvements must not exceed 0.35 percent per year, averaged over three years of the [investor-owned utility]'s gross operating revenue (GOR) from non-exempt customers. EFS spending in IOU plans is to be prorated for January 1 - June 30, 2026."[1] In 2024, the Minnesota Legislature removed Minn. Stat. § 216B.421, subd. 1c (g) in its

[1] Decision, In the Matter of Technical Guidance for the Inclusion of Efficient Fuel-Switching, Load Management, and Pre-Weatherization Measures in CIP, Department of Commerce, March 15,2020 (Page 32).

entirety as part of H.F. No. 5247 (Chapter 127). Due to this change, there is no additional reporting requirement.

Carry-Forward Provision (Minn. Stat. §216B.241, subd. 1c.)

The Carry-Forward Provision allows utilities to carry forward energy savings in excess of 1.75% for a year to the succeeding three calendar years for customer program savings and five years for electric utility infrastructure (EUI) projects. Because we surpassed the 1.75 percent electric savings goal, we meet the eligibility guidelines for use of the carry-forward provision. However, the Company is not using any carried-forward savings from previous years for our 2024 achievement.

Facilities Energy Efficiency (Minn. Stat. § 216B.241, subd. 1f)

Statute requires all utilities to include in their conservation plans programs that facilitate professional engineering verification to qualify a building as ENERGY STAR-labeled, Leadership in Energy and Environmental Design (LEED) certified, or Green Globes-certified. The Company's Business New Construction and Business Energy Assessment programs continue to satisfy this requirement.

R&D Spending Cap (Minn. Stat. § 216B.241, subd. 2e)

Minn. Stat. § 216B.241, subd. 2(e) allows public utilities to spend up to ten percent of total ECO spending on research and development projects that meet the definition of energy conservation improvements, efficient fuel-switching, or load management improvement. The table below demonstrates compliance with the R&D spending cap by comparing 2024 actual R&D spending to the approved R&D budget in the Deputy Commissioner's December 1, 2023 Decision and the annual maximum allowed by current statute (10% of spending).

Research and Development identifies, assesses, and develops new load management and energy efficiency products and services. This work allows the Company to identify and promote promising new energy saving opportunities for its customers. Consistent with the Deputy Commissioner's Decision, a narrative summary of R&D activities and the corresponding dollar amounts is provided in the Product Development section of this report.

Table 15: Research & Development Spending Cap

	Combined 2025 ECO R&D Spending	2025 ECO EFS Spending	Maximum Conservation R&D Spending	Variance of Actual to Cap
Electric	$ 2,784,726	$ 47,343	$ 15,246,414	$(12,461,688)
Gas	$ 342,288	$ -	$ 2,879,128	$ (2,536,840)
Total	$ 3,127,014	$ 47,343	$ 18,125,542	$ (14,998,528)

Low Income Spending Requirement (Minn. Stat. § 216B.241, subd. 7a)

Minn. Stat. §216B.241 requires utilities to spend one percent of their residential natural gas gross operating revenues (GOR) on low-income gas programs and 0.6 percent of their residential electric GOR on low-income electric programs, unless otherwise approved by the Commissioner.

The table below shows a comparison of the Company's 2024 actual low-income spending to the minimum spending requirement. The Low-Income Segment section of this Status Report provides greater detail on low-income program achievements and results.

Table 16: Low Income Spending Requirement

	Electric	Natural Gas	Total
IQ SPEND WITHIN HYBRID PROGRAMS			
Partners in Energy	$40,536	$8,060	$48,596
Business New Construction	$1,049,390	$73,700	$1,123,090
School Education Kits	$148,686	$74,653	$223,338
Non-Profit Energy Savings Program (NESP)	$900,965	$96,126	$997,091
Market Research	$12,622	$6,286	$18,908
DIRECT IQ PROGRAMS' SPEND	$6,559,879	$5,412,356	$11,972,234
Total Income Qualified Spend	$8,712,077	$5,671,180	$14,383,257
Minimum Spending Requirement	$7,866,292	$3,629,524	$11,495,816
Approved Low-Income Spend	$10,183,292	$4,762,383	$14,945,675
% of Minimum Spending Requirement	111%	156%	125%
% of Approved Spend	86%	119%	96%

In alignment with hybrid low-income program requirements established in the Deputy Commissioner's November 25, 2020 Decision[2], the table below provides spending and energy savings information from low-income spending within hybrid programs outside the dedicated Low-Income Segment. Five programs, Partners in Energy Program, Business New Construction, School Education Kits, Non-Profit Energy Savings Program (NESP) and Market Research capture income qualified participation, with the exception of Partners in Energy and Market Research spend.

[2] Decision, "Xcel Energy's 2021-2023 Conservation Improvement Program Triennial Plan", Minnesota Department of Commerce, Docket No. E,G002/CIP-20-473, November 25, 2020, pg.12-14.

Table 17a: 2024 Hybrid Program Income Qualified Achievement - Electric

Segment	Program	Participants	Electric Savings (kwh)	Actual Spend
Residential	School Education Kits	3,945	759,437	$148,686
Business	Non-Profit Energy Savings Program (NESP)	423	2,278,227	$900,965
Business	Business New Construction	25	5,671,992	$1,049,390
Indirect Products and Services	Partners in Energy	N/A	N/A	$40,536
Research, Evaluations, Pilots	Market Research	N/A	N/A	$6,286
	Total	4,393	8,709,656	$2,145,862

Table 17b: 2024 Hybrid Program Income Qualified Achievement - Natural Gas

Natural Gas (IQ only)				
Segment	**Program**	**Participants**	**Natural Gas Savings (Dth)**	**Actual Spend**
Residential	School Education Kits	3,892	4,089	$74,653
Business	Non-Profit Energy Savings Program (NESP)	423	5,289	$96,126
Business	Business New Construction	8	9,175	$73,700
Indirect Products and Services	Partners in Energy	N/A	N/A	$8,060
Research, Evaluations, Pilots	Market Research	N/A	N/A	$6,286
	Total	4,323	18,553	$258,825

Pre-weatherization Measures (Minn. Stat. § 216B.241, subd. 7f)

Statute allows utilities to spend up 15 percent of their total low-income spending on pre-weatherization measures. The Company provides pre-weatherization measures as part of our income-qualified segment as discussed in the detailed program write-ups. Statute also permits utilities to contribute to the state's Healthy AIR (Asbestos Insulation Removal) account (§216B.241, subd. 7(h)); funds contributed count toward both the minimum low-income spending and the 15 percent cap on pre-weatherization spending. If the Company contributes to the Healthy AIR account during a given program year, the Company will report the amount in its annual Status Report. In 2024, the Company spent $402,753 on pre-weatherization measures or three percent of our low-income spending. No funding was provided to the state's Healthy AIR program.

Public Schools (Minn. Stat. §216B.241, subd. 2(i))

Minnesota Statute requires public utilities to include activities to improve energy efficiency in public schools served by the utility. As applicable to each public utility, at a minimum the activities must include programs to increase the efficiency of the school's lighting and heating and cooling systems, and to provide for building recommissioning, building operator training, and opportunities to educate students, teachers, and staff regarding energy efficiency measures implemented at the school. The Company's extensive business portfolio provides several opportunities for public schools through our Business Lighting program, HVAC+R program, Energy Assessment programs, etc. to participate in energy efficiency options. Our dedicated account management staff provides guidance to public schools regarding what program opportunities are available and may benefit the school's unique needs. Additionally, the Company has a School Education Kits program to help public schools engage students in energy efficiency in their homes, while providing content to teachers within their lessons.

Assessments (Minn. Stat. § 216B.241, subd. 8)

Please see Assessments Segment for further details regarding assessments made under this subdivision.

SB 2030 Standards (Minn. Stat. § 216B.241, subd. 9(e))

All utilities are required by statute to develop ECO projects to support attainment of Sustainable Building (SB) 2030 standards. The Business New Construction program supports the SB 2030 performance standard in various ways. This includes providing design assistance[3], verification of equipment installation, and financial incentives for incorporating energy efficient design components. Additionally, projects that qualify for the Energy Design Assistance program receive whole-building energy modeling and each project includes a comparison to the SB 2030 standard.

Lighting Use and Recycling Programs (Minn. Stat. § 216B.241, subd. 5)

Utilities are required to invest in projects that encourage the use of energy efficient lighting and reclamation or recycling of spent fluorescent and high intensity discharge lamps. The Company met this requirement through its business and residential lighting and lamp recycling programs.

Employee Expenses (Minn. Stat. § 216B.16, subd. 1)

In the Department's August 13, 2010 Comments in Docket No. E002/M-10-296, the Department proposed employee expense guidelines, including a recommended cap on employee expenses of 0.5 percent of total annual budgets or expenses. In 2024, the Company had a total of $215,946 in employee expenses related to ECO. These expenses represent about 0.13 percent of our total ECO spending for 2024, which is below the Department's recommended cap of 0.5 percent of total annual budget for expenses.

[3] Per the statute, "A utility's design assistance program must consider the strategic planting of trees and shrubs around buildings as an energy conservation strategy for the designed project."

Table 18: Miscellaneous Expenses

	Employee Expenses	Total ECO Spending	% of Total Spending
Electric	$ 172,954	$ 135,649,998	0.13%
Natural Gas	$ 42,992	$ 26,206,674	0.16%
Total	$ 215,946	$ 161,856,673	0.13%

Programs for Efficient Fuel Switching; Electric and Natural Gas Utilities (Minn. Stat. §216B.241, subd. 11 & 12)

Program results related to EFS are discussed in more detail within the detailed segment write-up for Efficient Fuel Switching. Compliance with the eligibility requirements related to EFS are detailed in Appendix I: Fuel Neutral Energy Analysis.

Cost-effective Load Management Programs (Minn. Stat. §216B.241, subd. 13)

A public utility may propose load management programs that meet the criteria of statute and claim associated energy savings if these programs' primary purpose is energy efficiency. The Company reports on several load management (or demand response) programs and provides further details in our detailed program write-ups. Because most of the proposed programs result in a decrease in annual energy consumption, the Company believes it is reasonable to claim energy efficiency savings for them, consistent with prior practice.

Minnesota Efficient Technology Accelerator (Minn. Stat. §216B.241, subd. 14 (h))

Public utilities with more than 30,000 customers are required to contribute to the funding of the Minnesota Efficient Technology Accelerator (ETA) once that program is approved. The Deputy Commissioner approved a proposal from Center for Energy and Environment (CEE)[4]; the Company has included the contributions to ETA as provided by CEE in their December 21, 2023 Compliance Filing in Docket No. E002/CIP-23-92. We further reference these costs in our Assessment Segment write-up.

Distributed Energy Resources Spending Cap (Minn. Stat. §216B.2411)

Utilities may spend up to five percent of their total energy conservation improvement spending on distributed generation projects. In 2024, the Company did not have any distributed energy resources spending in ECO.

Program Modifications & Courtesy Notifications

Xcel Energy provides the following information regarding the formal and informal modifications to our 2024 ECO Plan that were made and approved in 2024 or went into effect in 2024.[5]

[4] Docket Number E,G999/CIP-21-548.

[5] The Deputy Commissioner requires utilities to include in their annual status reports a description of all program modifications and changes not requiring Deputy Commissioner approval to keep the Department and other interested parties informed of their activities. In the Matter of Xcel Energy's 2024-2026 Energy Conservation and Optimization Program Triennial Plan, Docket No. E,G002/CIP-23-92, et al., Deputy Commissioner Decision, p. 206 (Dec. 1, 2023).

Minn. R. 7690.1400 requires utilities to file formal program modifications when:

- proposing a new project;
- discontinuing an existing project;
- reducing the minimum qualifying efficiency level of a measure or technology;
- decreasing project budgets, savings and participation goals;
- increasing the Planning Segment annual budget by more than 25%; and
- increasing the Research, Evaluations, and Pilots Segment by more than 25%.

Formal Modifications

The Company filed a formal modification to two programs on February 24, 2024, which included:

Peak Day Partners
The Company filed Peak Day Partners as a pilot in the 2023 program year. The Peak Day Partners pilot program offers commercial and industrial customers an incentive through an incentive bidding process, in exchange for reducing their peak load during periods when demand is high. The program's purpose is to provide the Company with an additional power purchase resource to manage system requirements more efficiently during exceptional periods, and to provide the customer the option of receiving pricing associated with energy supply markets during such periods.

The Deputy Commissioner approved this pilot on October 27, 2023 and the Company filed to extend the pilot through 2025 on February 27, 2024. The Deputy Commissioner approved the extension on July 31, 2024.

Battery Connect.
Battery Connect is a new program that will allow residential and small commercial customers to earn incentives by granting the Company access to their on-site battery storage, up to 50 kWh, for demand management applications. By participating in this program, customers' battery storage will be operated in a manner that will charge off peak ahead of anticipated high system demand. Then, during peak hours, customer batteries will discharge to remove demand from the grid and, where available, return as much excess solar to the grid as possible. At this time, power will not be returned to the grid from customer batteries except in cases where the battery is charged solely from on-site solar. Participation in Battery Connect will be available to customers installing a new battery energy storage system (BESS) as well as customers with an existing BESS.

The Deputy Commissioner approved the inclusion of this program on July 31, 2024. However, the program has not yet officially launched as the Company continued to negotiate contracts with our vendors.

On April 12, 2024, the Company filed a modification to add measures to the following programs:

Home Lighting
The Home Lighting Program added Tier 1 and 2 advanced power strips, smart switches, plugs and outlets as well as LED grow lighting measures.

Lighting
Through this modification, the Company proposed the addition of LED-to-LED interior and exterior measures as well as LED to LED type B tubes to the Lighting Efficiency program.

Due to the diminishing efficiency of LEDs installed more than 10 years ago and to ensure that customers are installing equivalent energy efficient products at the end of its lifetime, the Lighting Efficiency program moved the LED-to-LED rebate from custom to prescriptive. This change provides a minor increase in the net generator kW and kWh savings.

Home Energy Insights
The Company proposed to update the Home Energy Insights program with the addition of a new measure called My Energy Connection. This program modification empowers customers to access their meter data through their home Wi-Fi to obtain insights around their electric usage.

Outdoor Equipment
The Outdoor Equipment program offers customers a post-purchase rebate for electric, battery powered lawn equipment. Through this program modification, the following measures were added to the program mix: trimmers, edgers, cultivators, leaf blowers, snow blowers, and chainsaws. The Petition also made corrections to technical assumptions documentation for Building Envelope and Appliance measures.

These changes, except for My Energy Connection, were approved on June 11, 2024.

On September 19, 2024, the Company filed a modification to add measures to the following programs:

Home Lighting
The Company added another grow lighting measure to the Home Lighting program. This measure was geared toward smaller LED grow lighting that is found in hardware stores. However, several residential customers have been purchasing commercial style grow lighting to maximize their home grow set ups. We proposed adding a new measure that is like the Company's commercial grow lighting measure to encourage customers to choose LED grow lights in these instances. Home Lighting rebates are typically upstream, where discounts are applied at the point of sale in retail stores. For this new measure, however, we created an application customers must fill out to receive the rebate.

Foodservice Equipment

The Company requested modification to the equipment list to add Commercial Griddles to expand incentives on electric equipment to the foodservice industry. This program modification follows ENERGY STAR product requirements [Version 1.2 (Rev. Dec – 2020)] for equipment eligibility criteria of Commercial Griddles, while referencing simplified assumptions from the Minnesota Technical Reference Manual (TRM).

Home Wiring Rebate

The Company added a new measure called EV Home Wiring as part of the Efficient Fuel Switching Training and Support program. This additional measure marked another opportunity to continue support of efficient fuel switching (EFS) by providing incentives to customers aiming to increase their electrical load through displacement of gasoline and fits well in the Efficient Fuel Switching Training and Support program as it addresses a significant barrier to EV adoption where infrastructure continues to be a cost burden.

The EV Home Wiring measure provides a one-time rebate for Market Rate customer and an additional amount for customers who meet the "Low-Income Household" ECO criteria.

These changes were approved by the Deputy Commissioner on November 18, 2024.

Courtesy Notifications

Business Lighting Promotion

For purchases qualifying between April 1, 2024, through November 15, 2024, the Company offered bonuses to encourage project implementation. Customers are critical on making capital expenditures and the bonus proved a pivotal factor in making that happen. To encourage more customer participation, the Company added screw-in lamp rebates to the Retrofit Prescriptive product in 2022 and continued to provide the same rebates in the Instant Rebate product. This effort created multiple pathways for customers to participate and added convenience. The Company submitted this courtesy notification on March 11 and received notice by the department on the same day.

Energy Design Assistance and Energy Efficient Buildings

In the ECO Triennial Plan, The Company followed the Custom Efficiency program and proposed a rebate of $10/Dth minus $0.02/kWh added for EFS measures. Leading up to launch, further analysis showed that this rebate structure resulted in comparable rebate levels customers would receive through the standard EDA program. Given the intent of EFS is to encourage customers to choose electric options, the rebate level must be increased to offer a meaningful premium. Therefore, we propose the rebate be increased to $15/Dth minus $0.02/kWh added, with income-qualified, multi-family housing projects receiving $18/Dth minus $0.02/kWh added. This adjustment to the efficient fuel switching rebate levels in Energy Design Assistance and Energy Efficient Buildings had no meaningful impact on savings or cost-effectiveness. The Company submitted this courtesy notification on March 12 and received notice by the Department on March 13, 2024.

Business HVAC+R & Business Lighting Bonuses

The Company offered a two-part trade incentive bonus on the Business HVAC+R Solutions program. An open network trade incentive provided an additional 5% bonus for a total of 20% on invoices for qualifying equipment dated between April 30, 2024, through November 15, 2024.

A closed network bonus was made available to the mid-down trade network (MDTN), adding an additional 5% bonus for a total of 20% as well as a project cap increase to $10,000 per project.

To incentivize the MDTN, the closed network trade incentive also allowed a short-term extended time frame to submit completed project invoices from 2020 through 2022. This provided trade partners who experienced resource constraints due to COVID and employee retirements extra time to submit invoices permitting customers to receive their rebate.

Similarly, The Company extended a 10% trade incentive bonus on the Business Lighting program for prescriptive lighting projects up to $5,000 per project and an increased trade incentive of 15% for custom lighting projects.

The Company submitted this courtesy notification on April 19, 2024 and received notice by the Department the same day.

HVAC+R VFD Bonus, Dual Fuel Rooftop Unit Rebate Adjustment & Business Lighting Drop Ship & Installation

The Business Lighting program introduced a drop ship and direct installation promotion offering free energy efficient LED lamps to small and mid-sized businesses. This allowed participants to order a limited amount of lamps at no cost, installation included. The promotion used existing technical assumptions and a similar delivery method to a promotion the Company ran in 2021 which reached over 700 business customers and distributed 67,000 lamps.

A 25 percent customer bonus for variable frequency drives (VFDs) in our Business HVAC+R Solutions program was offered. It included integrated VFDs for Fan Energy Index and Clean Water Pumps; the two market transformation products under the mid-down product of HVAC+R.

Lastly, an adjustment within the forecast technical assumptions in the 2024-2026 Triennial was made. The assumptions included a lower rebate for the cooling portion of the Dual Fuel Rooftop Units (DFRTU) than intended. The rebate structure for the cooling portion of the DFRTU should have been the same the structure for the DX units. These DFRTU rebate dollars correspond to the electric energy efficiency of the DFRTU measure which rolls up under the broader HVAC+R efficiency program.

The Company submitted this courtesy notification on May 6 and received notice by the Department May 8, 2024.

Business Compressed Air

To drive participation in the Compress Air Program, invoices dated April 30 through November 15 received a 25 percent customer bonus for qualifying prescriptive equipment upgrades. The Company submitted this courtesy notification on June 17 and received notice by the Department June 18.

Income Qualified Packaging - Lighting

The Commissioner's December 1, 2024 Decision included a provision regarding the Non-Profit Energy Savings Program. That Provision approved the distribution of LEDs, showerheads and smart power strips directly to low-income customers through the Non-Profit Energy Savings program as low-income spending, requiring that items be distributed individually and not bundled into a kit. A vendor facilitating this program alerted the Company of packaged distribution practices in progress, upon which the Company informed the department the practice would halt upon exhaustion of the existing supply.

The Company submitted this courtesy notification on June 17 and received notice by the Department on June 18.

EFS Panel Upgrades

Within the Efficient Fuel Switching Segment the Triennial Plan, the intention to rebate Panel Upgrades was stated as "one potential barrier to implementation of new electric equipment is panel upgrades in older homes. The Company proposes to include funds for these types of promotional incentives to help lower these barriers to participation."
When the Company became ready to accept applications for this EFS measure we provided the terms for the program to the department:

- rebate of $1500;
- work must be completed by a licensed electrician;
- an upgrade in the rated amperage is required.

Participation and budget remained as provided in the initial filing.

The Company submitted this courtesy notification on July 2 and received notice by the department on the same day.

Residential Heating

The Residential Heating and Cooling program offers prescriptive rebates to electric and natural gas customers in single-family homes that purchase new high efficiency equipment.

To encourage participation in high savings areas of our customer segments, the Company issued a bonus on rebates for eligible customers who replace their electric resistance heating with a qualifying heat pump.

The Company submitted this courtesy notification on July 8 and received notice by the department on the same day.

Income Qualified Packaging – Shower Kits

The Commissioner's December 1, 2023 Decision included a provision regarding the Non-Profit Energy Savings Program. That Provision approved the distribution of LEDs, showerheads and smart power strips directly to low-income customers through the Non-Profit Energy Savings program as low-income spending, requiring that items be distributed individually and not bundled into a kit. A vendor facilitating this program alerted the Company of packaged distribution practices in progress, upon which the Company informed the department the practice would halt upon exhaustion of the existing supply.

The Company submitted this courtesy notification on July 11 and received notice by the Department July 12.

Efficient Fuel Switching

In August, the Company discovered the Residential Segment budget for electric fuel switching (EFS) had been exceeded by more than the statutory allowance of 25%. Per the Order, the Company provided an explanation of the budget increase, impact on energy savings, participation, and cost-effectiveness. An updated budget forecast was provided. The Company also verified that even with the increased levels of participation, the Program still passed the Minnesota Test. The Department approved the increase in spending, but also began the process of bring stakeholders together to discuss how to claim savings based on the interdependence of these savings without utilities.

The Company submitted two courtesy notifications on August 12 and another on September 20, 2024. Per the Department's guidance on September 20, 2024, and further in person discussions, the Company continued to allow projects over the 25% statutory allowance.

Trade Incentive as a Service

Historically, the Company has allowed eligible trade partners, or their qualified representatives, to perform administrative duties involved in the project paperwork process. This has led to increased levels of participation in lighting and HVAC programs. This proposed change expanded these administrative dues to include the option to use field verification reviews as sufficient paperwork for providing rebates.

There are occurrences where customers do not pursue rebates because the complexity of projects makes it challenging to collect invoices. In such cases, qualified trade partners, or an eligible representative thereof, may be permitted to complete a thorough and fully documented field review of the equipment installation. The documentation is different than collecting invoices but is equally thorough and subject to a full M&V review later.

The Field Verification Form is a formal Company document completed at the time of the site visit and signed by both the field reviewer and the customer. If documents listing the installed equipment are attached to the Field Verification Form, they too must be dated and signed by both the reviewer and the customer to be valid. Such projects and any trade partners or representative thereof are subject to standard program measurement and verification procedures.

This approach is permissible in any area of the portfolio. However, widespread application is unlikely considering the depth of program knowledge required to perform a field verification properly.

The Company submitted this courtesy notification on October 31 and received notice by the department November 5.

Income Qualified Market Research

As directed by the Deputy Commissioner in the December 1, 2023, Decision, The Company reported on pilots and research the Company is planning to pursue via the Market Research program designed to improve its low-income portfolio.

Informed by the findings of the IQ Segment evaluation in 2024-2026 Triennial plan, the Equity Stakeholder Advisory Group (ESAG) convened by others at Xcel Energy, and an ECO Low-Income workshop in early 2023, the Company identified a Community Based Organization (CBO) Empowerment Program as a viable future experience concept to address participation barriers. The Company contracted with Illume Advising to conduct a concurrent developmental evaluation and CBO engagement pilot that will leverage the IQ Market Research budget that was approved in the triennial.

The current budget for this project is $177,000. Approximately 60% of which we are proposing to pay for with IQ market Research funds. In 2024 the Company spent approximately $21,000 on this project, of which $12,622 has been identified as IQ Market Research costs.

The Company submitted this courtesy notification on November 14 and received notice by the Department November 15.

Low-Income and Multi-family Compliance

Multi-family Buildings and Units

In the December 1, 2023 Decision, the Deputy Commissioner requested the Company continue to report the number of buildings and number of units served in multifamily programs in its annual status reports.

The Multi-Family Building Efficiency (MFBE) program serves both income-qualified and market rate customers. The Company reports on number of buildings and associated units of these programs in the table below.

Table 19: Multi-Family Units/Buildings
Market-rate versus Affordable Housing

	Multi-Family Building Efficiency (Market Rate)	Multi-Family Energy Savings Program (Affordable Housing)
# of Buildings	443	219
# of Units	21,016	9,949

Low Income and Renter Participation

The Deputy Commissioner also required utilities to clearly report the following metrics in their annual status reports:

- the estimate of anticipated and actual low-income residential customer participation levels for each program,
- the estimate of anticipated and actual residential rental customer participation levels for each program
- for programs that make use of the low-income multifamily policy guidance, the number of buildings and units served by market-rate versus affordable housing through the program.

These remaining metrics are shown in Tables 20 through 23.

Table 20: Electric Program Low-Income Participation

	Target			Actual		
	Total Participation	**LI Participation**	**Percent of Participation**	**Total Participation**	**LI Participation**	**Percent of Participation**
Business Segment						
Business New Construction	320		0.0%	284	25	8.8%
Multi-Family Building Efficiency	7,920	-	0.0%	21,016	0	0.0%
Non-Profit Energy Savings	210,924	190,000	90.1%	210,924	18,397	8.7%
Subtotal	**219,164**	**190,000**	**86.7%**	**232,224**	**448**	**7.9%**
Residential Segment						
Consumer Education	481,500		NA	532,244	Cannot Track	NA
Efficient New Home Construction	2,925	20	0.7%	3,098	0	0.0%
Energy Efficient Showerheads	4,860	141	2.9%	918	18	2.0%
Home Energy Audit	13,843	111	0.8%	3,199	214	6.7%
Home Energy Insights	1,119,270		NA	1,029,459	0	0.0%
Home Energy Squad	11,322	-	0.0%	4,180	0	0.0%
Home Lighting	337,450		NA	311,032	0	0.0%
Insulation Rebate Program	2,355	39	1.7%	940	6	0.6%
Lamp Recycling	471,787		NA	524,970	0	0.0%
Refrigerator & Freezer Recycling	7,000	116	1.7%	2,062	57	2.8%
Residential Heating and Cooling	41,852	42	0.1%	2,702	191	7.1%
School Education Kits	42,000	3,650	8.7%	40,799	3,945	9.7%
Whole Home Efficiency	215	1	0.5%	19	0	0.0%
Subtotal	**2,536,379**	**4,119**	**0.0%**	**2,455,622**	**4,431**	**0.2%**
Income Qualified Segment						
Affordable Efficient New Home Construction	25	25	100.0%	25	25	100.0%
Home Energy Savings Program	4,864	4,864	100.0%	2602	2,602	100.0%
LI Home Energy Squad	2,521	2,521	100.0%	1598	1,598	100.0%
LI Multi-Family Building Efficiency	3,691	3,691	100.0%	9,949	9,949	100.0%
Workforce Development & Education	87	87	100.0%	80	80	100.0%
Subtotal	**11,188**	**11,188**	**100.0%**	**14,254**	**14,254**	**100.0%**

	Target			Actual		
	Total Participation	**LI Participation**	**Percent of Participation**	**Total Participation**	**LI Participation**	**Percent of Participation**
Demand Response Segment						
Residential Demand Response	824,430	10,718	1.3%	551,130	621	0.1%
Subtotal	**824,430**	**10,718**	**1.3%**	**551,130**	**621**	**0.1%**
TOTAL	**3,591,161**	**216,025**	**6.0%**	**3,253,230**	**37,728**	**1.2%**

Table 21: Natural Gas Program Low-Income Participation

	Target			Actual		
	Total Participation	**LI Participation**	**Percent of Participation**	**Total Participation**	**LI Participation**	**Percent of Participation**
Business Segment						
Business New Construction	32	-	0.0%	54	8	14.8%
Multi-Family Building Efficiency	1,293	-	0.0%	4,560	2,319	50.9%
Non-Profit Energy Savings Program	110,143	109,702	99.6%	110,143	4,817	4.4%
Subtotal	**111,468**	**109,702**	**98.4%**	**114,757**	**7,144**	**6.2%**
Residential Segment						
Consumer Education	321,000		NA	418,192	Cannot track	NA
Efficient New Home Construction	1,630	33	2.0%	1,795	14	0.8%
Energy Efficient Showerheads	6,840	458	6.7%	2,503	13	0.5%
Home Energy Audit	5,105	327	6.4%	1,503	214	14.2%
Home Energy Insights	277,060		NA	779,195	0	0.0%
Home Energy Squad	4,160	-	0.0%	1,557	0	0.0%
Home Lighting	This program does not apply to this segment.					
Insulation Rebate Program	2,313	60	2.6%	660	5	0.8%
Lamp Recycling	This program does not apply to this segment.					
Refrigerator & Freezer Recycling	This program does not apply to this segment.					
Residential Heating and Cooling	25,958	441	1.7%	3,483	177	5.1%
School Education Kits	21,500	2,197	10.2%	19,653	3,892	19.8%
Whole Home Efficiency	202	1	0.5%	18	0	0.0%
Subtotal	**665,768**	**3,517**	**1%**	**1,228,559**	**4,315**	**0.4%**
Income Qualified Segment						
Affordable Efficient New Home Construction	11	11	100.0%	17	17	100.0%
Home Energy Savings Program	754	754	100.0%	313	313	100.0%
LI Home Energy Squad	945	945	100.0%	647	647	100.0%
LI Multi-Family Building Efficiency	1,126	1,126	100.0%	2,319	2,319	100.0%
Workforce Development & Education	13	13	100.0%	15	15	100.0%
Subtotal	**2,849**	**2,849**	**100.0%**	**3,311**	**3,311**	**100.0%**
Demand Response Segment						
Residential Demand Response	This program does not have 2024 participation to report.					
Subtotal	**This program does not have 2024 participation to report.**					
Efficient Fuel Switching						
Outdoor Equipment	This program does not have 2024 participation to report.					
Subtotal	**This segment does not have 2024 participation to report.**					
TOTAL	**780,085**	**116,068**	**15%**	**1,346,627**	**14,770**	**1.1%**

Table 22: Electric Program Renter Participation

Program	Target			Actual		
	Total Participation	Renter Participation	Percent of Participation	Total Participation	Renter Participation	Percent of Participation
Business Segment						
Business New Construction	320		NA	284	0	0.0%
Multi-Family Building Efficiency	7,920	7,761	98.0%	21,016	18,913	90.0%
Non-Profit Energy Savings Program	210,924		NA	210,924	0	0.0%
Subtotal	**219,164**	**7,761**	**3.5%**	**232,224**	**18,913**	**8.1%**
Residential Segment						
Consumer Education	481,500		NA	532,244	Cannot Track	NA
Efficient New Home Construction	2,925	44	1.5%	3,098	0	0.0%
Energy Efficient Showerheads	4,860	1,115	23.0%	918	28	3.1%
Home Energy Audit	13,843	803	5.8%	3,199	59	1.8%
Home Energy Insights	1,119,270		NA	1,029,459	0	0.0%
Home Energy Squad	11,322	345	3.1%	4,180	26	0.6%
Home Lighting	337,450		NA	311,032	18	0.0%
Insulation Rebate Program	2,355	37	1.6%	940	7	0.7%
Lamp Recycling	471,787		NA	524,970	Cannot Track	NA
Refrigerator & Freezer Recycling	7,000	200	2.9%	2,062	16	0.8%
Residential Heating and Cooling	41,852	837	2.0%	2,702	170	6.3%
School Education Kits	42,000		NA	40,799	Cannot Track	NA
Whole Home Efficiency	215	1	0.5%	19	0	0.0%
Subtotal	**2,536,379**	**3,382**	**0.1%**	**2,455,622**	**324**	**0.0%**
Income Qualified Segment						
Affordable Efficient New Home Construction	25	-	0.0%	25	0	0.0%
Home Energy Savings Program	4,864	717	14.7%	2,602	132	5.1%
LI Home Energy Squad	2,521	369	14.7%	1,598	26	1.6%
LI Multi-Family Building Efficiency	3,691	3,691	100.0%	9,949	40	0.4%
Workforce Development & Education	87		NA	80	Cannot Track	NA
Subtotal	**11,188**	**4,777**	**42.7%**	**14,254**	**198**	**1.4%**
Demand Response Segment						
Residential Demand Response	824,430	21,023	2.6%	551,130	271	0.0%

Subtotal	**824,430**	**21,023**	**2.6%**	**551,130**	**271**	**0.0%**
Efficient Fuel Switching						
Outdoor Equipment	This program does not have 2024 participation to report.					
Subtotal	**This program does not have 2024 participation to report.**					
TOTAL	**3,591,161**	**36,943**	**1%**	**3,253,230**	**19,706**	**0.6%**

Table 23: Natural Gas Program Renter Participation

	Target			Actual		
	Total Participation	**Renter Participation**	**Percent of Participation**	**Total Participation**	**Renter Participation**	**Percent of Participation**
Business Segment						
Business New Construction	32		NA	54	0	0.0%
Multi-Family Building Efficiency	1,293	1,239	96.0%	4,560	4,080	89.5%
Non-Profit Energy Savings Program	110,143		NA	110,143	0	0.0%
Subtotal	**111,468**	**1,239**	**1.1%**	**114,757**	**4,080**	**3.6%**
Residential Segment						
Consumer Education	321,000		NA	418,192	Cannot Track	NA
Efficient New Home Construction	1,630	24	1.5%	1,795	0	0.0%
Energy Efficient Showerheads	6,840	219	3.2%	2,503	21	0.8%
Home Energy Audit	5,105	373	7.3%	1,503	16	1.1%
Home Energy Insights	277,060		NA	779,195	0	0.0%
Home Energy Squad	4,160	-	4.0%	1,557	10	0.6%
Home Lighting	This program does not apply to this segment.					
Insulation Rebate Program	2,313	29	1.3%	660	5	0.8%
Lamp Recycling	This program does not apply to this segment.					
Refrigerator & Freezer Recycling	This program does not apply to this segment.					
Residential Heating and Cooling	25,958	467	1.8%	3,483	0	0.0%
School Education Kits	21,500		NA	19,653	Cannot Track	NA
Whole Home Efficiency	202	1	0.5%	18	0	0.0%
Subtotal	**665,768**	**1,112**	**0.2%**	**1,228,559**	**52**	**0.0%**
Income Qualified Segment						
Affordable Efficient New Home Construction	11	-	0.0%	17	0	0.0%
Home Energy Savings Program	754	393	52.1%	313	13	4.2%
LI Home Energy Squad	945	181	19.2%	647	11	1.7%
LI Multi-Family Building Efficiency	1,126	1,126	100.0%	2,319	0	0.0%
Workforce Development & Education	13		NA	15	0	0.0%
Subtotal	**2,849**	**1,700**	**59.6%**	**3,311**	**24**	**0.7%**
Demand Response Segment						
Residential Demand Response	This program does not apply to this segment.					
Subtotal	**This program does not apply to this segment for 2024.**					
Efficient Fuel Switching						

	Target			Actual		
	Total Participation	**Renter Participation**	**Percent of Participation**	**Total Participation**	**Renter Participation**	**Percent of Participation**
Outdoor Equipment	This program does not apply to this segment for 2024.					
Subtotal	**This program does not apply to this segment for 2024.**					
TOTAL PROGRAM	**780,085**	**44,051**	**5.6%**	**1,346,627**	**4,156**	**0.3%**

Other Regulatory Requirements

Energy Action Days (Behavioral Demand Response) Claimed Savings Methodology

The Deputy Commissioner directs Xcel to include a report or evaluation demonstrating the methodology for claimed energy savings as part of Energy Action Days (or Behavioral Demand Response) and examples of customer messaging as part of its annual status report. The Company provides the report conducted by Evergreen in compliance to this requirement in Appendix F and examples of customer messaging as Appendices G and H.

Residential Demand Response Product Level Breakdown

In the December 1, 2023 Decision, the Deputy Commissioner Approved the Company's format for providing a product level breakdown as part of the Residential Demand Response program write up in its status report and future plans.

Table 24: 2024 Residential Demand Response Breakdown

Product	Participants	Rebates	Gen kW Savings	Gen kWh Savings
AC Rewards	11,948	$1,194,800	14,815	26,173
Behavioral Demand Response	516,675	$ -	9,474	-
Saver's Switch	22,507	$ -	24,762	25,151
Smart Water Heaters	-	$ -	-	-
Total	551,130	$1,194,800	49,050	51,324

Compliance with Measurement and Verification ("M&V") Protocols

On July 23, 2008 the Deputy Commissioner approved the M&V Protocols for Large Custom CIP Projects, as part of Docket No. E,G999/CIP-06-1591. In the November 25, 2020 Decision the Deputy Commissioner instructed the Company to continue to follow the Protocols. The Protocols apply to custom projects that have savings greater than 1 GWh or 20,000 Dth and are initiated after April 1, 2008. As required by the protocols, we submitted 12 projects that met these criteria and required monitoring. We submitted monitoring reports for the qualifying projects to the Department.

Compliance with School Education Kits

In the December 1, 2023 Decision, The Deputy Commissioner approved use the geographical proxy method for the School Education Kits program and accepted the Company's proposal of reporting participating schools in the Company's status report and required reporting on the number of schools by county and number of kits identified as income eligible for the School Education Kits program.

Table 25: Income Qualified School Education Kits by County

County	Total Schools	Income Qualified Schools	Total Kits	Income Qualified Kits
Anoka	18	0	1,581	0
Benton	4	1	483	140
Blue Earth	12	0	548	0
Carver	12	0	835	0
Chisago	3	0	136	0
Clay	3	0	235	0
Dakota	23	0	1,934	0
Goodhue	1	0	6	0
Hennepin	132	0	8,829	0
Kandiyohi	1	0	126	0
Le Sueur	1	0	53	0
McLeod	1	0	111	0
Meeker	1	0	66	0
Nicollet	4	0	134	0
Pipestone	1	0	80	0
Ramsey	92	34	8,309	3177
Rice	16	4	1,021	404
Scott	8	0	565	0
Sherburne	8	0	946	0
Sibley	1	0	8	0
Stearns	25	3	2,128	224
Todd	1	0	59	0
Wabasha	3	0	85	0
Waseca	1	0	115	0
Washington	34	0	3,956	0
Winona	3	0	72	0
Wright	7	0	939	0

The Deputy Commissioner also required the Company to report in its Status Report potential solutions to waste generation from the School Education Kits program. To mitigate waste, custom boxes are utilized to ensure kits are protected while ensuring low levels packaging materials are used. Web messaging is in place, directing participants to give a device to a neighbor, friend or relative if they cannot use it. This messaging is also stated on the installation instructions. Partnering closely with teachers and firmly emphasizing waste limiting importance with those partners also limits unused materials.

2024 Influenced Savings Projects

There was one influenced savings project to report for 2024. The term "Influenced Savings" refers to projects for which Xcel Energy played a significant role in the customer's decision to implement

an energy efficiency measure and for which the customer participated in the normal Custom Efficiency project submission process, yet whose payback period failed. For such projects, Xcel Energy denies the customer any rebate for their efficiency measure, but claims Influenced Savings to appropriately account for the Company's role in achieving implementation of the higher energy efficiency technology and to recognize the often-significant labor and/or study costs invested in the project.

To qualify as an influenced savings project, the project must satisfy the following guidelines:

1. Project Pre-approval – Must occur prior to purchase and installation.
2. Cost-Effectiveness Tests – Projects must pass the Participant and Minnesota Tests.
3. Payback – Projects with a payback period of less than nine months may be considered only if they meet all the other Influenced Savings guidelines herein.
4. Large Projects – Projects with savings of 2 GWh and greater require separate DER pre-review. All other projects will be reviewed as part of the Status Report
5. Savings Cap – Influenced Savings claims cannot exceed 4% of the Company's annual CIP achievements.
6. Documentation – Documentation must be provided to show Xcel Energy's involvement was an important factor in implementing the energy saving project.

Xcel Energy submits the following supplemental information for its influenced savings project in 2024. Table 18 summarizes the program affected by this project and the associated savings. To maintain customer anonymity, the projects will be referred using their random opportunity identification number (OID) number. As required for Influenced Savings, this project received Xcel Energy preapproval and passed the societal and participant tests but did not receive a rebate. Influenced savings projects are included in the programs they fall under. Savings from Influenced Savings projects account for less than 0.0008% of total electric savings.

Table 26: Summary of Influenced Savings Projects

Project OID	Program	Customer kW	Customer kWh	Dth
OID5494410 & OID5646730[6]	Efficiency Controls	3.109	3,952	57

Influenced Project Savings Descriptions
The 2024 Influenced Savings Project summary tracker is included on the following page.

[6] Project included both electric and gas savings, so two project OIDs were needed.

2024 Influenced Savings				
Supplementary Information Worksheet				
Project Number	OID5494410 & OID5646730			
Program Name	Efficiency Controls			
Project Type	Electric and Gas			
Project Information				
Pre-approval Date	**Equipment Installed**	**Payback (years)**		
6/26/24	Control System	6.492		
Electric Cost-Benefit Test Results				
Participant Test	**Utility Test**	**Rate Impact Test**	**Societal Test**	**MN Test**
0.91	1.87	0.59	1.97	1.97
Gas Cost-Benefit Test Results				
Participant Test	**Utility Test**	**Rate Impact Test**	**Societal Test**	**MN Test**
0.75	5.62	0.66	0.81	9.62
Project Description				
This was for a subscription-based HVAC control system				
Estimated Energy Savings				
Customer kW	**Customer kWh**	**Dth Natural Gas**	**Reason for Rebate Denial**	
3.109	3,952	57	Project payback exceeded equipment lifetime	
Project History				
Date	**Description**			
6/11/24	Application received			
6/26/24	Pre-approval			
11/15/24	Earliest invoice			
11/26/24	Date completed			

Pre-Weatherization

In the December 1, 2023 Decision, the Department required The Company report how the utility uses pre-weatherization funds (e.g., by geography, household income, and types of repairs), as well as program deferral rates and causes.

Table 27: Health and Safety Projects Overview

H&S Measure	Number of Buildings	Number of Units	$	Type of Efficiency Project Enabled
Asbestos Removal	5	5	$15,600	Furnace / Boiler Replacement
Exhaust Fan	101	107	$200,100	Insulation
Dryer Vents	2	2	$266	Insulation
H&S - Electrical Other	14	18	$11,355	ASHP Water Heater / Water Heater / Furnace / Boiler / Mini Split / Insulation
H&S - HVAC Exhaust/Ventilation	20	21	$21,549	Furnace / Water Heater / Boiler / Insulation
H&S - HVAC Plumbing	20	28	$10,151	Water Heater / Furnace / Boiler / ASHP Water Heater
Mold Remediation	1	1	$2,109	Insulation
H&S - Moisture Mitigation	45	45	$18,601	Insulation
Misc	8	8	$3,665	Furnace / Insulation
CO Alarm	19	24	$1,790	Insulation
Knob & Tube	15	17	$65,100	Insulation
Vermiculite Removal	9	10	$52,467	Insulation
Total	**259**	**286**	**$402,753**	

Empower Facilities

On August 11, 2022, the Department issued a Decision on Xcel Energy's Empower Facilities Program Proposal that included an order that the Company report additional program performance metrics for the ECO Status Report. These metrics included:

- A breakdown of participation by number of participants that (1) received only assessment and project proposals and (2) contracted for implementation services and/or ongoing support.
- A list of non-ECO programs that benefited from the Empower Facilities Program.
- A summary of the fees reported in the ECO Tracker as associated with the Empower Facilities program.
- A summary of the total costs billed to customers for Empower Facilities and the percentage of these costs reported in the ECO Tracker.

A breakdown of participation can be found in the Table below. In 2024, there were no non-ECO programs that benefited from the Empower Facilities Program. No fees are being reported as part of the tracker as the first contract was signed in late 2024.

Table 28: Participation Breakdown

	Assessment & Proposals	Contracted for Implementation Services	Total Participants
Empower Facilities	8	1	8

Evaluations of Product Impact Measurement Methods

In a January 3, 1992 Order in Docket No. E002/M-90-1159, the Commission required a performance measurement evaluation to accompany Northern States Power Company, a Minnesota corporation, financial incentive mechanism filing. This information, suggested by the Department of Public Service (now the Division of Energy Resources), was required to provide a sound basis for Xcel Energy's DSM Financial Incentive. In 1999, 2010, 2012, 2016, 2020, and again in 2023 the Commission modified Xcel Energy's financial incentive mechanism but retained the basic performance-based philosophy that requires ongoing efforts to ensure that impacts are reasonably well measured.

Xcel Energy considers the following factors in determining what impact measurement methods are appropriate**:**

- The uncertainties associated with existing impact estimates;
- The relative importance of the individual product;
- The cost of impact measurement relative to the overall cost and cost-effectiveness of its various products;
- Informal ongoing product management evaluation efforts to identify issues requiring a more formal evaluation;
- The extent to which previous evaluation work remains pertinent;
- Cost-effective developments in measurement and evaluation methods;
- Effects of free-ridership, free-drivership, and spillover;
- Emerging policy or customer preferences that may significantly change the role or scope of a program or group of programs within the portfolio

The Company's process and/or impact analysis efforts since 2021 are shown in the table on the following page.

Table 29: Xcel Energy's Process and/or Impact Analysis Efforts Since 2021

Product	Type	Status
Compressed Air Efficiency	Process and Impact Evaluation	Completed in 2021
Commercial Efficiency/Process Efficiency (combined)	Process and Impact Evaluation	Completed in 2021
Low Income Segment	Process Evaluation	Completed in 2022
Home Energy Insights	Process Evaluation	Completed in 2022
Home Energy Squad	Process and Impact Evaluation	Completed in 2022
Lighting Efficiency	Process and Impact Evaluation	Completed in 2022
Residential Heating and Cooling	Process and Impact Evaluation	Completed in 2023
Business Energy Assessments	Process and Impact Evaluation	Completed in 2024
Custom Efficiency	Process and Impact Evaluation	Completed in 2024
Business Education	Process Evaluation	Completed in 2024
Data Center Efficiency	Process and Impact Evaluation	Completed in 2024
Home Energy Audits	Process Evaluation	Ongoing
Refrigerator and Freezer Recycling	Process and Impact Evaluation	Completed in 2024
Whole Home Efficiency	Process and Impact Evaluation	Ongoing

Following is a summary of current energy savings calculation methods and M&V practices. For products where technical assumptions have changed due to evaluation or impact analysis results, the specific changes have been documented in the text of this status report and incorporated into the respective CIP cost-benefit analyses.

Current Measurement and Verification (M&V) Practices

In 2024, our prescriptive, custom, and product-specific M&V inspection processes aligned with the processes described in our 2024-2026 Triennial Plan. Each program has an M&V plan to provide assurance that rebated measures were implemented as reported and that our reported savings are as accurate as possible. For prescriptive business and residential programs, we hire third party

contractors to perform random audits on a statistically valid number of rebated projects. Some prescriptive residential programs have M&V plans tailored to their program design and delivery method. For Custom business programs, the Company follows the M&V Protocols for Large Custom ECO Projects approved in Docket No. E,G002/CIP-23-92.

SECTION 7: STATUS REPORT – PROGRAMS AND SEGMENTS

SECTION 7: 2024 STATUS REPORT
DOCKET NO. E,G002/CIP-23-92

Northern States Power Company, doing business as Xcel Energy, submits this Status Report on its Energy Conservation and Optimization (ECO) Plan in compliance with the Minnesota Department of Commerce Rules and the Deputy Commissioner's Decisions. This report covers the 2024 ECO year, January 1 through December 31.

In compliance with Minn. R. 7690.0550, this Status Report includes the cost-effectiveness of the overall Xcel Energy ECO Plan based on 2024 actual performance and calculated by the Minnesota Cost Test. The results are listed by segment and by program. The cost-benefit analyses can be found in a separate section labeled "Cost-Benefit Analysis".

PORTFOLIO SUMMARY

The 2024 ECO Status Report compares the actual achievements accomplished by Xcel Energy in 2024 to the forecasts that were approved in the 2024-2026 ECO Triennial Plan. These comparisons focus on generator kWh and kW saved, Dth saved, participation, and dollars spent compared to goal. The report discusses program accomplishments by segment, including:

- Residential;
- Business;
- Income Qualified;
- Demand Response;
- Efficient Fuel Switching;
- Indirect Products and Services;
- Research, Evaluations, & Pilots;
- Assessments; and
- Alternative Filings.

Xcel Energy's ECO program continues to encourage energy savings and build awareness of the benefits of energy efficiency. In 2024, the electric and natural gas portfolios both achieved significant energy savings, but the electric portfolio fell short of their approved savings targets. The Company achieved 516 GWh of electric savings, 294 MW of demand reduction, and 1,298,039 Dth of natural gas savings, while spending $139 million on its electric programs and $29 million on its natural gas programs.

The following tables show final results of the portfolio as well as final segment-level cost-effectiveness. Cost-effectiveness at the program level is reported in the executive summary.

Table 30a: 2024 Portfolio Summary of Achievements – Energy Efficiency

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Participation	4,331,753	3,907,212	90%	1,131,389	1,550,397	137%
Budget	$ 157,520,863	$135,650,728	86%	$28,712,818	$26,206,674	91%
Generator kW	353,882	294,347	83%	-	-	-
kWh or Dth Saved	624,504,503	516,355,477	83%	1,090,672	1,243,874	114%

Table 30b: 2024 Portfolio Summary of Achievements – Efficient Fuel Switching

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Participation	2,729	6,202	227%	785	2,189	279%
Budget	$2,727,673	$3,611,921	132%	$1,029,405	$3,078,917	299%
Generator kW	(16)	(80)	489%	-	-	-
kWh or Dth Saved	(2,255,497)	(10,893,450)	483%	19,018	88,853	467%
Claimable Dth	-	-	-	11,682	54,166	464%

RESIDENTIAL SEGMENT

The Residential Segment provides cost-effective, direct, and indirect impact energy efficiency and demand response programs that target customers' homes. Prescriptive rebates, in-home services and consumer education make up the portfolio across a variety of programs. They are designed to inform and influence customer knowledge and purchasing decisions related to energy use and conservation. The tables below provide the 2024 Residential Segment Results.

Table 32a: 2024 Residential Segment Results – Energy Efficiency

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Participation	2,540,378	2,455,622	97%	665,778	1,228,559	185%
Budget	$30,470,153	$27,299,230	90%	$13,180,671	$11,302,647	86%
Generator kW	35,338	32,780	93%	-	-	-
kWh or Dth Saved	136,696,152	119,824,823	88%	443,238	396,544	89%

Table 32b: 2024 Residential Segment Results – Efficient Fuel Switching

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Participation	726	4,154	572%	719	2,189	304%
Budget	$186,469	$3,298,684	1769%	$672,657	$3,078,683	458%
Generator kW	(6)	(6)	92%	-	-	-
kWh or Dth Saved	(1,789,245)	(10,166,323)	568%	15,859	88,853	560%
Claimable Dth	-	-	-	9,754	54,166	555%

Consumer Education

The Consumer Education program creates awareness of energy conservation by providing residential customers with information and resources to reduce their homes' energy use. The Company provides customers with opportunities to actively engage by learning more about energy usage in their homes and ways they can save energy and money with Xcel Energy's tools, rebates, and programs. Awareness-driving tactics include sponsored community events with opportunities to engage customers face-to-face, larger sponsorships that provide highly visible in-person and digital messaging opportunities (such as events and sports games), social media, email, website advertising and newsletter outreach with the intention of empowering customers to act and participate in programs to help them save energy and money.

The Consumer Education program overachieved its target for customer participation/engagement in 2024. The program continues to find success in sponsoring popular local events across Minnesota and meet customers directly at the places they love to visit. The team works closely with local organizations to ensure the Company is getting value in each partnership with increased focus on engaging visitors face-to-face. On-site presence allows for face-to-face interactions with customers to answer questions and educate them on the energy-saving programs and rebates Xcel Energy offers. The intention is to reach as many customers as possible with creative and engaging messaging. Some key partnerships and events include: the MN State Fair, Como Zoo, the MN Timberwolves and Lynx, St. Paul Saints, home shows, Twin Cities Pride, and more.

The program came in just slightly over budget for the year due to an increased focus and effort on showing up for customers in the community. Sponsorship registration, staffing events and engaging collateral and giveaways continue to increase in cost year over year. The intention is to continue to show up in meaningful ways for customers, so they understand Xcel Energy is committed to their energy needs by meeting them where they are. With data and insights, the Company is aware that an increased effort is needed to show up for customers in person and show our support for the local community. These face-to-face engagement opportunities provide the Company with valuable ways to drive energy and money-saving educational messaging that support the Company's residential programs and resources.

Efficient New Home Construction

The Efficient New Home Construction program helps local builders construct energy efficient homes for residential customers by providing incentives based on the "percent better than baseline" savings achieved by the home. The program also provides annual training and consulting services for builders to help them learn and employ better building practices.

In 2024, the program exceeded both the natural gas and electric customer participation targets. This results from a continued strong construction market for residential homes. Electric and natural gas savings figures also exceeded filed goals proportionally to participation. Builders have continued to build homes that exceed the energy code. The program hosted several builder trainings throughout the year which educate builders on more efficient building practices. Participation in the 25%+ above code category doubled compared to 2023. In the April 29, 2021 Decision, the Deputy Commissioner required reporting on buildings by developer type. In 2024, Efficient New Home Construction had 22 non-profit and 3 market rate participants.

Energy Efficient Showerheads

The Energy Efficient Showerheads program is designed to offer year-round natural gas and electric savings to customers. Residential natural gas and combination natural gas and electric customers are eligible to receive a free kit containing energy-efficient showerheads and aerators to help reduce their energy and water use costs. Customers accept the offer by mailing in a business reply card, signing up via an online portal, or calling the vendor's toll-free number prior to the promotion's deadline. Customers can also login to the online Xcel Energy Store to purchase showerheads and aerators and receive an instant rebate or discount. Following sign-up, customers are mailed a showerhead kit free of charge. Customers are provided with education, instructions for installing the units and thread sealing tape. Participants are later surveyed to determine the installation rates of each unit.

The Energy Efficient Showerhead program fell short of its 2024 target participation. This is mainly due to the timing of our fall direct mail marketing campaign. Email and direct mail promotions are the primary communication drivers to promote showerhead kits, with most of the savings coming in later in the year. Direct mail tends to result in slower response times, so we are actively working with our vendor to ensure our fall and spring campaigns are sent out much earlier. Some of the program's spending is included as part of the "hybrid" programs that directly benefit low-income households and included in the total low-income spending towards the Company's statutory minimum. This is detailed further in our "Compliance Section".

Home Energy Audit

The Home Energy Audit program offers substantially discounted energy auditing services to residential customers. The program also includes a free follow-up consultation called the Energy Advisor service for customers who have rebate eligible projects that were recommended during the home energy audit. The Energy Advisor service puts customers in contact with an energy expert after the energy audit to get answers to questions after the visit, get help in locating rebate-eligible contractors, to understand additional rebate opportunities and find competitive financing options.

This Home Energy Audit program is designed to improve energy savings in residential homes by influencing customer behavior through conservation education and encouraging identification and implementation of energy efficiency efforts. Considered a gateway program to the other residential programs, the Home Energy Audit program is cross promoted with other programs. In addition, one of the third-party contracted vendors for the program has partnerships with more than 20 cities who help to promote Home Energy Audit program and encourage their residents to participate by paying the customer copay. Five of these partner cities also offer bonus rebates on top of utility rebates to increase implementation of efficiency upgrades. In 2024 over 50% of Home Energy Audit visits were in partner cities. This marketing strategy helps minimize promotional and advertising costs. The Company is working to boost the effectiveness of certain campaigns and achieve greater customer awareness and participation in 2025.

Home Energy Insights

Home Energy Insights is a free service offered to residential customers designed to help them save energy and money. The report compares a customer's energy consumption to similar nearby households for benchmarking an individual household's performance. The program provides personalized tips to demonstrate how much customers can save by changing their behavior. Participants receive free monthly emails or quarterly printed reports. Customers also can log on to the My Energy website where they can take a home energy assessment, customize an action plan, and receive energy efficiency tips. To administer the program, the Company works with a third-party company that helps utilities meet their efficiency goals through effective customer engagement.

The program's energy savings are derived by comparing the energy usage of a control group to a treatment group. The treatment group receives reports with tips and suggestions along with alerts, based on their usage and segmentation, to speed up the adoption of energy saving opportunities. The control group's improve energy consumption more organically based on both Xcel Energy and other external influences. While equipment improvements provide longer and less volatile energy savings, behavioral savings require consistent support to the customer through reminders to act on energy savings tips. The goal of integrating report delivery, the alerts and the

tools in the web portal is to improve the quality of the energy efficiency behavioral recommendations and drive the customer experience towards increased energy savings. Generally, realized energy savings increase gradually over time as behavior is affected by treatment, then begin a long slow decline as the control group efficiency catches up. We refer to this as attrition. Program savings are measured and reported to the Company each month by the third-party implementer.

In 2024, the program exceeded its targets for participation and spending. It also surpassed its savings target for electric savings and came very close to achieving its gas savings targets. Additional customers were added to the program (as a new cohort) mid-year to bring participation levels back into alignment for achieving filed goals.

Home Energy Squad

Home Energy Squad is a direct install program for electric and natural gas customers searching for ways to improve the energy efficiency and comfort of their home as well as lower their utility usage. The program is a co-branded partnership with CenterPoint Energy and implemented by a contracted third-party. The primary marketing tactics include mass media advertising, event marketing, bill onserts and email marketing initiated by both utilities. In addition, we have engaged third-party vendors who have partnered with several area cities to promote Home Energy Squad and encourage their residents to participate by paying the customer copay. In 2024 over fifty percent of Home Energy Squad visits were in partner cities.

In 2024, the program increased participation from the prior year but did not achieve its electric or natural gas savings targets. Electric and gas spending also were below filed budgets. In 2024, staffing for the program was adequate and wait times for customers were very short. Awareness and customer demand is an issue during the warmer months of the year when customers are less likely to sign up. The Company is working to boost the effectiveness of certain campaigns and achieve greater customer awareness and participation in 2025. One of our vendors is coordinating marketing and outreach efforts with partner cities and community organizations in order to increase demand during periods with lower historical participation.

Home Lighting

The Home Lighting and Recycling program offers discounted prices, via upstream incentives to retailers and manufacturers, on ENERGY STAR LEDs and other energy savings devices such as smart switches/sockets and advanced power strips. LEDs are an easy, low-cost way for customers to save energy and reduce their monthly electric bills. The Company is focused on increasing awareness and sales of LED bulbs to drive market transformation. The Home Lighting program is widely promoted through a variety of marketing channels including radio, TV, social media, print publications, bill onserts and point-of purchase displays.

In 2024, the Home Lighting program did not meet its electric energy savings target and exceeded the budget target due to increased rebate spend. The program implemented rebate bonuses as a continency plan to close the forecasted gap, but we did not implement it soon enough to achieve the forecasted goal. Sales were steady throughout the year, with an increase activity seen late in 2024 in conjunction with the bonus. Reduced savings per bulb were realized due to the 45 lumens per watt Energy Independence Security Act (EISA) standard, which the Company implemented in 2024. Promotion plans focused on low-cost ways to save energy and money by using LEDs. The program ran advertising campaigns at the beginning and end of the year to increase awareness of the

program. Customers can use our online "bulb finder" tool to easily find participating stores near them and the discounted bulbs offered at each store.

The Company continued to have a presence at community events throughout the year. Community events give us an opportunity to drive one-on-one engagements with our customers and allows us to promote the benefits of LEDs via LED A-line or nightlight giveaways at these events. In addition, the Company offered a deep discount promotion on LED multi-packs in select stores during the year, which continues to be well received by customers.

Insulation Rebate
The Insulation Rebate program offers prescriptive electric and natural gas rebates to residential customers to improve their home's air-sealing and attic and wall insulation. Customers must have products installed by an insulation contractor that has Building Performance Institute certification, or has completed a utility-approved training course, to qualify for the rebate.

The Insulation Rebate program exceeded its electric savings targets and fell short of the natural gas savings target in 2024. Program spending was in line with achievement.

Refrigerator Recycling
The Refrigerator and Freezer Recycling program is designed to decrease the number of inefficient refrigerators, freezers, air conditioners, and dehumidifiers in the Company's service territory in an environmentally safe and compliant manner and, by doing so, achieve electric energy savings and peak demand reduction. Customers receive an incentive plus free pickup and disposal of their operable, inefficient refrigerator and freezer. In addition, air conditioners and dehumidifiers are picked up and recycled for free with no rebate. A third-party implementer administers the program, including customer scheduling, pickup, recycling and rebating.

In 2024, the program did not meet its electric savings target. This was due in part to a major disruption in the appliance recycling industry at the end of 2023, which affected not only the Company, but many utilities nationwide. The program was still finalizing the contract with the new vendor at the beginning of 2024. The sudden shutdown at the end of 2023 lead to poor customer satisfaction and program reputation which made resuming the program difficult. As the program, under a new vendor, began to stabilize while customers were notified of the continuation of the program, participation began to slowly rise. Still, a lack of steady marketing made getting back to full participation difficult. The program came in under budget due to lower-than-expected participation numbers.

Residential Heating and Cooling
The Residential Heating and Cooling program provides prescriptive rebates to electric and natural gas customers in single-family homes that purchase new high efficiency cooling, heating, or water heating equipment. For centrally ducted air conditioners or heat pumps, this equipment must be installed using Quality Installation standards. Quality Installation specifications are based on the Air Conditioning Contractors of America Standard 5 which dictates proper sizing, airflow, duct sealing, and refrigeration charge.

The program gives flexibility to customers by offering incentives for air conditioners, heat pumps, furnaces, water heaters, and smart thermostats. Marketing is done through a variety of channels,

including advertising, cross-promotions with other programs, bill onserts, and trade partners. As customers are required to use a participating contractor to ensure quality installation for most systems, customer awareness and participation rely heavily on trade relationships.

For the 2024 program year, the program exceeded the electric and natural gas targets and spending was in alignment with this increase. Customers greatly exceeded expectations for efficient fuel switching measures and took advantage of the Company's geographic consistency policy. The Company is excited to see how interest in efficient fuel switching continues to grow as more trade partners get more comfortable with the technologies and customers learn more about options. The Company continues to have a strong network of participating trade partners.

Residential Lamp Recycling
The Residential Lamp Recycling program encourages electric customers in Minnesota to recycle their spent fluorescent bulbs instead of discarding them, to ensure that hazardous materials such as mercury do not enter the environment. The program's main offerings include free compact fluorescent light bulb recycling at participating local hardware stores and partnering with county waste facilities. In addition, the Company offers coupons to help reduce the recycling fees for fluorescent tubes and HID bulbs at participating hardware stores. The coupons are available at participating hardware stores and on the Company's website. In 2024, the program exceeded its participation targets while staying within the allocated budget.

School Education Kits
The School Education Kits program offers a multi-component kit that combines classroom activities and in-home projects for students and their parents to teach them about energy and water conservation. The curriculum is designed for 5th and 6th grade students or secondary students. The kits include energy saving and water conservation measures that students implement at home with their families, including LED bulbs, a high-efficiency showerhead, and faucet aerators. The program offers gas and electric savings, supports state education standards, and educates the next generation of energy consumers on how to be energy efficient. Additional low-cost incentives are offered to encourage students to return their Home Energy Worksheets, which help ensure installation of the provided measures and help determine installation rates. Program delivery, teacher training, marketing outreach are implemented by the third-party program vendor. Marketing outreach consists of email and direct mail to teachers at eligible schools.

The program exceeded its filed participation, electric, and natural gas savings targets in 2024. The program ended the year exceeding the filed electric and natural gas budgets. The partnership with CenterPoint Energy continued and allowed the program to reach new customers who receive electric service from Xcel Energy and natural gas service from CenterPoint Energy. This partnership contributed to the program's electric savings achievement, as did strong installation rates of LED bulbs and water conservation measures. Students completed the Home Energy Worksheet and provided installation data for the program. Program materials encouraged students and parents to pass along or donate products not installed in the student's home.

Whole Home Efficiency

Whole Home Efficiency is a comprehensive retrofit program available to residential combination natural gas and electric customers living in single-family homes or multi-unit complexes with no more than four units. This program is designed to offer electric and natural gas rebates to customers who implement multiple measures. The program requires three measures of which at least one must be a form of insulation. Additional measures include air sealing and mechanical measures. The intent is to incentivize customers to make more holistic improvements to their home's efficiency as these types of measures are more effective when done in conjuncture. Participants have two years to implement required measures and have the option of receiving some free direct install measures during final inspection, provided the measures are not already installed.

The program did not meet its participation or savings targets in 2024 due to lower than forecasted participation. Program administrative costs reflect the lower achievement. Although the program did see some participation growth due to the 2024 program changes, there wasn't sufficient time to communicate the changes and make a considerable impact in 2024. We expect the impact of these changes will be reflected in 2025 achievement.

BUSINESS SEGMENT

Xcel Energy's Business Segment encourages business customers to save energy by upgrading their equipment or systems to lower their energy needs resulting in a reduction to both carbon emissions and the customer's energy bill.

The Business Segment offers a variety of programs and rebates for customers, including:

- Prescriptive equipment rebate programs that lower the cost for customers to purchase and install energy-efficient equipment;
- Custom rebates that address equipment or process improvements not included in the prescriptive area;
- Studies and audits that help customers identify, prioritize, develop a plan and implement energy efficiency projects;
- Holistic programs that encourage broader, long-term energy planning to help customers analyze, track and implement efficiency plans rather than ad-hoc efficiency projects;
- Business education, advertising, and promotional events that increase customer and trade awareness of conservation options, leading to future participation in programs.

Table 31a: 2024 Business Segment Results – Energy Efficiency

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Participation	251,902	252,494	100%	114,987	116,975	102%
Budget	$54,765,511	$50,857,885	93%	$6,399,413	$5,362,181	84%
Generator kW	69,606	64,769	93%	-	-	-
kWh or Dth Saved	429,012,175	338,251,629	79%	606,438	828,558	137%

Table 31b: 2024 Business Segment Results – Efficient Fuel Switching

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Participation	66	-	0%	63	-	0%
Budget	$90,622	$60,645	67%	$78,634	$234	0%
Generator kW	(6)	-	0%	-	-	-
kWh or Dth Saved	(373,187)	-	0%	124	-	0%
Claimable Dth	-	-	-	16	-	0%

Business Education
The Business Education program creates awareness of energy conservation by providing business customers with information and resources to reduce their business' energy use. The Company provides customers with opportunities to actively learn about and engage in energy efficiency by offering product information at event sponsorships and other on-site outreach, along with print and digital communications to drive overall education.

Through the fourth quarter of 2024, the Business Education program just slightly overachieved the year-end target of consumer participation/engagement. The program has found success in driving education, awareness and engagement with local business customers via in-person event participation, local sponsorships, and advertising. Additionally, partnerships with local teams and organizations allow for greater business and relationship development opportunities. Digital and print advertising, via Star Tribune, also offer great opportunities to get messaging in front of the right business audiences.

Business Energy Assessment
The Business Energy Assessment program offers study funding and electric and natural gas implementation rebates to commercial and industrial customers who improve their building performance through an energy assessment. Free implementation services are also offered to facilitate customer action on energy-saving opportunities identified in the studies. There are several assessment options available to meet the needs of different types of customers. The assessment options include Commercial Streamline Assessments for small to midsized customers. The assessment focuses on immediate savings from minor repairs and tune-ups. The Industrial Assessment is a whole-facility assessment for small to midsize industrial customers. The Building Assessment focuses on optimizing existing equipment and the Targeted Building Assessment encompasses the same components as the Building Assessment but in greater depth. Rebates to offset the cost of Building Operator Certification training are also available through the program.

In 2024, the program continued to grow, achieving electric and natural gas savings over previous years. However, while the program fell short of its electric and natural gas saving targets in 2024, we have a strong pipeline of projects for future years. The economy impacted the number of projects implemented as customers were careful about their spend. The Company completed studies amongst a wide range of customer types, including offices, churches, manufacturers, hospitals, hotels, and primary and secondary schools.

Business New Construction
The Business New Construction program offers free consulting services as well as electric and natural gas rebates to customers that incorporate energy efficiency into their new construction project, building addition or major renovation. The program includes three offerings: Energy Design Assistance (EDA) is an integrated design approach that uses energy modeling to identify whole building energy savings opportunities and provides customized rebates; Energy Efficient Buildings (EEB) is typically for smaller, less complicated projects that utilize our existing custom and prescriptive rebates to develop a project-specific rebate offering for the customer; and Minnesota Energy Code Support program is designed to improve code compliance via training and support for cities and communities.

In 2024, the Community Code Support program was replaced with the Code Compliance Support program, marketed as the Minnesota Energy Code Support program, in collaboration with four

other Minnesota electric and gas utilities. This proactive effort supports communities across Minnesota in improving commercial building energy code compliance. By providing resources and guidance, the utilities help communities throughout Minnesota understand and adhere to building codes in new construction projects, ultimately aiding them in achieving their energy performance and economic development goals.

In 2024, the Business New Construction program had lower savings due to the effects of a slow construction start period from 2020-2022. High interest rates and continued supply chain challenges reduced opportunities for project starts. Projects enrolled in the last year and a half were the main driver of 2024 achievement. The Company has not yet seen an uptick of enrollment such as seen prior to the pandemic, which will impact future achievement. In 2024 the Business New Construction program fell short of its electric savings targets but exceeded its natural gas savings targets.

As part of its commitment to help housing qualified as income qualified, Xcel Energy increased rebates for income qualified projects as part of the Business New Construction Program. These rebates are up to double that of standard rate housing rebates. We also offered free energy consulting services. Twenty-five projects under the program were completed in 2024. The Company includes this spending as part of our Low-Income Hybrid programs. Additional information can be found in the "Compliance" section.

Compressed Air Efficiency
The Compressed Air Efficiency program offers prescriptive and custom electric rebates as well as study funding to customers who make improvements in their compressed air systems. The program encourages repair and redesign of existing systems by offering rebates for measures that include cycling dryers, purge controls, mist eliminators, new VFD compressors, no loss air drains and supply side studies. The program is available to electric commercial and industrial customers within the Company's service area. The primary participants are mid-sized business customers with demand of more than 100 kW and/or operate in energy intensive industries.

Our Compressed Air studies continue to be a driving factor for implementation of energy efficiency projects for compressed air technologies in the Compressed Air program and other holistic programs such as Process Efficiency.

Although the Compressed Air Efficiency program did not meet its filed 2024 targets, it outperformed 2023 savings while underspending on the overall budget.
Several changes were introduced in the 2024 Triennial Plan to increase the accessibility of the program and broaden savings opportunities. However, it has taken time to get these new initiatives to market so they did not have a significant impact on program participation. Efforts to build awareness of the new offerings with customers and trade partners will continue in 2025.

Custom Efficiency
The Custom Efficiency program is designed to provide rebates on a wide variety of equipment and process improvements that do not fall within the Company's prescriptive rebates. Custom Efficiency projects require submission for pre-approval before equipment purchase and installation and must pass cost benefit analysis. The program is an essential piece of the Company's portfolio as it provides a place to evaluate unique savings opportunities and serves as a launchpad for new programs or measures.

In 2024, the Custom Efficiency program did not meet its electric and natural gas targeted achievements. The Company continues to work across key channels, including trade and commercial & industrial business segments, to engage customers and identify potential solutions to increase participation.

Data Center Efficiency
The Data Center Efficiency program offers study, prescriptive and custom electric rebates to customers that implement energy-saving measures in data centers. This program is tailored to the specialized needs of this unique segment.

In 2024, the Data Center Efficiency program did not reach its electric savings target. Electric spending was under target and in line with the savings achieved. In existing data centers, staff turnover, long sales cycles, the artificial intelligence boom along with continuing supply chain and economic challenges have impacted the ability of customers to implement improvements and gain business justifications within defined financial timelines. For new data centers, ramp-up time of IT load can take years; with spaces often underused and energy efficiency not fully optimized until IT loads are filled. Internal and external program training opportunities were available to support pipeline building. Free walkthroughs continued to be available for customers to identify energy savings opportunities. As new data centers continue to be built, the Company continues to engage customers at various stages to assist in identifying potential energy efficient solutions.

Efficiency Controls
The Efficiency Controls program offers both custom and prescriptive electric and natural gas rebates to businesses that install automated building control systems resulting in energy savings and load shifting. Rebates apply to new systems and updated controls systems for HVAC or lighting that can be centrally controlled either locally or via web interface. Customers receive customized energy savings estimates when they apply for rebates under the program.

Achieving significant energy savings in 2024 continued to be challenging, especially during peak customer usage times. Traditional systems seldom yield demand savings and are expensive relative to their energy savings. Many controls applications fail the cost-effectiveness test due to a variety of factors. The continued high vacancy rate in commercial real estate and economic inflation has resulted in a dearth of program applications. Future opportunities in Efficiency Controls exist due to building occupancy patterns becoming more variable and less predictable. The program did not meet its electric or natural gas projected targets for 2024 but did surpass previous years' electric numbers. The Company trusts that filing changes and trade partner and sales team training should improve the building control installation opportunities in the future.

Empower Facilities
Empower Facilities is designed to support the Company's current direct impact business programs by reducing barriers for customers and offering a comprehensives approach to realizing their energy efficiency needs. This turnkey service assesses energy consumption, current equipment and future plans. First recommendations are provided to the customer, then proposals and a scope of work are created before the customer can choose how to move forward. Customers may then choose to continue to work with the program, contracting for implementation services and/or ongoing support, under an agreed scope and financial arrangement, or they may choose to implement projects independently. The program also aids in preparation and submission of any applicable

rebate paperwork associated with other direct impact programs and identification of additional projects. Empower Facilities was a CIP modification approval issued August 11, 2023. The program was launched in October 2023.[1]

The program successfully engaged dozens of industrial and commercial customers. The sales cycle is long and iterative, as a result only one customer contract was signed in 2024. This project is scheduled to be completed in 2025 at which time we will begin to return funds from customer projects to the CIP Rider. Further details on Empower Facilities can be found in the Compliance Section.

Empower Intelligence
The Empower Intelligence program offers business customers a data-driven software solution that delivers energy usage insights through a simple and intuitive web-based portal. Customers can subscribe to monthly, daily, or real-time levels of electric energy usage granularity subject to the capability of the customer's meter. Water and natural gas usage tracking may also be available from the vendor for an additional fee with a real-time subscription. In addition, the Company provides a virtual commissioning component identifying low, no-cost measures to customers for implementation. If other opportunities are identified, the customer will have the opportunity to participate in one of our many Businesses Segment programs. Empower Intelligence provides more granular information than the free Energy Benchmarking service, along with offering insights and suggestions through a virtual commissioning component. The product is primarily marketed through our Account Managers and Energy Efficiency Specialists. In 2024, the program underachieved program savings targets because it will take a year of baseline data to show savings through virtual commissioning.

Foodservice Equipment
The Foodservice Equipment program offers prescriptive electric and gas rebates to commercial businesses that purchase and install qualifying energy efficient foodservice equipment. The program's main objective is to influence energy savings by incentivizing customers to purchase higher efficiency equipment.

From March to December 2024, the Company implemented targeted promotions, which included onserts and bonus rebates for Foodservice. The Foodservice program's bonus allowed customers to earn an extra 10 percent bonus on all-natural gas equipment. The combined efforts led to an uplift in participation in the program. The Company also offers a trade incentive to stimulate greater interest in the program. In 2024, the program was modified to add incentives for electric and natural gas griddles[2]. The Foodservice Equipment program did not meet its achievement targets. Although our advertising and promotions provided an opportunity to increase program participation, the continuous economic challenges within the market decreased demand for new equipment.

HVAC+R Solutions
The HVAC+R Solutions program combines the commercial technologies of Heating Efficiency, Motors & Drive Efficiency, Cooling Efficiency and Refrigeration into one program. The HVAC+R

[1] Decision, *In the Matter of Xcel Energy's CIP Modification Request: Empower Facilities Program, Department of Commerce*, August 11, 2023.
[2] Decision, In the Matter of Xcel Energy's Program Modification Request Filed September 19, 2024, November 18, 2024 Program Modification Request Filed September 19, 2024, November 18, 2024

Solutions program offers electric and gas rebates via prescriptive and custom options to customers under the four technologies to ensure customers can improve their facility performance and buy down first costs through a variety of rebates, programs, and services.

A new 25 percent variable frequency drive (VFD) bonus was launched on April 30, 2024, to drive program participation and savings. Due to on-going supply chain delays and staffing shortages the VFD bonus offering runs through October of 2025 to help customers participate and realize additional savings. Despite these efforts, the program fell short of the savings targets in 2024. Many projects expected to be completed in 2024 were delayed in part due to economic barriers like high interest rates and employee turnover at trade partner organizations, which stalled equipment installations. The spend for both fuels was in-line with the program savings.

Lighting Efficiency
The Lighting Efficiency program offers rebates to motivate business customers to purchase and install energy-efficient LED lighting. There are five rebate categories available with the Lighting program:

- Fixture replacements for retrofit projects with prescriptive rebate amounts;
- Fixture replacements for new construction projects with prescribed rebate amounts;
- Instant rebate discounts on lamps/bulbs with screw-in or pin bases at lighting distributors;
- Custom analyses for fixtures that do not fit into the other categories; and
- Study funding for customers who need to determine proper lighting levels for a facility.

In 2024, the program fell short of its targeted achievements. Commercial customers were reluctant to implement large capital projects amongst inflation concerns. These economic pressures, along with staffing shortages experienced by trade partners and customers, in conjunction with supply chain issues, increases in labor prices and market saturation were known issues that contributed to the savings shortfall for the program. The Prescriptive Retrofit category had the largest gap in performance from previous years. In addition to issues related to the economy, the Company experienced increased saturation of LED lighting. The spending was aligned with achieved savings.

To help to overcome the market challenges, the Company promoted the program by offering limited-time bonus rebates on fixtures and lamps to drive the purchase of energy-efficient lighting. A trade incentive bonus was also launched to incentivize trade partners to promote the customer bonuses. Additional paid advertising was also implemented to promote the lighting program, support the bonus rebates, and drive customers to purchase LEDs. Marketing efforts also focused on developing and maintaining relationships with lighting trade partners.

To bridge the market saturation gap for the first generation of LEDs; the custom measure of LED to LED was moved to prescriptive in June of 2024[3]. This type of program strategy takes time to ramp up and the increased savings from this program change should be seen in the next year or two.

Load Strategy Analysis
Load Strategy Analysis is designed to target Commercial & Industrial customers to provide financial incentives for complex, custom energy strategy studies and projects. These efficiency projects may

[3] Decision, In the Matter of Xcel Energy's Program Modification Request Filed April 12, 2024, June 11, 2024

pertain to natural gas or electric consumption in a commercial or manufacturing process, or for HVAC and industrial water heating.

In 2024, the program met its electric achievements under budget. The Company attributes this to the holistic approach and commitment to in-depth studies. Customers responded to incentives by reserving capital for energy efficiency upgrades. The program did not meet its natural gas targets, but the natural gas spend was in-line with the program savings.

Multi-Family Building Efficiency
The Multi-Family Building Efficiency (MFBE) program is a holistic approach for reaching the multi-family housing market segment to achieve deep, whole-building energy savings. The program is delivered in partnership with CenterPoint Energy and offers a whole-building energy use baseline, free energy audit, direct installation of low-cost energy saving measures and the potential for higher incentives with the implementation of a cost-effective energy efficiency bundle. MFBE is focused on the entire multi-family building, including resident spaces and common areas.

In 2024, the Multi-Family Building Efficiency product fell short of both electric and natural gas savings targets. Despite this, the program increased building participation from 2023, particularly in the audit and direct install stages of the program. The proportion of properties serviced that are rentals, as opposed to condominiums and co-ops, also increased. The addition of tube lighting as part of the direct install offerings had a measurable impact on the savings achieved. The program was able to stay under both filed electric and natural gas budgets.

Non-Profit Energy Savings Program
The Non-Profit Energy Savings (NESP) program serves qualifying non-profits organized and operated primarily to serve low-to-middle-income customers and communities – shelters, safe houses, treatment centers, community food and housing, individual, family, emergency, and other relief services. The program offers free education, facility assessments, direct installation of energy efficient measures, and rebates for larger system upgrades.

In 2024, the Non-Profit Energy Savings Program completed its first full year of delivery. The program exceeded both its electric and natural gas savings targets. A strong pipeline of direct install opportunities and efficiency projects contributed to the program's success. Integrating tube lighting into the direct install program has been very impactful on both program savings and nonprofit customer satisfaction.

Beginning in the 2024-2026 Triennial, the program also started to offer direct install items in bulk for non-profits to distribute within their communities.[4] This was positively received by non-profits. While still primarily focused on nonprofits that serve income qualified or otherwise disadvantaged individuals, the program expanded to offer direct install to all nonprofits, which resulted in a small increase in applications. Participation was evenly split between Xcel Energy electric only and Xcel Energy electric and natural gas territory. Electric savings came primarily from direct install, while natural gas savings were largely from direct install distribution. Non-profits continue to show significant interest in electrifying their buildings and moving towards solar energy. This has led to lower interest in natural gas saving projects among NESP participants. Finally, a strong Foodbank

[4] Decision, In the Matter of Xcel Energy's 2024-2026 Energy Conservation and Optimization Triennial Plan, December 1, 2023

distribution to qualified foodbanks allowed for large savings and impact through LED bulbs, showerheads, aerators, and advanced power strips.

In 2024, the program greatly exceeded both electric and gas savings targets. The budgets for both electric and gas were also exceeded due in large part to a very successful foodbank distribution. Spend was proportionate to the savings impact.

Process & Commercial Efficiency

The Process & Commercial Efficiency program offerings were combined into one program in the 2024-2026 ECO Triennial Plan. The program offers customized resources to large and mid-sized industrial customers to develop a holistic, sustainable energy management plan to create persistent savings and continuous improvements. The program helps customers identify energy efficiency opportunities and implement long-term solutions to reduce energy costs. In addition to capital equipment improvements for energy efficiency and demand response opportunities, the program stresses system-level operational changes as well as cultural changes from customers' senior management, mid-management, and other personnel.

Specifically, this program provides funding for studies to identify and scope energy efficiency opportunities. Prescriptive and custom rebates are available to customers who implement qualifying energy efficiency recommendations. This program is primarily marketed through the Company's account managers.

The program continued to face challenges in 2024, as customers continued to face staffing shortages, budget constraints, inflation rates, and supply chain disruptions. High turnover at customer sites has resulted in the loss of many successful, long-standing relationships. The Company focused heavily on program participant re-engagement efforts in 2024 to establish relationships with newer customer personnel. Several large projects that were expected for 2023 ended up being pushed to 2024 which resulted in the program nearly reaching the electric savings target and exceeding the natural gas savings target. Spend was in line with achievement.

Self-Direct Efficiency

The Self-Direct Efficiency program is designed for business customers who have the resources and expertise to manage their own energy efficiency improvement projects. These customers are capable of conducting their own measurement and verification for their projects which are reviewed by the Company's engineers. While some businesses prefer to utilize their in-house experience and resources, others opt to partner with an energy service partner to assist them. Customers who successfully implement and commission qualifying projects are eligible to receive rebates based on the amount of energy savings achieved.

In 2024, the program cost effectively exceeded impact goal and spend. Several electric savings projects that were originally expected in 2023 experienced delays and were completed in 2024.

INCOME QUALIFIED SEGMENT

The Income Qualified Segment program portfolio supports income-qualified customers by promoting energy savings that results in minimizing the impact utility bills have on their households while promoting improved comfort and performance from their appliances, HVAC and lighting.

In 2024, the Company's work in the low-income segment continued to expand. Although the number of participants remained relatively constant, the services provided, and the education and outreach delivered expanded to incorporate additional opportunities around improving energy-efficiency. This included efforts to convert income-qualified customers from electric heat to heat pump technologies. In addition to the five dedicated programs described below, spending under "hybrid" programs that directly benefitted low-income households is included in the total low-income spending for purposes of transparency and compliance with the statutory minimum low-income spending requirement (see the Compliance section of this filing). This section of the report discusses only the dedicated low-income programs listed above. The table below includes the total achievement for the Income Qualified Segment.

Table 33a: 2024 Income Qualified Segment Results – Energy Efficiency

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Participation	11,188	14,254	127%	2,849	3,311	116%
Budget	$9,215,092	$6,559,879	71%	$4,045,383	$5,412,356	134%
Generator kW	1,387	658	47%	-	-	-
kWh or Dth Saved	5,542,337	3,598,855	65%	29,681	15,738	53%

Table 33b: 2024 Income Qualified Segment Results – Efficient Fuel Switching

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Participation	5	-	0%	3	-	0%
Budget	$0	$0	0%	$148,064	$0	0%
Generator kW	-	-	0%	-	-	-
kWh or Dth Saved	(31,505)	-	0%	124	-	0%
Claimable Dth	-	-	-	16	-	0%

Affordable Efficient New Home Construction

The Affordable Efficient New Home Construction program helps local affordable housing builders and qualified market-rate builders construct energy efficient, affordable homes for residential customers. It provides incentives for installing a suite of advanced energy efficiency measures.

Incentives are based on the sum of the incremental cost of the advanced measures plus incentives for the market-rate Efficient New Home Construction program using the same savings calculations. This program hopes to expand the supply of affordable, high-performance homes to people and communities in need.

In 2024, 25 dwellings participated in the program. Eight homes were all-electric, and 17 had combination natural gas and electric service. The program met its electric and natural gas participation targets, but electric and natural gas savings were just short of the targets. Several projects that started years prior wrapped up construction in 2024. The program expects increased participation going forward, since the biggest hurdle of the program is completing the first project and understanding the nuances of the program.

Home Energy Savings

The Home Energy Savings program (HESP) offers home energy assessments and educational services to income-qualifying customers in smaller building units (1-4 units). The program is designed to provide customers with free energy-saving measures and information to help reduce their energy usage and make their energy bills more manageable. HESP is marketed through various channels that include the Company's partner vendors, low-income service providers and traditional communications channels.

In 2024, HVAC equipment availability continued to improve compared to 2023. The availability of qualified workforce willing to serve the income qualified market continued to be a barrier to implementing projects.

Direct mail and search engine marketing outreach continue to provide additional visibility for the program. Telemarketing has yielded consistent results, but this effort is limited by the number of qualified contacts available. The Company continues to expand efforts to leverage relationships with social service agencies serving income qualified customers. The Company is currently conducting two pilot projects to evaluate the effectiveness of emerging measures in serving income-qualified markets. These ongoing projects focus on cold climate heat pumps and energy-efficient storm windows. Additionally, the Company has launched a Manufactured Home Pilot project to address customer and contractor barriers to participation in the HESP program. The primary implementation efforts for this initiative were carried out in 2024, with the project scheduled for completion by mid-2025.

The program was close but did not meet its electric savings target. However, the program achieved its natural gas savings targets because higher pricing enabled the Company to better engage wholesalers and suppliers to complete program work within the metro and these case-by-case approvals paved the way for more participation.

Health and Safety measures continue to enable implementers in the east metro to install additional energy efficient equipment. This increased implementation costs but helped increase participation and energy savings, especially in the east metro. Changes driven through the ECO Act enabled the Company to expand the outreach, increase qualifying health and safety measures and increase electric energy savings achievement while improving net benefits.

Low-Income Home Energy Squad

Low-Income Home Energy Squad is a direct install program provided at no cost for income-eligible customers who are searching for ways to improve the energy efficiency and comfort of their homes while also lowering their utility bills. The program is a co-branded partnership with CenterPoint Energy and is administered by a contracted third party. While in the home, technicians work closely with customers to help them identify measures that will help optimize energy efficiency. Before, during and after the installation of measures, the implementers work toward educating customers about each measure's efficiency benefits. In 2024, the Company increased the eligibility threshold from 50% SMI to 80% AMI.

In 2024, the Company focused its promotion budget on expanding interest in the program and increasing the number of home visits. These activities included adding information about free in-home visits for income qualified customers into additional outreach and education channels including flyers, email, community events, and advertising. The Company also expanded distribution of translated materials to improve outreach to all customers. With support from the vendor, Xcel Energy funded an eight-week community engagement campaign in economically challenged neighborhoods of St Paul which included newspaper ads, targeted social media campaigns, and field canvassing. Over 12,000 homes were visited, 2,450 conversations with customers, and 5,300 door hangers distributed. Efforts to reach more customers living in manufactured home communities have increased year after year. In 2024, there were Home Energy Squad campaigns at parks in six cities served by Xcel Energy.

The Low-Income Energy Squad did not achieve its electric or natural gas savings targets but did significantly increase participation from the prior year's participation. Electric and natural gas spending was also lower than filed budgets. Staffing for the program was adequate and customer wait times were very short.

Low-Income Multi-Family Building Efficiency

The Low-Income Multi-Family Building Efficiency (LI-MFBE) is designed to target 5+ unit multi-family properties. Offered through one program implementer, in the same manner as the Multi-family Building Efficiency Program, it is designed to engage building owners by helping them understand their energy use, achieve immediate energy savings through low-cost improvements, and move beyond the initial measures for whole-building energy savings. The delivery model is a combined approach of a whole-building energy audit with direct-install phase to engage the building owners and achieve early savings, a performance-based component to encourage further improvements in the building, then assistance to begin benchmarking their building and provide financial incentives for more complex, custom energy efficiency projects. These efficiency projects are intended to reduce natural gas or electric consumption in qualifying multi-family buildings.
In 2024, the Low-Income Multi-Family Building Efficiency product fell short of both its electric and gas saving targets. This program was new in 2024 and replaced the previous Multifamily Energy Savings Program (MESP). The program absorbed many of the energy saving measures that were previously included across two different implementors. This new approach allows the programming to better align and create a consistent experience for income qualified customers. The program stayed within both the electric and natural gas filed budgets. There will be a continued effort to strengthen trade participation and program education in 2025.

Workforce Development & Education

The Workforce Development & Education (WDE) program creates numerous energy efficiency career pathways for unemployed and underemployed people living in historically underserved communities, Black, Indigenous, people of color, and women residing in Green Zones of Minneapolis and Areas of Concentrated Poverty (ACP) 50 zones of St. Paul. This year, the program expanded to St. Cloud for a pilot cohort at the end of 2024. The WDE program is provided by the Company and administered by Center for Energy and Environment (CEE). This program moved from the residential segment-indirect programs portfolio to the income qualified segment in 2024. In 2024, the program saw developments and expansion in the focus of the program both geographically and career opportunities. This was the first year that WDE implemented a training cohort outside of the Twin Cities Metro. To expand access to the WDE program, CEE offered a shortened home energy career training in St. Cloud. Also, the types of roles program graduates were offered positions for within the energy efficiency sector, specifically in HVAC, expanded. In 2023, those who completed the internship were only hired as energy auditors, insulation installers, and carpenter's apprentices. In 2024, one trainee was offered employment directly out of the paid internship as an HVAC technician and two additional participants were offered roles as energy counselors.

The program was slightly underbudget for the WDE program and met budget goals for the scholarship program. Costs associated with partner development and communication, recruitment, classroom curriculum, hands-on classroom and field training, certifications, equipment, training props, transportation and wrap-around services were realized as planned in 2024. The Company partnered with fifteen local colleges and trade schools to launch the Scholarship Fund in 2024.

In summary, the WDE program has increased the number of low-income, BIPOC, and female workers in the energy efficiency sector, workers who then bring their knowledge and experience back to their communities. We provide a full report regarding the WDE 2024 efforts in Appendix B.

DEMAND RESPONSE SEGMENT

Xcel Energy's Demand Response Segment provides the Company with a valuable tool for managing peak demand on the electric system. The segment includes participation opportunities for business and residential customers.

The Demand Response Segment offers a variety of programs and incentives for customers, including:

- Behavioral demand response options,
- Direct load control for residential customers,
- Programs focused on thermostats and using them to manage energy during an event on top of their use for managing electric bills,
- Opportunities and programs to shift loads, and
- A variety of options aimed toward specific commercial applications – meeting our customers where they are in their energy journey.

We continue to grow our Demand Response segment and expect to continue to see increased load and program opportunities in the future, despite challenges addressing technology and new opportunities that may require the Company to review existing offerings. Demand Response programs typically have a longer sales cycle and more customized approach with commercial customers. We continue to work on tools and resources to better meet customer needs, such as site visits to help identify curtailment opportunities. The residential programs continue to explore and expand partnership opportunities for new and evolving technologies to better support our customers and the grid needs.

The Compliance Section of this filing addresses Behavioral Demand Response claimed savings methodology and product level breakdown, which were directed to be included in this Status Report by the Deputy Commissioner in the December 1, 2023, Decision.

Table 34: 2024 Demand Response Segment Results – Energy Efficiency

Demand Response Segment	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Participation	828,834	552,032	67%	83	83	100%
Budget	$21,512,459	$16,023,561	74%	$32,765	$6,783	21%
Generator kW	238,501	187,541	79%	-	-	-
kWh or Dth Saved	2,790,209	109,331	4%	639	0	0%

Commercial AC Control

Commercial AC control consists of two products – Saver's Switch for Business® and AC Rewards for Business. Both aim to reduce peak electric loads by controlling HVAC Cooling load. Both programs had one control event in 2024.

Saver's Switch for Business® is a prescriptive load management product available to business electric customers with central air conditioning. Participating customers receive a monthly discount on their June through September bills. In exchange for the discounts, participants allow Xcel Energy to cycle their air conditioner on and off during control events, which typically occur on hot, humid summer days. The program is marketed via direct mail, customer care agents, and account managers.

AC Rewards for Business is a demand response product that uses smart communicating thermostats for reducing air conditioning load during a control event. Participating customers receive incentives for enrolling eligible thermostats in AC Rewards. They also receive annual bill credits for their participation. AC Rewards events can be overridden during control event periods the Company does have the capability of calling mandatory events which cannot be overridden if conditions apply. The AC Rewards program does include a gas measure to capture the energy efficiency gas savings from smart thermostat installation from the CEE partnership.

In 2024, despite streamlined marketing and advertising across our load management programs to make it easier for customers to choose what offering is best for them and to further drive participation, neither Saver's Switch for Business nor AC Rewards for Business met their targeted savings goals.

With fewer Saver Switches than anticipated installed in the field, the Saver's Switch for Business program costs were also below expectations. Most of the participation for the year came through maintenance replacements of older switches.

AC Rewards for Business continued to increase enrollments in 2024 over previous years but fell short of its forecasts due to a challenging recruiting and enrollment environment for new participants. With fewer thermostats than anticipated installed, the program costs were also below expectations. AC Rewards for business continues to partner with CEE to promote and implement the offering. The gas savings portion from CEE smart thermostat installation is captured under the One which has created admin gas spend for the AC Rewards for Business program.

Critical Peak Pricing

The Critical Peak Pricing (CPP) Pilot is a two-year pilot designed to encourage business customers to voluntarily reduce their usage based on price signals. Eligible large businesses may be able to lower energy bills and save valuable resources by tracking price signals and lowering usage when notified. During a Critical Peak Pricing event a customer will be billed at a substantially higher energy charge, thus incentivizing the customer to reduce their consumption during that time. CPP events can be up to four hours in duration, with up to 75 event hours per year. Customers will receive a 12–24-hour notice before the event begins. Eligible customers must have a qualifying interval meter, demand greater than 50 kilowatts over the last 12 months, and a load factor of at least 30% achieved in the past 12 months.

The CPP pilot was launched in the summer of 2023 and has struggled to enroll participants. Multiple rounds of marketing were carried out and no customers enrolled in 2024. Spending was in line with this achievement level. A petition to modify the pilot's recruitment plan to attract more customers was filed in June of 2024[1] with the Commission hearing on March 6, 2025.[2] The Decision, pending Commission approval, instructs the company to "…suspend its General TOU Service Rate Pilot Program and focus on developing a partial transition plan to a General Service TOU rate and include a detailed customer outreach plan to be filed by March 31, 2026..."

Electric Rate Savings

The Electric Rate Savings (ERS) program is offered to any commercial or industrial business customer that can reduce their electric loads by at least 50 kW in a summer month during control periods initiated by either the Company or the Midcontinent Independent System Operator (MISO). There are customers who agree to a 10-year contractual term as well as customers who agree to a 5-year term. In return for being on-call to reduce their electric loads, customers receive a monthly discount on their demand charges that can potentially save up to 50 percent on their demand charges over the entire year. Customers who fail to curtail their electrical load during a control period are financially penalized. In 2024, some customers left the program because their contract expired or the customer was impacted in some other fashion that resulted in the inability to participate. Conversely, there were a few additions to the program in 2024. There was only one control event in 2024 that was initiated by the Company as a real power test to determine whether customers could curtail their controllable load. The program fell short of forecasted targets and came in under budget for 2024.

Peak Day Partners

The Peak Day Partners Pilot (PDP) was launched in October of 2023 and will continue through 2025.[3] PDP offers commercial and industrial customers an incentive through a bid-offer process, in exchange for reducing their peak load during periods when demand is high. The product purpose is to provide the Company with an additional power purchase resource to manage system requirements more efficiently during exceptional periods, and the customer the option of receiving pricing associated with energy supply markets during such periods.

In 2024, the program grew to 87 customers; however, due to a variety of challenges the Company has been unable to call events. We intend to begin to test these resources in the summer of 2025 before determining whether it should be a permanent offering by the Company. Spending was generally for customer acquisition purposes and equipment costs. Due to a lack of events being called, spending for Peak Day Partners was lower than targeted. Even with a sign-on bonus, made available in September, participation in 2024 was also lower than targeted as customer awareness of this new program has progressed slowly.

Peak Partner Rewards

The Peak Partner Rewards (PPR) program is offered to business customers that can reduce their electric loads during control periods by at least 25 kW between June and September. Customers can participate year-round but are only required to participate in the period listed above. With PPR,

[1] Petition - Recruitment Modification General Time of Use Service Pilot Program, Docket No. E002/M-20-86

[2] March 6, 2025, PUC Agenda Webcast beginning at 2:02

[3] Decision, In the Matter of Xcel Energy's Program Modification Request Filed February 27, 2024, Department of Commerce, July 31, 2024. Docket Number E,G002/CIP-23-92

customers can receive credits on their electric bill for agreeing to reduce electric usage during periods of peak energy demand. Customers receive an additional performance-based bill credit when they reduce their electric usage by their agreed upon amount or more during control periods.

The PPR program had an increase in participation in 2024. The primary driving factor for the participant growth was due to a contract with third-party vendor who provided marketing and engineering assessment services to historically non-participating accounts. The vendor provided outreach, sales support, and enrollment support. The program created a pipeline by partnering with our DSM Program Portfolio to host customer events and implement various marketing tactics including bill onserts, targeted emails and a LinkedIn marketing campaign. One control event was called in 2024. The program exceeded its participant and kW goals, but did not achieve the kWh savings goal. The program's spending was below plan.

Residential Demand Response

The Company offers four residential demand response products: Saver's Switch®, AC Rewards, Smart Water Heaters and Behavioral Demand Response. All products target central air conditioners or electric water heaters for reducing system load during times of peak demand, except Behavioral Demand Response which is more generalized.

Saver's Switch offers a seasonal bill discount to customers who agree to allow the Company to control remotely their central air conditioners during the summer months. Customers with qualifying electric water heaters can enroll this equipment as well. Electric water heaters can be controlled year-round, and customers receive incentives for their participation year-round. In 2024, Saver's Switch met targets for the year. Due to the aging of previously installed switches, most of the program's achievements in 2024 were derived from the replacement of older hardware that has aged beyond its useful life expectancy. The Company anticipates continuing the trend of robust volumes of switch upgrades.

AC Rewards also seeks to reduce air conditioning load during demand peaks. Participants can receive up-front incentives via bill credits on qualifying smart communicating thermostats and receive annual bill credits in exchange for allowing the Company to temporarily adjust the set point on the thermostat during control events. Customers can join through either the Bring Your Own Thermostat (BYOT) option or direct installation. Through BYOT, customers who already own a qualifying smart thermostat can enroll and receive a $100 bill credit. Alternatively, customers without a smart thermostat can opt for direct installation, where the Company will install one free of charge, forgoing the initial enrollment credit. Regardless of the chosen enrollment method, participants receive a $25 annual bill credit for remaining in the program. The AC Rewards product saw solid participation in 2024 through both the Bring Your Own Thermostat (BYOT) and direct installation channels. Strong partnerships with multiple leading device manufacturers have resulted in continued growth and the product significantly exceeded its forecasted targets. Spend was slightly under the filed targets.

The Smart Water Heating product will offer customers with qualifying heat pump water heaters bill savings in exchange for allowing the utility to adjust settings on the water heater. Unfortunately, supply chain difficulties with communication modules used to adjust water heating settings have continued to delay the launch of the product.

Behavioral Demand Response, also known as Energy Action Days, was a new product for 2023. In 2024, there were three events called during summer months. It is a formalized way of asking customers to reduce electric consumption during times of peak demand. Most customers receive emails the day ahead of a control event asking them to reduce consumption during certain hours. Participation in events is voluntary and no incentives are offered for participation. The Behavioral Demand Response product worked with more than 500,000 customers who were included in the second year of summer operations, and the Company was able to verify additional savings opportunities as AMI was further deployed in our territory. The Company provides an analysis of energy savings, as required by the Department, in Appendix F.

Overall, Residential Demand Response was slightly under the filed budget while exceeding forecasted achievement targets.

EFFICIENT FUEL SWITCHING SEGMENT

"Fuel switching" refers to a utility program that provides incentives for customers to switch from one fuel type to another to serve the same end use. As an example, encouraging customers to replace a natural gas water heater with an electric water heater would be considered "fuel switching". Historically, utilities were prohibited from including fuel-switching incentives in their energy efficiency portfolios, even in cases where the switch resulted in efficiency, cost savings or reduced emissions. With the passage of the ECO Act, however, fuel switching may be allowed under certain conditions provided certain eligibility criteria are met. Measures or programs that meet these criteria, following technical guidance issued by the Department, are referred to as "efficient fuel switching" (EFS).

In the first year of our offering EFS measures, we saw significant customer interest in EFS incentives, including the use of our "Geographic Consistency" policy. Through this policy, the Company used electric EFS funding to make up the difference between the incentive paid by a customer's natural gas utility for a given EFS measure and the amount the customer would have received if they received natural gas service from Xcel Energy.[1] No savings are claimed for these Geographic Consistency rebates, consistent with the Company's Triennial Plan, though the Company does claim natural gas savings for EFS measures installed by its natural gas customers.[2]

Both natural gas and electric EFS spending were considerably higher than expected in the Triennial Plan, owing to the combination of several factors. First, customer interest in EFS was more robust than expected; both gas and electric EFS participation was several times the level anticipated in the Triennial. In addition, the mix of systems installed was more heavily weighted toward cold-climate systems, for which the Company offers a larger rebate than that offered for non-cold-climate units.[3]

These factors resulted in higher-than-expected spending for EFS for both combination customers (who receive both gas and electric service from Xcel Energy) and electric-only customers receiving Geographic Consistency rebates. In addition, several factors further contributed to higher-than-anticipated spending under the Geographic Consistency policy. First, some natural gas utilities had rebates for air-source heat pumps that did not differentiate between cold-climate and non-cold-climate units; which meant that per-participant Geographic Consistency rebates were higher than expected.[4] Another contributing factor was an increased interest in ductless units compared to standard ducted units. Because some natural gas utilities did not offer incentives for ductless units, the full amount for these units (that is, the rebate the customer would have received if they received both gas and electricity from Xcel Energy) was paid through Geographic Consistency. Finally, there were cases where installations would have qualified for a natural gas EFS rebate from Xcel Energy but were blocked for submittal by the customer's natural gas utility because the AHRI rating number

[1] More detail on the Geographic Consistency policy can be found in the Company's 2024-2026 ECO Triennial Plan.
[2] The Company provides data regarding increased electric consumption resulting from EFS measures in some of the tables in this filing; while these figures are negative to reflect that they are consumption increases, they are provided for informational purposes and are not treated as an "offset" against electric energy savings achieved through traditional energy efficiency measures.
[3] Cold-climate heat pumps were assumed to represent 38% of participation in the Triennial but were 70% of actual rebates paid.
[4] Most customers receiving Geographic Consistency rebates were natural gas customers of CenterPoint Energy.

did not include a furnace. In these cases, the Company relied on trade partners to attest for a customer that the customer's natural gas utility would not accept the application, and in these cases, the Company paid the full incentive amount.

The result of this higher spending is that the Residential Heating and Cooling program – in which most of the spending under Geographic Consistency occurred – does not quite pass the Minnesota Test when Geographic Consistency spending is included.[5] This is because, as noted above, no savings are claimed under Geographic Consistency, driving higher spending without associated benefits. The program is cost-effective under the Minnesota Test if Geographic Consistency spending is omitted from the consideration. If the Company were able to claim energy savings along with spending from Geographic Consistency, it expects the program would pass the Minnesota Test. Additionally, the program passes the Ratepayer Impact Measure (RIM) test with the inclusion of Geographic Consistency spending and without the inclusion of any energy impacts from that spending. What this means is that the program is putting overall downward pressure on electric rates based solely on the increased electric consumption from combination natural gas and electric customers; including the increased electric consumption of Geographic Consistency participants would show a stronger effect.

The Company is aware that the attribution of energy impacts from EFS measures installed by multi-utility customers (and related questions of cost-effectiveness methodology) is under active discussion and consideration between the Department and stakeholders. The Company looks forward to those conversations continuing as EFS measures continue to gain popularity among both HVAC installers and customers.

Table 35: 2024 Efficient Fuel Switching Segment Results – Efficient Fuel Switching

Efficient Fuel Switching Segment	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Participation	1,932	2,047	106%	-	-	-
Budget	$1,927,290	$203,535	11%	$0	$0	-
Generator kW	(4)	(74)	1968%	-	-	-
kWh or Dth Saved	(61,560)	(727,127)	1181%	-	-	-
Claimable Dth	-	-	-	-	-	-

For a more detailed look at the Company's EFS savings please reference the Fuel Neutral Energy Analysis in Appendix I.

Training & Support

The Efficient Fuel Switching (EFS) Training and Support program aims to indirectly impact the market by providing funding to promote the growth of EFS measures and address potential adoption barriers. These barriers often arise when replacing gas equipment and electrifying homes

[5] The Minnesota Test score for Residential Heating and Cooling is 0.97 when including Geographic Consistency spending.

with heat pumps, heat pump water heaters, and EV charging, which frequently require panel upgrades. These upgrades can be a significant entry barrier for many who wish to adopt these technologies.

The Company anticipates that the activities under this program will primarily motivate and educate both customers and trade allies.

Due to the delayed launch of this rebate, the program did not experience high participation. However, the Company anticipates greater participation moving forward and will be running an email marketing campaign to increase awareness and drive greater participation. In addition, the Home Wiring rebate was added to the portfolio beginning in 2025, this should also increase participation in future years.[6]

Outdoor Equipment Program

The Outdoor Equipment program is designed to provide alternatives to end-uses traditionally met with gasoline motors by providing financial incentives for electric lawn equipment. The Outdoor Equipment program offers customers a post-purchase rebate for electric, battery powered lawn equipment. Additionally, rebate recipients receive messaging encouraging off-peak charging to help improve system load factor and reduce customer bills.

In 2024, this program exceeded its filed participation and electric savings targets while staying within the spend target. The program started distributing rebates in the spring with a steady flow of rebate applications. There was a dramatic spike in rebate applications late in the year due to the Company running an email campaign to promote awareness of the program.

[6] Decision, In the Matter of Xcel Energy's Program Modification Request Filed September 19, 2024, November 18, 2024.

INDIRECT PRODUCTS AND SERVICES SEGMENT

This ECO Segment includes Advertising & Promotion, Application Development and Maintenance, CIP Training, Energy Reporting, Energy Benchmarking, Efficient Technology Accelerator, Electric Utility Infrastructure, Partners in Energy, and Planning & Regulatory Affairs. These programs are all indirect impact and therefore generate no energy savings. The Table below provides 2024 results for the Planning Segment.

Table 36: 2024 Indirect Products and Services Segment – Energy Efficiency

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Advertising & Promotion	$7,097,042	$6,452,391	91%	$1,610,483	$1,512,304	94%
Application Development & Maintenance	$3,485,264	$608,563	17%	$712,737	$276,878	39%
CIP Training	$359,484	$95,686	27%	$146,397	$36,785	25%
Community Energy Reporting	$40,858	$29,370	72%	$13,625	$16,168	119%
Electric Utility Infrastructure	$0	$0	N/A	$0	$0	N/A
Energy Benchmarking	$126,771	$197,540	156%	$31,427	$48,513	154%
Partners in Energy	$1,332,871	$1,174,806	88%	$340,504	$241,977	71%
Planning & Regulatory Affairs	$900,000	$678,577	75%	$350,000	$262,506	75%
Total	$13,342,290	$9,236,933	69%	$3,205,173	$2,395,131	75%

Advertising & Promotion

Advertising & Promotion provides funding to drive awareness of electric and gas energy solutions options with broad appeal among all types of customers. The advertising and promotion strategy objectives are to ensure that the Company's energy solutions are top-of mind during customer energy-related purchasing decisions, and to encourage energy saving action for their homes and businesses.

Business and residential advertising continues to play an essential part in building awareness and motivating customers to pursue energy efficiency opportunities. Strategies used to connect with business and residential customers in 2024 included advertising through various mediums, promotion of programs, segment campaigns, and a variety of promotions and sponsorships designed to enhance customer and trade partner engagement. Digital and interactive components

targeting high-impact venues played a large part in reaching the goal of educating customers. Community partnerships created outreach opportunities providing mutually beneficial and longstanding relationships.

Application Development & Maintenance
The Application Development & Maintenance (ADM) provides funding to support the Company's extensive data and process management tools for the marketing and delivery of energy efficiency programs and reporting on program achievements. This includes performance enhancements to our current systems and system updates to maintain the quality of our reporting. This is necessary to introduce additional reporting flexibility and efficiencies, improve back-office processes and improve process management by injecting efficiencies into current operations.

The Company underspent its ADM budget because of reviewing longer-term planning initiatives and the number of software licenses to ensure ADM dollars were spent appropriately. Investments in software purchases were also done with prudence that reduced the overall budget spend.

The ADM budget will continue to be an important part of future filings as the Company seeks to proactively improve the systems and software packages used to improve the customer's experience. This past year, the Company's technologies teams recognized it was imperative to put together an action plan and strategy to produce a long-term road map. For these reasons the funds for the ADM budgets for both fuels were underspent during this planning phase.

CIP Training
The CIP Training budget is used to advance the energy efficiency knowledge of the Company's marketing, engineering, regulatory, operations and sales personnel. The budget provides funding for educational training, seminars and conferences focused on energy efficient electric and natural gas equipment, industry best practices, new advances in technology and changes in the energy efficiency industry. This budget helps ensure that the Company's staff are informed of the latest advances in demand side management to provide better service for our customers. As an indirect program in the Planning Segment, this program is an internal budget only and is not marketed to customers.

In 2024, the Company implemented cost saving measures due to market inflation. As a result, the amount of travel and attendance of in-person conferences and meetings was reduced, leading to the Company underspending its CIP Training budget.

Community Energy Reporting
The focus of the Community Energy Reporting program is to provide aggregated data at the city, county, and state levels in the form of Community Energy Reports, which are published on the Company's website each year by June 1 reflecting the previous year's data. These Community Energy Reports contain a variety of useful data tables such as: energy consumption, utility systems characteristics, renewable, demand management, energy efficiency and EV program participation. These reports are automatically produced for cities with populations larger than 50,000 residents and counties with populations larger than 100,000 residents. Smaller cities and counties can be added to the annual production upon request, and the Company anticipates a significant growth in this program over the next several years.

The Community Energy Reporting team made additional enhancements to its business systems, which contributed to a significant increase in data accuracy and stakeholder satisfaction which were reflected in the 2024 Community Energy Reports.

The electric spend was under the filed target, but natural gas spend was a little over the filed spend.

Electric Utility Infrastructure

The Minnesota Next Generation Energy Act of 2007 ("Act") created the opportunity for an electric utility to claim savings from projects that improve the efficiency of the utility's infrastructure or system towards its electric savings targets, provided that the utility files a plan to achieve savings of at least one percent of retail sales through direct energy conservation programs. The Act also authorized a new rate schedule for recovery of electric utility infrastructure project costs but does not require that a utility create a specific rate schedule to claim the related energy savings. The Company is not claiming savings for EUI for 2024.

Energy Benchmarking

The Energy Benchmarking program provides aggregated whole building usage data to commercial and multifamily buildings, utilizing an internal benchmarking platform in combination with the EPA's Energy Star Portfolio Manager. Most participants are in territories with benchmarking ordinances, but the program serves any customer of the Company who wishes to obtain benchmarking data.

The program is primarily marketed to those customers falling under a municipal or state benchmarking ordinance, such as Minneapolis' Commercial Building Energy Benchmarking and Transparency ordinance. The Minnesota legislature has passed Minn. Stat. 216C.331, which requires all buildings larger than 100,000 square feet to begin reporting energy usage by June 1, 2025, and all buildings larger than 50,000 square feet by June 1, 2026.

Additionally, the Energy Benchmarking program encompasses the Rental Usage Reporting program, which stemmed from the Minneapolis Time of Rent Ordinance that went into effect in September 2021. This program allows building owners and their authorized agents to obtain utility cost estimates at a dollar/square foot and dollar/bedroom level for their prospective tenants. As a result of continuously expanding and new ordinances, the Company expects program participation to expand continually over the next several years.

The Company made effective improvements to customer satisfaction by increasing stakeholder engagement and improving customer inquiry response times in 2024. Upgrades were made to the Company's software platform that is utilized to send automated aggregated energy usage data to ENERGY STAR Portfolio Manager that focused on faster processing times and increased data accuracy. The Company also made enhancements to our Rental Usage Portal, which allowed customers to be better informed on the status of their data request and made processing more streamlined.

The program exceeded its natural gas and electric budgets. This overage in spending was caused by increased participation, extended reporting deadlines, and now including the Rental Usage Portal under the Energy Benchmarking program. The addition of the Rental Usage Reporting program has also added increased workload.

Partners in Energy

The Partners in Energy Program works with communities served by the Company to support them in reaching their unique energy goals. The framework for the program is to provide resources to assist them in developing community-driven energy action plans, including beneficial electrification plans, and provide tools and resources for the initial launch and implementation of that plan as well as to support communities with existing goals and plans. This incorporates providing support for driving incremental energy savings in a community. Implementation support often includes leveraging programs and rebates offered by the Company, promoting, and creating educational materials and enhancing outreach opportunities with Company resources. Additional services are delivered to all participating communities to support networking and deeper learning about issues relevant to community-level energy management, energy planning, new technologies, marketing, and program delivery. These resources are delivered through in-person events, webinars, newsletters, and an online portal.

The program is primarily marketed to local government entities through direct outreach and word of mouth promotion. However, there has been recent interest from broader regions and city coalitions. In addition to supporting new communities, we continue to see strong participation from communities who extend their initial term of implementation support to pursue additional energy management opportunities. This enables the program to continue to work with these engaged communities on driving additional energy savings to achieve their long-term goals. We are also seeing a growing number of past participants interested in updating their energy plans to reflect current energy trends and opportunities.

Topics incorporated into program delivery to the communities include broader energy management opportunities such as renewables, electric vehicles, efficient fuel switching and customer service options, but these were not funded through the ECO.

The program was slightly under budget for 2024. This was driven by:

- Fewer communities entering the program than anticipated. The volume of communities revising their plans or extending their implementation support was higher than expected, but the cost per community of these activities on average was lower.
- Continued virtual delivery program elements. Beginning in 2021, the Company offered Partners in Energy virtually and developed tools for delivering elements of the program remotely. In 2024, we continued to see a shift back to many in-person workshops and events, but the Company continued to leverage past learnings to deliver components of the program online at a lower cost. As communities continue to adopt digital channels, community representatives and program implementers have become more adept at delivering education and outreach online and through social media. For example, communities have recorded events and then shared educational presentations on YouTube and via webinars. We continue to use these channels to provide a cost-effective means to distribute messaging to a large audience especially in remote communities.

Planning & Regulatory Affairs
Planning & Regulatory Affairs provides funding for all the Company's DSM regulatory filings, directs and prepares cost-benefit analyses, provides results of energy conservation achievements, manages electric and gas potential studies and analyzes and prepares cost recovery reports. These functions are needed to ensure a cohesive and high-quality portfolio that meets legal requirements as well as the expectations of Xcel Energy's customers and regulators.

In addition, Planning & Regulatory Affairs supports the ECO component of resource planning, rate cases, and certificates of need, and provides strategic evaluation planning and internal policy guidance. These functions are needed to ensure the cost-effectiveness of ECO, the quality of impact estimates, help generate ideas for future projects, establish programmatic consistency, and manage ECO-related marketing information.

In 2024, the Planning & Regulatory Affairs spending was under budget for both electric and natural gas budgets.

RESEARCH, EVALUATIONS, & PILOTS SEGMENT

The Research, Evaluations, and Pilots Segment provides Market Research and Product Development services to Xcel Energy. This segment includes the pilots being managed within the Product Development program. The table below shows target and actual spending and energy-saving targets in this segment for 2024.

Table 37a: 2024 Research, Evaluations & Pilots Results – Energy Efficiency

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Market Research	$2,146,287	$1,555,240	72%	$525,579	$350,786	67%
Product Development	$5,232,917	$2,109,911	40%	$198,051	$189,414	96%
Total	$7,379,204	$3,665,151	50%	$723,630	$540,200	75%

Table 37b: 2024 Research, Evaluations & Pilots Results –Efficient Fuel Switching

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Market Research	$0	$0	0%	$0	$0	0%
Product Development	$523,291	$47,343	9%	$130,051	$0	0%
Total	$523,291	$47,343	9%	$130,051	$0	0%

Market Research

Market Research conducts surveys and studies to understand customer needs that relate to DSM conservation efforts. In 2024, the Company conducted the following general research projects to:

- maintain an Xcel Energy-specific residential customer segmentation model,
- support a Product Experience Survey that monitors customer satisfaction by surveying most participants after a rebate has been processed or program participation has completed,
- subscribe to E Source Consultative services and research and other multi-sponsor research projects,
- purchase updated Dun & Bradstreet business customer classification information;
- continue Residential Campaign Effectiveness Tracking research,
- conduct a Residential Home Use Study,
- develop the project plan for a community-based Organization research and pilot project (to be executed in 2025), and
- support employee expenses.

Market Research funds are also used to procure third-party services for comprehensive, process, and impact evaluations on individual programs. In 2024, the Company conducted research on the following programs:

- Business Education
- Data Center Efficiency
- Home Energy Audits
- Refrigerator & Freezer Recycling
- Whole Home Efficiency

The Company conducted evaluability assessments and impact evaluation of new residential behavioral (Energy Action Days) offerings and conducted evaluation activities for the commercial & industrial Critical Peak Pricing & Time of Use rate pilots.

In 2024, the Market Research program spending was under budget for electric and natural gas.

Some work conducted as part of the Market Research program, as well as other activities to verify savings are described in the Measurement and Verification portion of the compliance section within this report.

Table 38: Market Research Spend

		Total Spending by Category	
Project Name	**Description**	**Electric**	**Natural Gas**
ACEEE Co-sponsored Research	Support ACEEE national research projects along with other utilities, program administrators, and agencies	$15,600	$5,200
Business and Residential Segmentation	Data purchases and database system management to provide customer segmentation for program design and delivery.	$176,711	$48,428
CBO Research, Pilot, and Evaluation - General Portion	Comprehensive project to enhance engagement with community-based organizations (CBOs) through preliminary research and a pilot with embedded evaluation.	$3,156	$1,572
CBO Research, Pilot, and Evaluation - Income-Qualified Portion	see above; initial focus is exclusively on CBOs serving income-qualified customers. In recognition that other customers may benefit from the research as well, only a portion of the program cost is assigned to the income-qualified market research budget	$12,622	$6,286
Demand Management Research Brief	Third party research of established and emerging demand management opportunities to support the DSM chapter of the IRP filing	$43,947	$0
DSM Advertising Campaign Tracking Research	Track effectiveness of DSM messaging campaigns	$37,600	$0

		Total Spending by Category	
Project Name	**Description**	**Electric**	**Natural Gas**
Employee Expenses	Travel and meal expenses in conjunction with Market Research projects	$2,431	$585
Energy Action Days Pilot M&V	Third party review of pilot design and savings methodology for 2023 Energy Action Days pilot.	$24,552	$0
ESource Subscription	Annual fee for access to ESource research and advisory services for DSM programs	$82,128	$24,118
Home Use Study	Self-report web survey of energy-consuming equipment in customers' homes	$13,375	$5,156
Labor and Overhead	Direct labor to manage projects and overhead to cover procurement and invoice processing activities	$164,767	$61,530
Lighting Plus Study	Co-sponsor (with ~10 other entities) a study of next-generation commercial lighting savings opportunities.	$35,000	$0
MN Portfolio Evaluation Project	Create dashboard to offer faster access to evaluation results; develop and deliver cross-cutting customer and trade partner surveys to supplement program-specific evaluations	$108,514	$51,909
Program Evaluations	Finalize 2023 evaluation reporting and conduct planning, research, and initial reporting for 2024 evaluations	$794,702	$146,003

Product Development

Product Development identifies, assesses, and develops new energy efficiency, efficient fuel switching and demand response products and services for eventual inclusion as new programs and measures. This work enables the Company to identify and promote promising new energy-saving technologies for customers. The group also develops improvements to existing programs. In 2024, Product Development remained under its electric and natural gas target due to lower than anticipated costs for research, outside services and association dues.

The Company provides a narrative summary of its product development activities, and the corresponding dollar amounts for each activity, as part of the Company's annual status report as required by the Deputy Commissioner's December 1, 2023 Decision in Docket No. G,E002/CIP-23-92. The 2024 successes included:

- the launch of Building Codes,
- the addition of Efficient Fuel Switching measures to the HVAC+R program, and
- piloting a new approach to mobile home parks.

The table below is a record of product development spending to support our development efforts.

Table 39: Product Development Spending

		Total Spending by Category		
Project Name	**Description**	**Electric**	**Natural Gas**	**Efficient Fuel Switching**
Carbon Reporting and Management	Worked with customers to test new methods of analyzing, reducing, and communicating carbon emissions.	$105,236		
Electric Heat Affordable Rental Program Pilot (EHARP)	Electric Heat Affordable Rental Program Pilot (EHARP) assists low-income renters who currently heat with electric resistance heating to install more efficient electric heating systems.	$251,227		
DERMS Requirements	Distributed Energy Resource Management System (DERMS) Requirements are necessary to acquire a new software system for demand management.	$79,405		
Mobile Home Pilot	Develop manufactured home measures and a comprehensive marketing strategy for mobile homes	$14,179	$14,179	
Storm Window Pilot	Test the efficacy of storm window retrofit measures	$23,870	$10,263	
Power Quality Research	Explore whether efficiency opportunities can be found through power quality studies	$17,353		
Empower Intelligence	Investigate Virtual Recommissioning service	$30,330		
Solar Removal	Removal of a solar voltaic system from the roof of Rapson Hall at the University of MN to complete a long-term contract obligation	$28,160		
Whole Home program design	Market research to investigate more effective ways to help customers make larger clean energy investments over time	$62,175	$62,175	
Product Lifecycle Management	Improving our development and management of customer programs to increase effectiveness and create efficiencies.	$215,750	$27,000	
Air Source Heat Pump Studies	Air Source Heat Pump Studies investigated the performance of space and water heating in MN's climate.			$47,343
Labor	Expenses related to administration.	$987,304	$84,115	
Employee Expenses		$11,676		
Contract Labor		$103,761		
R&D Data Subscriptions/ Dues		$53,269	$5,000	
Misc.		$126,216	($13,318)	
Total		**$2,109,911**	**$189,414**	**$47,343**

ASSESSMENTS SEGMENT

The Assessments Segment accounts for assessments from the Division of Energy Resources (DER) to support state energy policy. This segment includes assessments authorized by Minnesota Statute, fees for the Department and the Public Utilities Commission filing review, and assessments for the Minnesota Efficient Technology Accelerator.[1] The table below provides the 2024 results.

Table 40: Assessments Results – Energy Efficiency

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Minnesota Assessments	$1,932,291	$1,859,102	96%	$294,738	$390,117	132%
Minnesota Efficient Technology Accelerator	$3,041,550	$3,044,149	100%	$602,088	$604,140	100%
Total	$4,973,841	$4,903,251	99%	$896,826	$994,257	111%

Assessments from our regulators were slightly below the filed electric budget and above the natural gas target.

[1] Assessments for the Minnesota Efficient Technology Accelerator began in 2023 and follow the Decision, In the Matter of Xcel Energy's 2024-2026 Energy Conservation and Optimization Triennial Plan, Department of Commerce, December 1, 2023 Docket G,E002/CIP-23-92.

ALTERNATIVE FILINGS SEGMENT

The Alternative Filings segment includes four alternative ECO programs that third parties have been operating within the Company's portfolio. These programs were approved by the Deputy Commissioner in the December 1, 2023 Decision.

Alternative filings generally are used to publicize and promote Xcel Energy ECO programs to specific customer segments that the program administrator has a strong relationship with and to support specific needs of that customer segment. Like indirect programs offered by utilities, such as energy audits and customer education programs, these alternative ECO programs drive participation in the utility programs that have direct energy savings. Since these programs are proposed and managed by third-parties, additional questions and requests regarding achievement should be directed to individual parties. The table below provides the 2024 results for the Alternative Filings.

Table 41a: Alternative Filing Results – Energy Efficiency

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
EnerChange	$551,304	$621,986	113%	$61,256	$68,156	111%
Energy Smart	$635,250	$626,451	99%	$46,725	$28,695	61%
One-Stop Shop	$14,504,032	$15,713,802	108%	$99,099	$75,010	76%
Trillion Btu	$171,727	$142,598	83%	$21,877	$21,258	97%
Total	**$15,862,313**	**$17,104,838**	**108%**	**$228,957**	**$193,119**	**84%**

Table 41b: Alternative Filing Results – Efficient Fuel Switching

	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
EnerChange	$0	$0	0%	$0	$0	0%
Energy Smart	$0	$0	0%	$0	$0	0%
One-Stop Shop	$0	$1,714	0%	$0	$0	0%
Trillion Btu	$0	$0	0%	$0	$0	0%
Total	**$0**	**$1,714**	**0%**	**$0**	**$0**	**0%**

EnerChange

The EnerChange program was proposed for inclusion in the Company's 2024-2026 Triennial Plan by the National Initiative by Consumers of Energy (EnerChange) in Docket No. E,G002/CIP-23-92. EnerChange is an indirect impact program that provides nonprofit organizations with facility evaluations. These evaluations identify conservation project opportunities, review applicable electric and natural gas utility rebates availability, provide customer assistance to drive implementation of

measures and help with implementation financing. EnerChange leverages referrals, networking, associations, organizations, community outreach and social media to market the program.

Energy Smart
The Energy Smart program was proposed for inclusion in the Company's 2024-2026 Triennial Plan by the Minnesota Waste Wise Foundation, a nonprofit affiliate of the Minnesota Chamber of Commerce, in Docket No. E,G002/CIP-23-92. Energy Smart is an indirect impact energy efficiency assistance program. The mission of the program is to engage Minnesota businesses and direct them toward existing utility energy efficiency and load management programs.

The Energy Smart program offers several electric and natural gas services, such as on-site business consultations, and distribution of ECO program information. The program is primarily marketed to the business community through direct contact with members of the Minnesota Chamber of Commerce and Waste Wise Contract participants, partnership with the local chambers and business groups, door-to-door outreach, direct mailings, inquiries via the Energy Smart website, and various social media channels.

One-Stop Efficiency Shop®
Developed and implemented by Center for Energy and Environment (CEE), the One-Stop Efficiency Shop (One-Stop) is a comprehensive lighting, refrigeration and HVAC rebate program designed to help small businesses reduce energy costs. Tailored for businesses with a demand of 400 kW or less, One-Stop addresses the unique challenges faced by this sector by offering:

- free assessments with actionable cost savings recommendations,
- substantial financial incentives combined with convenient and attractive financing,
- a streamlined, full-service process that minimizes time commitments for business owners,
- access to quality contractors, and
- end-to-end project management, including completion of all rebate paperwork.

Due to limitations on financial resources, time, and knowledge of energy efficient products, small businesses are difficult to serve with traditional rebate programs. One-Stop overcomes these barriers by providing hands-on support to Xcel Energy's small business customers. Program consultants offer objective, customized recommendations, allowing business owners to make informed decisions that align with their budget and operational needs. By combining expert guidance, financial assistance, and a seamless implementation process, One-Stop makes energy efficiency accessible, cost-effective, and hassle-free for participating businesses.

Trillion BTU
The Trillion BTU program was proposed for inclusion in the Company's 2024-2026 Triennial Plan by the St. Paul Port Authority in Docket No. G7036, E7035/CIP-20-485. Trillion BTU is aimed at increasing participation in the Company's existing commercial and industrial energy efficiency programs. The program leverages funding awarded to the St. Paul Port Authority through resources from economic development agencies and municipalities in Xcel Energy's electric and natural gas service territories, to create a revolving loan fund and provide technical assistance to prospective participating businesses. The program targets customers looking to implement relatively large energy

saving projects and is primarily delivered to customers by the St. Paul Port Authority. It is anticipated that customer investments will increase in 2025.

SECTION 8: APPENDICES

Appendix A: Compliance Matrix

Appendix B: Workforce Development & Education Report

Appendix C: Cost Effectiveness Analyses

Appendix D: Detailed Technical Assumptions

Appendix E: Natural Gas Innovation Act (NGIA) Projects

Appendix F: Energy Action Days Report

Appendix G: Behavioral Demand Response Welcome Messaging

Appendix H: Behavioral Demand Response Customer Email

Appendix I: Energy Efficient Fuel Switching

APPENDIX A: COMPLIANCE MATRIX

APPENDIX A: COMPLIANCE MATRIX

Xcel Energy is committed to complying fully with all applicable statutes, rules and decisions by the Department of Commerce. We believe our Status Report reflects appropriate implementation of all requirements. We have prepared a matrix reflecting our inventory of requirements to be met in this Application and cross-referenced to the portion of the Plan that fulfills each compliance item.

STATUTES, RULES, AND ORDER

Rules, Statute or Order	Subdivision or Order Point	Required Information	2024 Status Report Section
§216B.241	Subd. 1c (b)	**Achievement as a % of Sales.** A public utility providing electric service has an annual energy-savings goal equivalent to 1.75 percent of gross annual retail energy sales unless modified by the commissioner under paragraph.	Section 6: Compliance with Rules and Statutes *TABLE: Achievement as Percent of Sales*
§216B.241	Subd. 1c (c)	**Achievement as a % of Sales & Carry Forward Provisions.** A public utility providing natural gas service has an annual energy-savings goal equivalent to one percent of gross annual retail energy sales, which cannot be lowered by the commissioner. The savings goals must be calculated based on the most recent three-year weather-normalized average. A public utility providing electric service may elect to carry forward energy savings in excess of 1.75 percent for a year to the succeeding three calendar years, except that savings from electric utility infrastructure projects allowed under paragraph (d) may be carried forward for five years. A public utility providing natural gas service may elect to carry forward energy savings in excess of one percent for a year to the succeeding three calendar years. A particular energy savings can only be used to meet one year's goal.	Section 6: Compliance with Rules and Statutes
§216B.241	Subd. 1c (g)	**Efficient Fuel Switching.** Notwithstanding any provision to the contrary, until July 1, 2026, spending by a public utility subject to this section on efficient fuel-switching improvements to meet energy savings goals under this section must not exceed 0.35 percent per year, averaged over three years of the public utility's gross annual retail energy sales.	N/A
§216B.241	Subd. 2(e)	**R&D Spending.** Each public utility subject to this subdivision may spend and invest annually up to ten percent of the total amount spent and invested on energy conservation improvements under this section by the public utility on research and development projects that meet the definition of energy conservation improvement.	Section 6: Compliance with Rules and Statutes *TABLE: Research & Development Spending Cap*
§216B.241	Subd. 1f(c)	**Facilities Energy Efficiency.** The commissioner shall require that utilities include in their conservation improvement plans programs that facilitate professional engineering	Section 6: Compliance with Rules and Statutes

Rules, Statute or Order	Subdivision or Order Point	Required Information	2024 Status Report Section
		verification to qualify a building as Energy Star-labeled, Leadership in Energy and Environmental Design (LEED) certified, or Green Globes-certified.	
§216B.241	Subd. 5a	**Qualifying solar energy project.** (a) A utility or association may include in its conservation plan programs for the installation of qualifying solar energy projects as defined by section 216B.2411 to the extent of the spending allowed for generation projects by section 216B.2411. The cost-effectiveness of a qualifying solar energy project may be determined by a different standard than for other energy conservation improvements under this section if the commissioner determines it is in the public interest to do so to encourage solar energy projects. Energy savings from qualifying solar energy projects may not be counted toward the minimum energy-savings goal of at least one percent for energy conservation improvements required under subdivision 1c, but may, if the conservation plan is approved: (1) be counted toward energy savings above that minimum percentage; and (2) be eligible for a performance incentive under section 216B.16, subdivision 6c, or 216B.241, subdivision 2c, that is distinct from the incentive for energy conservation and is based on the competitiveness and cost-effectiveness of solar projects in relation to other potential solar projects available to the utility. (b) Qualifying solar energy projects may not be considered when establishing demand-side management targets under section 216B.2422, 216B.243, or any other section of this chapter	N/A – The Company does not include solar as part of our ECO portfolio.
§216B.241	Subd. 7(a)	**Low-Income Spending.** The commissioner shall ensure that each public utility subject to subdivision 1c provides energy conservation and efficient fuel-switching programs to low-income households. When approving spending and energy-savings goals for low-income programs, the commissioner shall consider historic spending and participation levels, energy savings achieved by low-income programs, and the number of low-income persons residing in the utility's service territory. Beginning January 1, 2022, a public utility furnishing gas service must spend at least one percent of its most recent three-year average gross operating revenue from residential customers in the state on low-income programs. A public utility that furnishes electric service must spend at least 0.4 percent of its gross operating revenue from residential customers in the state on low-income programs. Beginning in 2024, a public utility that furnishes electric service must spend 0.6 percent of	Section 6: Compliance with Rules and Statutes *TABLE: Low-Income Spending Requirement*

Rules, Statute or Order	Subdivision or Order Point	Required Information	2024 Status Report Section
		the public utility's gross operating revenue from residential customers in the state on low-income programs.	
§216B.241	Subd. 7(f)	**Pre-weatherization.** Up to 15 percent of a public utility's spending on low-income programs may be spent on pre-weatherization measures. A public utility is prohibited from claiming energy savings from pre-weatherization measures toward the public utility's energy savings goal.	Section 6: Compliance with Rules and Statutes
§216B.241	Subd. 8	**Assessments**. The commission or department may assess public utilities subject to this section to carry out the purposes of subdivisions 1d, 1e, and 1f. An assessment under this subdivision must be proportionate to a public utility's gross operating revenue from sales of gas or electric service within Minnesota during the last calendar year, as applicable. Assessments made under this subdivision are not subject to the cap on assessments provided by section 216B.62, or any other law.	Section 6: Compliance with Rules and Statutes
§216B.241	Subd. 9(e)	**SB2030.** The commissioner shall require utilities to develop and implement conservation improvement programs that are expressly designed to achieve energy efficiency goals consistent with the Sustainable Building 2030 performance standards. These programs must include offerings of design assistance and modeling, financial incentives, and the verification of the proper installation of energy-efficient design components in new and substantially reconstructed buildings. A utility's design assistance program must consider the strategic planting of trees and shrubs around buildings as an energy conservation strategy for the designed project. A utility making an expenditure under its conservation improvement program that results in a building meeting the Sustainable Building 2030 performance standards may claim the energy savings toward its energy-savings goal established in subdivision 1c.	Section 6: Compliance with Rules and Statutes
§216B.241	Subd. 11 (a)	**Efficient Fuel Switching.** A public utility providing electric service at retail may include in the plan required under subdivision 2 programs to implement efficient fuel-switching improvements or combinations of energy conservation improvements, fuel-switching improvements, and load management. For each program, the public utility must provide a proposed budget, an analysis of the program's cost-effectiveness, and estimated net energy and demand savings.	Section 1: Executive Summary
§216B.241	Subd. 11(d)	**Efficient Fuel Switching.** A fuel-switching improvement is deemed efficient if, applying the technical criteria established under section 216B.241, subdivision 1d, paragraph (e), the improvement meets the following criteria, relative to the fuel that is being displaced:	Section 6: Compliance with Rules and Statutes *Appendix I*

Rules, Statute or Order	Subdivision or Order Point	Required Information	2024 Status Report Section
		(1) results in a net reduction in the amount of source energy consumed for a particular use, measured on a fuel-neutral basis; (2) results in a net reduction of statewide greenhouse gas emissions as defined in section 216H.01, subdivision 2, over the lifetime of the improvement. For an efficient fuel-switching improvement installed by an electric utility, the reduction in emissions must be measured based on the hourly emission profile of the electric utility, using the hourly emissions profile in the most recent resource plan approved by the commission under section 216B.2422; (3) is cost-effective, considering the costs and benefits from the perspective of the utility, participants, and society; and (4) is installed and operated in a manner that improves the utility's system load factor.	
§216B.241	Subd. 12 (a-b)	**Efficient Fuel Switching.** (a)As part of a public utility's plan filed under subdivision 2, a public utility that provides natural gas service to Minnesota retail customers may propose one or more programs to install electric technologies that reduce the consumption of natural gas by the utility's retail customers as an energy conservation improvement. The commissioner may approve a proposed program if the commissioner, applying the technical criteria developed under section 216B.241, subdivision 1d, paragraph (e), determines that: (1) the electric technology to be installed meets the criteria established under section 216B.241, subdivision 11, paragraph (d), clauses (1) and (2); and (2) the program is cost-effective, considering the costs and benefits to ratepayers, the utility, participants, and society. (b) If a program is approved by the commission under this subdivision, the public utility may count the program's energy savings toward its energy savings goal under section 216B.241, subdivision 1c. Notwithstanding section 216B.2402, subdivision 4, efficient fuel-switching achieved through programs approved under this subdivision is energy conservation.	Section 1: Executive Summary Section 6: Compliance with Rules and Statutes *Appendix I*
§216B.241	Subd. 13	**Load Management.** A public utility may include in the utility's plan required under subdivision 2 programs to implement load management activities, or combinations of energy conservation improvements, fuel-switching improvements, and load management	Load Management program details can be

Rules, Statute or Order	Subdivision or Order Point	Required Information	2024 Status Report Section
		activities. For each program the public utility must provide a proposed budget, cost-effectiveness analysis, and estimated net energy and demand savings. (b) The commissioner may approve a proposed program if the commissioner determines the program is cost-effective, considering the costs and benefits to ratepayers, the utility, participants, and society.	found in the Executive Summaries.
§216B.241	Subd. 14 (h)	**Transformation.** Upon approval, each public utility with over 30,000 customers must participate in ETA and contribute to the approved budget of the program by depositing annually in the energy and conservation account under subdivision 2a an amount that is proportional to the utility's gross operating revenue from sales of gas or electric service in Minnesota, excluding revenues from large customer facilities exempted under subdivision 1a. A participating utility must not be required to contribute more than the following percentages of the utility's spending approved by the commission in the plan filed under subdivision 2: (1) two percent in the program's initial two years; (2) 3.5 percent in the program's third and fourth years; and (3) five percent thereafter.	These costs are included as part of Assessments in the filing.
§216B.16	Subd. 17	**Employee Expenses**. Amended by Minn. Laws 2010, Chp. 328, requires utilities to report general travel, entertainment, and employee related costs. Staff recommended that travel, entertainment, and employee-related expenses associated with CIP be reviewed as part of the general expenditure review process associated with CIP status reports. Staff further recommended that these costs be capped at 0.5% of total annual CIP expenses	Section 6: Compliance with Rules and Statutes *TABLE: Summary of Employee Expenses*
§216B.2411	Subd. 1(a)	**Distributed Energy Resource Spending Cap**: Any municipality or rural electric association providing electric service and subject to section 216B.241 may, and each public utility may, use five percent of the total amount to be spent on energy conservation improvements under section 216B.241, on:	Section 6: Compliance with Rules and Statutes
Minnesota Rules	Part 7690.0550	Utilities must file the following data for each **program:** • the approved participation goal, and the actual participants served during the previous calendar year; • the estimate of (1) low-income and (2) renter residential customer participation levels as anticipated in the approved biennial conservation improvement program filing, and the utility's estimates of low-income and renter participation actually achieved, if applicable; • the approved budget, and the actual expenditures; • the approved energy and demand savings goals and the actual savings achieved for the previous year; and the cost-effectiveness of the program based on the results of previous years and the actual expenditures, as calculated from the utility, participant, ratepayer, and societal perspectives.	Section 6: Compliance with Rules and Statutes Section 7: ECO Status Report (Portfolio Results)

Rules, Statute or Order	Subdivision or Order Point	Required Information	2024 Status Report Section
Docket No. E002/M-90-1159			
January 3, 1992 Order		Requires a performance measurement evaluation to accompany Northern States Power Company, a Minnesota corporation's, financial incentive mechanism filing.	Section 6: Compliance with Rules and Statutes *TABLE: Impact Analysis Since 2017* Section 3: Conservation Cost Recovery Report
Docket No. E,G002/CIP-20-473			
November 25, 2020 Decision	1f	Provision requiring programs to promote the use of efficient lighting and support the collection of spent lamps.	Section 6: Compliance with Rules and Statutes
November 25, 2020 Decision	N/A – Explanation of Hybrid low-income	For the purpose of determining whether a utility's planned low-income spending meets the low-income spending requirement, the Department reviews spending for dedicated low-income programs. The Department will also include the planned spending in "hybrid programs" when the utility: • proposes a reasonable low-income spending goal within the program, • develops an acceptable method to identify the low-income portion of total program spending, and • tracks and clearly reports the low-income and non-low-income portions of the program spending in annual status reports.	Section 6: Compliance with Rules and Statutes *TABLE: Hybrid Program Achievement*
November 25, 2020 Decision	9d	Requiring the utilities to include in their annual status reports a description of all program modifications and changes not requiring Deputy Commissioner approval in order to keep the Department and other interested parties informed of their activities.	Section 6: Compliance with Rules and Statutes *Modifications*
April 29, 2021 Decision		The Deputy Commissioner requires that as part of the AENHC program Xcel track and include in its annual CIP Status Report the number of buildings and units built by each type of developer.	Section 7: ECO Status Report *Residential Segment, Efficient New Home Construction*
April 29, 2021 Decision		Given the relative magnitude of the CIP-WDE program's budget, the uniqueness of the program design, and the interest from stakeholders, the Deputy Commissioner requires that prior to the Company submitting its annual CIP Status Report, Xcel work with Staff to develop a template and system for reporting on the metrics listed in information	Appendix B

Rules, Statute or Order	Subdivision or Order Point	Required Information	2024 Status Report Section
		request #12 that will be meaningful to the Department and interested parties, will be presented clearly, and will not compromise data privacy.	
August 11, 2022 Department Decision	Empower Facilities Modification	Include in annual Status Reports: (1) A breakdown of participation by number of participants that (1) received only assessment and project proposals and (2) contracted for implementation services and/or ongoing support. (2)A list of non-CIP programs that benefited from the Empower Facilities program. (3) A summary of the fees reported in the CIP tracker as associated with the Empower Facilities program. (4) A summary of the total costs billed to customers for Empower Facilities and the percentage of these costs reported in the CIP Tracker.	Section 6: Compliance with Rules and Statutes *TABLE: Empower Facilities Participation Breakdown*
January 19 2023 – CIP Modification Decision (CPP)		The Deputy Commissioner also requires Xcel to clearly report the amount of any M&V expenses and describe any M&V activities associated with the CPP Pilot program in the Market Research program section of its annual Status Report.	N/A – no expenses in 2024
October 27, 2023 – CIP Modification Decision	PDP Modification	The Deputy Commissioner also requires the Company to consider customer behavior, especially how customers choose to drop load and adjust their energy usage, including switching to fossil based back up generation when it conducts any formal or informal research and evaluations on the pilot and report any findings in future Status Reports.	The PDP pilot is ongoing and currently does not have any additional details to report as part of our 2024 Annual Report.
Docket No. E,G002/CIP-23-92			
December 1, 2023 Department Decision	3.	The Deputy Commissioner requires the Company to include a narrative summary of its R&D activities and the corresponding dollar amounts for each R&D activity as part of the Company's annual Status Reports.	Section 6: Compliance with Rules and Statutes Section 7: ECO Status Report
December 1, 2023 Department Decision	4.e.	The Deputy Commissioner approves use the geographical proxy method for the School Kits program and accepts the Company's proposal of reporting participating schools in the Company's status report.	Section 6: Compliance with Rules and Statutes *Other Regulatory Requirements*
December 1, 2023 Department Decision	4.f.	The Deputy Commissioner also requires Xcel to report on (1) the number of schools by county and (2) the number of kits identified as income eligible for the School Kits program via the geographic proxy method in its status reports.	Section 6: Compliance with Rules and Statutes *Other Regulatory Requirements*

Rules, Statute or Order	Subdivision or Order Point	Required Information	2024 Status Report Section
December 1, 2023 Department Decision	4.g.	The Deputy Commissioner requires the Company to report in its Status Report potential solutions to waste generation from the School Kits program and directs Staff to work on technical assumptions and program design parameters for kit programs through the TRM Advisory Committee over the coming triennial period.	Section 6: Compliance with Rules and Statutes *Other Regulatory Requirements*
December 1, 2023 Department Decision	4.i.	The Deputy Commissioner requires Xcel to seek review from Staff of pilots and research the Company is planning to pursue via the Market Research program designed to improve its low-income portfolio either through a Courtesy Notification or a formal plan modification prior to commencement. The Deputy Commissioner also requires Xcel to report on these activities in its annual status reports.	Section 6: Compliance with Rules and Statutes *Courtesy Notifications*
December 1, 2023 Department Decision	4.j.	The Deputy Commissioner accepts Xcel's proposed format for providing a product level breakdown as part of the Residential Demand Response program write up in its status report and future plans. The Deputy Commissioner also accepts the correction noted by Xcel for this program.	Section 6: Compliance with Rules and Statutes *Other Regulatory Requirements*
December 1, 2023 Department Decision	4.k.	The Deputy Commissioner directs Xcel to include a report or evaluation demonstrating the methodology for claimed energy savings as part of Energy Action Days (or Behavioral Demand Response) and examples of customer messaging as part of its annual status report.	Section 6: Compliance with Rules and Statutes *Other Regulatory Requirements*
December 1, 2023 Department Decision	8.e.	Requiring the utilities to include in their annual status reports a description of all program modifications and changes not requiring Deputy Commissioner approval in order to keep the Department and other interested parties informed of their activities.	Section 6: Compliance with Rules and Statutes *Other Regulatory Requirements*
December 1, 2023 Department Decision	8.f.	Not requiring the Budget Flexibility and Plan Modification provisions when a utility falls short of achieving a budget, savings, or participation goal for a specific segment or program in a particular program year. However, as part of Staff's review of annual status reports, when an approved goal for a segment or program is no longer realistic compared to actual performance, the Deputy Commissioner may require a Plan modification, so that all interested parties can track and have reasonable expectations regarding ECO accomplishments.	Section 6: Compliance with Rules and Statutes
December 1, 2023 Department Decision	9.	Due to ongoing interest by the Department and interested parties in understanding utility investments to support low-income customers and under-resourced communities, the Deputy Commissioner requires that utilities clearly report the following metrics in their annual status Reports;	Section 6: Compliance with Rules and Statutes

Rules, Statute or Order	Subdivision or Order Point	Required Information	2024 Status Report Section
December 1, 2023 Department Decision	9.a.	the estimate of anticipated and actual low-income residential customer participation levels for each program as required in Minnesota Rules 7690.0550,	Section 6: Compliance with Rules and Statutes *TABLES: Electric & Gas Program Low-Income Participation*
December 1, 2023 Department Decision	9.b.	the estimate of anticipated and actual residential rental customer participation levels for each program as required in Minnesota Rules 7690.0550,	Section 6: Compliance with Rules and Statutes *TABLES: Electric & Gas Program Renter Participation*
December 1, 2023 Department Decision	9.c.	the planned and actual low-income spending and energy savings for each program, including dedicated low-income programs, as required in Minnesota Rules 7690.0550,	Section 6: Compliance with Rules and Statutes *TABLE: Low Income Spending Requirement*
December 1, 2023 Department Decision	9.g.	how the utility uses pre-weatherization funds (e.g., by geography, household income, and types of repairs), as well as program deferral rates and causes.	Section 6: Compliance with Rules and Statutes *TABLE: Health & Safety Projects Overview*
December 1, 2023 Department Decision	9.	The Deputy Commissioner notes that items d-f do not apply to Xcel since it has redesigned its multifamily program into 2 separate programs, one for market rate properties and one for income eligible properties. The Deputy Commissioner <u>does request that the Company continue to report the number of buildings and number of units served in multifamily programs in its annual status reports.</u>	Section 6: Compliance with Rules and Statutes *TABLE: Multifamily Buildings & Units*
December 1, 2023 Department Decision	11.d.	The Deputy Commissioner reminds all utilities of the Measurement and Verification (M&V) Protocols for Large Custom Projects Version 1. M&V reports detailing any changes to the project, measured savings, and actual expenditures may be provided with annual status reports.	Section 6: Compliance with Rules and Statutes *Other Regulatory Requirements*
December 1, 2023 Department Decision	13.	For any 2024-2026 ECO regulatory filings (e.g., Triennial Plan modifications and annual ECO Status Reports) that the Company submits for Department review, the Deputy Commissioner requires the Company to follow the Department's issued technical guidance documents.	Section 6: Compliance with Rules and Statutes

Rules, Statute or Order	Subdivision or Order Point	Required Information	2024 Status Report Section
July 31, 2024 ECO Modification Decision	Peak Day Partners 4.	The Deputy Commissioner requires the Company to include information about program activities, number of events, and progress towards completing the evaluations in future Status Reports.	The PDP pilot is ongoing and currently does not have any additional details to report as part of our 2024 Annual Report.
NGIA 23-0518		Require Xcel to provide an informational appendix in its 2024 ECO Status Report, due to be filed on April 1, 2025, with high level information regarding customer projects which did not receive an incentive under ECO in 2024, but which might have been eligible for support under the Custom Projects for Large Customers pilot. For each such project, the Company will include an explanation of why the project did not receive ECO funding and an estimate of the energy and emissions impact of the project. No customer-identifying or trade secret information will be included in the project summaries.	Section 6: Compliance with Rules and Statutes *Appendix E*

APPENDIX B: WORKFORCE DEVELOPMENT & EDUCATION REPORT

APPENDIX B:
Workforce Development & Education Program (WDE)

Workforce Development and Education Program (WDE)

The ECO-WDE creates numerous energy efficiency career pathways for unemployed and underemployed people living in historically underserved communities, Black, Indigenous, people of color, and women residing in Green Zones of Minneapolis and Areas of Concentrated Poverty (ACP) 50 zones of St. Paul. This year, the program expanded to St. Cloud for a pilot cohort at the end of 2024. The WDE program is provided by Xcel Energy and administered by Center for Energy and Environment (CEE). It is a direct low-income ECO program.

Since its launch in 2022, nearly 100% of graduates have reported having a household income that is at or below 80% of the Area Median Income and nearly two thirds, 64%, of internship graduates have gone on to get job offers in the energy efficiency sector. As shown through these results, WDE is accomplishing its mission in training and employing individuals from historically underserved communities in the energy efficiency sector. All the while, WDE impacts income-qualified (IQ) customers and their communities by building a more robust workforce that represents the communities Xcel Energy serves.

WDE Program overview

During each cohort, participants receive four weeks of paid training, earning up to $2,750 and receiving an industry-recognized credential in Building Science Principles (BSP). During training, participants learn the basics of building science, home energy audits, insulation, and air sealing, and receive installation training from experts. Along with weekly stipend payments, including one stipend paid a week after training ends, participants receive weekly transportation support in the form of bus or gas cards throughout the four-week training.

Participants learn about the theory and practice of home energy, including basic building science and the relationships between heat transfer, air flow, moisture transport, heating systems, cooling systems, insulation, mechanical ventilation, and other home systems. In 2024, there were a total of 95 graduates from WDE. 78 participants completed the full four-week home energy career training with 92% earning the industry-recognized Building Science Principles (BSP) certification. An additional 17 participants completed an introductory home energy career training to learn about careers in energy efficiency and be connected to future training.

In addition to the certification, participants receive hands-on air sealing and insulation training, using props designed in accordance with BPI standards. Additional topics cover low- and no-cost energy solutions, job-site safety guidelines, basic math for home insulation, and workplace readiness. The high-level learning objectives of this course are:

- Understand the landscape of clean energy jobs
- Learn the value of home energy efficiency in peoples' lives
- Understand the "House as a System" concept
- Identify components of different home building types

- Understand the basics of thermodynamics applicable to home energy
- Recognize the benefits of air sealing and insulation
- Recognize the interaction between the building envelope and HVAC systems
- Understand the interaction between home tightness, ventilation, and combustion safety
- Be prepared for an internship in an entry-level insulation or energy auditing role
- Obtain the Building Science Principles Certificate of Knowledge by passing the exam

The combination of these topics provides a solid base in home energy efficiency for several clean energy career pathways, but particularly the internship pathways offered through the program's next phase.

Following the paid four-week home energy career training, participants can continue their training through a paid 16-week internship. The internships directly follow the home energy career training. Qualified trainees become temporary CEE staff and are paid an hourly wage of $18.00 with some benefits, including 40 hours of paid time off. This program began offering two internship pathways, residential insulation and energy auditing, and began offering a third pathway in HVAC installation and technician training. Trainees work alongside experienced practitioners to earn a nationally recognized BPI credential specific to each pathway. There are internship positions for roughly 30% of the participants who successfully complete the Home Energy Career Training.

As an extension of the four-week training, trainees in the home insulation and air sealing pathway spend time in the first few weeks practicing techniques on props designed to replicate real-world installations. Once placed with host partners, trainees spend four days per week completing projects on homes with trained crews throughout the Twin Cities. At the end of the internship, trainees can take the BPI Air Leakage Control Installer (ALCI) certification exam. All trainees who took the ALCI certification exam passed and received this credential.

Trainees in the Energy Auditing track receive hands-on experience installing low-cost, energy-saving products such as door weatherstripping, pipe insulation, lighting, and smart thermostats. Trainees are coached in effective communication skills related to home energy efficiency projects and learn basic diagnostic skills like blower door testing and combustion safety analysis by observing and performing audits on customer homes. At the end of the internship, trainees can take the BPI Building Analyst field and written exam to earn certification. All trainees who took the Building Analyst certification exam passed and received this credential as well.

During the first week of the internship, trainees from all pathways train primarily with CEE on props and homes as part of CEE's program portfolio. For the following 15 weeks, trainees are placed with CEE in the Home Energy Squad, partner employer weatherization agencies such as Community Action Partnership of Ramsey & Washington Counties (CAPRW) and Sustainable Resource Center (SRC), or insulation contractor companies such as Element Insulation or Franek Construction. This gives employers and trainees the opportunity to work side by side before hiring starts. It also gives trainees a glimpse into different workplace cultures and procedures. Once per week during these internships, participants meet with the training staff at CEE to recap what they learned that week and prepare to test for credentials. There is also ongoing training on career

readiness topics such as writing effective resumes, best practices for interviewing, and conflict resolution.

In 2024 the workforce development program expanded to include an HVAC internship pathway. HVAC service technicians reduce a home's heating and cooling costs by ensuring that the HVAC system is running at maximum efficiency. Installers also replace older, less efficient systems with new systems, including cold climate heat pumps. Like the auditor and insulator tracks, trainees, also referred to as interns, spend 15 weeks with a host HVAC contractor.

For those graduates not pursuing internships, CEE facilitates referrals to other clean energy training or related training programs. One such training program is the City of Minneapolis Health Department's Green Career Exploration Program. Through the City's Green Career Exploration program, they provide a 56-hour solar installation training program that prepares participants to sit for the NABCEP Solar Associate exam. They also provide sustainable landcare training and solar training at Sabathani that has served as a 'feeder' for the WDE program. Graduates have also gone on to complete Xcel Energy's Energy Careers Academy Line Worker program. One graduate in particular who excelled in the Home Energy Career Training completed the Xcel Line Worker program and was identified as a potential instructor. Participation in adjacent programs following the initial training course is tracked for up to two years after they have graduated from the Home Energy Career Training program.

Employer Partners

CEE leverages relationships with employers to connect participants directly to insulation, energy auditor, and HVAC careers. This program provides ongoing opportunities for participants to meet with employer partners and build a bridge to employment. This is done in many ways, including guest speakers from employers and mock interviews, as well as direct placement for training with insulation companies and weatherization agencies. CEE partners with low-income weatherization agencies including Sustainable Resources Center (SRC) and Community Action Partnership of Ramsey and Washington Counties (CAPRW) to host trainees and provide opportunities for them to learn about the weatherization audit process. These companies advance trainees' knowledge to better understand the landscape of weatherization work, benefiting themselves and their staff in pursuing potential hires and enhancing the quality of work done in low-income homes. Simultaneously, 100% of these visits are in low-income households.

In addition to insulation companies and weatherization agencies, CEE also created new partnerships with mechanical contractors to expand into HVAC as a career pathway. These companies include Standard Heating and Air, The Energy Conservatory, Residential Heating and Air, Air Mechanical, and Lighthowes Mechanical. Each of these companies have hosted interns in 2024 and provide unique on-the-job training opportunities with one of these contractors completing plumbing and electrical work in addition to HVAC projects. Out of these five new employer hosts, two of these companies hired the first trainee they hosted. This program plans to expand the number of HVAC contractor hosts in 2025 in the metro area and beyond.

Through continued conversations with employers, CEE has discovered that apart from facing issues with retaining and training new employees, contractors need more resources to address customers' questions regarding tax credits and rebates rolling out with the Inflation Reduction Act (IRA).

Additionally, small contractor companies often rely on informal networks to enlist new crew members, often passing over candidates who may not have access to their networks. By providing qualified trainees to these companies, this program has supplied diverse talent that would have otherwise gone unnoticed.

When asked about the impact of the program on CAPRW's hiring staff, Quality Assurance Manager, Jeremy Taylor, shared, "many of the insulator trainees we hosted in 2024 were able to supplement our staff at a time where our in-house weatherization crews were understaffed and under-capacity. There were also several candidates from the 2024 cohorts that we considered for the open position. In the two years of the contract, we have hired two apprentice carpenters and two energy auditors. CAPRW's Energy Conservation team is very excited to continue this program in 2025 and beyond." As the relationship between employers and the WDE program continues to grow, the opportunities for graduates to grow in a wide range of energy efficiency careers continues to expand as well.

Program Results

WDE sought to train participants in the communities where they reside. For this reason, CEE held its workforce training in Green Zone areas of Minneapolis and St. Cloud that were highly accessible by public transportation and central to the communities. In 2024, three home energy career training cohorts were held at Sabathani Community Center, two introductions to home energy career training cohorts were held at the Regional Apprenticeship Training Center (RATC) in North Minneapolis, and one cohort was held at CAIRO's Isku Filan Center in St. Cloud.

Sabathani Community Center is one of Minnesota's oldest African American founded nonprofits providing a wide range of community orientated, culturally tailored services in the heart of South Minneapolis. Due to the strategic location of Sabathani, two-thirds of participants reside in the Green Zones of Minneapolis or ACP50 Zones of St. Paul. CEE also held two introductory training cohorts at the RATC in North Minneapolis. Several green energy non-profits host training here and it has become a hub for green energy workforce training.

2024 was the first year that WDE implemented a training cohort outside of the Twin Cities Metro. To expand access to the WDE program, CEE offered a shortened home energy career training in St. Cloud. Through expansion to St. Cloud, CAIRO was identified as an organizational community partner. CAIRO, Center for African Immigrants & Refugees Organization, is a leader in St. Cloud in working with African immigrant and refugee families. Their Isku Filan Center served as an ideal training location as it is situated in an area of St. Cloud that serves as an economic hub for the Somali community. It was also easily accessible by public transit and located at a well-recognized intersection.

In addition to CAIRO, a few other trusted community-based organizations were identified as partners including Community Grassroots Solutions and Tri-CAP to recruit participants and provide on-going case management and career navigation. The class was very well attended and 92% of participants earned the BSP, despite English being the second, third, or fourth language of most participants. Two participants went on to become interns in the St. Cloud area in auditing and insulation.

Figure 1

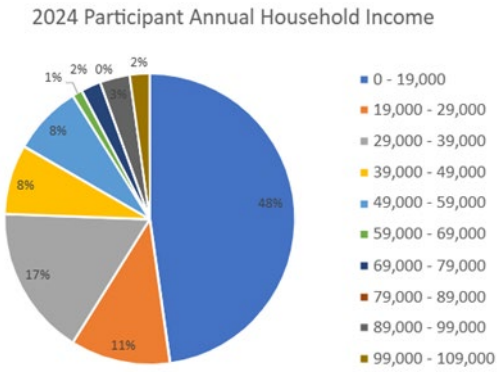


Figure 2

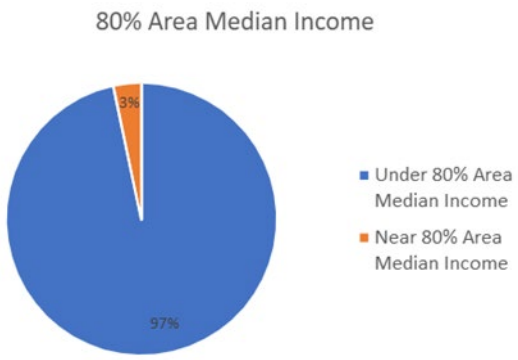


Figure 1. "What is your annual household income?" responses from graduates of Home Energy Career Training

Figure 2. The percentage of participants above and below 80% Area Median Income based on household income and household size. The 3% of people near the 80% median income may fall above or below the limit since income is reported as a range. No one reported an income above 80% AMI.

Apart from many participants residing in the targeted locations, 88% identify as Black, Indigenous, or people of color. According to a report conducted by Clean Energy Economy MN in 2021, only 6.9% of clean energy workers identified as Black/African American and 1.4% identified as American Indian or Alaska Native. The ability to prioritize BIPOC communities through the WDE training has developed a much more diverse workforce that is representative of the communities Xcel Energy serves.

Gender demographics have also been on track. Women have historically been underrepresented in the trades, specifically the energy efficiency sector, and continue to be grossly outnumbered by their male counterparts. As a result of our program, the women who have completed our paid internship and are employed in the sector have an overall average hourly wage of $24, higher than the overall average among graduates. Additionally, those that earned BPI credentials have created greater opportunity for promotions and pay increases. This success speaks to the need to continually invest in programs such as WDE to engage and retain all workers and meet market demands.

In 2024, the types of roles program graduates were offered positions for within the energy efficiency sector, specifically in HVAC, expanded. In 2023, those who completed the internship were only hired as energy auditors, insulation installers, and carpenter's apprentices. In 2024, one trainee was offered employment directly out of the paid internship as an HVAC technician and two additional participants were offered roles as energy counselors.

There were many graduates that have progressed in their careers in energy efficiency over the course of the past year. A trainee that was hired in 2023 by CAPRW as a carpenter's apprentice for their weatherization assistance program working on income-qualified households throughout the Twin Cities has continued in her career progression to the role of a journey worker. She put in the necessary hours and demonstrated the mastery of skills needed to become a journey worker within the Carpenter's Union, a coveted role within the CAPRW insulation crew.

Additionally, two graduates of the program in 2023 that were hired by CEE as energy counselors were promoted to the role of energy auditors in 2024. Another graduate progressed and was promoted to the role of Senior Auditor Trainer in 2024. This graduate was highlighted in a blog post by Clean Energy Resource Teams (CERTs). This graduate shared, "I was able to complete my certificates, and I'm now a CEE Senior Energy Auditor Trainer. I'm now training people to do the position I was trained to do. So, you kind of escalate within this business, which I think is huge."[1]

As a result of meeting the demographic targets for ECO-WDE, the program is also creating a workforce to better serve income-qualified customers and the communities in which they live. Responses from graduates of the ECO-WDE program have included the following.

- "I don't look at houses the same. I learned things about my house that I never knew."
- "I learned how to use the right furnace filter. I can apply everything I learned in real life.
- "Seeing people comfortable and established in their field is motivating."
- "I learned the proper way to reduce energy loss by properly conducting an audit and proper air sealing and insulation."
- "I know how to save my family money and which companies to go to get insulation."

A common thread included throughout the feedback on the Home Energy Career training was the stipends and the bus/gas cards given weekly that allowed participants to focus more fully on the training content. Throughout all the surveys from 2024, graduates mentioned the importance of hearing from past graduates who had progressed in their careers and how this served as a primary motivation to seek out employment or additional training in the field.

This increase in knowledge about energy saving measures and how to access quality insulation and weatherization services demonstrates that WDE is accomplishing what it set out to do in empowering communities that have been historically underrepresented and underserved.

Community-Based Partnerships

In 2024, partnerships with community-based organizations were sustained and expanded to greater Minnesota. During both the four-week training and the paid internship, community-based organization partners provide participants with career navigation and case management services to ensure they have what they need to participate each day: transportation, technology, adequate childcare, etc. They also provide training in career readiness to help participants effectively present themselves and their skills to future employers and prepare for their next career.

CAPI played a significant role in supporting 29 participants through completion of the Home Energy Career Training through 3 training cohorts at Sabathani Community Center. CAPI provided financial coaching support to all participants in the training and worked closely with several graduates that entered the paid internship. CAPI also supported participants in seeking additional employment and training opportunities after the training ended.

CAPI continued to provide a full-time navigator for this program with additional funds allocated to CEE for training needs. The funding CAPI had in 2024 from Minneapolis Employment & Training allowed CAPI to allocate an additional $200 per participant for support services to assist with

transportation, technology, or fees related to childcare or housing. CAPI was not awarded funding through the City of Minneapolis for an additional grant cycle; however, CEE and CAPI continue to provide referrals to each other's organizations for support services and training.

In addition to partners like CAPI, relationships with additional community partners have strengthened retention and support following the training. In 2024, a new partnership was forged with HIRED, a nonprofit organization that nurtures purpose and advances economic opportunity for all through individualized employment and career services. CEE identified a need for greater career readiness support for all participants in the training. HIRED approached CEE as a potential training provider partner in DEED's Clean Economy & Equitable Workforce grant. Through funding from DEED's Clean Economy grant and additional foundation funds from Wilson and Cargill foundations, HIRED has been able to increase the amount of support service funds per participant to $2,000. These funds were awarded in July and CEE began planning work with HIRED's Career Pathways team in August. With their funds, HIRED was able to provide two weeks of career readiness training leading to the building science principles portion of the curriculum CEE instructs as well as funding for one full-time Navigator to work with 33 participants.

CEE's partnership with Sabathani Community Center has continued to expand as well. In 2024, Sabathani's Environmental Sustainability Coordinator worked closely with CEE and CAPI to support participants during the Home Energy Career training by providing career navigation and additional support services. To meet growing needs for hands-on training space, CEE formed an agreement with Sabathani to use their training room for insulation and air sealing practice for classroom participants and interns. This allowed the hands-on training to take place in the same building as the classroom training, instead of traveling to CEE's warehouse in St. Paul.

Additionally, Sabathani received funding to build an innovative training lab space focused on training, credentialing and preparation for careers in energy efficiency (i.e. solar, HVAC, insulation, auditing). Sabathani aims to be a leader in training for environmental sustainability and energy efficiency careers and provide a state-of-the-art training facility for South Minneapolis residents. CEE began providing consultation to Sabathani on the build out of this space to ensure it would meet BPI testing standards.

As the City of Minneapolis and Minneapolis Climate Action continue to expand their training opportunities in clean energy, CEE has found strategic ways to provide collaboration. In 2024, CEE provided two introductions to home energy career trainings at the Regional Apprenticeship Training Center (RATC) in North Minneapolis for Minneapolis residents. Through this three-day training, participants learned about heat transfer, air sealing and insulation, and career pathways in energy efficiency. They also gained practical hands-on skills in residential construction by building a 'little library' house retrofitted with attic insulation and solar panels. In addition to these two introductory trainings, CEE also attended an employer and community organization green energy workshop to strengthen partnerships across the industry and has participated in monthly meetings head by the City of Minneapolis's Green Careers Exploration Program to discuss collaboration with other training providers.

Through conversations early on with CERTs, CEE identified two community-based organizations that played a significant role in the workforce ecosystem and engagement with the Somali and

immigrant communities in St. Cloud: CAIRO and CGS. CAIRO and CGS both served as trusted community collaborators and provided recruitment, outreach, and served as liaison during the enrollment process between St. Cloud and CEE staff. Both organizations provided career navigation support specifically with resume development during and after the training.

In reflecting on the success of the first St. Cloud cohort with 25 graduates, CAIRO workforce development coordinator, Mohamed Salat, shared, "our organization partnered with the Center for Energy and Environment (CEE) because of their expertise in designing and delivering impactful energy-related programs. CEE's reputation for excellence in energy training, and with their commitment to workforce development, aligns seamlessly with our mission to create opportunities for individuals while addressing critical environmental challenges."

Barriers and Wraparound Services

Many program participants face multiple barriers to employment including issues related to transportation, workplace readiness, and housing. One of the most common financial burdens participants in the WDE program face are fees related to housing (i.e. rental deposit fees) and past due bills for utilities. Working side by side with CAPI and Sabathani, CEE has been able to address some of these obstacles.

With the wraparound support services budget from Xcel, CEE was able to work in tandem with CAPI to cover the cost of the first month's rent and damage deposit fees for two trainees so they could secure and maintain housing. This allowed these two trainees to continue uninterrupted in their on-the-job training. As a result of the stability this support service provided, these two trainees were both offered full-time employment as an energy auditor and as a carpenter's apprentice.

Another significant barrier to employment in this sector is transportation. For residential energy efficiency jobs, it is essential for workers to have access to reliable transportation, particularly their own vehicle and driver's license. Many residential insulation contractors' shops are in the outer metro region, making it difficult for those without a reliable form of transportation to get to and from work daily. A lack of reliable transportation, ownership of a driver's license, or ability fines to have a license reinstated are all reasons trainees may face challenges getting to and from a jobsite.

Due to Xcel Energy's wrap around support services budget, CEE was able to secure a reliable form of transportation for those without vehicles through a partnership with Uber. In 2024, Uber provided around 636 rides, supporting 16 trainees in getting to and from jobsites. Ultimately, this resulted in a higher retention rate throughout the paid internship, specifically in residential insulation where the jobsites vary from day to day. CEE workforce staff coordinated with CEE staff who schedule insulation jobs with contractors that host trainees to ensure insulation jobs were scheduled in St. Paul or Minneapolis as often as possible. This eased the strain on a trainee in coordinating public transportation or a ride to a job in an outer ring suburb.

Conclusion

In summary, the WDE program has not only increased the number of low-income, BIPOC, and female workers in the energy efficiency sector, it has also equipped these graduates to bring their knowledge back to their communities, impacting the income-qualified households Xcel Energy serves. Programs like WDE will play a crucial role in meeting both Xcel Energy and the state's

ambitious goals in significantly reducing greenhouse gas emissions by 2030. This program sponsored by Xcel Energy and administered by CEE has been highly successful in equitably growing the energy efficiency workforce to expand services to low-income customers and communities in the Twin Cities metro.

Table 1: 2024 Participation Matrix

a	Number of persons employed when starting the training	**51**
b	Number of persons unemployed when starting the training	**66**
c	Number of graduates who are minorities (identify as BIPOC and/or Women)	**90**
d	Number of trainees who have requested ADA accommodations	**3**
e	Number of graduates were economically disadvantaged (meeting 80% AMI as self-reported) at the time of application	**87***
f	What is the number of people who have registered for the training vs. the number who come?	**139 registered, 118 attended**
g	Number of trainees who have dropped out without completing training.	**23**
h	Number of trainees who have completed training.	**95**
i	Total number of trainees who have completed training (since 2022)	**164**
j	Information on trainees that have been placed in training-related jobs	**See below**
k	Employers where trainees have been placed, the occupation(s) of the trainee(s),their wage rates, and the number of placements to-date	**See Below**
l	Average wages and benefits for trainees that have completed the training program. (Sector or not)	**$23.00 /hour**

*Due to the method of self-reporting income ($10,000 income range buckets) 3 people are within $5,000 of the 80% AMI threshold. They may be above or below the limit. Additionally, 5 participants in the introductory home energy career training 3-day class either didn't report income or did not report household size so we were not able to verify their low-income status.

Table 2: 2024 Trainees (Placed in Related Jobs)

	Employer	Occupation	Wages per hour	Benefits
Graduate 1	CEE	Energy Auditor	$23.08	Offered
Graduate 2	CEE	Energy Auditor	$23.58	Offered
Graduate 3	CEE	Energy Auditor	$23.00	Offered
Graduate 4	CEE	Energy Counselor	$19.50	Offered
Graduate 5	CEE	Energy Counselor	$19.50	Offered
Graduate 6	Lighthowes Mechanical	HVAC Technician	$25.00	Offered

Table 3: 2024 Trainees (Employment)

	Employer	Occupation	Wages per Hour	Benefits
Graduate 7	CAPRW	Unknown	$18.00	Not Offered
Graduate 8	Pilgrim's Pride	Maintenance	$28.00	Offered
Graduate 9	Pilgrim's Pride	Lead	$26.00	Offered
Graduate 10	St. Cloud Hospital	Cleaner	$23.00	Not Offered
Graduate 11	UPS	Pre-Loader (Part-Time)	$21.00	Not Offered
Graduate 12	Care Home	Certified Nursing Assistant (Part-time)	$22.00	Not Offered
Graduate 13	Cummins Warehouse	Warehouse Worker	$18.00	Not Offered
Graduate 14	Work study at University of Minnesota	Peer Advisor (Part-time)	$15.20	Not Offered
Graduate 15	University of Minnesota	Office Assistant	$10.00	Not Offered
Graduate 16	Dick's Sporting Goods	Sales Associate (Part-time)	$19.50	Not Offered
Graduate 17	Teachers on Call	Substitute Teacher (Part-time)	$25.00	Not Offered

	Employer	Occupation	Wages per Hour	Benefits
Graduate 18	Genesis Group Homes	Caretaker	$20.00	Not Offered
Graduate 19	Medical Company	Certified Medical Assistant	$35.00	Offered
Graduate 20	Home Care	Caretaker	$10.00	Not Offered
Graduate 21	Pilgrims	Industrial Mechanic	$26.00	Not Offered
Graduate 22	Essilor Luxottica	Deblock	$21.00	Not Offered
Graduate 23	St. Cloud Hospital	Nursing Assistant	$22.00	Offered
Graduate 24	Essilor Luxottica	Unknown	$17.00	Not Offered
Graduate 25	Osseo Schools	Unknown	$52.60	Offered
Graduate 26	Newflyer	Unknown	$24.00	Offered
Graduate 27	Pilgrim's Pride	Unknown	$29.00 + $4 for perfect attendance	Offered
Graduate 28	Pilgrim's Pride	Unknown	$25.00	Not Offered
Graduate 29	Community Center	Tech and Education Coordinator	$25.00	Offered
Graduate 30	PCA	Unknown	$17.00	Not Offered
Graduate 31	Nova Home Health Care	Unknown	$18.00	Not Offered

Note: Of the graduates that responded, 31 reported being employed, 12 reported being unemployed, and 3 went on to study at MinnState colleges following the Home Energy Career Training.

Major Curriculum Goals

The major curriculum goals for WDE include a) to learn the value of home energy efficiency, understanding the house as a system, and the foundations of building science b) to be prepared for an internship in Energy Auditing or Insulation Installation c) to apply career readiness skills to meet professional goals, progress in a career, and secure long-term employment in the energy efficiency sector. This year, we expanded the HVAC sections of the classroom training to include more information about heat pumps. We also worked with Minneapolis College and Saint Paul College to provide hands on training in carpentry, refrigeration charge/discharge, and sheet metal. This allowed us to offer a third internship pathway as an HVAC technician.

Curriculum Topics, including training provider(s) and delivery method

Curriculum topics include the thermodynamics of heat, air, and moisture flow; mechanical systems; home energy auditing; home insulation and air sealing; and career readiness, such as resume writing, best practices for interviewing, and workplace professionalism. The classroom training was expanded and taught by CEE Workforce Training Manager, Sage Berglund. Additional training was provided by CEE Building Science Trainers, Anna Wiebe, Victor French, and Noah Herman, experienced and BPI certified energy auditors. The class included various guest speakers through daily lectures, hands on activities, and a curriculum specific textbook. Trainees receive on-the-job training at auditing, insulation, and HVAC employers.

What are major steps and milestones in the program? How many trainees in each step and milestone?

For the participants enrolled in the Intro to Home Energy Career Training, the major milestone is completion of the 3-day training. A further milestone is enrollment in additional green energy and home efficiency training. 15 people completed the introductory training and three of those graduates went on to complete the four-week Home Energy Career training.

There are several steps and milestones within the Home Energy Career Training. The first step is completing the paid classroom training and obtaining the BSP certificate. 80 participants completed the training and 72 of the 80 earned the BSP certificate. The next major milestone is entering into the paid Internship. From the classroom training participants, 21 were selected for the Internship. Seven of those interns earned a professional certification (BA-T, ALCI, EPA608). An additional three trainees from previous internship cohorts also earned one of these certifications. 6 interns were given job offers after the internship. Two people were hired out of the class into the industry without going on to the internship. In 2024, six graduates are currently employed in the sector with six internships currently ongoing with end dates in spring of 2025.

Using general categories, provide reasons that trainees did not complete the training when CEE is able to contact the trainee.

General categories for reasons why trainees did not complete the classroom training or the internship: a) Trainee was not ready to re-enter the workforce due to significant challenges related to housing and mental health b) Trainee was unable to commit to internship due to other employment c) Trainee did not want to pursue a career in insulation installation or energy auditing.

Types of certifications, degrees, or diplomas that the trainees are expected to obtain.

The Building Science Principles certificate is obtained through the Home Energy Career Training four-week program and is administered by the Building Performance Institute (BPI). Trainees are expected to obtain additional BPI credentials through the completion of the internship. Those in the Auditor internship track can earn the Building Analyst Technician (BA-T) certification and those in Insulation route have the opportunity to earn the Air Leakage Control Installer (ALCI) certification. All Green Construction Career Training participants earn at least three NREL Weatherization Installer Badges. HVAC trainees earn the EPA 608 Type 1 for residential systems. They also have the opportunity to earn the Type 2 and Type 3 EPA certification as well.

APPENDIX C: COST EFFECTIVENESS ANALYSES

RESIDENTIAL SEGMENT TOTAL	DSM TOTAL	2024	GOAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	39,387,904	39,387,904	N/A	45,389,646	45,389,646
Transmission and Distribution Capacity	N/A	4,510,122	4,510,122	N/A	5,217,987	5,217,987
Energy Generation	N/A	51,068,933	51,068,933	N/A	58,790,659	58,790,659
Market Effects and Ancilary Services	N/A	1,899,339	1,899,339	N/A	2,187,966	2,187,966
Subtotal	N/A	96,866,298	96,866,298	N/A	111,586,258	111,586,258
Gas System Impacts						
Commodity Cost	N/A	24,116,056	N/A	24,116,056	27,807,029	27,807,029
Variable O&M	N/A	207,604	N/A	207,604	239,315	239,315
Demand	N/A	5,891,447	N/A	5,891,447	6,789,576	6,789,576
Environmental Compliance	N/A	337,625	N/A	337,625	389,298	389,298
Subtotal	N/A	30,552,732	N/A	30,552,732	35,225,219	35,225,219
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	12,951,587	12,951,587
Gas Environmental Externalities	N/A	N/A	N/A	N/A	22,291,540	22,291,540
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	(6,433,002)	(4,659,583)	(1,773,420)	(6,433,002)	(6,433,002)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	(6,433,002)	(4,659,583)	(1,773,420)	28,810,125	28,810,125
Participant Impacts						
Electric Bill	208,289,040	N/A	(180,609,614)	N/A	N/A	N/A
Gas Bill	46,605,923	N/A	N/A	(40,441,168)	N/A	N/A
Participant Rebates and Incentives	26,631,077	N/A	N/A	N/A	26,631,077	N/A
Incremental Capital	(56,326,722)	N/A	N/A	N/A	(56,326,722)	N/A
Incremental O&M	11,553,267	N/A	N/A	N/A	11,553,267	N/A
Subtotal	236,752,585	N/A	(180,609,614)	(40,441,168)	(18,142,378)	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	(1,113,936)	(781,293)	(332,643)	(1,113,936)	(1,113,936)
Utility Administration	N/A	(12,489,287)	(8,694,461)	(3,794,826)	(12,489,287)	(12,489,287)
Advertising & Promotion	N/A	(4,154,328)	(2,834,900)	(1,319,428)	(4,154,328)	(4,154,328)
Measurement & Verification	N/A	(46,000)	(31,500)	(14,500)	(46,000)	(46,000)
Rebates	N/A	(26,631,077)	(18,280,327)	(8,350,749)	(26,631,077)	(26,631,077)
Other	N/A	(75,323)	(34,142)	(41,182)	(75,323)	(75,323)
Subtotal	N/A	(44,509,951)	**(30,656,623)**	**(13,853,328)**	(44,509,951)	(44,509,951)
Benefits	293,079,307	127,419,030	96,866,298	30,552,732	220,238,948	182,054,605
Costs	(56,326,722)	(50,942,953)	(215,925,820)	(56,067,915)	(107,269,674)	(50,942,953)
Net Benefit (Cost)	**236,752,585**	**76,476,078**	**(119,059,521)**	**(25,515,183)**	**112,969,274**	**131,111,652**
Benefit/Cost Ratio	**5.20**	**2.50**	**0.45**	**0.54**	**2.05**	**3.57**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	12.2 years
Lifetime (Weighted on Dth)	13.8 years
T & D Loss Factor (Energy)	8.52%
T & D Loss Factor (Demand)	10.40%
System Coincident kW Saved at Generator	**35,338 kW**
Annual kWh Saved at Customer	129,641,736 kWh
Annual kWh Saved at Generator	**136,696,152 kWh**
Annual Dth Saved	**443,238 Dth**
Electric Participants	**2,540,378**
Gas Participants	**665,778**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	16.6 years
Lifetime (Weighted on Dth)	16.6 years
T & D Loss Factor (Energy)	8.70%
T & D Loss Factor (Demand)	10.56%
System Coincident kW Saved at Generator	**-6.38 kW**
Annual kWh Saved at Customer	-1,633,580 kWh
Annual kWh Saved at Generator	**-1,789,245 kWh**
Annual Dth Saved	**15,859 Dth**
Electric Participants	**726**
Gas Participants	**719**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	41,508 tons CO2
Gas Energy Efficiency	32,325 tons CO2
Electric Electrification	-492 tons CO2
Gas Electrification	1,157 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	74,498 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	280,223 tons CO2
Gas Energy Efficiency	444,524 tons CO2
Electric Electrification	-4,140 tons CO2
Gas Electrification	19,246 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	739,852 tons CO2

RESIDENTIAL SEGMENT TOTAL	DSM TOTAL	2024	ACTUAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	33,557,319	33,557,319	N/A	38,505,835	38,505,835
Transmission and Distribution Capacity	N/A	3,835,815	3,835,815	N/A	4,419,408	4,419,408
Energy Generation	N/A	40,160,453	40,160,453	N/A	46,253,455	46,253,455
Market Effects and Ancilary Services	N/A	1,551,072	1,551,072	N/A	1,783,574	1,783,574
Subtotal	N/A	79,104,658	79,104,658	N/A	90,962,273	90,962,273
Gas System Impacts						
Commodity Cost	N/A	27,243,308	N/A	27,243,308	31,604,283	31,604,283
Variable O&M	N/A	234,476	N/A	234,476	271,931	271,931
Demand	N/A	6,653,378	N/A	6,653,378	7,714,383	7,714,383
Environmental Compliance	N/A	381,406	N/A	381,406	442,460	442,460
Subtotal	N/A	34,512,568	N/A	34,512,568	40,033,057	40,033,057
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	10,451,852	10,451,852
Gas Environmental Externalities	N/A	N/A	N/A	N/A	25,228,925	25,228,925
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	(4,864,392)	(2,894,107)	(1,970,285)	(4,864,392)	(4,864,392)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	(4,864,392)	(2,894,107)	(1,970,285)	30,816,385	30,816,385
Participant Impacts						
Electric Bill	174,257,494	N/A	(148,741,294)	N/A	N/A	N/A
Gas Bill	51,208,485	N/A	N/A	(44,071,647)	N/A	N/A
Participant Rebates and Incentives	28,737,466	N/A	N/A	N/A	28,737,466	N/A
Incremental Capital	(104,174,920)	N/A	N/A	N/A	(104,174,920)	N/A
Incremental O&M	4,610,780	N/A	N/A	N/A	4,610,780	N/A
Subtotal	154,639,304	N/A	(148,741,294)	(44,071,647)	(70,826,674)	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	(610,841)	(471,647)	(139,194)	(610,841)	(610,841)
Utility Administration	N/A	(11,276,967)	(8,338,728)	(2,938,239)	(11,276,967)	(11,276,967)
Advertising & Promotion	N/A	(2,801,181)	(1,934,832)	(866,349)	(2,801,181)	(2,801,181)
Measurement & Verification	N/A	(984,033)	(346,955)	(637,078)	(984,033)	(984,033)
Rebates	N/A	(28,737,466)	(19,113,643)	(9,623,824)	(28,737,466)	(28,737,466)
Other	N/A	(568,757)	(392,110)	(176,646)	(568,757)	(568,757)
Subtotal	N/A	(44,979,245)	**(30,597,914)**	**(14,381,330)**	(44,979,245)	(44,979,245)
Benefits	258,814,225	113,617,226	79,104,658	34,512,568	200,024,354	166,676,108
Costs	(104,174,920)	(49,843,637)	(182,233,316)	(60,423,261)	(154,018,557)	(49,843,637)
Net Benefit (Cost)	**154,639,304**	**63,773,590**	**(103,128,658)**	**(25,910,694)**	**46,005,797**	**116,832,471**
Benefit/Cost Ratio	**2.48**	**2.28**	**0.43**	**0.57**	**1.30**	**3.34**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	12.1 years
Lifetime (Weighted on Dth)	14.5 years
T & D Loss Factor (Energy)	8.55%
T & D Loss Factor (Demand)	10.44%
System Coincident kW Saved at Generator	**32,780 kW**
Annual kWh Saved at Customer	114,814,483 kWh
Annual kWh Saved at Generator	**119,824,823 kWh**
Annual Dth Saved	**396,544 Dth**
Electric Participants	**2,455,622**
Gas Participants	**1,228,559**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	16.9 years
Lifetime (Weighted on Dth)	16.8 years
T & D Loss Factor (Energy)	8.70%
T & D Loss Factor (Demand)	10.56%
System Coincident kW Saved at Generator	**-5.84 kW**
Annual kWh Saved at Customer	-9,281,853 kWh
Annual kWh Saved at Generator	**-10,166,323 kWh**
Annual Dth Saved	**88,853 Dth**
Electric Participants	**1,458**
Gas Participants	**1,445**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	29,308 tons CO2
Gas Energy Efficiency	33,258 tons CO2
Electric Electrification	-2,895 tons CO2
Gas Electrification	6,480 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	66,152 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	257,409 tons CO2
Gas Energy Efficiency	418,264 tons CO2
Electric Electrification	-24,944 tons CO2
Gas Electrification	109,154 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	759,882 tons CO2

BUSINESS SEGMENT TOTAL	DSM TOTAL	2024	GOAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	91,825,941	91,825,941	N/A	107,131,194	107,131,194
Transmission and Distribution Capacity	N/A	10,543,657	10,543,657	N/A	12,353,020	12,353,020
Energy Generation	N/A	212,603,865	212,603,865	N/A	249,111,768	249,111,768
Market Effects and Ancilary Services	N/A	6,299,469	6,299,469	N/A	7,371,920	7,371,920
Subtotal	N/A	321,272,932	321,272,932	N/A	375,967,902	375,967,902
Gas System Impacts						
Commodity Cost	N/A	31,992,699	N/A	31,992,699	36,792,190	36,792,190
Variable O&M	N/A	275,579	N/A	275,579	316,788	316,788
Demand	N/A	7,816,778	N/A	7,816,778	8,984,815	8,984,815
Environmental Compliance	N/A	447,898	N/A	447,898	515,091	515,091
Subtotal	N/A	40,532,954	N/A	40,532,954	46,608,883	46,608,883
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	46,019,090	46,019,090
Gas Environmental Externalities	N/A	N/A	N/A	N/A	29,563,147	29,563,147
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	22,484	22,484
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	115,984	N/A	N/A	N/A	115,984	115,984
Utility Performance Incentives	N/A	(22,510,370)	(20,172,019)	(2,338,351)	(22,510,370)	(22,510,370)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	115,984	(22,510,370)	(20,172,019)	(2,338,351)	53,210,334	53,210,334
Participant Impacts						
Electric Bill	569,274,341	N/A	(565,863,391)	N/A	N/A	N/A
Gas Bill	51,147,181	N/A	N/A	(50,255,174)	N/A	N/A
Participant Rebates and Incentives	39,149,764	N/A	N/A	N/A	39,149,764	N/A
Incremental Capital	(140,795,229)	N/A	N/A	N/A	(140,795,229)	N/A
Incremental O&M	89,409,906	N/A	N/A	N/A	101,982,163	N/A
Subtotal	608,185,963	N/A	(565,863,391)	(50,255,174)	336,698	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	(126,933)	(106,933)	(20,000)	(126,933)	(126,933)
Utility Administration	N/A	(18,389,544)	(15,924,279)	(2,465,265)	(18,389,544)	(18,389,544)
Advertising & Promotion	N/A	(1,234,731)	(1,020,378)	(214,353)	(1,234,731)	(1,234,731)
Measurement & Verification	N/A	(589,344)	(525,543)	(63,801)	(589,344)	(589,344)
Rebates	N/A	(39,149,764)	(35,724,782)	(3,424,982)	(39,149,764)	(39,149,764)
Other	N/A	(1,843,863)	(1,554,217)	(289,646)	(1,843,863)	(1,843,863)
Subtotal	N/A	(61,334,179)	**(54,856,133)**	**(6,478,046)**	(61,334,179)	(61,334,179)
Benefits	749,097,176	361,805,886	321,272,932	40,532,954	639,429,417	498,297,490
Costs	(140,795,229)	(83,844,550)	(640,891,543)	(59,071,571)	(224,639,778)	(83,844,550)
Net Benefit (Cost)	**608,301,947**	**277,961,336**	**(319,618,611)**	**(18,538,617)**	**414,789,638**	**414,452,941**
Benefit/Cost Ratio	**5.32**	**4.32**	**0.50**	**0.69**	**2.85**	**5.94**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	16.8 years
Lifetime (Weighted on Dth)	13.8 years
T & D Loss Factor (Energy)	7.43%
T & D Loss Factor (Demand)	8.83%
System Coincident kW Saved at Generator	**69,606 kW**
Annual kWh Saved at Customer	399,209,149 kWh
Annual kWh Saved at Generator	**429,012,175 kWh**
Annual Dth Saved	**606,438 Dth**
Electric Participants	**251,902**
Gas Participants	**114,987**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	19.1 years
Lifetime (Weighted on Dth)	19.9 years
T & D Loss Factor (Energy)	7.40%
T & D Loss Factor (Demand)	8.80%
System Coincident kW Saved at Generator	**-6.14 kW**
Annual kWh Saved at Customer	-345,571 kWh
Annual kWh Saved at Generator	**-373,187 kWh**
Annual Dth Saved	**3,035 Dth**
Electric Participants	**66**
Gas Participants	**63**

First year Carbon Emissions Reductions		
Electric Energy Efficiency	124,004	tons CO2
Gas Energy Efficiency	44,228	tons CO2
Electric Electrification	-113	tons CO2
Gas Electrification	221	tons CO2
Other Fuel Electification	34	tons CO2
TOTAL	168,374	tons CO2

Lifetime Carbon Emissions Reductions		
Electric Energy Efficiency	1,002,286	tons CO2
Gas Energy Efficiency	609,277	tons CO2
Electric Electrification	-1,032	tons CO2
Gas Electrification	4,405	tons CO2
Other Fuel Electification	545	tons CO2
TOTAL	1,615,480	tons CO2

BUSINESS SEGMENT TOTAL	DSM TOTAL	2024	ACTUAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	84,554,068	84,554,068	N/A	98,326,020	98,326,020
Transmission and Distribution Capacity	N/A	9,710,521	9,710,521	N/A	11,338,631	11,338,631
Energy Generation	N/A	156,848,267	156,848,267	N/A	182,944,020	182,944,020
Market Effects and Ancilary Services	N/A	5,022,257	5,022,257	N/A	5,852,173	5,852,173
Subtotal	N/A	256,135,113	256,135,113	N/A	298,460,845	298,460,845
Gas System Impacts						
Commodity Cost	N/A	32,778,049	N/A	32,778,049	36,536,685	36,536,685
Variable O&M	N/A	282,678	N/A	282,678	315,176	315,176
Demand	N/A	8,021,400	N/A	8,021,400	8,937,235	8,937,235
Environmental Compliance	N/A	458,893	N/A	458,893	511,514	511,514
Subtotal	N/A	41,541,021	N/A	41,541,021	46,300,609	46,300,609
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	34,449,383	34,449,383
Gas Environmental Externalities	N/A	N/A	N/A	N/A	30,052,446	30,052,446
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	(12,885,282)	(10,613,854)	(2,271,428)	(12,885,282)	(12,885,282)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	(12,885,282)	(10,613,854)	(2,271,428)	51,616,547	51,616,547
Participant Impacts						
Electric Bill	454,892,525	N/A	(444,443,123)	N/A	N/A	N/A
Gas Bill	55,623,715	N/A	N/A	(53,012,890)	N/A	N/A
Participant Rebates and Incentives	30,222,057	N/A	N/A	N/A	30,222,057	N/A
Incremental Capital	(148,606,951)	N/A	N/A	N/A	(148,606,951)	N/A
Incremental O&M	203,597,041	N/A	N/A	N/A	232,087,269	N/A
Subtotal	595,728,388	N/A	(444,443,123)	(53,012,890)	113,702,375	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	(1,035,955)	(861,139)	(174,816)	(1,035,955)	(1,035,955)
Utility Administration	N/A	(23,449,852)	(20,025,387)	(3,424,465)	(23,449,852)	(23,449,852)
Advertising & Promotion	N/A	(216,268)	(186,390)	(29,878)	(216,268)	(216,268)
Measurement & Verification	N/A	(438,991)	(364,327)	(74,664)	(438,991)	(438,991)
Rebates	N/A	(30,222,057)	(28,636,089)	(1,585,969)	(30,222,057)	(30,222,057)
Other	N/A	(917,821)	(845,198)	(72,623)	(917,821)	(917,821)
Subtotal	N/A	(56,280,945)	**(50,918,530)**	**(5,362,415)**	(56,280,945)	(56,280,945)
Benefits	744,335,339	297,676,134	256,135,113	41,541,021	671,572,609	409,263,283
Costs	(148,606,951)	(69,166,227)	(505,975,506)	(60,646,733)	(217,773,177)	(69,166,227)
Net Benefit (Cost)	**595,728,388**	**228,509,907**	**(249,840,393)**	**(19,105,713)**	**453,799,432**	**340,097,056**
Benefit/Cost Ratio	**5.01**	**4.30**	**0.51**	**0.68**	**3.08**	**5.92**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts

Lifetime (Weighted on Generator kWh)	15.8 years
Lifetime (Weighted on Dth)	10.1 years
T & D Loss Factor (Energy)	7.70%
T & D Loss Factor (Demand)	8.97%
System Coincident kW Saved at Generator	**64,769 kW**
Annual kWh Saved at Customer	325,709,551 kWh
Annual kWh Saved at Generator	**338,251,629 kWh**
Annual Dth Saved	**828,558 Dth**
Electric Participants	**252,494**
Gas Participants	**116,975**

Beneficial Electrification Impacts

Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**107**
Gas Participants	**102**

First year Carbon Emissions Reductions

Electric Energy Efficiency	84,064 tons CO2
Gas Energy Efficiency	47,684 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	131,748 tons CO2

Lifetime Carbon Emissions Reductions

Electric Energy Efficiency	912,321 tons CO2
Gas Energy Efficiency	608,029 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	1,520,350 tons CO2

INCOME QUALIFIED SEGMENT TOTAL	DSM TOTAL	2024	GOAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	1,069,705	1,069,705	N/A	1,188,234	1,188,234
Transmission and Distribution Capacity	N/A	120,211	120,211	N/A	134,040	134,040
Energy Generation	N/A	2,272,804	2,272,804	N/A	2,623,496	2,623,496
Market Effects and Ancilary Services	N/A	68,933	68,933	N/A	78,533	78,533
Subtotal	N/A	3,531,654	3,531,654	N/A	4,024,303	4,024,303
Gas System Impacts						
Commodity Cost	N/A	1,793,211	N/A	1,793,211	2,092,657	2,092,657
Variable O&M	N/A	15,439	N/A	15,439	18,006	18,006
Demand	N/A	437,862	N/A	437,862	510,696	510,696
Environmental Compliance	N/A	25,105	N/A	25,105	29,297	29,297
Subtotal	N/A	2,271,617	N/A	2,271,617	2,650,657	2,650,657
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	549,055	549,055
Gas Environmental Externalities	N/A	N/A	N/A	N/A	1,665,892	1,665,892
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	(345,815)	(212,438)	(133,377)	(345,815)	(345,815)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	(345,815)	(212,438)	(133,377)	1,869,132	1,869,132
Participant Impacts						
Electric Bill	9,467,845	N/A	(8,200,585)	N/A	N/A	N/A
Gas Bill	3,126,571	N/A	N/A	(2,896,037)	N/A	N/A
Participant Rebates and Incentives	6,865,829	N/A	N/A	N/A	6,865,829	N/A
Incremental Capital	(6,143,908)	N/A	N/A	N/A	(6,143,908)	N/A
Incremental O&M	560,626	N/A	N/A	N/A	560,619	N/A
Subtotal	13,876,962	N/A	(8,200,585)	(2,896,037)	1,282,540	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	0	0	0	0	0
Utility Administration	N/A	(4,011,602)	(2,971,980)	(1,039,622)	(4,011,602)	(4,011,602)
Advertising & Promotion	N/A	(1,613,400)	(1,234,100)	(379,300)	(1,613,400)	(1,613,400)
Measurement & Verification	N/A	(52,000)	(42,000)	(10,000)	(52,000)	(52,000)
Rebates	N/A	(6,865,829)	(4,236,135)	(2,629,693)	(6,865,829)	(6,865,829)
Other	N/A	(865,709)	(730,877)	(134,832)	(865,709)	(865,709)
Subtotal	N/A	(13,408,539)	**(9,215,092)**	**(4,193,447)**	(13,408,539)	(13,408,539)
Benefits	20,020,870	5,803,270	3,531,654	2,271,617	16,316,355	8,889,907
Costs	(6,143,908)	(13,754,354)	(17,628,115)	(7,222,861)	(19,898,262)	(13,754,354)
Net Benefit (Cost)	**13,876,962**	**(7,951,084)**	**(14,096,462)**	**(4,951,244)**	**(3,581,907)**	**(4,864,447)**
Benefit/Cost Ratio	**3.26**	**0.42**	**0.20**	**0.31**	**0.82**	**0.65**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	13.7 years
Lifetime (Weighted on Dth)	16.1 years
T & D Loss Factor (Energy)	8.60%
T & D Loss Factor (Demand)	10.47%
System Coincident kW Saved at Generator	**1,387 kW**
Annual kWh Saved at Customer	5,084,204 kWh
Annual kWh Saved at Generator	**5,542,337 kWh**
Annual Dth Saved	**29,681 Dth**
Electric Participants	**11,188**
Gas Participants	**2,849**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	17.1 years
Lifetime (Weighted on Dth)	16.1 years
T & D Loss Factor (Energy)	8.70%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	-28,764 kWh
Annual kWh Saved at Generator	**-31,505 kWh**
Annual Dth Saved	**124 Dth**
Electric Participants	**5**
Gas Participants	**3**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	1,627 tons CO2
Gas Energy Efficiency	2,165 tons CO2
Electric Electrification	-9 tons CO2
Gas Electrification	9 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	3,791 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	11,933 tons CO2
Gas Energy Efficiency	34,870 tons CO2
Electric Electrification	-83 tons CO2
Gas Electrification	145 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	46,865 tons CO2

INCOME QUALIFIED SEGMENT TOTAL	DSM TOTAL	2024	ACTUAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	731,739	731,739	N/A	835,686	835,686
Transmission and Distribution Capacity	N/A	83,230	83,230	N/A	95,405	95,405
Energy Generation	N/A	1,592,549	1,592,549	N/A	1,843,066	1,843,066
Market Effects and Ancilary Services	N/A	48,150	48,150	N/A	55,483	55,483
Subtotal	N/A	2,455,668	2,455,668	N/A	2,829,640	2,829,640
Gas System Impacts						
Commodity Cost	N/A	880,151	N/A	880,151	1,015,504	1,015,504
Variable O&M	N/A	7,580	N/A	7,580	8,742	8,742
Demand	N/A	215,016	N/A	215,016	247,953	247,953
Environmental Compliance	N/A	12,322	N/A	12,322	14,217	14,217
Subtotal	N/A	1,115,069	N/A	1,115,069	1,286,417	1,286,417
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	382,194	382,194
Gas Environmental Externalities	N/A	N/A	N/A	N/A	814,217	814,217
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	(167,351)	(104,038)	(63,313)	(167,351)	(167,351)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	(167,351)	(104,038)	(63,313)	1,029,060	1,029,060
Participant Impacts						
Electric Bill	6,589,962	N/A	(5,726,340)	N/A	N/A	N/A
Gas Bill	1,668,982	N/A	N/A	(1,461,723)	N/A	N/A
Participant Rebates and Incentives	6,797,973	N/A	N/A	N/A	6,797,973	N/A
Incremental Capital	(5,263,305)	N/A	N/A	N/A	(5,263,305)	N/A
Incremental O&M	468,947	N/A	N/A	N/A	467,990	N/A
Subtotal	10,262,557	N/A	(5,726,340)	(1,461,723)	2,002,657	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	(296,306)	(196,176)	(100,129)	(296,306)	(296,306)
Utility Administration	N/A	(4,592,243)	(2,870,098)	(1,722,145)	(4,592,243)	(4,592,243)
Advertising & Promotion	N/A	(266,889)	(195,828)	(71,061)	(266,889)	(266,889)
Measurement & Verification	N/A	(18,824)	(16,195)	(2,629)	(18,824)	(18,824)
Rebates	N/A	(6,797,973)	(3,281,581)	(3,516,392)	(6,797,973)	(6,797,973)
Other	N/A	0	0	0	0	0
Subtotal	N/A	(11,972,234)	**(6,559,879)**	**(5,412,356)**	(11,972,234)	(11,972,234)
Benefits	15,525,863	3,570,737	2,455,668	1,115,069	12,578,431	5,312,468
Costs	(5,263,305)	(12,139,585)	(12,390,257)	(6,937,391)	(17,402,891)	(12,139,585)
Net Benefit (Cost)	**10,262,557**	**(8,568,848)**	**(9,934,589)**	**(5,822,322)**	**(4,824,460)**	**(6,827,118)**
Benefit/Cost Ratio	**2.95**	**0.29**	**0.20**	**0.16**	**0.72**	**0.44**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	14.5 years
Lifetime (Weighted on Dth)	14.8 years
T & D Loss Factor (Energy)	8.45%
T & D Loss Factor (Demand)	10.25%
System Coincident kW Saved at Generator	**658 kW**
Annual kWh Saved at Customer	3,353,892 kWh
Annual kWh Saved at Generator	**3,598,855 kWh**
Annual Dth Saved	**15,738 Dth**
Electric Participants	**14,254**
Gas Participants	**3,311**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**8**
Gas Participants	**4**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	1,336 tons CO2
Gas Energy Efficiency	2,467 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	3,804 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	13,644 tons CO2
Gas Energy Efficiency	16,948 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	30,592 tons CO2

DEMAND RESPONSE SEGMENT TOTAL	DSM TOTAL	2024	GOAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	54,401,272	54,401,272	N/A	58,058,231	58,058,231
Transmission and Distribution Capacity	N/A	0	0	N/A	0	0
Energy Generation	N/A	240,789	240,789	N/A	254,412	254,412
Market Effects and Ancilary Services	N/A	1,092,841	1,092,841	N/A	1,166,253	1,166,253
Subtotal	N/A	55,734,902	55,734,902	N/A	59,478,896	59,478,896
Gas System Impacts						
Commodity Cost	N/A	25,844	N/A	25,844	28,205	28,205
Variable O&M	N/A	223	N/A	223	243	243
Demand	N/A	6,329	N/A	6,329	6,905	6,905
Environmental Compliance	N/A	362	N/A	362	395	395
Subtotal	N/A	32,757	N/A	32,757	35,749	35,749
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	78,634	78,634
Gas Environmental Externalities	N/A	N/A	N/A	N/A	23,470	23,470
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	(19,644)	(17,870)	(1,775)	(19,644)	(19,644)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	(19,644)	(17,870)	(1,775)	82,460	82,460
Participant Impacts						
Electric Bill	12,271,218	N/A	(11,379,434)	N/A	N/A	N/A
Gas Bill	40,074	N/A	N/A	(40,074)	N/A	N/A
Participant Rebates and Incentives	6,059,469	N/A	N/A	N/A	6,059,469	N/A
Incremental Capital	(460,307)	N/A	N/A	N/A	(460,307)	N/A
Incremental O&M	0	N/A	N/A	N/A	0	N/A
Subtotal	17,910,454	N/A	(11,379,434)	(40,074)	5,599,162	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	(37,000)	(37,000)	0	(37,000)	(37,000)
Utility Administration	N/A	(14,028,427)	(14,005,427)	(23,000)	(14,028,427)	(14,028,427)
Advertising & Promotion	N/A	(990,328)	(990,328)	0	(990,328)	(990,328)
Measurement & Verification	N/A	(405,000)	(400,000)	(5,000)	(405,000)	(405,000)
Rebates	N/A	(6,059,469)	(6,054,704)	(4,765)	(6,059,469)	(6,059,469)
Other	N/A	(25,000)	(25,000)	0	(25,000)	(25,000)
Subtotal	N/A	(21,545,224)	**(21,512,459)**	**(32,765)**	(21,545,224)	(21,545,224)
Benefits	18,370,761	55,767,659	55,734,902	32,757	65,676,218	59,616,748
Costs	(460,307)	(21,564,869)	(32,909,763)	(74,614)	(22,025,176)	(21,564,869)
Net Benefit (Cost)	**17,910,454**	**34,202,791**	**22,825,139**	**(41,857)**	**43,651,042**	**38,051,880**
Benefit/Cost Ratio	**39.91**	**2.59**	**1.69**	**0.44**	**2.98**	**2.76**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	2.3 years
Lifetime (Weighted on Dth)	10.0 years
T & D Loss Factor (Energy)	7.42%
T & D Loss Factor (Demand)	9.12%
System Coincident kW Saved at Generator	**238,501 kW**
Annual kWh Saved at Customer	2,583,181 kWh
Annual kWh Saved at Generator	**2,790,209 kWh**
Annual Dth Saved	**639 Dth**
Electric Participants	**828,834**
Gas Participants	**83**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	958 tons CO2
Gas Energy Efficiency	47 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	1,004 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	1,486 tons CO2
Gas Energy Efficiency	466 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	1,952 tons CO2

DEMAND RESPONSE SEGMENT TOTAL	DSM TOTAL	2024	ACTUAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	56,134,318	56,134,318	N/A	61,039,613	61,039,613
Transmission and Distribution Capacity	N/A	0	0	N/A	0	0
Energy Generation	N/A	29,527	29,527	N/A	32,505	32,505
Market Effects and Ancilary Services	N/A	1,123,277	1,123,277	N/A	1,221,442	1,221,442
Subtotal	N/A	57,287,122	57,287,122	N/A	62,293,560	62,293,560
Gas System Impacts						
Commodity Cost	N/A	0	N/A	0	0	0
Variable O&M	N/A	0	N/A	0	0	0
Demand	N/A	0	N/A	0	0	0
Environmental Compliance	N/A	0	N/A	0	0	0
Subtotal	N/A	0	N/A	0	0	0
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	6,592	6,592
Gas Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	(1,458)	(1,458)	0	(1,458)	(1,458)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	(1,458)	(1,458)	0	5,134	5,134
Participant Impacts						
Electric Bill	12,261,665	N/A	(10,845,393)	N/A	N/A	N/A
Gas Bill	0	N/A	N/A	0	N/A	N/A
Participant Rebates and Incentives	3,194,953	N/A	N/A	N/A	3,194,953	N/A
Incremental Capital	(408,555)	N/A	N/A	N/A	(408,555)	N/A
Incremental O&M	0	N/A	N/A	N/A	0	N/A
Subtotal	15,048,063	N/A	(10,845,393)	0	2,786,398	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	(1,024,130)	(1,024,130)	0	(1,024,130)	(1,024,130)
Utility Administration	N/A	(11,239,223)	(11,232,439)	(6,783)	(11,239,223)	(11,239,223)
Advertising & Promotion	N/A	(498,502)	(498,502)	0	(498,502)	(498,502)
Measurement & Verification	N/A	(73,536)	(73,536)	0	(73,536)	(73,536)
Rebates	N/A	(3,194,953)	(3,194,953)	0	(3,194,953)	(3,194,953)
Other	N/A	0	0	0	0	0
Subtotal	N/A	(16,030,345)	**(16,023,561)**	**(6,783)**	(16,030,345)	(16,030,345)
Benefits	15,456,618	57,287,122	57,287,122	0	65,495,105	62,300,152
Costs	(408,555)	(16,031,802)	(26,870,412)	(6,783)	(16,440,357)	(16,031,802)
Net Benefit (Cost)	**15,048,063**	**41,255,320**	**30,416,710**	**(6,783)**	**49,054,748**	**46,268,349**
Benefit/Cost Ratio	**37.83**	**3.57**	**2.13**	**0.00**	**3.98**	**3.89**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	6.7 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	8.01%
T & D Loss Factor (Demand)	9.26%
System Coincident kW Saved at Generator	**187,541 kW**
Annual kWh Saved at Customer	100,573 kWh
Annual kWh Saved at Generator	**109,331 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**552,032**
Gas Participants	**83**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	786 tons CO2
Gas Energy Efficiency	84 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	871 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	1,450 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	1,450 tons CO2

EFFICIENT FUEL SWITCHING TOTAL	DSM TOTAL	2024	GOAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	(3,334)	(3,334)	N/A	(3,631)	(3,631)
Transmission and Distribution Capacity	N/A	(375)	(375)	N/A	(409)	(409)
Energy Generation	N/A	(19,890)	(19,890)	N/A	(21,681)	(21,681)
Market Effects and Ancilary Services	N/A	(472)	(472)	N/A	(514)	(514)
Subtotal	N/A	(24,071)	(24,071)	N/A	(26,235)	(26,235)
Gas System Impacts						
Commodity Cost	N/A	0	N/A	0	0	0
Variable O&M	N/A	0	N/A	0	0	0
Demand	N/A	0	N/A	0	0	0
Environmental Compliance	N/A	0	N/A	0	0	0
Subtotal	N/A	0	N/A	0	0	0
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	(4,752)	(4,752)
Gas Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	69,210	69,210
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	519,499	N/A	N/A	N/A	519,499	519,499
Utility Performance Incentives	N/A	0	0	0	0	0
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	519,499	0	0	0	583,956	583,956
Participant Impacts						
Electric Bill	(57,978)	N/A	55,342	N/A	N/A	N/A
Gas Bill	0	N/A	N/A	0	N/A	N/A
Participant Rebates and Incentives	1,102,290	N/A	N/A	N/A	1,102,290	N/A
Incremental Capital	(509,670)	N/A	N/A	N/A	(509,670)	N/A
Incremental O&M	0	N/A	N/A	N/A	0	N/A
Subtotal	534,641	N/A	55,342	0	592,620	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	0	0	0	0	0
Utility Administration	N/A	(650,000)	(650,000)	0	(650,000)	(650,000)
Advertising & Promotion	N/A	(175,000)	(175,000)	0	(175,000)	(175,000)
Measurement & Verification	N/A	0	0	0	0	0
Rebates	N/A	(1,102,290)	(1,102,290)	0	(1,102,290)	(1,102,290)
Other	N/A	0	0	0	0	0
Subtotal	N/A	(1,927,290)	**(1,927,290)**	**0**	(1,927,290)	(1,927,290)
Benefits	1,621,789	0	55,342	0	1,690,999	588,709
Costs	(567,649)	(1,951,361)	(1,951,361)	0	(2,467,948)	(1,958,278)
Net Benefit (Cost)	**1,054,140**	**(1,951,361)**	**(1,896,019)**	**0**	**(776,950)**	**(1,369,569)**
Benefit/Cost Ratio	**2.86**	**0.00**	**0.03**	**INF**	**0.69**	**0.30**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.000 kW**
Annual kWh Saved at Customer	#DIV/0!
Annual kWh Saved at Generator	**#DIV/0!**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	9.2 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	7.86%
T & D Loss Factor (Demand)	8.80%
System Coincident kW Saved at Generator	**-3.75 kW**
Annual kWh Saved at Customer	-56,723 kWh
Annual kWh Saved at Generator	**-61,560 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**1,932**
Gas Participants	**0**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	-19 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	218 tons CO2
TOTAL	200 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	-95 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	1,589 tons CO2
TOTAL	1,494 tons CO2

EFFICIENT FUEL SWITCHING TOTAL	DSM TOTAL	2024	ACTUAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	(65,626)	(65,626)	N/A	(71,478)	(71,478)
Transmission and Distribution Capacity	N/A	(7,375)	(7,375)	N/A	(8,042)	(8,042)
Energy Generation	N/A	(267,845)	(267,845)	N/A	(292,822)	(292,822)
Market Effects and Ancilary Services	N/A	(6,817)	(6,817)	N/A	(7,447)	(7,447)
Subtotal	N/A	(347,662)	(347,662)	N/A	(379,789)	(379,789)
Gas System Impacts						
Commodity Cost	N/A	0	N/A	0	0	0
Variable O&M	N/A	0	N/A	0	0	0
Demand	N/A	0	N/A	0	0	0
Environmental Compliance	N/A	0	N/A	0	0	0
Subtotal	N/A	0	N/A	0	0	0
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	(65,299)	(65,299)
Gas Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	808,341	808,341
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	6,062,487	N/A	N/A	N/A	6,062,487	6,062,487
Utility Performance Incentives	N/A	0	0	0	0	0
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	6,062,487	0	0	0	6,805,529	6,805,529
Participant Impacts						
Electric Bill	(596,386)	N/A	593,257	N/A	N/A	N/A
Gas Bill	0	N/A	N/A	0	N/A	N/A
Participant Rebates and Incentives	170,325	N/A	N/A	N/A	170,325	N/A
Incremental Capital	(330,195)	N/A	N/A	N/A	(330,195)	N/A
Incremental O&M	0	N/A	N/A	N/A	0	N/A
Subtotal	(756,256)	N/A	593,257	0	(159,870)	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	0	0	0	0	0
Utility Administration	N/A	(33,210)	(33,210)	0	(33,210)	(33,210)
Advertising & Promotion	N/A	0	0	0	0	0
Measurement & Verification	N/A	0	0	0	0	0
Rebates	N/A	(170,325)	(170,325)	0	(170,325)	(170,325)
Other	N/A	0	0	0	0	0
Subtotal	N/A	(203,535)	**(203,535)**	**0**	(203,535)	(203,535)
Benefits	6,232,812	0	593,257	0	7,041,153	6,870,828
Costs	(926,581)	(551,197)	(551,197)	0	(978,818)	(648,623)
Net Benefit (Cost)	**5,306,231**	**(551,197)**	**42,060**	**0**	**6,062,335**	**6,222,205**
Benefit/Cost Ratio	**6.73**	**0.00**	**1.08**	**INF**	**7.19**	**10.59**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts

Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**#DIV/0!**
Annual kWh Saved at Customer	#DIV/0!
Annual kWh Saved at Generator	**#DIV/0!**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

Beneficial Electrification Impacts

Lifetime (Weighted on Generator kWh)	10.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	7.45%
T & D Loss Factor (Demand)	8.80%
System Coincident kW Saved at Generator	**-73.74 kW**
Annual kWh Saved at Customer	-672,989 kWh
Annual kWh Saved at Generator	**-727,127 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**3,350**
Gas Participants	**0**

First year Carbon Emissions Reductions

Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	-229 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	1,868 tons CO2
TOTAL	1,639 tons CO2

Lifetime Carbon Emissions Reductions

Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	-1,327 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	18,675 tons CO2
TOTAL	17,348 tons CO2

INDIRECT PRODUCTS & SERVICES TOTAL	DSM TOTAL	2024	GOAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	0	0	N/A	0	0
Transmission and Distribution Capacity	N/A	0	0	N/A	0	0
Energy Generation	N/A	0	0	N/A	0	0
Market Effects and Ancilary Services	N/A	0	0	N/A	0	0
Subtotal	N/A	0	0	N/A	0	0
Gas System Impacts						
Commodity Cost	N/A	0	N/A	0	0	0
Variable O&M	N/A	0	N/A	0	0	0
Demand	N/A	0	N/A	0	0	0
Environmental Compliance	N/A	0	N/A	0	0	0
Subtotal	N/A	0	N/A	0	0	0
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Gas Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	0	0	0	0	0
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	0	0	0	0	0
Participant Impacts						
Electric Bill	0	N/A	0	N/A	N/A	N/A
Gas Bill	0	N/A	N/A	0	N/A	N/A
Participant Rebates and Incentives	0	N/A	N/A	N/A	0	N/A
Incremental Capital	0	N/A	N/A	N/A	0	N/A
Incremental O&M	0	N/A	N/A	N/A	0	N/A
Subtotal	0	N/A	0	0	0	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	0	0	0	0	0
Utility Administration	N/A	(9,791,343)	(7,833,151)	(1,958,192)	(9,791,343)	(9,791,343)
Advertising & Promotion	N/A	(6,756,120)	(5,509,139)	(1,246,981)	(6,756,120)	(6,756,120)
Measurement & Verification	N/A	0	0	0	0	0
Rebates	N/A	0	0	0	0	0
Other	N/A	0	0	0	0	0
Subtotal	N/A	(16,547,463)	**(13,342,290)**	**(3,205,173)**	(16,547,463)	(16,547,463)
Benefits	0	0	0	0	0	0
Costs	0	(16,547,463)	(13,342,290)	(3,205,173)	(16,547,463)	(16,547,463)
Net Benefit (Cost)	**0**	**(16,547,463)**	**(13,342,290)**	**(3,205,173)**	**(16,547,463)**	**(16,547,463)**
Benefit/Cost Ratio	**INF**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.000 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**697,494**
Gas Participants	**347,474**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

INDIRECT PRODUCTS & SERVICES TOTAL	DSM TOTAL	2024	ACTUAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	0	0	N/A	0	0
Transmission and Distribution Capacity	N/A	0	0	N/A	0	0
Energy Generation	N/A	0	0	N/A	0	0
Market Effects and Ancilary Services	N/A	0	0	N/A	0	0
Subtotal	N/A	0	0	N/A	0	0
Gas System Impacts						
Commodity Cost	N/A	0	N/A	0	0	0
Variable O&M	N/A	0	N/A	0	0	0
Demand	N/A	0	N/A	0	0	0
Environmental Compliance	N/A	0	N/A	0	0	0
Subtotal	N/A	0	N/A	0	0	0
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Gas Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	0	0	0	0	0
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	0	0	0	0	0
Participant Impacts						
Electric Bill	0	N/A	0	N/A	N/A	N/A
Gas Bill	0	N/A	N/A	0	N/A	N/A
Participant Rebates and Incentives	0	N/A	N/A	N/A	0	N/A
Incremental Capital	0	N/A	N/A	N/A	0	N/A
Incremental O&M	0	N/A	N/A	N/A	0	N/A
Subtotal	0	N/A	0	0	0	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	0	0	0	0	0
Utility Administration	N/A	(7,230,559)	(5,675,192)	(1,555,367)	(7,230,559)	(7,230,559)
Advertising & Promotion	N/A	(4,401,506)	(3,561,741)	(839,764)	(4,401,506)	(4,401,506)
Measurement & Verification	N/A	0	0	0	0	0
Rebates	N/A	0	0	0	0	0
Other	N/A	0	0	0	0	0
Subtotal	N/A	(11,632,064)	**(9,236,933)**	**(2,395,131)**	(11,632,064)	(11,632,064)
Benefits	0	0	0	0	0	0
Costs	0	(11,632,064)	(9,236,933)	(2,395,131)	(11,632,064)	(11,632,064)
Net Benefit (Cost)	**0**	**(11,632,064)**	**(9,236,933)**	**(2,395,131)**	**(11,632,064)**	**(11,632,064)**
Benefit/Cost Ratio	**INF**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.000 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**630,511**
Gas Participants	**201,263**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

RESEARCH, EVALUATIONS & PILOTS TOTAL	DSM TOTAL	2024	GOAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	0	0	N/A	0	0
Transmission and Distribution Capacity	N/A	0	0	N/A	0	0
Energy Generation	N/A	0	0	N/A	0	0
Market Effects and Ancilary Services	N/A	0	0	N/A	0	0
Subtotal	N/A	0	0	N/A	0	0
Gas System Impacts						
Commodity Cost	N/A	0	N/A	0	0	0
Variable O&M	N/A	0	N/A	0	0	0
Demand	N/A	0	N/A	0	0	0
Environmental Compliance	N/A	0	N/A	0	0	0
Subtotal	N/A	0	N/A	0	0	0
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Gas Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	0	0	0	0	0
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	0	0	0	0	0
Participant Impacts						
Electric Bill	0	N/A	0	N/A	N/A	N/A
Gas Bill	0	N/A	N/A	0	N/A	N/A
Participant Rebates and Incentives	0	N/A	N/A	N/A	0	N/A
Incremental Capital	0	N/A	N/A	N/A	0	N/A
Incremental O&M	0	N/A	N/A	N/A	0	N/A
Subtotal	0	N/A	0	0	0	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	0	0	0	0	0
Utility Administration	N/A	(6,706,957)	(6,214,682)	(492,275)	(6,706,957)	(6,706,957)
Advertising & Promotion	N/A	0	0	0	0	0
Measurement & Verification	N/A	(2,001,719)	(1,660,313)	(341,406)	(2,001,719)	(2,001,719)
Rebates	N/A	0	0	0	0	0
Other	N/A	(47,500)	(27,500)	(20,000)	(47,500)	(47,500)
Subtotal	N/A	(8,756,176)	**(7,902,495)**	**(853,681)**	(8,756,176)	(8,756,176)
Benefits	0	0	0	0	0	0
Costs	0	(8,756,176)	(7,902,495)	(853,681)	(8,756,176)	(8,756,176)
Net Benefit (Cost)	**0**	**(8,756,176)**	**(7,902,495)**	**(853,681)**	**(8,756,176)**	**(8,756,176)**
Benefit/Cost Ratio	**INF**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.000 kW**
Annual kWh Saved at Customer	#DIV/0!
Annual kWh Saved at Generator	**#DIV/0!**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

RESEARCH, EVALUATIONS & PILOTS TOTAL	DSM TOTAL	2024	ACTUAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	0	0	N/A	0	0
Transmission and Distribution Capacity	N/A	0	0	N/A	0	0
Energy Generation	N/A	0	0	N/A	0	0
Market Effects and Ancilary Services	N/A	0	0	N/A	0	0
Subtotal	N/A	0	0	N/A	0	0
Gas System Impacts						
Commodity Cost	N/A	0	N/A	0	0	0
Variable O&M	N/A	0	N/A	0	0	0
Demand	N/A	0	N/A	0	0	0
Environmental Compliance	N/A	0	N/A	0	0	0
Subtotal	N/A	0	N/A	0	0	0
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Gas Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	0	0	0	0	0
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	0	0	0	0	0
Participant Impacts						
Electric Bill	0	N/A	0	N/A	N/A	N/A
Gas Bill	0	N/A	N/A	0	N/A	N/A
Participant Rebates and Incentives	208,387	N/A	N/A	N/A	208,387	N/A
Incremental Capital	0	N/A	N/A	N/A	0	N/A
Incremental O&M	0	N/A	N/A	N/A	0	N/A
Subtotal	208,387	N/A	0	0	208,387	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	0	0	0	0	0
Utility Administration	N/A	(3,438,979)	(3,017,182)	(421,796)	(3,438,979)	(3,438,979)
Advertising & Promotion	N/A	0	0	0	0	0
Measurement & Verification	N/A	(605,328)	(486,924)	(118,403)	(605,328)	(605,328)
Rebates	N/A	(208,387)	(208,387)	0	(208,387)	(208,387)
Other	N/A	0	0	0	0	0
Subtotal	N/A	(4,252,693)	**(3,712,493)**	**(540,200)**	(4,252,693)	(4,252,693)
Benefits	208,387	0	0	0	208,387	0
Costs	0	(4,252,693)	(3,712,493)	(540,200)	(4,252,693)	(4,252,693)
Net Benefit (Cost)	**208,387**	**(4,252,693)**	**(3,712,493)**	**(540,200)**	**(4,044,306)**	**(4,252,693)**
Benefit/Cost Ratio	**INF**	**0.00**	**0.00**	**0.00**	**0.05**	**0.00**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**#DIV/0!**
Annual kWh Saved at Customer	#DIV/0!
Annual kWh Saved at Generator	**#DIV/0!**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

ASSESSMENTS SEGMENT TOTAL	DSM TOTAL	2024	GOAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	0	0	N/A	0	0
Transmission and Distribution Capacity	N/A	0	0	N/A	0	0
Energy Generation	N/A	0	0	N/A	0	0
Market Effects and Ancilary Services	N/A	0	0	N/A	0	0
Subtotal	N/A	0	0	N/A	0	0
Gas System Impacts						
Commodity Cost	N/A	0	N/A	0	0	0
Variable O&M	N/A	0	N/A	0	0	0
Demand	N/A	0	N/A	0	0	0
Environmental Compliance	N/A	0	N/A	0	0	0
Subtotal	N/A	0	N/A	0	0	0
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Gas Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	0	0	0	0	0
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	0	0	0	0	0
Participant Impacts						
Electric Bill	0	N/A	0	N/A	N/A	N/A
Gas Bill	0	N/A	N/A	0	N/A	N/A
Participant Rebates and Incentives	0	N/A	N/A	N/A	0	N/A
Incremental Capital	0	N/A	N/A	N/A	0	N/A
Incremental O&M	0	N/A	N/A	N/A	0	N/A
Subtotal	0	N/A	0	0	0	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	0	0	0	0	0
Utility Administration	N/A	(5,870,667)	(4,973,841)	(896,826)	(5,870,667)	(5,870,667)
Advertising & Promotion	N/A	0	0	0	0	0
Measurement & Verification	N/A	0	0	0	0	0
Rebates	N/A	0	0	0	0	0
Other	N/A	0	0	0	0	0
Subtotal	N/A	(5,870,667)	**(4,973,841)**	**(896,826)**	(5,870,667)	(5,870,667)
Benefits	0	0	0	0	0	0
Costs	0	(5,870,667)	(4,973,841)	(896,826)	(5,870,667)	(5,870,667)
Net Benefit (Cost)	**0**	**(5,870,667)**	**(4,973,841)**	**(896,826)**	**(5,870,667)**	**(5,870,667)**
Benefit/Cost Ratio	**INF**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.000 kW**
Annual kWh Saved at Customer	#DIV/0!
Annual kWh Saved at Generator	**#DIV/0!**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

ASSESSMENTS SEGMENT TOTAL	DSM TOTAL	2024	ACTUAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	0	0	N/A	0	0
Transmission and Distribution Capacity	N/A	0	0	N/A	0	0
Energy Generation	N/A	0	0	N/A	0	0
Market Effects and Ancilary Services	N/A	0	0	N/A	0	0
Subtotal	N/A	0	0	N/A	0	0
Gas System Impacts						
Commodity Cost	N/A	0	N/A	0	0	0
Variable O&M	N/A	0	N/A	0	0	0
Demand	N/A	0	N/A	0	0	0
Environmental Compliance	N/A	0	N/A	0	0	0
Subtotal	N/A	0	N/A	0	0	0
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Gas Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	0	0	0	0	0
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	0	0	0	0	0
Participant Impacts						
Electric Bill	0	N/A	0	N/A	N/A	N/A
Gas Bill	0	N/A	N/A	0	N/A	N/A
Participant Rebates and Incentives	0	N/A	N/A	N/A	0	N/A
Incremental Capital	0	N/A	N/A	N/A	0	N/A
Incremental O&M	0	N/A	N/A	N/A	0	N/A
Subtotal	0	N/A	0	0	0	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	0	0	0	0	0
Utility Administration	N/A	0	0	0	0	0
Advertising & Promotion	N/A	0	0	0	0	0
Measurement & Verification	N/A	0	0	0	0	0
Rebates	N/A	0	0	0	0	0
Other	N/A	(5,897,508)	(4,903,251)	(994,257)	(5,897,508)	(5,897,508)
Subtotal	N/A	(5,897,508)	**(4,903,251)**	**(994,257)**	(5,897,508)	(5,897,508)

Benefits	0	0	0	0	0	0
Costs	0	(5,897,508)	(4,903,251)	(994,257)	(5,897,508)	(5,897,508)
Net Benefit (Cost)	**0**	**(5,897,508)**	**(4,903,251)**	**(994,257)**	**(5,897,508)**	**(5,897,508)**
Benefit/Cost Ratio	**INF**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts

Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**#DIV/0!**
Annual kWh Saved at Customer	#DIV/0!
Annual kWh Saved at Generator	**#DIV/0!**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

Beneficial Electrification Impacts

Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

First year Carbon Emissions Reductions

Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

Lifetime Carbon Emissions Reductions

Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

ALTERNATIVE FILINGS TOTAL	DSM TOTAL	2024	GOAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	8,439,116	8,439,116	N/A	9,562,786	9,562,786
Transmission and Distribution Capacity	N/A	960,887	960,887	N/A	1,092,410	1,092,410
Energy Generation	N/A	18,630,516	18,630,516	N/A	21,241,914	21,241,914
Market Effects and Ancilary Services	N/A	280,305	280,305	N/A	318,971	318,971
Subtotal	N/A	28,310,824	28,310,824	N/A	32,216,081	32,216,081
Gas System Impacts						
Commodity Cost	N/A	504,658	N/A	504,658	946,398	946,398
Variable O&M	N/A	0	N/A	0	0	0
Demand	N/A	0	N/A	0	0	0
Environmental Compliance	N/A	0	N/A	0	0	0
Subtotal	N/A	504,658	N/A	504,658	946,398	946,398
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	4,150,708	4,150,708
Gas Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	0	0	0	0	0
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	0	0	0	4,150,708	4,150,708
Participant Impacts						
Electric Bill	0	N/A	0	N/A	N/A	N/A
Gas Bill	0	N/A	N/A	0	N/A	N/A
Participant Rebates and Incentives	7,570,333	N/A	N/A	N/A	7,570,333	N/A
Incremental Capital	0	N/A	N/A	N/A	0	N/A
Incremental O&M	0	N/A	N/A	N/A	0	N/A
Subtotal	7,570,333	N/A	0	0	7,570,333	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	0	0	0	0	0
Utility Administration	N/A	(7,195,529)	(7,029,094)	(166,435)	(7,195,529)	(7,195,529)
Advertising & Promotion	N/A	0	0	0	0	0
Measurement & Verification	N/A	0	0	0	0	0
Rebates	N/A	(7,570,333)	(7,507,811)	(62,522)	(7,570,333)	(7,570,333)
Other	N/A	0	0	0	0	0
Subtotal	N/A	(14,765,862)	**(14,536,905)**	**(228,957)**	(14,765,862)	(14,765,862)
Benefits	7,570,333	28,815,482	28,310,824	504,658	44,883,520	37,313,187
Costs	0	(14,765,862)	(14,536,905)	(228,957)	(14,765,862)	(14,765,862)
Net Benefit (Cost)	**7,570,333**	**14,049,620**	**13,773,919**	**275,701**	**30,117,658**	**22,547,325**
Benefit/Cost Ratio	**INF**	**1.95**	**1.95**	**2.20**	**3.04**	**2.53**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.000 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**50,463,630 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**1,957**
Gas Participants	**219**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

ALTERNATIVE FILINGS TOTAL	DSM TOTAL	2024	ACTUAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	9,483,722	9,483,722	N/A	10,779,668	10,779,668
Transmission and Distribution Capacity	N/A	1,080,912	1,080,912	N/A	1,232,939	1,232,939
Energy Generation	N/A	24,029,013	24,029,013	N/A	27,638,802	27,638,802
Market Effects and Ancilary Services	N/A	345,936	345,936	N/A	396,514	396,514
Subtotal	N/A	34,939,583	34,939,583	N/A	40,047,923	40,047,923
Gas System Impacts						
Commodity Cost	N/A	122,130	N/A	122,130	133,258	133,258
Variable O&M	N/A	1,058	N/A	1,058	1,155	1,155
Demand	N/A	30,046	N/A	30,046	32,783	32,783
Environmental Compliance	N/A	1,710	N/A	1,710	1,866	1,866
Subtotal	N/A	154,944	N/A	154,944	169,062	169,062
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	5,314,970	5,314,970
Gas Environmental Externalities	N/A	N/A	N/A	N/A	111,419	111,419
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	0	0
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	0	N/A	N/A	N/A	0	0
Utility Performance Incentives	N/A	(1,528,535)	(1,520,269)	(8,266)	(1,528,535)	(1,528,535)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	0	(1,528,535)	(1,520,269)	(8,266)	3,897,854	3,897,854
Participant Impacts						
Electric Bill	62,987,354	N/A	(62,987,354)	N/A	N/A	N/A
Gas Bill	190,298	N/A	N/A	(190,298)	N/A	N/A
Participant Rebates and Incentives	9,108,463	N/A	N/A	N/A	9,108,463	N/A
Incremental Capital	(15,889,733)	N/A	N/A	N/A	(15,889,733)	N/A
Incremental O&M	(1,514,793)	N/A	N/A	N/A	(1,735,218)	N/A
Subtotal	54,881,589	N/A	(62,987,354)	(190,298)	(8,516,488)	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	0	0	0	0	0
Utility Administration	N/A	(7,807,567)	(7,640,264)	(167,303)	(7,807,567)	(7,807,567)
Advertising & Promotion	N/A	0	0	0	0	0
Measurement & Verification	N/A	0	0	0	0	0
Rebates	N/A	(9,108,463)	(9,082,647)	(25,816)	(9,108,463)	(9,108,463)
Other	N/A	(383,641)	(383,641)	0	(383,641)	(383,641)
Subtotal	N/A	(17,299,671)	**(17,106,552)**	**(193,119)**	(17,299,671)	(17,299,671)
Benefits	72,286,115	35,094,527	34,939,583	154,944	54,751,837	45,643,374
Costs	(17,404,526)	(18,828,206)	(81,614,175)	(391,684)	(36,453,157)	(18,828,206)
Net Benefit (Cost)	**54,881,589**	**16,266,320**	**(46,674,592)**	**(236,740)**	**18,298,680**	**26,815,168**
Benefit/Cost Ratio	**4.15**	**1.86**	**0.43**	**0.40**	**1.50**	**2.42**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	14.0 years
Lifetime (Weighted on Dth)	10.0 years
T & D Loss Factor (Energy)	7.40%
T & D Loss Factor (Demand)	8.80%
System Coincident kW Saved at Generator	**8,599 kW**
Annual kWh Saved at Customer	50,532,597 kWh
Annual kWh Saved at Generator	**54,570,839 kWh**
Annual Dth Saved	**3,034 Dth**
Electric Participants	**2,299**
Gas Participants	**206**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	0.0 years
Lifetime (Weighted on Dth)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
System Coincident kW Saved at Generator	**0.00 kW**
Annual kWh Saved at Customer	0 kWh
Annual kWh Saved at Generator	**0 kWh**
Annual Dth Saved	**0 Dth**
Electric Participants	**0**
Gas Participants	**0**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	0 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	0 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	0 tons CO2
Gas Energy Efficiency	2,213 tons CO2
Electric Electrification	0 tons CO2
Gas Electrification	0 tons CO2
Other Fuel Electification	0 tons CO2
TOTAL	2,213 tons CO2

PORTFOLIO TOTAL	DSM TOTAL	2024	GOAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	186,681,489	186,681,489	N/A	211,763,673	211,763,673
Transmission and Distribution Capacity	N/A	15,173,614	15,173,614	N/A	17,704,638	17,704,638
Energy Generation	N/A	266,166,501	266,166,501	N/A	310,758,655	310,758,655
Market Effects and Ancilary Services	N/A	9,360,111	9,360,111	N/A	10,804,157	10,804,157
Subtotal	N/A	477,381,715	477,381,715	N/A	551,031,123	551,031,123
Gas System Impacts						
Commodity Cost	N/A	57,927,810	N/A	57,927,810	66,720,081	66,720,081
Variable O&M	N/A	498,845	N/A	498,845	574,353	574,353
Demand	N/A	14,152,415	N/A	14,152,415	16,291,992	16,291,992
Environmental Compliance	N/A	810,989	N/A	810,989	934,081	934,081
Subtotal	N/A	73,390,060	N/A	73,390,060	84,520,508	84,520,508
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	59,593,613	59,593,613
Gas Environmental Externalities	N/A	N/A	N/A	N/A	53,544,049	53,544,049
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	91,693	91,693
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	635,483	N/A	N/A	N/A	635,483	635,483
Utility Performance Incentives	N/A	(29,308,832)	(25,061,910)	(4,246,922)	(29,308,832)	(29,308,832)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	635,483	(29,308,832)	(25,061,910)	(4,246,922)	84,556,007	84,556,007
Participant Impacts						
Electric Bill	799,244,466	N/A	(765,997,683)	N/A	N/A	N/A
Gas Bill	100,919,749	N/A	N/A	(93,632,452)	N/A	N/A
Participant Rebates and Incentives	79,808,429	N/A	N/A	N/A	79,808,429	N/A
Incremental Capital	(204,235,836)	N/A	N/A	N/A	(204,235,836)	N/A
Incremental O&M	101,523,798	N/A	N/A	N/A	114,096,049	N/A
Subtotal	877,260,606	N/A	(765,997,683)	(93,632,452)	(10,331,358)	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	(1,277,869)	(925,226)	(352,643)	(1,277,869)	(1,277,869)
Utility Administration	N/A	(66,067,160)	(56,293,980)	(9,773,180)	(66,067,160)	(66,067,160)
Advertising & Promotion	N/A	(14,923,908)	(11,763,845)	(3,160,063)	(14,923,908)	(14,923,908)
Measurement & Verification	N/A	(3,094,063)	(2,659,356)	(434,707)	(3,094,063)	(3,094,063)
Rebates	N/A	(79,808,429)	(65,398,239)	(14,410,190)	(79,808,429)	(79,808,429)
Other	N/A	(2,857,395)	(2,371,736)	(485,659)	(2,857,395)	(2,857,395)
Subtotal	N/A	(168,028,822)	**(139,412,382)**	**(28,616,441)**	(168,028,822)	(168,028,822)
Benefits	1,082,131,925	550,771,775	477,381,715	73,390,060	943,320,948	749,416,471
Costs	(204,235,836)	(197,337,654)	(930,471,974)	(126,495,815)	(401,573,490)	(197,337,654)
Net Benefit (Cost)	**877,896,089**	**353,434,121**	**(453,090,259)**	**(53,105,755)**	**541,747,458**	**552,078,816**
Benefit/Cost Ratio	**5.30**	**2.79**	**0.51**	**0.58**	**2.35**	**3.80**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	15.6 years
Lifetime (Weighted on Dth)	13.8 years
T & D Loss Factor (Energy)	7.71%
T & D Loss Factor (Demand)	9.20%
System Coincident kW Saved at Generator	**344,832 kW**
Annual kWh Saved at Customer	536,518,270 kWh
Annual kWh Saved at Generator	**574,040,873 kWh**
Annual Dth Saved	**1,079,996 Dth**
Electric Participants	**4,329,796**
Gas Participants	**1,131,170**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	16.8 years
Lifetime (Weighted on Dth)	17.2 years
T & D Loss Factor (Energy)	8.46%
T & D Loss Factor (Demand)	9.49%
System Coincident kW Saved at Generator	**-16.26 kW**
Annual kWh Saved at Customer	-2,064,639 kWh
Annual kWh Saved at Generator	**-2,255,497 kWh**
Annual Dth Saved	**19,018 Dth**
Electric Participants	**2,729**
Gas Participants	**785**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	168,097 tons CO2
Gas Energy Efficiency	78,764 tons CO2
Electric Electrification	-633 tons CO2
Gas Electrification	1,387 tons CO2
Other Fuel Electification	252 tons CO2
TOTAL	247,867 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	1,295,927 tons CO2
Gas Energy Efficiency	1,089,136 tons CO2
Electric Electrification	-5,350 tons CO2
Gas Electrification	23,795 tons CO2
Other Fuel Electification	2,134 tons CO2
TOTAL	2,405,643 tons CO2

PORTFOLIO TOTAL	DSM TOTAL	2024	ACTUAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	174,911,819	174,911,819	N/A	198,635,676	198,635,676
Transmission and Distribution Capacity	N/A	13,622,191	13,622,191	N/A	15,845,403	15,845,403
Energy Generation	N/A	198,362,951	198,362,951	N/A	230,780,224	230,780,224
Market Effects and Ancilary Services	N/A	7,737,939	7,737,939	N/A	8,905,226	8,905,226
Subtotal	N/A	394,634,900	394,634,900	N/A	454,166,529	454,166,529
Gas System Impacts						
Commodity Cost	N/A	60,901,508	N/A	60,901,508	69,156,472	69,156,472
Variable O&M	N/A	524,734	N/A	524,734	595,849	595,849
Demand	N/A	14,889,795	N/A	14,889,795	16,899,571	16,899,571
Environmental Compliance	N/A	852,621	N/A	852,621	968,191	968,191
Subtotal	N/A	77,168,658	N/A	77,168,658	87,620,083	87,620,083
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	45,224,722	45,224,722
Gas Environmental Externalities	N/A	N/A	N/A	N/A	56,095,588	56,095,588
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	808,341	808,341
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	6,062,487	N/A	N/A	N/A	6,062,487	6,062,487
Utility Performance Incentives	N/A	(17,918,483)	(13,613,457)	(4,305,026)	(17,918,483)	(17,918,483)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	6,062,487	(17,918,483)	(13,613,457)	(4,305,026)	90,272,655	90,272,655
Participant Impacts						
Electric Bill	647,405,259	N/A	(609,162,893)	N/A	N/A	N/A
Gas Bill	108,501,182	N/A	N/A	(98,546,260)	N/A	N/A
Participant Rebates and Incentives	69,331,161	N/A	N/A	N/A	69,331,161	N/A
Incremental Capital	(258,783,927)	N/A	N/A	N/A	(258,783,927)	N/A
Incremental O&M	208,676,768	N/A	N/A	N/A	237,166,039	N/A
Subtotal	775,130,444	N/A	(609,162,893)	(98,546,260)	47,713,274	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	(2,967,232)	(2,553,093)	(414,139)	(2,967,232)	(2,967,232)
Utility Administration	N/A	(61,261,033)	(51,192,237)	(10,068,796)	(61,261,033)	(61,261,033)
Advertising & Promotion	N/A	(8,184,345)	(6,377,292)	(1,807,053)	(8,184,345)	(8,184,345)
Measurement & Verification	N/A	(2,120,712)	(1,287,938)	(832,774)	(2,120,712)	(2,120,712)
Rebates	N/A	(69,331,161)	(54,604,978)	(14,726,184)	(69,331,161)	(69,331,161)
Other	N/A	(1,486,577)	(1,237,309)	(249,269)	(1,486,577)	(1,486,577)
Subtotal	N/A	(145,351,061)	**(117,252,846)**	**(28,098,215)**	(145,351,061)	(145,351,061)
Benefits	1,039,976,858	471,803,557	394,634,900	77,168,658	956,474,951	649,977,751
Costs	(258,783,927)	(163,269,544)	(740,029,197)	(130,949,500)	(422,053,470)	(163,269,544)
Net Benefit (Cost)	**781,192,931**	**308,534,014**	**(345,394,297)**	**(53,780,843)**	**534,421,481**	**486,708,207**
Benefit/Cost Ratio	**4.02**	**2.89**	**0.53**	**0.59**	**2.27**	**3.98**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts

Lifetime (Weighted on Generator kWh)	14.8 years
Lifetime (Weighted on Dth)	11.5 years
T & D Loss Factor (Energy)	7.93%
T & D Loss Factor (Demand)	9.33%
System Coincident kW Saved at Generator	**285,748 kW**
Annual kWh Saved at Customer	443,978,499 kWh
Annual kWh Saved at Generator	**461,784,638 kWh**
Annual Dth Saved	**1,240,840 Dth**
Electric Participants	**3,904,913**
Gas Participants	**1,550,191**

Beneficial Electrification Impacts

Lifetime (Weighted on Generator kWh)	16.5 years
Lifetime (Weighted on Dth)	16.8 years
T & D Loss Factor (Energy)	8.62%
T & D Loss Factor (Demand)	8.93%
System Coincident kW Saved at Generator	**-79.58 kW**
Annual kWh Saved at Customer	-9,954,842 kWh
Annual kWh Saved at Generator	**-10,893,450 kWh**
Annual Dth Saved	**88,853 Dth**
Electric Participants	**4,923**
Gas Participants	**1,551**

First year Carbon Emissions Reductions

Electric Energy Efficiency	115,495 tons CO2
Gas Energy Efficiency	83,494 tons CO2
Electric Electrification	-3,124 tons CO2
Gas Electrification	6,480 tons CO2
Other Fuel Electification	1,868 tons CO2
TOTAL	204,213 tons CO2

Lifetime Carbon Emissions Reductions

Electric Energy Efficiency	1,184,823 tons CO2
Gas Energy Efficiency	1,043,241 tons CO2
Electric Electrification	-26,271 tons CO2
Gas Electrification	109,154 tons CO2
Other Fuel Electification	18,675 tons CO2
TOTAL	2,329,622 tons CO2

PORTFOLIO TOTAL W ALTERNATIVE FILINGS	DSM TOTAL	2024	GOAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	195,120,605	195,120,605	N/A	221,326,459	221,326,459
Transmission and Distribution Capacity	N/A	16,134,501	16,134,501	N/A	18,797,048	18,797,048
Energy Generation	N/A	284,797,017	284,797,017	N/A	332,000,569	332,000,569
Market Effects and Ancilary Services	N/A	9,640,416	9,640,416	N/A	11,123,128	11,123,128
Subtotal	N/A	505,692,539	505,692,539	N/A	583,247,204	583,247,204
Gas System Impacts						
Commodity Cost	N/A	58,432,468	N/A	58,432,468	67,666,479	67,666,479
Variable O&M	N/A	498,845	N/A	498,845	574,353	574,353
Demand	N/A	14,152,415	N/A	14,152,415	16,291,992	16,291,992
Environmental Compliance	N/A	810,989	N/A	810,989	934,081	934,081
Subtotal	N/A	73,894,718	N/A	73,894,718	85,466,906	85,466,906
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	63,744,321	63,744,321
Gas Environmental Externalities	N/A	N/A	N/A	N/A	53,544,049	53,544,049
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	91,693	91,693
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	635,483	N/A	N/A	N/A	635,483	635,483
Utility Performance Incentives	N/A	(29,308,832)	(25,061,910)	(4,246,922)	(29,308,832)	(29,308,832)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	635,483	(29,308,832)	(25,061,910)	(4,246,922)	88,706,715	88,706,715
Participant Impacts						
Electric Bill	799,244,466	N/A	(765,997,683)	N/A	N/A	N/A
Gas Bill	100,919,749	N/A	N/A	(93,632,452)	N/A	N/A
Participant Rebates and Incentives	87,378,762	N/A	N/A	N/A	87,378,762	N/A
Incremental Capital	(204,235,836)	N/A	N/A	N/A	(204,235,836)	N/A
Incremental O&M	101,523,798	N/A	N/A	N/A	114,096,049	N/A
Subtotal	884,830,939	N/A	(765,997,683)	(93,632,452)	(2,761,025)	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	(1,277,869)	(925,226)	(352,643)	(1,277,869)	(1,277,869)
Utility Administration	N/A	(79,133,356)	(68,296,915)	(10,836,441)	(79,133,356)	(79,133,356)
Advertising & Promotion	N/A	(14,923,908)	(11,763,845)	(3,160,063)	(14,923,908)	(14,923,908)
Measurement & Verification	N/A	(3,094,063)	(2,659,356)	(434,707)	(3,094,063)	(3,094,063)
Rebates	N/A	(87,378,762)	(72,906,050)	(14,472,712)	(87,378,762)	(87,378,762)
Other	N/A	(2,857,395)	(2,371,736)	(485,659)	(2,857,395)	(2,857,395)
Subtotal	N/A	(188,665,351)	**(158,923,128)**	**(29,742,224)**	(188,665,351)	(188,665,351)
Benefits	1,089,702,258	579,587,257	505,692,539	73,894,718	988,204,468	786,729,658
Costs	(204,235,836)	(217,974,183)	(949,982,720)	(127,621,598)	(422,210,019)	(217,974,183)
Net Benefit (Cost)	**885,466,422**	**361,613,074**	**(444,290,181)**	**(53,726,880)**	**565,994,449**	**568,755,474**
Benefit/Cost Ratio	**5.34**	**2.66**	**0.53**	**0.58**	**2.34**	**3.61**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts	
Lifetime (Weighted on Generator kWh)	14.4 years
Lifetime (Weighted on Dth)	13.8 years
T & D Loss Factor (Energy)	7.71%
T & D Loss Factor (Demand)	9.20%
System Coincident kW Saved at Generator	**344,832 kW**
Annual kWh Saved at Customer	536,518,270 kWh
Annual kWh Saved at Generator	**624,504,503 kWh**
Annual Dth Saved	**1,079,996 Dth**
Electric Participants	**4,331,753**
Gas Participants	**1,131,389**

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	16.8 years
Lifetime (Weighted on Dth)	17.2 years
T & D Loss Factor (Energy)	8.46%
T & D Loss Factor (Demand)	9.49%
System Coincident kW Saved at Generator	**-16.26 kW**
Annual kWh Saved at Customer	-2,064,639 kWh
Annual kWh Saved at Generator	**-2,255,497 kWh**
Annual Dth Saved	**19,018 Dth**
Electric Participants	**2,729**
Gas Participants	**785**

First year Carbon Emissions Reductions	
Electric Energy Efficiency	168,097 tons CO2
Gas Energy Efficiency	78,764 tons CO2
Electric Electrification	-633 tons CO2
Gas Electrification	1,387 tons CO2
Other Fuel Electification	252 tons CO2
TOTAL	247,867 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Energy Efficiency	1,295,927 tons CO2
Gas Energy Efficiency	1,089,136 tons CO2
Electric Electrification	-5,350 tons CO2
Gas Electrification	23,795 tons CO2
Other Fuel Electification	2,134 tons CO2
TOTAL	2,405,643 tons CO2

PORTFOLIO TOTAL W ALTERNATIVE FILINGS	DSM TOTAL	2024	ACTUAL

2024 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)

	Participant Test ($Total)	Utility Test ($Total)	Electric Rate Impact Test ($Total)	Gas Rate Impact Test ($Total)	Societal Test ($Total)	Minnesota Test ($Total)
Electric System Impacts						
Generation Capacity	N/A	184,395,541	184,395,541	N/A	209,415,344	209,415,344
Transmission and Distribution Capacity	N/A	14,703,103	14,703,103	N/A	17,078,342	17,078,342
Energy Generation	N/A	222,391,964	222,391,964	N/A	258,419,026	258,419,026
Market Effects and Ancilary Services	N/A	8,083,875	8,083,875	N/A	9,301,740	9,301,740
Subtotal	N/A	429,574,483	429,574,483	N/A	494,214,452	494,214,452
Gas System Impacts						
Commodity Cost	N/A	61,023,638	N/A	61,023,638	69,289,731	69,289,731
Variable O&M	N/A	525,792	N/A	525,792	597,004	597,004
Demand	N/A	14,919,840	N/A	14,919,840	16,932,354	16,932,354
Environmental Compliance	N/A	854,331	N/A	854,331	970,056	970,056
Subtotal	N/A	77,323,601	N/A	77,323,601	87,789,145	87,789,145
Environmental Externalities and Non-Energy Impacts						
Electric Environmental Externalities	N/A	N/A	N/A	N/A	50,539,692	50,539,692
Gas Environmental Externalities	N/A	N/A	N/A	N/A	56,207,008	56,207,008
Other Fuels Environmental Externalities	N/A	N/A	N/A	N/A	808,341	808,341
Electric Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	0	N/A	N/A	N/A	0	0
Other Fuels Benefits	6,062,487	N/A	N/A	N/A	6,062,487	6,062,487
Utility Performance Incentives	N/A	(19,447,018)	(15,133,727)	(4,313,292)	(19,447,018)	(19,447,018)
Utility Non-Energy Benefits	N/A	0	0	0	0	0
Subtotal	6,062,487	(19,447,018)	(15,133,727)	(4,313,292)	94,170,509	94,170,509
Participant Impacts						
Electric Bill	710,392,613	N/A	(672,150,247)	N/A	N/A	N/A
Gas Bill	108,691,480	N/A	N/A	(98,736,558)	N/A	N/A
Participant Rebates and Incentives	78,439,624	N/A	N/A	N/A	78,439,624	N/A
Incremental Capital	(274,673,660)	N/A	N/A	N/A	(274,673,660)	N/A
Incremental O&M	207,161,975	N/A	N/A	N/A	235,430,821	N/A
Subtotal	830,012,033	N/A	(672,150,247)	(98,736,558)	39,196,785	N/A
Utility Impacts						
Utility Project Costs						
Customer Services	N/A	(2,967,232)	(2,553,093)	(414,139)	(2,967,232)	(2,967,232)
Utility Administration	N/A	(69,068,600)	(58,832,501)	(10,236,099)	(69,068,600)	(69,068,600)
Advertising & Promotion	N/A	(8,184,345)	(6,377,292)	(1,807,053)	(8,184,345)	(8,184,345)
Measurement & Verification	N/A	(2,120,712)	(1,287,938)	(832,774)	(2,120,712)	(2,120,712)
Rebates	N/A	(78,439,624)	(63,687,624)	(14,752,000)	(78,439,624)	(78,439,624)
Other	N/A	(7,767,726)	(6,524,201)	(1,243,526)	(7,767,726)	(7,767,726)
Subtotal	N/A	(168,548,240)	**(139,262,649)**	**(29,285,591)**	(168,548,240)	(168,548,240)
Benefits	1,110,748,180	506,898,084	429,574,483	77,323,601	1,009,491,570	695,621,125
Costs	(274,673,660)	(187,995,258)	(826,546,622)	(132,335,441)	(462,668,918)	(187,995,258)
Net Benefit (Cost)	**836,074,520**	**318,902,826**	**(396,972,140)**	**(55,011,840)**	**546,822,652**	**507,625,867**
Benefit/Cost Ratio	**4.04**	**2.70**	**0.52**	**0.58**	**2.18**	**3.70**

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Energy Efficiency Impacts

Lifetime (Weighted on Generator kWh)	14.7 years
Lifetime (Weighted on Dth)	11.5 years
T & D Loss Factor (Energy)	7.87%
T & D Loss Factor (Demand)	9.32%
System Coincident kW Saved at Generator	**294,347 kW**
Annual kWh Saved at Customer	494,511,096 kWh
Annual kWh Saved at Generator	**516,355,477 kWh**
Annual Dth Saved	**1,243,874 Dth**
Electric Participants	**3,907,212**
Gas Participants	**1,550,397**

Beneficial Electrification Impacts

Lifetime (Weighted on Generator kWh)	16.5 years
Lifetime (Weighted on Dth)	16.8 years
T & D Loss Factor (Energy)	8.62%
T & D Loss Factor (Demand)	8.93%
System Coincident kW Saved at Generator	**-79.58 kW**
Annual kWh Saved at Customer	-9,954,842 kWh
Annual kWh Saved at Generator	**-10,893,450 kWh**
Annual Dth Saved	**88,853 Dth**
Electric Participants	**4,923**
Gas Participants	**1,551**

First year Carbon Emissions Reductions

Electric Energy Efficiency	115,495 tons CO2
Gas Energy Efficiency	83,494 tons CO2
Electric Electrification	-3,124 tons CO2
Gas Electrification	6,480 tons CO2
Other Fuel Electification	1,868 tons CO2
TOTAL	204,213 tons CO2

Lifetime Carbon Emissions Reductions

Electric Energy Efficiency	1,184,823 tons CO2
Gas Energy Efficiency	1,045,454 tons CO2
Electric Electrification	-26,271 tons CO2
Gas Electrification	109,154 tons CO2
Other Fuel Electification	18,675 tons CO2
TOTAL	2,331,835 tons CO2

APPENDIX D: DETAILED TECHNICAL ASSUMPTIONS

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Affordable New Home Construction - MN	ENERGY STAR Clothes Dryer	ENERGY STAR Clothes Dryer	Energy Star Clothes Dryer >= 4.4 Cu.Ft.	Industry Standard	12	$40.00	$75.00	41	0.005	0.0	$0.00	MN-RES-SFLIT	Res	Electric Only	Combo	A018	1.6	100%	100%	100%	100%	7	-
Affordable New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Front-loading Clothes Washer - Combo Customers w/ Electric DHW	Energy Star Front-Loading Clothes Washer w/ electric DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A023	1.7	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Front-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Front-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	$10.00	$25.00	100	0.015	0.3	$0.00	MN-RES-FLAT	Res	Combo	Combo	A024	1.7	100%	100%	100%	100%	1	1
Affordable New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Front-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Front-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Electric Only	A090	1.7	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Front-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Front-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Gas Only	A091	1.7	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Top-loading Clothes Washer - Combo Customers w/ Electric DHW	Energy Star Top-Loading Clothes Washer w/ electric DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	$10.00	$50.00	138	0.021	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A025	1.7	100%	100%	100%	100%	8	-
Affordable New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Top-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Top-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Electric Only	A092	1.7	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Top-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Top-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Gas Only	A093	1.7	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Top-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Top-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00		Res	Combo	Combo	A026	1.7	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	ENERGY STAR Clothes Washer	Electric Clothes Washer - Advanced Tier	ENERGY STAR Most Efficient Clothes Dryer 2019	Industry Standard	11	$20.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	Res	Electric Only	Combo	A027	1.7	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	ENERGY STAR Refrigerator	Refrigerator Replacement	ENERGY STAR ® Refrigerators	Industry Standard	14	$15.00	$20.00	45	0.003	0.0	$0.00	MN-RES-SFRF1	Res	Electric Only	Combo	A028	1.9	100%	100%	100%	100%	15	-
Affordable New Home Construction - MN	A - New Homes	11 MSR - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$18,000.00	$7,150.45	916	0.163	25.3	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O033	15.1	100%	100%	100%	100%	6	6
Affordable New Home Construction - MN	A - New Homes	12 MSR - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$21,000.00	$7,230.65	1,300	0.159	19.2	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O034	15.1	100%	100%	100%	100%	9	9
Affordable New Home Construction - MN	A - New Homes	13 MSR - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$23,000.00	$10,829.64	6,883	0.574	26.7	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O035	15.1	100%	100%	100%	100%	10	4
Affordable New Home Construction - MN	B - New Homes	11 MSR - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$18,000.00	$0.00	0	0.000	0.0	$0.00		RES	Combo	Gas Only	O036	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	B - New Homes	12 MSR - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$21,000.00	$0.00	0	0.000	0.0	$0.00		RES	Combo	Gas Only	O037	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	B - New Homes	13 MSR - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$23,000.00	$0.00	0	0.000	0.0	$0.00		RES	Combo	Gas Only	O038	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	C - New Homes - 100% Electric Homes	11 MSR + Electrification - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$19,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O039	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	C - New Homes - 100% Electric Homes	12 MSR + Electrification - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$22,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O040	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	C - New Homes - 100% Electric Homes	13 MSR + Electrification - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$25,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O041	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	A - New Homes	10% Overall UA - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$18,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O042	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	A - New Homes	15% Overall UA - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$21,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O043	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	A - New Homes	20% Overall UA - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$23,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O044	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	B - New Homes	10% Overall UA - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$18,000.00	$0.00	0	0.000	0.0	$0.00		RES	Combo	Gas Only	O045	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	B - New Homes	15% Overall UA - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$21,000.00	$0.00	0	0.000	0.0	$0.00		RES	Combo	Gas Only	O046	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	B - New Homes	20% Overall UA - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$23,000.00	$0.00	0	0.000	0.0	$0.00		RES	Combo	Gas Only	O047	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	C - New Homes - 100% Electric Homes	10% Overall UA + Electrification - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$19,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O048	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	C - New Homes - 100% Electric Homes	15% Overall UA + Electrification - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$22,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O049	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	C - New Homes - 100% Electric Homes	20% Overall UA + Electrification - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$25,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O050	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	Rater Incentive	Energy Efficient Home - Less than 30% BTC	Energy Efficient Home - 20-30% BTC	Reference Home Based upon Local Code	20	$125.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	Res	Combo	Combo	O052	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	Rater Incentive	Energy Efficient Home - 30% & Higher BTC	Energy Efficient Home - 30% & Higher BTC	Reference Home Based upon Local Code	20	$250.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	Res	Combo	Combo	O053	15.1	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$125.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Electric Only	U080	17.7	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	Smart Thermostat	Install Energy Star certified smart thermostat - GAS Only	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$125.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Gas Only	U085	17.7	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	ES Radon Fans	Energy Star Radon Fans	Energy Star Radon Fan - Radonaway RP140	Radonaway RP145	10	$125.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	RES	Electric Only	Combo	U096	17.9	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$20.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U075	17.7	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	Water Heater DR	Demand response capability on grid enabled electric resistance water heater	Demand response from electric resistance water heater	No management of water heater time of use	1	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Electric Only	S268	19.2	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045)	Heat Pump Water Heater w/ DR Management	No management of water heater time of use	1	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HPWH_DR	RES	DR	Electric Only	S269	19.2	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	HP Water Heater	Heat Pump Water Heater - New Homes	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$400.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S275	19.2	100%	100%	100%	100%	-	-
Affordable New Home Construction - MN	HP Water Heater	Heat Pump Water Heater + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S277	19.2	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Behavioral Industrial	Behavioral Changes	Behavior changes that reduce energy use	No change in behavior	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECOM	Bus	Electric Only	Electric Only	C001		100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Behavioral Commercial	Behavioral Changes	Behavior changes that reduce energy use	No change in behavior	0	$1,462.25	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECOM	Bus	Electric Only	Electric Only	C002		100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	0	$4,618.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T021	4.2	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	0	$4,618.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T022	4.2	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Custom BEA Industrial Project	Custom Industrial BEA Electric	High Efficiency Product/system	Less Efficient Product/Systems	15	$5,036.11	$52,117.54	152,927	10.153	0.0	$21,652.62	MN-BUS-CUSTOM	BUS	Electric Only	Electric Only	G021	7.1	100%	100%	100%	100%	13	-
Business Energy Assessments - MN	Custom BEA Industrial Project	Custom Industrial BEA Gas	High Efficiency Product/system	Less Efficient Product/Systems	0	$12,823.85	$0.00	0	0.000	0.0	$0.00		BUS	Gas Only	Gas Only	G022	7.1	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Custom BEA Commercial Project	Custom Commercial BEA Electric	New or Optimized System or Equipment	Old or less efficient systems or equipment	12	$7,752.07	$33,889.99	45,396	3.851	0.0	$3,370.69	MN-BUS-CUSTOM_	Bus	Electric Only	Electric Only	G023	7.1	100%	100%	100%	100%	68	-
Business Energy Assessments - MN	Custom BEA Commercial Project	Custom Commercial BEA Gas	New or Optimized System or Equipment	Old or less efficient systems or equipment	8	$3,688.67	$7,946.38	0	0.000	240.6	$0.00	MN-BUS-CUSTOM_	Bus	Gas Only	Gas Only	G024	7.1	100%	100%	100%	100%	-	8
Business Energy Assessments - MN	Efficiency Controls Gas Project	Business Energy Assessments Controls Gas Project	New Building Controls	Old Building Controls	15	$4,005.47	$46,827.67	0	0.000	493.0	$310.00		Bus	Gas Only	Gas Only	G032	7.1	100%	100%	100%	100%	-	3
Business Energy Assessments - MN	Efficiency Controls Electric Project	Business Energy Assessments Controls Electric Project	New Building Controls	Old Building Controls	15	$8,375.64	$29,817.63	51,922	3.767	0.0	$1,202.50	MN-BUS-RECM_OUT	Bus	Electric Only	Electric Only	G033	7.1	100%	100%	100%	100%	16	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Business Energy Assessments - MN	Load Shifting	Equipment Based Load Shift	Equipment-based load shift to off peak hours	Unshifted peak load	0	$22,500.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	G046	7.1	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Custom Electrification Equipment	Custom Efficient Fuel Switching	Gas equipment	Efficient electric equipment	0	$862.70	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTOM	BUS	Beneficial Electrification	Combo	G050	7.1	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Industrial Prescriptive	Average Cooling Project	More efficient cooling equipment	Baseline System	0	$740.70	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	J001	9.1	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Industrial Prescriptive	Average Compressed Air/FSO Project	Optimized System	Old System	12	$4,654.65	$1,298.48	14,318	1.899	0.0	$49.00	MN-BUS-CUSTCAIR	BUS	Electric Only	Electric Only	J002	9.1	100%	100%	100%	100%	31	-
Business Energy Assessments - MN	Industrial Prescriptive	Average EMS	New Direct Digital Controls System	Old System	0	$1,598.33	$0.00	0	0.000	0.0	$0.00	MN-BUS-EMS_OFFP	BUS	Electric Only	Electric Only	J003	9.1	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Industrial Prescriptive	Average Lighting Project	Optimized System	Old System	10	$5,474.70	$22.83	154	0.023	0.0	-$0.44	MN-BUS-LIGHTING	BUS	Electric Only	Electric Only	J004	9.1	100%	100%	100%	100%	979	-
Business Energy Assessments - MN	Industrial Prescriptive	Average Motor Project	Optimized System	Old System	15	$3,031.26	$3,830.71	5,518	1.295	0.0	$0.00	MN-BUS-MOTORASD	BUS	Electric Only	Electric Only	J005	9.1	100%	100%	100%	100%	3	-
Business Energy Assessments - MN	Industrial Prescriptive	Average Heating Project	New System	Old System	0	$715.18	$0.00	0	0.000	0.0	$0.00		BUS	Gas Only	Gas Only	J006	9.1	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Commercial Prescriptive	Average Cooling Project	More efficient cooling equipment	Baseline System	20	$2,448.12	$549.64	400	0.539	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	J007	9.1	100%	100%	100%	100%	28	-
Business Energy Assessments - MN	Commercial Prescriptive	Average Compressed Air/FSO Project	Efficient Equipment	Old System	0	$4,844.57	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTCAIR	BUS	Electric Only	Electric Only	J008	9.1	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Commercial Prescriptive	Average Lighting Project	Efficient Equipment	Old System	13	$7,657.21	$48.16	103	0.018	0.0	-$0.20	MN-BUS-LIGHTING	BUS	Electric Only	Electric Only	J009	9.1	100%	100%	100%	100%	3,966	-
Business Energy Assessments - MN	Commercial Prescriptive	Average Motor Project	Efficient Equipment	Old System	15	$17,178.48	$2,645.48	5,315	0.873	0.0	$0.00	MN-BUS-MOTORASD	BUS	Electric Only	Electric Only	J010	9.1	100%	100%	100%	100%	68	-
Business Energy Assessments - MN	Commercial Prescriptive	Average Heating Project	Efficient Equipment	Old System	20	$1,848.50	$4,568.85	19,086	2.855	148.1	$0.00		BUS	Gas Only	Gas Only	J011	9.1	100%	100%	100%	100%	4	3
Business Energy Assessments - MN	Turn Key Services Prescriptive	Average Cooling Project	More efficient cooling equipment	Baseline System	20	$6,713.92	$3,278.89	3,214	2.709	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	J038	9.1	100%	100%	100%	100%	80	-
Business Energy Assessments - MN	Turn Key Services Prescriptive	Average Compressed Air/FSO Project	Efficient Equipment	Non-Optimized System	17	$6,018.75	$2,911.80	20,455	2.677	0.0	$0.00	MN-BUS-CUSTCAIR	BUS	Electric Only	Electric Only	J039	9.1	100%	100%	100%	100%	15	-
Business Energy Assessments - MN	Turn Key Services Prescriptive	Average Lighting Project	Optimized System	Old System	17	$14,042.44	$123.41	265	0.050	0.0	-$0.54	MN-BUS-LIGHTING	BUS	Electric Only	Electric Only	J040	9.1	100%	100%	100%	100%	24,448	-
Business Energy Assessments - MN	Turn Key Services Prescriptive	Average Motor Project	Efficient Equipment	Old System	16	$1,893.93	$3,806.49	15,208	2.611	0.0	$0.00	MN-BUS-MOTORASD	BUS	Electric Only	Electric Only	J041	9.1	100%	100%	100%	100%	209	-
Business Energy Assessments - MN	Turn Key Services Prescriptive	Average Heating Project	New System	Old System	11	$4,972.04	$1,055.77	0	0.000	77.0	-$13.33		BUS	Gas Only	Gas Only	J042	9.1	100%	100%	100%	100%	-	105
Business Energy Assessments - MN	Load Shifting	Average Load Shift Project	Load Shifted Operation	Existing Operation	0	$750.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-EIS Load Shift	BUS	Electric Only	Electric Only	J051	9.1	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	BEA Building Assessment	Building Assessment	Assessment Performed and Energy Efficient Improvements Implemented	Existing Building Pre-Assessment	0	$3,500.00	$0.00	0	0.000	0.0	$0.00		BUS	Combo	Combo	R001	Combo	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	BEA Targeted Building Assessment	Targeted Building Assessment	Assessment Performed and Energy Efficient Improvements Implemented	Existing Building Pre-Assessment	0	$15,000.00	$0.00	0	0.000	0.0	$0.00		BUS	Combo	Combo	R002	Combo	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	BEA Industrial Streamlined Assessment	Industrial Streamlined Assessment	Assessment Performed and Energy Efficient Improvements Implemented	Existing Building Pre-Assessment	0	$6,172.07	$0.00	0	0.000	0.0	$0.00		BUS	Combo	Combo	R003		100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Building Operator Certification	BOC	Energy Use After Class	Energy Usage Before Class	0	$500.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECOM	BUS	Combo	Combo	R004	Combo	100%	100%	100%	100%	-	-
Business Energy Assessments - MN	Commercial Streamlined Assessment	Streamlined Assessment	Assessment Performed and Energy Efficient Improvements Implemented	Existing Building Pre-Assessment	0	$1,500.00	$0.00	0	0.000	0.0	$0.00		BUS	Combo	Combo	R007		100%	100%	100%	100%	-	-
Business Energy Assessments - MN	In-Depth Study	Beneficial Electrification Studies			0	$8,680.00	$0.00	0	0.000	0.0	$0.00		BUS	Beneficial Electrification	Electric Only	R025		100%	100%	100%	100%	-	-
Business New Construction - MN	EDA	Energy Design Assistance for Gas	More Efficient than Code Building	Code-Compliant Building	20	$15,693.46	$201,463.78	0	0.000	2,968.7	$0.00	MN-BUS-CUSTOM	BUS	Gas Only	Gas Only	D001		100%	100%	100%	100%	-	15
Business New Construction - MN	EDA	Energy Design Assistance for Electric	More Efficient than Code Building	Code-Compliant Building	20	$74,044.20	$249,757.12	370,538	76.056	0.0	-$2.39	MN-BUS-CUSTOM	BUS	Electric Only	Electric Only	D002		100%	100%	100%	100%	54	-
Business New Construction - MN	EDA	Energy Design Assistance for Efficient Fuel Switching, Gas to Electric	Building with better-than Code-Compliant building electric equipment	Building with code-compliant gas fired equipment	0	$7,806.75	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTOM	BUS	Beneficial Electrification	Combo	D004		100%	100%	100%	100%	-	-
Business New Construction - MN	EDA	Energy Design Assistance for Low Income gas projects	More Efficient than Code Building	Code-Compliant Building	20	$10,867.48	$141,228.60	0	0.000	1,294.0	$0.00	MN-BUS-CUSTOM	BUS	Gas Only	Gas Only	D016		100%	100%	100%	100%	-	6
Business New Construction - MN	EDA	Energy Design Assistance for Low Income electric projects	More Efficient than Code Building	Code-Compliant Building	20	$101,462.50	$139,992.66	200,568	37.182	0.0	$0.00	MN-BUS-CUSTOM	BUS	Electric Only	Electric Only	D017		100%	100%	100%	100%	22	-
Business New Construction - MN	EDA	Energy Design Assistance for Low Income efficient fuel switching projects, gas to electric	Building with better-than Code-Compliant building electric equipment	Building with code-compliant gas fired equipment	0	$7,806.75	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTOM	BUS	Beneficial Electrification	Combo	D108		100%	100%	100%	100%	-	-
Business New Construction - MN	EEB	Energy Efficient Buildings for Gas	More Efficient than Code Building	Code-Compliant Building	17	$3,748.77	$230.18	0	0.000	11.8	$16.87	MN-BUS-CUSTOM	BUS	Gas Only	Gas Only	D019		100%	100%	100%	100%	-	1,152
Business New Construction - MN	EEB	Energy Efficient Buildings for Electric	More Efficient than Code Building	Code-Compliant Building	19	$3,378.93	$1,107.79	2,465	0.658	0.0	-$2.45	MN-BUS-CUSTOM	BUS	Electric Only	Electric Only	D020		100%	100%	100%	100%	3,091	-
Business New Construction - MN	EEB	Energy Efficient Buildings for Efficient Fuel Switching, Gas to Electric	More Efficient than Code Building	Code-Compliant Building	0	$720.17	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTOM	BUS	Beneficial Electrification	Combo	D021		100%	100%	100%	100%	-	-
Business New Construction - MN	LI EEB	Energy Efficient Buildings for Low Income gas projects	More Efficient than Code Building	Code-Compliant Building	12	$5,710.83	$149.52	0	0.000	4.9	$27.33	MN-BUS-CUSTOM	BUS	Gas Only	Gas Only	D030		100%	100%	100%	100%	-	40
Business New Construction - MN	LI EEB	Energy Efficient Buildings for Low Income electric projects	More Efficient than Code Building	Code-Compliant Building	20	$4,639.36	$187.42	268	0.084	0.0	-$0.51	MN-BUS-CUSTOM	BUS	Electric Only	Electric Only	D031		100%	100%	100%	100%	40	-
Business New Construction - MN	LI EEB	Energy Efficient Buildings for Low Income efficient fuel switching projects, gas to electric	Building with better-than Code-Compliant building electric equipment	Building with code-compliant gas fired equipment	0	$1,056.45	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTOM	BUS	Beneficial Electrification	Combo	D032		100%	100%	100%	100%	-	-
Business New Construction - MN	Code Compliance	2024 Savings attributed to Xcel Energy for code compliance	Code Compliant Building	Non-Compliant Building	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-CODES	BUS	Combo	Combo	D033		100%	100%	100%	100%	-	-
Business New Construction - MN	Code Compliance	2025 Savings attributed to Xcel Energy for code compliance	Code Compliant Building	Non-Compliant Building	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-CODES	BUS	Combo	Combo	D034		100%	100%	100%	100%	-	-
Business New Construction - MN	Code Compliance	2026 Savings attributed to Xcel Energy for code compliance	Code Compliant Building	Non-Compliant Building	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-CODES	BUS	Combo	Combo	D035		100%	100%	100%	100%	-	-
Business New Construction - MN	EEB	Energy Efficient Buildings for Electric - Test	More Efficient than Code Building	Code-Compliant Building	0	$4,290.74	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTOM	BUS	Electric Only	Electric Only	D036		100%	100%	100%	100%	-	-
Compressed Air Efficiency - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	0	$4,458.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T011	4.2	100%	100%	100%	100%	-	-
Compressed Air Efficiency - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	0	$4,458.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T012	4.2	100%	100%	100%	100%	-	-
Compressed Air Efficiency - MN	ECO	Non-Custom Opportunity identified in a study	Optimized System	Non-Optimized System	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E001	5.1	100%	100%	100%	100%	-	-
Compressed Air Efficiency - MN	Supply Side Study	Supply-side compressed air study with leak fixes	Leaks & Waste Found and Repaired	Existing System with Leaks & Waste that have not been repaired	5	$7,180.00	$4,061.90	22,048	3.174	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E002	5.2	100%	100%	100%	100%	44	-
Compressed Air Efficiency - MN	Cycling Dryers	Cycling or Variable Speed Refrigerated Dryer	New Cycling Refrigerated Dryer	New Non-Cycling Refrigerated Dryer	20	$1,606.00	$2,627.25	13,533	1.483	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E003	5.3	100%	100%	100%	100%	16	-
Compressed Air Efficiency - MN	Dryer Purge Demand Controls	Dryer Purge/Dewpoint Demand Controls on a Heatless Desiccant Dryer	Purge/Dewpoint Control for Heatless Dessicant Dryers	No Purge Control for Heatless Dessicant Dryers	0	$1,847.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E004	5.4	100%	100%	100%	100%	-	-
Compressed Air Efficiency - MN	Mist Eliminators	Mist Eliminator Filter w/ rated pressure drop of 1 psig or less	New Mist Eliminator Filter	New General Purpose Filter	15	$1,802.00	$2,934.00	7,193	0.937	0.0	$251.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E005	5.5	100%	100%	100%	100%	2	-
Compressed Air Efficiency - MN	No Air Loss Drain	New No-Air Loss Drains	New No-Air Loss Drains	New Electronic Solenoid/Timed Drains	17	$200.00	$323.00	3,819	0.511	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E006	5.6	100%	100%	100%	100%	44	-
Compressed Air Efficiency - MN	New VFD Compressor	10HP VFD Air Compressor - New	New 10HP VFD Compressor	New 10HP Fixed Speed Compressor w/ modulation or load no-load control	20	$1,500.00	$2,922.50	8,423	2.042	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E007	5.7	100%	100%	100%	100%	4	-
Compressed Air Efficiency - MN	New VFD Compressor	15HP VFD Air Compressor - New	New 15HP VFD Compressor	New 15HP Fixed Speed Compressor w/ modulation or load no-load control	20	$2,250.00	$3,882.40	22,805	3.041	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E008	5.7	100%	100%	100%	100%	5	-
Compressed Air Efficiency - MN	New VFD Compressor	20HP VFD Air Compressor - New	New 20HP VFD Compressor	New 20HP Fixed Speed Compressor w/ modulation or load no-load control	20	$3,000.00	$4,759.50	31,314	4.056	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E009	5.7	100%	100%	100%	100%	6	-
Compressed Air Efficiency - MN	New VFD Compressor	25HP VFD Air Compressor - New	New 25HP VFD Compressor	New 25HP Fixed Speed Compressor w/ modulation or load no-load control	20	$3,750.00	$5,541.67	36,580	5.028	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E010	5.7	100%	100%	100%	100%	3	-
Compressed Air Efficiency - MN	New VFD Compressor	30HP VFD Air Compressor - New	New 30HP VFD Compressor	New 30HP Fixed Speed Compressor w/ modulation or load no-load control	20	$4,500.00	$6,781.00	40,699	5.993	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E011	5.7	100%	100%	100%	100%	9	-
Compressed Air Efficiency - MN	New VFD Compressor	40HP VFD Air Compressor - New	New 40HP VFD Compressor	New 40HP Fixed Speed Compressor w/ modulation or load no-load control	20	$6,000.00	$7,938.86	60,319	8.006	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E012	5.7	100%	100%	100%	100%	7	-
Compressed Air Efficiency - MN	New VFD Compressor	50HP VFD Air Compressor - New	New 50HP VFD Compressor	New 50HP Fixed Speed Compressor w/ modulation or load no-load control	20	$7,500.00	$9,667.00	88,626	9.999	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E013	5.7	100%	100%	100%	100%	5	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Compressed Air Efficiency - MN	New VFD Compressor	75HP VFD Air Compressor - New	New 75HP VFD Compressor	New 75HP Fixed Speed Compressor w/ modulation or load no-load control	20	$11,250.00	$13,604.00	133,794	14.920	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E014	5.7	100%	100%	100%	100%	6	-
Compressed Air Efficiency - MN	New VFD Compressor	100HP VFD Air Compressor - New	New 100HP VFD Compressor	New 100HP Fixed Speed Compressor w/ modulation or load no-load control	20	$15,000.00	$17,541.00	179,657	19.810	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E015	5.7	100%	100%	100%	100%	3	-
Compressed Air Efficiency - MN	New VFD Compressor	125HP VFD Air Compressor - New	New 125HP VFD Compressor	New 125HP Fixed Speed Compressor w/ modulation or load no-load control	0	$18,750.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E016	5.7	100%	100%	100%	100%	-	-
Compressed Air Efficiency - MN	Demand Side Study	Demand-side compressed air and vacuum system studies	Study Completed	No Study Completed	0	$4,970.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E017	5.8	100%	100%	100%	100%	-	-
Compressed Air Efficiency - MN	Pressure Flow Controller	Precision System Pressure Regulator or Flow Controller Installed in Compressed Air System	New Pressure/Flow Controller Installed w/ Optimized Pressures	Non-Optimized Compressed Air System	0	$2,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E018	5.9	100%	100%	100%	100%	-	-
Compressed Air Efficiency - MN	Storage Tank	Compressed Air Storage Tank for Load/Unload Systems	New Additional Storage Tanks Installed	Fixed Speed Load/Unload Compressed Air System	20	$2,000.00	$3,093.33	17,727	1.907	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E019	5.1	100%	100%	100%	100%	3	-
Compressed Air Efficiency - MN	Dryer Purge Demand Controls	Heated Desiccant Dryer w/ Dewpoint/Purge Controls	New Heated Desiccant Dryer w/ Purge/Dewpoint Controls	Uncontrolled Heatless Desiccant Dryer	15	$2,888.00	$3,403.67	95,675	10.487	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E020	5.4	100%	100%	100%	100%	3	-
Compressed Air Efficiency - MN	Dryer Purge Demand Controls	Heated Blower Purge Desiccant Dryer w/ Purge/Dewpoint Controls	New Heated Blower Purge Desiccant Dryer w/ Purge/Dewpoint Control	Uncontrolled Heatless Desiccant Dryer	18	$2,888.00	$8,754.00	56,090	6.368	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E021	5.4	100%	100%	100%	100%	3	-
Compressed Air Efficiency - MN	Leak Fixes	Compressed Air Leak Fixes	Leaks & Waste Found and Repaired	Existing Compressed Air System with Leaks & Waste that have not been repaired	0	$1,500.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTCAIR	Bus	Electric Only	Electric Only	E022	5.11	100%	100%	100%	100%	-	-
Compressed Air Efficiency - MN	Industrial Battery Chargers	High efficiency battery chargers for industrial equipment	High frequency industrial battery chargers	Low efficiency industrial battery chargers, ferroresonant or HCR	0	$250.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Forklift	Bus	Electric Only	Electric Only	E023	5.12	100%	100%	100%	100%	-	-
Compressed Air Efficiency - MN	Forklift Electrification	Lithium-Ion battery forklift	Electric forklift with lithium-ion battery	Propane forklift	0	$4,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Forklift	Bus	Electrification - Propane	Electric Only	E024	5.13	100%	100%	100%	100%	-	-
Compressed Air Efficiency - MN	Custom Compressed Air Project	Custom compressed air, blower, and vacuum opportunities. With Study	New Equipment	Old or less efficient systems or equipment	20	$10,342.45	$12,586.62	26,775	4.092	0.0	$134.17	MN-BUS-CUSTCAIR	BUS	Electric Only	Electric Only	G009	7.1	100%	100%	100%	100%	52	-
Compressed Air Efficiency - MN	Custom Compressed Air Project	Custom compressed air, blower, and vacuum opportunities. Without Study	New Equipment	Old or less efficient systems or equipment	0	$2,167.83	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTCAIR	BUS	Electric Only	Electric Only	G031	7.1	100%	100%	100%	100%	-	-
CPP TOU Pilot - MN	Critical Peak Pricing	New Participating Customer	Reduction of building electrical load due to participation in this program and higher prices implemented when the electric grid experiences peak demand periods	No participation in program	1	$0.00	$0.00	2,786	696.470	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T025	4.5	100%	100%	100%	100%	-	
CPP TOU Pilot - MN	Critical Peak Pricing	Existing Participating Customer	Reduction of building electrical load due to participation in this program and higher prices implemented when the electric grid experiences peak demand periods	No participation in program	1	$0.00	$0.00	2,786	696.470	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T026	4.5	100%	100%	100%	100%	-	
CPP TOU Pilot - MN	Critical Peak Pricing	New Participating Customer	Reduction of building electrical load due to participation in this program and higher prices implemented when the electric grid experiences peak demand periods	No participation in program	1	$0.00	$0.00	2,786	696.470	0.0	$0.00	MN-BUS-PEAK_CNT	Bus	DR	Electric Only	T063	5.8	100%	100%	100%	100%		
CPP TOU Pilot - MN	Critical Peak Pricing	Existing Participating Customer	Reduction of building electrical load due to participation in this program and higher prices implemented when the electric grid experiences peak demand periods	No participation in program	1	$0.00	$0.00	2,786	696.470	0.0	$0.00	MN-BUS-PEAK_CNT	Bus	DR	Electric Only	T064	6.8	100%	100%	100%	100%		
Custom Efficiency - MN	Custom Custom Electric Project	Custom Efficiency Electric	High Efficiency Product/system	Less Efficient Product/Systems	19	$12,526.78	$558,809.63	354,692	45.493	0.0	$6,399.13	MN-BUS-CUSTOM	BUS	Electric Only	Electric Only	G002	7.1	100%	100%	100%	100%	8	-
Custom Efficiency - MN	Custom Gas Project	Custom Efficiency Gas	High Efficiency Product/system	Less Efficient Product/Systems	19	$12,823.85	$620,175.00	0	0.000	7,784.8	$59,676.00		BUS	Gas Only	Gas Only	G003	7.1	100%	100%	100%	100%	-	2
Custom Efficiency - MN	Custom Electrification Equipment	Custom Efficient Fuel Switching	Gas equipment	Efficient electric equipment	20	$862.70	$12,000.00	-6,165	0.000	98.6	$0.00	MN-BUS-CUSTOM	BUS	Beneficial Electrification	Combo	G041	7.1	100%	100%	100%	100%		
Custom Efficiency - MN	Load Shifting	Equipment Based Load Shift	Equipment-based load shift to off peak hours	Unshifted peak load	15	$22,500.00	$50,000.00	0	50.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	G042	7.1	100%	100%	100%	100%		
Custom Efficiency - MN	Custom Electrification Equipment	Custom Efficient Fuel Switching	Gasoline Equipment	Efficient electric equipment	20	$862.70	$12,000.00	-6,165	0.000	820.0	$0.00	MN-BUS-CUSTOM	BUS	Electrification - Gasoline	Combo	G052	7.1	100%	100%	100%	100%		
Custom Efficiency - MN	Custom Electrification Equipment	Custom Efficient Fuel Switching	Propane Equipment	Efficient electric equipment	20	$862.70	$12,000.00	-6,165	0.000	1,077.6	$0.00	MN-BUS-CUSTOM	BUS	Electrification - Propane	Combo	G053	7.1	100%	100%	100%	100%		
Custom Efficiency - MN	In-Depth Study	Custom Studies Electric				$14,679.49	$28,510.91						BUS	Electric Only	Electric Only	R008	Combo	100%	100%	100%	100%		
Custom Efficiency - MN	In-Depth Study	Custom Studies Gas				$12,417.53	$36,884.88						BUS	Gas Only	Gas Only	R009		100%	100%	100%	100%		
Custom Efficiency - MN	In-Depth Study	Beneficial Electrification Studies				$8,680.00	$21,148.00						BUS	Beneficial Electrification	Electric Only	R024		100%	100%	100%	100%		
Data Center Efficiency - MN	EDA	New Construction, addition or renovation for Data Centers	Highly efficient data center	Standard efficiency new data center	0	$23,191.92	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	D007		100%	100%	100%	100%	-	-
Data Center Efficiency - MN	Computer VDI	Zero & Thin Client Installations	Server & software at data center, along with thin-client or zero-client device, to replace desktop CPU (e.g. VM Ware w/ Wyse thin-client system, Pano-Logic zero-client system); meeting Energy Star 6.0 specification	Desktop computers meeting ENERGY STAR 3.0 specifications	0	$10.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-LITE_CI_	BUS	Electric Only	Electric Only	F001	6.1	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	Data Center Efficiency Implementation	Data Center Measures - Study Identified	High Efficiency Product/system	Less Efficient Product/Systems	0	$5,708.54	$0.00	0	0.000	0.0	$0.00	MN-BUS-Data Center Blend	BUS	Electric Only	Electric Only	G004	7.1	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	Data Center Efficiency Implementation	Data Center Measures - Customer Identified	High Efficiency Product/system	Less Efficient Product/Systems	0	$5,708.54	$0.00	0	0.000	0.0	$0.00	MN-BUS-Data Center Blend	BUS	Electric Only	Electric Only	G005	7.1	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	Data Center Efficiency Implementation	Data Center Measures - On Site	High Efficiency Product/system	Less Efficient Product/Systems	0	$5,708.54	$0.00	0	0.000	0.0	$0.00	MN-BUS-Data Center Blend	BUS	Electric Only	Electric Only	G006	7.1	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	Load Shifting	Equipment Based Load Shift	Equipment-based load shift to off peak hours	Unshifted peak load	0	$22,500.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	G048	7.1	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	Data Center Efficiency Prescriptive	Average Cooling Project	Efficient Equipment	Old System	11	$45,500.67	$441.00	0	0.442	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	J017	9.1	100%	100%	100%	100%	2	-
Data Center Efficiency - MN	Data Center Efficiency Prescriptive	Average Lighting Project	Efficient Equipment	Old System	0	$405.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	J018	9.1	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	Data Center Efficiency Prescriptive	Average Motor Project	Efficient Equipment	Old System	15	$16,120.00	$4,776.08	36,983	3.293	0.0	$0.00	MN-BUS-MOTORASD	BUS	Electric Only	Electric Only	J019	9.1	100%	100%	100%	100%	4	-
Data Center Efficiency - MN	Data Center Efficiency Prescriptive	Average Computer Project	Efficient Equipment	Old System	0	$4,717.89	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	J020	9.1	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	CRAC Units	Downflow, Air-Cooled w/ Economizer, 65,000 ≤ Net Sensible Btuh < 240,000	More efficient CRAC unit	CRAC unit at Code efficiency	0	$1,457.88	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	L023	11.11	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	CRAC Units	Downflow, Air-Cooled w/ Economizer, 240,000 ≤ Net Sensible Btuh < 760,000	More efficient CRAC unit	CRAC unit at Code efficiency	0	$3,195.20	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	L024	11.11	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	CRAC Units	Upflow, Air-Cooled w/ Economizer, 240,000 ≤ Net Sensible Btuh < 760,000	More efficient CRAC unit	CRAC unit at Code efficiency	0	$3,301.40	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	L025	11.11	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	CRAC Units	Downflow, Glycol-Cooled, 65,000 ≤ Net Sensible Btuh < 240,000	More efficient CRAC unit	CRAC unit at Code efficiency	0	$893.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	L026	11.11	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	CRAC Units	Upflow, Glycol-Cooled w/ Economizer, 240,000 ≤ Net Sensible Btuh < 760,000	More efficient CRAC unit	CRAC unit at Code efficiency	0	$1,656.48	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	L027	11.11	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	Plate & Frame Heat Exchangers	Chilled Water Systems Waterside Economizer	Chilled water system with waterside economizer	Chilled water system without economizer	0	$21,200.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	L028	11.12	100%	100%	100%	100%	-	-
Data Center Efficiency - MN	In-Depth Study	Data Center Efficiency Study	Study Performed		0	$7,350.00	$0.00	0	0.000	0.0	$0.00		BUS	Electric Only	Electric Only	R010		100%	100%	100%	100%	-	-
Efficiency Controls - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	0	$4,171.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T013	4.2	100%	100%	100%	100%	-	-
Efficiency Controls - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	0	$4,171.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T014	4.2	100%	100%	100%	100%	-	-
Efficiency Controls - MN	Efficiency Controls Gas Project	Efficiency Controls - Gas	New Building Controls	Old Building Controls	15	$4,005.47	$11,502.33	0	0.000	158.7	$213.17		BUS	Gas Only	Gas Only	G007	7.1	100%	100%	100%	100%	-	6
Efficiency Controls - MN	Efficiency Controls Electric Project	Efficiency Controls - Electric	New Building Controls	Old Building Controls	15	$8,375.64	$25,566.56	68,087	6.973	0.0	$905.44	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	G008	7.1	100%	100%	100%	100%	27	-
Efficiency Controls - MN	Pneumatic to DDC	Pneumatic to Wireless DDC Thermostat - Small Office	New wireless pneumatic thermostat with a direct digital-to-pneumatic signal for control of such end devices as VAV boxes, fan powered boxes, reheat coils, fan coils and radiant heat.	An existing pneumatic thermostat	0	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-EMS	BUS	Combo	Combo	H001	20.1	100%	100%	100%	100%	-	-
Efficiency Controls - MN	Pneumatic to DDC	Pneumatic to Wireless DDC Thermostat - Medium Office	New wireless pneumatic thermostat with a direct digital-to-pneumatic signal for control of such end devices as VAV boxes, fan powered boxes, reheat coils, fan coils and radiant heat.	An existing pneumatic thermostat	0	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-EMS	BUS	Combo	Combo	H002	20.1	100%	100%	100%	100%	-	-
Efficiency Controls - MN	Pneumatic to DDC	Pneumatic to Wireless DDC Thermostat - Large Office	New wireless pneumatic thermostat with a direct digital-to-pneumatic signal for control of such end devices as VAV boxes, fan powered boxes, reheat coils, fan coils and radiant heat.	An existing pneumatic thermostat	0	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-EMS	BUS	Combo	Combo	H003	20.1	100%	100%	100%	100%	-	-
Efficiency Controls - MN	Pneumatic to DDC	Pneumatic to Wireless DDC Thermostat - Small Office (Electric Heating)	New wireless pneumatic thermostat with a direct digital-to-pneumatic signal for control of such end devices as VAV boxes, fan powered boxes, reheat coils, fan coils and radiant heat.	An existing pneumatic thermostat	0	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-EMS	BUS	Electric Only	Electric Only	H004	20.1	100%	100%	100%	100%	-	-
Efficiency Controls - MN	Pneumatic to DDC	Pneumatic to Wireless DDC Thermostat - Medium Office (Electric Heating)	New wireless pneumatic thermostat with a direct digital-to-pneumatic signal for control of such end devices as VAV boxes, fan powered boxes, reheat coils, fan coils and radiant heat.	An existing pneumatic thermostat	0	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-EMS	BUS	Electric Only	Electric Only	H005	20.1	100%	100%			-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Efficiency Controls - MN	Pneumatic to DDC	Pneumatic to Wireless DDC Thermostat - Large Office (Electric Heating)	New wireless pneumatic thermostat with a direct digital-to-pneumatic signal for control of such end devices as VAV boxes, fan powered boxes, reheat coils, fan coils and radiant heat.	An existing pneumatic thermostat	8	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-EMS	BUS	Electric Only	Electric Only	H006	20.1	100%	100%	100%	100%	-	-
Efficiency Controls - MN	Demand Control	RTU with Demand Control Ventilation	RTU With Demand Control	RTU Without Demand Control	15	$303.13	$2,350.00	2,000	0.000	350.0	$0.00	MN-BUS-Cool with Economizer	BUS	Combo	Combo	H007	20.3	100%	100%	100%	100%	13	11
Efficiency Controls - MN	GREM	GREM - PTAC/Electric Resistance	A thermostat (room HVAC controller) with guest room energy management control	An existing manual thermostat control	8	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-EMS	BUS	Electric Only	Electric Only	H008	20.2	100%	100%	100%	100%	-	-
Efficiency Controls - MN	GREM	GREM - PTAC/Hot Water or Fan Coil	A thermostat (room HVAC controller) with guest room energy management control	An existing manual thermostat control	8	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-EMS	BUS	Combo	Combo	H009	20.2	100%	100%	100%	100%	-	-
Efficiency Controls - MN	GREM	GREM - PTHP	A thermostat (room HVAC controller) with guest room energy management control	An existing manual thermostat control	8	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-EMS	BUS	Electric Only	Electric Only	H010	20.2	100%	100%	100%	100%	-	-
Efficiency Controls - MN	GREM	GREM - Chilled Water/Hot Water Fan Coil	A thermostat (room HVAC controller) with guest room energy management control	An existing manual thermostat control	8	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-EMS	BUS	Combo	Combo	H011	20.2	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	ENERGY STAR Clothes Dryer	ENERGY STAR Clothes Dryer	Energy Star Clothes Dryer >= 4.4 Cu.Ft.	Industry Standard	12	$40.00	$75.00	45	0.005	0.0	$0.00	MN-RES-SFLIT	Res	Electric Only	Combo	A016	1.6	100%	100%	100%	100%	67	-
Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Front-loading Clothes Washer - Combo Customers w/ Electric DHW	Energy Star Front-Loading Clothes Washer w/ electric DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	$40.00	$50.00	48	0.005	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A019	1.7	100%	100%	100%	100%	13	-
Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Front-loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Front-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	$20.00	$25.00	25	0.003	0.2	$0.00	MN-RES-FLAT	Res	Combo	Combo	A020	1.7	100%	100%	100%	100%	49	49
Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Front-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Front-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	$20.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Electric Only	A086	1.7	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Front-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Front-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	$20.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Gas Only	A087	1.7	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Top-loading Clothes Washer - Combo Customers w/ Electric DHW	Energy Star Top-Loading Clothes Washer w/ electric DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	$40.00	$50.00	60	0.008	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A021	1.7	100%	100%	100%	100%	30	-
Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Top-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Top-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	$20.00	$25.00	29	0.004	0.2	$0.00	MN-RES-FLAT	Res	Combo	Combo	A022	1.7	100%	100%	100%	100%	47	47
Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Top-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Top-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	$20.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Electric Only	A088	1.7	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Top-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Top-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	$20.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Gas Only	A089	1.7	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	ENERGY STAR Refrigerator	Refrigerator Replacement	ENERGY STAR ® Refrigerators	Industry Standard	14	$15.00	$50.00	45	0.005	0.0	$0.00	MN-RES-SFRFL	Res	Electric Only	Combo	A033	1.9	100%	100%	100%	100%	1,699	-
Efficient New Home Construction - MN	New Homes	Low Income Envelope Improvements - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	$500.00	$1,000.24	1,191	0.306	6.9	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O001	15.1	100%	100%	100%	100%	14	14
Efficient New Home Construction - MN	New Homes	Low Income Envelope Improvements - Electric Only	Energy Efficient Home	Reference Home Based upon Local Code	20	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O002	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	Low Income Envelope Improvements - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	$500.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Gas Only	O003	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	10% to 15% improvement over code - Combo Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	$500.00	$682.37	1,034	0.263	11.1	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O004	15.1	100%	100%	100%	100%	266	142
Efficient New Home Construction - MN	New Homes	15% to 20% improvement over code - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	$1,000.00	$1,364.61	1,378	0.337	17.8	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O005	15.1	100%	100%	100%	100%	850	477
Efficient New Home Construction - MN	New Homes	20% to 25% improvement over code - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	$1,500.00	$1,930.19	1,964	0.451	28.5	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O006	15.1	100%	100%	100%	100%	1,038	604
Efficient New Home Construction - MN	New Homes	25% to 30% improvement over code - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	$2,000.00	$2,320.24	2,092	0.566	40.5	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O007	15.1	100%	100%	100%	100%	759	480
Efficient New Home Construction - MN	New Homes	30% to 35% improvement over code - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	$3,000.00	$2,269.29	2,668	0.776	59.0	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O008	15.1	100%	100%	100%	100%	136	64
Efficient New Home Construction - MN	New Homes	35% and greater improvement over code - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	$4,000.00	$4,152.14	3,938	0.966	77.4	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O009	15.1	100%	100%	100%	100%	35	15
Efficient New Home Construction - MN	New Homes	10% to 15% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O010	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	15% to 20% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O011	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	20% to 25% improvement over code - Electric Only	Energy Efficient Home	Reference Home Based upon Local Code	20	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O012	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	25% to 30% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O013	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	30% to 35% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O014	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	35% and greater improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O015	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	10% to 15% improvement over code - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	$500.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Gas Only	O016	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	15% to 20% improvement over code - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	$1,000.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Gas Only	O017	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	20% to 25% improvement over code - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	$1,500.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Gas Only	O018	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	25% to 30% improvement over code - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	$2,000.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Gas Only	O019	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	30% to 35% improvement over code - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	$3,000.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Gas Only	O020	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes	35% and greater improvement over code - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	$4,000.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Gas Only	O021	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes - 100% Electric Homes	10% to 15% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O022	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes - 100% Electric Homes	15% to 20% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	$1,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O023	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes - 100% Electric Homes	20% to 25% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	$1,500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O024	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes - 100% Electric Homes	25% to 30% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	$2,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O025	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes - 100% Electric Homes	30% to 35% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	$3,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O026	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	New Homes - 100% Electric Homes	35% and greater improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	$4,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	O027	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	Builder Incentive	ENERGY STAR Home	Energy Efficient Home that is ENERGY STAR Homes v3.2 Certified	Reference Home Based upon Local Code	20	$250.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O028	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	Builder Incentive	ENERGY STAR Home	Energy Efficient Home that is ENERGY STAR Next Gen Certified	Reference Home Based upon Local Code	20	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Combo	Combo	O029	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	Rater Incentive	Energy Efficient Home - Less than 30% BTC	Energy Efficient Home -20-30% BTC	Reference Home Based upon Local Code	20	$125.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	Res	Combo	Combo	O031	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	Rater Incentive	Energy Efficient Home - 30% & Higher BTC	Energy Efficient Home - 30% & Higher BTC	Reference Home Based upon Local Code	20	$250.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	Res	Combo	Combo	O032	15.1	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	Codes & Standards	Residential Codes 2024	Influenced code level	Uninfluenced code level	20	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Combo	Combo	O001	1.2	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Efficient New Home Construction - MN	Codes & Standards	Residential Codes 2025	Influenced code level	Uninfluenced code level	20	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Combo	Combo	Q002	1.2	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	Codes & Standards	Residential Codes 2026	Influenced code level	Uninfluenced code level	20	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Combo	Combo	Q003	1.2	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$125.00	$62.50	63	0.148	4.5	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U074	17.7	100%	100%	100%	100%	457	457
Efficient New Home Construction - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$125.00	$26.34	55	0.124	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Electric Only	U079	17.7	100%	100%	100%	100%	606	-
Efficient New Home Construction - MN	Smart Thermostat	Install Energy Star certified smart thermostat - GAS Only	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$125.00	$89.26	0	0.000	5.2	$0.00		RES	Gas Only	Gas Only	U084	17.7	100%	100%	100%	100%	-	142
Efficient New Home Construction - MN	ES Radon Fans	Energy Star Radon Fans	Energy Star Radon Fan - Radonaway RP140	Radonaway RP145	10	$20.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	RES	Electric Only	Combo	U095	17.9	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	Water Heater DR	Demand response capability on grid enabled electric resistance water heater	Demand response from electric resistance water heater	No management of water heater time of use	1	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	S181	19.2	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045)	Heat Pump Water Heater w/ DR Management	No management of water heater time of use	1	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HPWH_DR	RES	DR	Combo	S188	19.2	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	HP Water Heater	Heat Pump Water Heater - New Homes	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$400.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S274	19.2	100%	100%	100%	100%	-	-
Efficient New Home Construction - MN	HP Water Heater	Heat Pump Water Heater + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S276	19.2	100%	100%	100%	100%	-	-
Electric Rate Savings - MN	Electric Rate Savings	Participating Customer	Utility load control of at least 50 kW for control period	No control	5	$0.00	$0.00	142	138.733	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T001	4.1	100%	100%	100%	100%	1	-
Empower Intelligence - MN	Custom Electric Project	Custom Virtual Commissioning	Improved Building Operation	Standard Building Operation	7			71,368	0.000	60.6		MN-BUS-RECOM	Bus	Combo	Combo	G051	7.1	100%	100%	100%	100%	-	-
Empower Intelligence - MN	Virtual Commissioning Subscription	One-year's subscription to receive virtual commissioning					$1,032.00							Combo	Combo	R021		100%	100%	100%	100%		
Energy Efficient Showerhead - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2024	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.99	$2.12	79	0.011	0.0	$6.28	MN-RES-SFWHT	Res	Electric Only	Combo	S009	19.1	100%	100%	30%	100%	348	-
Energy Efficient Showerhead - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2025	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.99	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S010	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2026	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.99	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S011	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Aerators - EWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2024	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.65	$0.73	72	0.010	0.0	$6.56	MN-RES-SFWHT	Res	Electric Only	Combo	S012	19.1	100%	100%	35%	100%	390	-
Energy Efficient Showerhead - MN	Aerators - EWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2025	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.65	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S013	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Aerators - EWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2026	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.65	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S014	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2024	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.65	$0.69	68	0.009	0.0	$6.22	MN-RES-SFWHT	Res	Electric Only	Combo	S015	19.1	100%	100%	35%	100%	292	-
Energy Efficient Showerhead - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2025	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.65	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S016	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2026	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.65	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S017	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2024	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.99	$2.21	0	0.000	0.3	$6.62		Res	Gas Only	Combo	S036	19.1	100%	100%	30%	100%	-	1,987
Energy Efficient Showerhead - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2025	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.99	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S037	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2026	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.99	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S038	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Aerators - GWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2024	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.65	$0.75	0	0.000	0.3	$6.91		Res	Gas Only	Combo	S039	19.1	100%	100%	35%	100%	-	2,094
Energy Efficient Showerhead - MN	Aerators - GWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2025	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.65	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S040	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Aerators - GWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2026	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.65	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S041	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2024	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.65	$0.71	0	0.000	0.3	$6.52		Res	Gas Only	Combo	S042	19.1	100%	100%	35%	100%	-	1,722
Energy Efficient Showerhead - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2025	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.65	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S043	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2026	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.65	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S044	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2024	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.75	$4.13	561	0.040	0.0	$51.33	MN-RES-SFWHT	Res	Electric Only	Combo	S093	19.1	100%	100%	64%	100%	389	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2025	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.75	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S094	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2026	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.75	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S095	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2024	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.75	$3.95	362	0.026	0.0	$33.11	MN-RES-SFWHT	Res	Electric Only	Combo	S096	19.1	100%	100%	64%	100%	291	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2025	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.75	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S097	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2026	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.75	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S098	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2024	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$2.84	$10.44	575	0.041	0.0	$52.79	MN-RES-SFWHT	Res	Electric Only	Combo	S099	19.1	100%	100%	64%	100%	39	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2025	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$2.84	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S100	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2026	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$2.84	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S101	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2024	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$2.84	$4.44	164	0.012	0.0	$31.44	MN-RES-SFWHT	Res	Electric Only	Combo	S102	19.1	100%	100%	0%	100%	1	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2025	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$2.84	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S103	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2026	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$2.84	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S104	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2024	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	$1.48	$5.64	575	0.041	0.0	$53.27	MN-RES-SFWHT	Res	Electric Only	Combo	S105	19.1	100%	100%	64%	100%	39	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2025	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	$1.48	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S106	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2026	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	$1.48	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S107	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2024	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	$1.48	$3.70	254	0.019	0.0	$31.07	MN-RES-SFWHT	Res	Electric Only	Combo	S108	19.1	100%	100%	64%	100%	2	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2025	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	$1.48	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S109	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2026	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	$1.48	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S110	19.1	100%	100%	0%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2024	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.75	$4.36	0	0.000	2.6	$54.84		Res	Gas Only	Combo	S131	19.1	100%	100%	64%	100%	-	1,997
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2025	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.75	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S132	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2026	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.75	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S133	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2024	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.75	$4.11	0	0.000	1.6	$34.69		Res	Gas Only	Combo	S134	19.1	100%	100%	64%	100%	-	1,718
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2025	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.75	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S135	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2026	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.75	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S136	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2024	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$2.84	$20.67	0	0.000	4.9	$118.58		Res	Gas Only	Combo	S137	19.1	100%	100%	64%	100%	-	22
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2025	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$2.84	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S138	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2026	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$2.84	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S139	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2024	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$2.84	$20.91	0	0.000	3.4	$130.61		Res	Gas Only	Combo	S140	19.1	100%	100%	64%	100%	-	2
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2025	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$2.84	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S141	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2026	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$2.84	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S142	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2024	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	$1.48	$9.55	0	0.000	4.2	$106.44		Res	Gas Only	Combo	S143	19.1	100%	100%	64%	100%	-	26
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2025	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	$1.48	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S144	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2026	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	$1.48	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S145	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2024	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	$1.48	$8.15	0	0.000	2.4	$80.66		Res	Gas Only	Combo	S146	19.1	100%	100%	64%	100%	-	4
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2025	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	$1.48	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S147	19.1	100%	100%	0%	100%	-	-
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2026	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	$1.48	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S148	19.1	100%	100%	0%	100%	-	-
Foodservice Equipment - MN	Dishwasher Combo	Dishwashers - Primary Fuel: Elec; Secondary Fuel: Gas	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	0	$170.64	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Combo	Combo	A010	1.1	100%	100%	100%	100%	-	-
Foodservice Equipment - MN	Dishwasher Combo	Dishwashers - Primary Fuel: Gas; Secondary Fuel: Elec	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	0	$212.43	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Combo	Combo	A011	1.1	100%	100%	100%	100%	-	-
Foodservice Equipment - MN	Dishwasher Electric	Dishwashers - Primary Fuel: Elec; Secondary Fuel: Elec	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	10	$125.00	$584.29	9,380	1.219	0.0	$140.43	MN-BUS-FLAT	Bus	Electric Only	Electric Only	A012	1.1	100%	100%	100%	100%	7	-
Foodservice Equipment - MN	Dishwasher Electric	Dishwashers - Primary Fuel: Elec; Secondary Fuel: None	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	0	$250.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Electric Only	A013	1.1	100%	100%	100%	100%	-	-
Foodservice Equipment - MN	Dishwasher Gas	Dishwashers - Primary Fuel: Gas; Secondary Fuel: Gas	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	0	$250.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	A014	1.1	100%	100%	100%	100%	-	-
Foodservice Equipment - MN	Dishwasher Gas	Dishwashers - Primary Fuel: Gas; Secondary Fuel: None	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	0	$250.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	A015	1.1	100%	100%	100%	100%	-	-
Foodservice Equipment - MN	Food Service	Combi-Oven	Combination Oven	Steamer	11	$1,000.00	$4,346.84	0	0.000	144.4	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A039	1.2	100%	100%	100%	100%	-	8
Foodservice Equipment - MN	Food Service	Commercial Gas Fryer	High Efficiency Unit	Standard Efficiency Unit	11	$250.00	$2,376.51	0	0.000	27.1	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A040	1.2	100%	100%	100%	100%	-	11
Foodservice Equipment - MN	Food Service	Convection Oven	Convection Oven	Deck Oven	11	$500.00	$1,977.11	0	0.000	99.8	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A041	1.2	100%	100%	100%	100%	-	11
Foodservice Equipment - MN	Food Service	Conveyor Oven	Conveyor Oven	Pizza Deck Oven	0	$750.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A042	1.2	100%	100%	100%	100%	-	-
Foodservice Equipment - MN	Food Service	High Efficiency Charbroiler	High Efficiency Charbroiler	Standard Charbroiler	11	$300.00	$3,631.20	0	0.000	146.6	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A043	1.2	100%	100%	100%	100%	-	1
Foodservice Equipment - MN	Food Service	High Efficiency Salamander Broiler	High Efficiency Salamander Broiler	Standard Salamander Broiler	11	$150.00	$1,508.00	0	0.000	41.6	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A044	1.2	100%	100%	100%	100%	-	1
Foodservice Equipment - MN	Food Service	Pasta Cooker	Pasta Cooker	Gas Range	0	$200.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A045	1.2	100%	100%	100%	100%	-	-
Foodservice Equipment - MN	Food Service	Rotating Rack Oven	Rotating Rack Oven	Deck Oven	11	$500.00	$2,532.14	0	0.000	104.3	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A046	1.2	100%	100%	100%	100%	-	2
Foodservice Equipment - MN	Food Service	Rotisserie Oven	Rotisserie Oven - Infrared	Open Flame Rotisserie Oven	0	$500.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A047	1.2	100%	100%	100%	100%	-	-
Foodservice Equipment - MN	Food Service	Upright Broiler	Upright Broiler	Standard Radiant Broiler	0	$600.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A048	1.2	100%	100%	100%	100%	-	-
Foodservice Equipment - MN	Food Service Electric	Hot Food Holding Cabinet	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	12	$400.00	$1,713.00	2,075	0.324	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Combo	A049	1.2	100%	100%	100%	100%	6	-
Foodservice Equipment - MN	Steam Cooker	3 Pan Steam Cooker	Energy Star 3 Pan Steam Cooker	Non- Energy Star 3 Pan Steam Cooker	12	$349.72	$2,270.00	0	0.000	57.0	$141.96	MN-BUS-FLAT	Bus	Gas Only	Combo	A058	1.4	100%	100%	100%	100%	-	1
Foodservice Equipment - MN	Steam Cooker	4 Pan Steam Cooker	Energy Star 4 Pan Steam Cooker	Non- Energy Star 4 Pan Steam Cooker	0	$402.64	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A059	1.4	100%	100%	100%	100%	-	-
Foodservice Equipment - MN	Steam Cooker	5 Pan Steam Cooker	Energy Star 5 Pan Steam Cooker	Non- Energy Star 5 Pan Steam Cooker	0	$456.38	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A060	1.4	100%	100%	100%	100%	-	-
Foodservice Equipment - MN	Steam Cooker	6+ Pan Steam Cooker	Energy Star 6+ Pan Steam Cooker	Non- Energy Star 6+ Pan Steam Cooker	13	$509.32	$2,270.00	0	0.000	71.2	$432.43	MN-BUS-FLAT	Bus	Gas Only	Combo	A061	1.4	100%	100%	100%	100%	-	5
Foodservice Equipment - MN	Demand Control Ventilation	Demand Controlled Ventilation - Electric Only or Gas Only or Combo Customer	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	19	$751.03	$2,252.26	6,913	1.023	100.6	$29.38	MN-BUS-FLAT	Bus	Combo	Combo	M076	12.8	100%	100%	100%	100%	18	11
Home Energy Insights - MN	Behavioral Residential	Online Energy Feedback & Tools	Treatment	Control	1	$0.00	$0.00	19,458,000	0.000	31,031.1	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C005		100%	100%	100%	100%	1	1
Home Energy Insights - MN	Behavioral Residential	ROLL-UP: Existing Participant - 2024	Treatment	Control	1	$0.00	$0.00	405,902	132.058	883.3	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C006		100%	100%	100%	100%	154	154
Home Energy Insights - MN	Behavioral Residential	ROLL-UP: New Participant - 2024	Treatment	Control	1	$0.00	$0.00	384,414	536.000	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C007		100%	100%	100%	100%	4	-
Home Energy Insights - MN	Behavioral Residential	ROLL-UP: Existing Participant - 2025	Treatment	Control	1	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C008		100%	100%	100%	100%	-	-
Home Energy Insights - MN	Behavioral Residential	ROLL-UP: New Participant - 2025	Treatment	Control	1	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C009		100%	100%	100%	100%	-	-
Home Energy Insights - MN	Behavioral Residential	ROLL-UP: Existing Participant - 2026	Treatment	Control	1	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C010		100%	100%	100%	100%	-	-
Home Energy Insights - MN	Behavioral Residential	ROLL-UP: New Participant - 2026	Treatment	Control	1	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C011		100%	100%	100%	100%	-	-
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustment-Online Group Savings	Treatment	Control	0	$0.00	$0.00	-12,972,000	0.000	-20,687.4	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C012		100%	100%	100%	100%	1	1
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustments Rollup: Existing Participants 2024 Savings	Treatment	Control	0	$0.00	$0.00	-270,601	-88.039	-588.9	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C013		100%	100%	100%	100%	154	154
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustments Rollup: New Participant 2024 Savings	Treatment	Control	0	$0.00	$0.00	-256,276	-357.334	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C014		100%	100%	100%	100%	4	-
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustments Rollup: Existing Participants 2025 Savings	Treatment	Control	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C015		100%	100%	100%	100%	-	-
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustments Rollup: New Participant 2025 Savings	Treatment	Control	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C016		100%	100%	100%	100%	-	-
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustments Rollup: Existing Participants 2026 Savings	Treatment	Control	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C017		100%	100%	100%	100%	-	-
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustments Rollup: New Participant 2026 Savings	Treatment	Control	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	C018		100%	100%	100%	100%	-	-
Home Energy Insights - MN	High Bill Alerts	High Bill Alert	Customer enrolled in High Bill Alerts	Customer not enrolled in High Bill Alerts	1	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Combo	C020		100%	100%	100%	100%	-	-
Home Energy Insights - MN	High Bill Alerts	Behavioral Adjustments High Bill Alert Savings	Customer enrolled in High Bill Alerts	Customer not enrolled in High Bill Alerts	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Combo	C022		100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	7	$20.00	$26.00	68	0.009	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A001	1.5	100%	100%	75%	100%	1,226	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Home Energy Savings Program - MN	Dehumidifier Recycling	Dehumidifier Removal and Recycling	Removal of dehumidifier	Existing dehumidifier	5	$15.00	$(16.07)	130	0.040	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	A008	1.1	100%	100%	100%	100%	630	-
Home Energy Savings Program - MN	ENERGY STAR Refrigerator	Freezer Replacement	ENERGY STAR ® Freezers	Industry Standard	11	$407.50	$0.00	0	0.000	0.0	$0.00	MN-RES-SFRF1	Res	Electric Only	Combo	A034	1.9	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	ENERGY STAR Refrigerator	Refrigerator Replacement	ENERGY STAR ® Refrigerators	Industry Standard	14	$865.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFRF1	Res	Electric Only	Combo	A035	1.9	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Refrigerator Recycling	Freezer Removal and Recycling	Existing primary unit - age mostly >10 years	Existing primary unit - age mostly >10 years	7	$82.00	$(38.42)	212	0.036	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A051	1.11	100%	100%	100%	100%	332	-
Home Energy Savings Program - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Secondary Refrigerator	Existing Secondary Unit - age mostly > 15 years	8	$82.00	$(68.13)	237	0.027	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A052	1.11	100%	100%	100%	100%	612	-
Home Energy Savings Program - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Primary Refrigerator	Existing Primary Unit - age mostly > 15 years	8	$87.50	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A100	1.11	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	ENERGY STAR Dehumidifier	Installation of ENERGY STAR Dehumidifier	ENERGY STAR Dehumidifier (Current ENERGY STAR Criteria)	Standard Efficiency Dehumidifier (Current Federal Standard)	12	$289.00	$0.00	0	0.000	0.0	$0.00	MN-RES-ESTARREF	Res	Electric Only	Combo	A069	1.8	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Attic Insulation - Electric Heating and Cooling	Attic insulation in homes with electric heating / electric cooling	Home with R49 or more attic insulation	Existing home with 985 sqft avg attic area and R19 avg baseline insulation	20	$1,521.97	$(4,764.83)	1,205	0.138	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I001	8.1	100%	100%	100%	100%	2	-
Home Energy Savings Program - MN	Attic Insulation - Electric Heating Only	Attic insulation in homes with electric heating / no cooling	Home with R49 or more attic insulation	Existing home with 985 sqft avg attic area and R19 avg baseline insulation	20	$2,513.60	$0.00	0	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I002	8.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for combo customers	Home with R49 or more attic insulation	Existing home with 985 sqft avg attic area and R19 avg baseline insulation	20	$2,428.86	$(1,975.24)	61	0.126031616	0.5	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I003	8.1	100%	100%	100%	100%	99	113
Home Energy Savings Program - MN	Attic Insulation - Gas Heating Only	Attic insulation in homes with gas heating / no cooling	Home with R49 or more attic insulation	Existing home with 985 sqft avg attic area and R19 avg baseline insulation	20	$2,347.94	$(2,140.33)	0	0.000	7.0	$0.00		Res	Gas Only	Combo	I004	8.1	100%	100%	100%	100%	-	38
Home Energy Savings Program - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for gas-only customers	Home with R49 or more attic insulation	Existing home with 985 sqft avg attic area and R19 avg baseline insulation	20	$3,118.41	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I005	8.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Wall Insulation - Electric Heating and Cooling	Wall insulation in homes with electric heating / electric cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$2,919.49	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I006	8.2	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Wall Insulation - Electric Heating Only	Wall insulation in homes with electric heating / no cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$2,919.49	$0.00	0	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I007	8.2	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall insulation in homes with gas heating / electric cooling for combo customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$2,794.95	$(1,423.67)	110	0.0230303031	23.4	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I008	8.2	100%	100%	100%	100%	74	81
Home Energy Savings Program - MN	Wall Insulation - Gas Heating Only	Wall insulation in homes with gas heating / no cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$3,066.58	$(2,892.25)	0	0.000	26.0	$0.00		Res	Gas Only	Combo	I009	8.2	100%	100%	100%	100%	-	29
Home Energy Savings Program - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall insulation in homes with gas heating / electric cooling for gas-only customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$4,329.60	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I010	8.2	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Crawl Space Insulation - Electric Heating and Cooling	Crawl Space insulation in homes with electric heating / electric cooling	Home with R13 crawl space insulation added	Home with modist existing crawl space insulation (R1.9 above grade, R2.9 below grade)	20	$1,856.67	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I011	8.6	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Crawl Space Insulation - Electric Heating Only	Crawl Space insulation in homes with electric heating / no cooling	Home with R13 crawl space insulation added	Home with modist existing crawl space insulation (R1.9 above grade, R2.9 below grade)	20	$1,856.67	$0.00	0	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I012	8.6	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Crawl Space Insulation - Gas Heating / Electric Cooling	Crawl Space insulation in homes with gas heating / electric cooling for combo customers	Home with R13 crawl space insulation added	Home with modist existing crawl space insulation (R1.9 above grade, R2.9 below grade)	20	$1,856.67	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I013	8.6	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Crawl Space Insulation - Gas Heating Only	Crawl Space insulation in homes with gas heating / no cooling	Home with R13 crawl space insulation added	Home with modist existing crawl space insulation (R1.9 above grade, R2.9 below grade)	20	$1,856.67	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	I014	8.6	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Crawl Space Insulation - Gas Heating / Electric Cooling	Crawl Space insulation in homes with gas heating / electric cooling for gas-only customers	Home with R13 crawl space insulation added	Home with modist existing crawl space insulation (R1.9 above grade, R2.9 below grade)	20	$1,856.67	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I015	8.7	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Rim Joist Insulation - Electric Heating and Cooling	Rim Joist insulation in homes with electric heating / electric cooling	Home with R13 rim joist insulation added	Home with no rim joist insulation	20	$429.25	$(30.84)	2,472	0.283	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I016	8.7	100%	100%	100%	100%	2	-
Home Energy Savings Program - MN	Rim Joist Insulation - Electric Heating Only	Rim Joist insulation in homes with electric heating / no cooling	Home with R13 rim joist insulation added	Home with no rim joist insulation	20	$429.25	$0.00	0	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I017	8.7	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Rim Joist Insulation - Gas Heating / Electric Cooling	Rim Joist insulation in homes with gas heating / electric cooling for combo customers	Home with R13 rim joist insulation added	Home with no rim joist insulation	20	$429.25	$(30.84)	7	0.0027946429	0.4	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I018	8.7	100%	100%	100%	100%	11	13
Home Energy Savings Program - MN	Rim Joist Insulation - Gas Heating Only	Rim Joist insulation in homes with gas heating / no cooling	Home with R13 rim joist insulation added	Home with no rim joist insulation	20	$429.25	$(1,321.95)	0	0.000	0.3	$0.00		Res	Gas Only	Combo	I019	8.7	100%	100%	100%	100%	-	2
Home Energy Savings Program - MN	Rim Joist Insulation - Gas Heating / Electric Cooling	Rim Joist insulation in homes with gas heating / electric cooling for gas-only customers	Home with R13 rim joist insulation added	Home with no rim joist insulation	20	$429.25	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I020	8.7	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Air Sealing - Electric Heating and Cooling	Air sealing in homes with electric heating / electric cooling	Home with bypass air sealing performed	Existing home without air sealing	10	$405.76	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I021	8.3	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Air Sealing - Electric Heating Only	Air sealing in homes with electric heating / no cooling	Home with bypass air sealing performed	Existing home without air sealing	10	$405.76	$0.00	0	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I022	8.3	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for combo customers	Home with bypass air sealing performed	Existing home without air sealing	10	$405.76	$(30.84)	77	0.00431	21.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I023	8.3	100%	100%	100%	100%	100	114
Home Energy Savings Program - MN	Air Sealing - Gas Heating Only	Air sealing in homes with gas heating / no cooling	Home with bypass air sealing performed	Existing home without air sealing	10	$405.76	$(30.84)	0	0.000	19.0	$0.00		Res	Gas Only	Combo	I024	8.3	100%	100%	100%	100%	-	38
Home Energy Savings Program - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for gas-only customers	Home with bypass air sealing performed	Existing home without air sealing	10	$405.76	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I025	8.3	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Weatherstripping - Electric Heating and Cooling	Weatherstripping in homes with electric heating / electric cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$32.00	$(32.00)	88	0.01	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I026	8.4	100%	100%	100%	100%	1	-
Home Energy Savings Program - MN	Weatherstripping - Electric Heating Only	Weatherstripping in homes with electric heating / no cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$32.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I027	8.4	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for combo customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$32.00	$(32.00)	4	0.0003030303	1.2	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I028	8.4	100%	100%	100%	100%	3	3
Home Energy Savings Program - MN	Weatherstripping - Gas Heating Only	Weatherstripping in homes with gas heating / no cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$32.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	I029	8.4	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for gas-only customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$32.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I030	8.4	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Manufacutred Home Floor Insulation - Electric Heating and Cooling	Manufactured Home floor insulation in homes with electric heating / electric cooling	Home with R-30 belly insulation or more	Existing home with 1,254 sqft avg belly area and R-0 avg baseline insulation	20	$9,050.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I099	8.8	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Home Energy Savings Program - MN	Manufacutred Home Floor Insulation - Electric Heating Only	Manufactured Home floor insulation in homes with electric heating / no cooling	Home with R-30 belly insulation or more	Existing home with 1,254 sqft avg belly area and R-9 avg baseline insulation	20	$9,050.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I100	8.8	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Manufacutred Home Floor Insulation - Gas Heating / Electric Cooling	Manufactured Home floor insulation in homes with gas heating / electric cooling for combo customers	Home with R-30 belly insulation or more	Existing home with 1,254 sqft avg belly area and R-9 avg baseline insulation	20	$9,050.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I101	8.8	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Manufacutred Home Floor Insulation - Gas Heating Only	Manufactured Home floor insulation in homes with gas heating / no cooling	Home with R-30 belly insulation or more	Existing home with 1,254 sqft avg belly area and R-9 avg baseline insulation	20	$9,050.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	I102	8.8	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Manufacutred Home Floor Insulation - Gas Heating / Electric Cooling	Manufactured Home floor insulation in homes with gas heating / electric cooling for gas-only customers	Home with R-30 belly insulation or more	Existing home with 1,254 sqft avg belly area and R-9 avg baseline insulation	20	$9,050.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I103	8.8	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Home Lighting DI	LED A19 10W	LED A19 10W	Existing incandiscent Bulb	18	$3.35	$0.00	0	0.000	0.0	$0.00	MN-RES-SFUT	RES	Electric Only	Combo	K003	13.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Home Lighting DI	LED A19 10W CFL Replacement	LED A19 10W	Existing CFL Bulb	18	$3.35	$0.00	0	0.000	0.0	$0.00	MN-RES-SFUT	RES	Electric Only	Combo	K004	13.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Home Lighting DI	LED A19 11W	11W LED	Existing incandiscent Bulb	18	$3.35	$0.00	0	0.000	0.0	$0.00	MN-RES-SFUT	RES	Electric Only	Combo	K005	13.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Home Lighting DI	LED A19 9W	9W LED	Existing incandiscent Bulb	18	$3.35	$20.05	442	0.047	0.0	$0.00	MN-RES-SFUT	RES	Electric Only	Combo	K006	13.1	100%	100%	100%	100%	1,135	-
Home Energy Savings Program - MN	Home Lighting DI	LED Candelabra 6W	LED Candelabra 6W	Existing incandiscent Bulb	20	$4.40	$26.53	442	0.034	0.0	$0.00	MN-RES-SFUT	RES	Electric Only	Combo	K007	13.1	100%	100%	100%	100%	301	-
Home Energy Savings Program - MN	Home Lighting DI	LED Globe 6W	LED Globe 6W	Existing incandiscent Bulb	20	$4.95	$34.72	236	0.030	0.0	$0.00	MN-RES-SFUT	RES	Electric Only	Combo	K008	13.1	100%	100%	100%	100%	439	-
Home Energy Savings Program - MN	Boiler	95% Efficient Boiler	95% Efficient Boiler	84% Efficient Boiler	20	$9,172.50	$11,765.79	0	0.000	23.0	$0.00		RES	Gas Only	Combo	U034	17.5	100%	100%	100%	100%	-	43
Home Energy Savings Program - MN	Furnace	Replace Furnace AFUE 80 to 95 (SF)	95% Efficient Furnace	80% Efficient Furnace	18	$4,432.50	$5,682.03	0	0.000	17.0	$0.00		RES	Gas Only	Combo	U044	17.5	100%	100%	100%	100%	-	92
Home Energy Savings Program - MN	Saver's Switch	Residential AC Switch	Utility Load Control for control period with smart switch	No Control, No Switch	15	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	U060	17.8	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$125.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U088	17.7	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Residential Furnace Tune Up	Furnace Tune Up	Existing Furnace with Tune Up - 5% improvement in efficiency	Existing Furnace	2	$330.00	$330.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	U089	17.5	100%	100%	100%	100%	-	15
Home Energy Savings Program - MN	Residential Boiler Tune Up	Boiler Tune Up	Existing Boiler with Tune Up - 5% improvement in efficiency	Existing Boiler	2	$430.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	U090	17.5	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	ECM Furnace Fan	EC Fan Motor on Retrofit Residential Furnace with AC	Furnace Fan with AC retrofited with ECM	Existing furnace with AC and non-EC Motor	7	$845.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	RES	Electric Only	Combo	U091	17.5	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	ECM Furnace Fan	EC Fan Motor on Retrofit Residential Furnace no AC	Furnace Fan without AC retrofited with ECM	Existing furnace without AC with non-EC Motor	7	$845.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	RES	Electric Only	Combo	U092	17.5	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Wall AC	Wall Air Conditioner Replacement	Average Energy Star Wall AC w/o Louvers 10,000 Btu/hr 10.8 CEER Window AC Unit	Existing Window AC Unit	9	$540.00	$699.99	46	0.072	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U097	17.11	100%	100%	100%	100%	333	-
Home Energy Savings Program - MN	Room Air Conditioner Recycling	Wall Air Conditioner Removal and Recycling	Removal of Standard 10,000 Btu/hr Window AC Unit	Existing Window AC Unit	5	$82.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U099	17.11	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Window AC	Window Air Conditioner Replacement	Average Energy Star Window AC with Louvers 10,000 Btu/hr 10.8 CEER Window AC Unit	Existing Window AC Unit	9	$492.50	$478.54	23	0.036	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U102	17.11	100%	100%	100%	100%	568	-
Home Energy Savings Program - MN	Room Air Conditioner Recycling	Window Air Conditioner Removal and Recycling	Removal of Standard 10,000 Btu/hr Window AC Unit	Existing Window AC Unit	5	$82.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U104	17.11	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Res MSHP	Non-ducted Multi-Split Heat Pump w/ Electric Resistance baseline	Residential Multi-Split Heat Pump w/ 2 heads (Nominal 1.8 Tons with 18.9 SEER2, 12.9 EER2, 10.2 HSPF2) with electric resistance heat backup	Spot Cooling Solution needed with Existing Electric Resistance Heating	15	$4,232.25	$6,384.43	4,668	0.931	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U109	17.4	100%	100%	100%	100%	2	-
Home Energy Savings Program - MN	Res ASHP	Centrally ducted ASHP Cooling size basis wER baseline	Quality Installation of Qualifying ASHP sized for Cooling Load - 2 Ton 16 SEER2 & 12 EER2 & 9 HSPF2 with existing ER heat backup	Non-Quality Installation of 13.4 SEER2 AC Sized at 2 tons in home with existing electric resistance heat	18	$9,942.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U129	17.3	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Res ccASHP	Centerally ducted cold climate ASHP w/ electric resistance baseline	Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 8.1 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18.0	$11,011.81	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ccASHP	RES	Electric Only	Combo	U151	17.12	100%	100%	100%	100%	0	0.00
Home Energy Savings Program - MN	Res ccMSHP	Non-ducted cold climate Multi-Split Heat Pump w/ Electric Resistance Heat backup	Installation of Cold Climate Mini-Split Heat Pump (2.75 Tons 20.5 SEER2, 13.3 EER2, 11.5 HSPF2) with 3 indoor heads and Electric Resistance heat backup	Installation of comparable size code minimum AC with Existing Electric Resistance Heating	15	$9,255.48	$20,410.17	7,638	0.872	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U159	17.13	100%	100%	100%	100%	6	-
Home Energy Savings Program - MN	Programmable Thermostat	Install Programmable T-stat (Elec Cooling & Gas Heat) - Gas Only Customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U163	17.6	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Programmable Thermostat	Install Programmable T-stat (Elec Cooling & Gas Heat) combo customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U164	17.6	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Programmable Thermostat	Install Programmable T-stat (Elec Cooling & Gas Heat) electric only customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U165	17.6	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	EFS - Res ASHP Cooling	Centerally ducted dual fuel ASHP	Cooling Portion of Quality Installation of High Efficiency Residential Air Source Heat Pump - 2.75 Ton 16 SEER2 & 10 EER2 & 7.8 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$5,373.17	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U193	17.3	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	EFS - Res ASHP Heating	Centerally ducted dual fuel ASHP	Heating Portion of Quality Installation of High Efficiency Residential Air Source Heat Pump - 2.75 Ton 16 SEER2 & 10 EER2 & 7.8 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$5,373.17	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ASHP	RES	Beneficial Electrification	Combo	U194	17.3	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	EFS - Res ccASHP Cooling	Centerally ducted dual fuel cold climate ASHP	Cooling Portion of Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 9 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18.0	$9,741.82	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U201	17.12	100%	100%	100%	100%	0	0.00
Home Energy Savings Program - MN	EFS - Res ccASHP Heating	Centerally ducted dual fuel cold climate ASHP	Heating Portion of Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 9 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18.0	$9,741.82	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ccASHP	RES	Beneficial Electrification	Combo	U202	17.12	100%	100%	100%	100%	0	0.00
Home Energy Savings Program - MN	EFS - Res ccMSHP Cooling	Non-ducted cold climate Multi-Split Heat Pump w/ Gas Furance backup	Cooling Portion of Installation of Cold Climate Mini-Split Heat Pump (2 Tons 22 SEER2, 9.3 EER2, 9.5 HSPF2) with 3 indoor heads and Gas Furnace heat backup	Non-Quality Installation of comparable size code minimum AC and Gas Furnace	15	$5,393.09	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U209	17.13	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	EFS - Res ccMSHP Heating	Non-ducted cold climate Multi-Split Heat Pump w/ Gas Furance backup	Heating Portion of Installation of Cold Climate Mini-Split Heat Pump (2 Tons 22 SEER2, 9.3 EER2, 9.5 HSPF2) with 3 indoor heads and Gas Furnace heat backup	Non-Quality Installation of comparable size code minimum AC and Gas Furnace	15	$5,393.09	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ccASHP	RES	Beneficial Electrification	Combo	U210	17.13	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	EFS - Res MSHP Cooling	Non-ducted dual fuel MSHP w/ gas furnace backup	Cooling Portion of Installation of Residential Mini-Split Heat Pump Equipment - 2 Ton 18.9 SEER2 & 11.5 EER2 & 10.3 HSPF2	Installation of comparable size code minimum AC with Gas Furnace	15	$4,500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U217	17.4	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	EFS - Res MSHP Heating	Non-ducted dual fuel MSHP w/ gas furnace backup	Heating Portion of Installation of Residential Mini-Split Heat Pump Equipment - 2 Ton 18.9 SEER2 & 11.5 EER2 & 10.3 HSPF2	Installation of comparable size code minimum AC with Gas Furnace	15	$4,500.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ASHP	RES	Beneficial Electrification	Combo	U218	17.4	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$5.20	$0.00	74	0.010	0.0	$0.71	MN-RES-SFWHT	Res	Electric Only	Combo	S018	19.1	100%	100%	100%	100%	29	-
Home Energy Savings Program - MN	Aerators - EWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$5.20	$0.00	84	0.013	0.0	$0.12	MN-RES-SFWHT	Res	Electric Only	Combo	S019	19.1	100%	100%	100%	100%	29	-
Home Energy Savings Program - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$5.20	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S020	19.1	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Home Energy Savings Program - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$5.20	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S045	19.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Aerators - GWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$5.20	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S046	19.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$5.20	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S047	19.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Electric Resistance Heat	High Efficiency Heat Pump Water Heater	Existing Electric Water Heater	13	$4,850.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S061	19.2	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling ASHP Heat	High Efficiency Heat Pump Water Heater	Existing Electric Water Heater	13	$4,850.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S062	19.2	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater	Existing Electric Water Heater	13	$4,850.00	$0.00	2,958	0.337	0.0	$16.26	MN-RES-SFWHT	RES	Electric Only	Combo	S063	19.2	100%	100%	100%	100%	21	-
Home Energy Savings Program - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Electric Resistance Heat	High Efficiency Heat Pump Water Heater	Existing Electric Water Heater	13	$4,850.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S064	19.2	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling ASHP Heat	High Efficiency Heat Pump Water Heater	Existing Electric Water Heater	13	$4,850.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S065	19.2	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater	Existing Electric Water Heater	13	$4,850.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S066	19.2	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$15.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S111	19.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$15.00	$15.00	649	0.074	0.0	$35.79	MN-RES-SFWHT	Res	Electric Only	Combo	S112	19.1	100%	100%	100%	100%	29	-
Home Energy Savings Program - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$47.00	$47.00	632	0.072	0.0	$46.66	MN-RES-SFWHT	Res	Electric Only	Combo	S113	19.1	100%	100%	100%	100%	30	-
Home Energy Savings Program - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$47.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S114	19.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$15.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S149	19.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$15.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S150	19.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$47.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S151	19.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$47.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S152	19.1	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Water Heater	High Efficiency Storage Water Heater	68% UEF High Efficiency Storage Water Heater - Medium Draw	Minimum Efficiency Storage Water Heater	13	$3,325.00	$4,583.33	0	0.000	1.5	$2.00		RES	Gas Only	Combo	S167	19.2	100%	100%	100%	100%	-	142
Home Energy Savings Program - MN	Water Heater	High Efficiency Storage Water Heater	68% UEF High Efficiency Storage Water Heater - High Draw	Minimum Efficiency Storage Water Heater	13	$3,325.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	S168	19.2	100%	100%	100%	100%	-	-
Home Energy Savings Program - MN	Aerators - EWH	Renter Kit Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.22	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S207	19.1	100%	100%	60%	100%	-	-
Home Energy Savings Program - MN	Aerators - EWH	Renter Kit Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.48	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S208	19.1	100%	100%	60%	100%	-	-
Home Energy Savings Program - MN	Showerheads - EWH	Renter Kit Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.22	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S209	19.1	100%	100%	65%	100%	-	-
Home Energy Savings Program - MN	Aerators - GWH	Renter Kit Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.22	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S210	19.1	100%	100%	60%	100%	-	-
Home Energy Savings Program - MN	Aerators - GWH	Renter Kit Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.48	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S211	19.1	100%	100%	60%	100%	-	-
Home Energy Savings Program - MN	Showerheads - GWH	Renter Kit Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.22	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S212	19.1	100%	100%	65%	100%	-	-
Home Energy Squad - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	7	$25.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A002	1.5	100%	100%	100%	100%	-	-
Home Energy Squad - MN	ENERGY STAR Dehumidifier	Installation of ENERGY STAR Dehumidifier	ENERGY STAR Dehumidifier (Current ENERGY STAR Criteria)	Standard Efficiency Dehumidifier (Current Federal Standard)	12	$35.00	$50.00	152	0.017	0.0	$2.00	MN-RES-ESTARREF	Res	Electric Only	Combo	A072	1.8	100%	100%	100%	100%	9	-
Home Energy Squad - MN	Weatherstripping - Electric Heating and Cooling	Weatherstripping in homes with electric heating / electric cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$12.00	$12.00	147	0.016784	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I064	8.4	100%	100%	100%	100%	45	-
Home Energy Squad - MN	Weatherstripping - Electric Heating Only	Weatherstripping in homes with electric heating / no cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$12.00	$12.00	332	0.038	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I065	8.4	100%	100%	100%	100%	18	-
Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for combo customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$12.00	$3.84	4	0.000354	1.3	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I066	8.4	100%	100%	100%	100%	3,220	1,270
Home Energy Squad - MN	Weatherstripping - Gas Heating Only	Weatherstripping in homes with gas heating / no cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$12.00	$12.00	0	0.000	1.3	$0.00		Res	Gas Only	Combo	I067	8.4	100%	100%	100%	100%	-	260
Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for gas-only customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$12.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I068	8.4	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for electric-only customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$12.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Electric Only	I069	8.4	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Weatherstripping - Electric Heating and Cooling	A la carte weatherstripping in homes with electric heating / electric cooling	Additional weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Additional existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$0.00	$12.00	121	0.0175	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I070	8.4	100%	100%	100%	100%	8	-
Home Energy Squad - MN	Weatherstripping - Electric Heating Only	A la carte weatherstripping in homes with electric heating / no cooling	Additional weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Additional existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$0.00	$12.00	132	0.0191	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I071	8.4	100%	100%	100%	100%	4	-
Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	A la carte weatherstripping in homes with gas heating / electric cooling for combo customers	Additional weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Additional existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$0.00	$4.00	5	0.000723	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I072	8.4	100%	100%	100%	100%	736	329
Home Energy Squad - MN	Weatherstripping - Gas Heating Only	A la carte weatherstripping in homes with gas heating / no cooling	Additional weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Additional existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$0.00	$12.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	I073	8.4	100%	100%	100%	100%	-	85
Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	A la carte weatherstripping in homes with gas heating / electric cooling for gas-only customers	Additional weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Additional existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$0.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I074	8.4	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	A la carte weatherstripping in homes with gas heating / electric cooling for electric-only customers	Additional weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Additional existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$0.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Electric Only	I075	8.4	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Home Energy Squad Service	Home Energy Squad Service	Tier One Energy Squad Service				$0.00	0	0.000	0.0	$0.00			Combo	Combo	2021	9.1	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Home Lighting DI	3-WAY SW-9W-16W	3-WAY SW-9W-16W	Existing Incandecent Bulb	18	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K009	13.1	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Home Lighting DI	LED - A-lamp (15W)	15w Standard LED (100w Equivalent)	Existing Incandecent Bulb	18	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K010	13.1	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Home Energy Squad - MN	Home Lighting DI	LED - A-lamp (9W)	9w Standard LED (60w Equivalent)	Existing Incandecent Bulb	18	$5.00	$18.34	380	0.049	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K011	13.1	100%	100%	100%	100%	3,322	-
Home Energy Squad - MN	Home Lighting DI	LED - Candelabra (5W)	LED - Candelabra (5W)	Existing Incandecent Bulb	20	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K012	13.1	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Home Lighting DI	LED - Flood (10W)	10W VALUE led (60W Equivalent)	Existing Incandecent Bulb	20	$5.00	$24.38	373	0.048	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K013	13.1	100%	100%	100%	100%	2,421	-
Home Energy Squad - MN	Home Lighting DI	LED - Globe (6W)	6w Globe LED Dim	Existing Incandecent Bulb	20	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K014	13.1	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Home Lighting DI	Replace Compact Flourescent Lamps (CFLs) with LEDs	A-Line LED	Existing CFL	18	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K015	13.1	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Home Lighting DI	Replace Compact Flourescent Lamps (CFLs) with LEDs	Specialty LED	Existing CFL	20	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K016	13.1	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Home Lighting DI	A19 Smart LED Bulb	A19 Smart LED Bulb	Existing Incandecent Bulb	18	$12.99	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K070	13.1	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Home Lighting DI	BR30 Smart LED Bulb	BR30 Smart LED Bulb	Existing Incandecent Bulb	18	$17.99	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K071	13.1	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Programmable Thermostat	Install Programmable T-stat (Elec Cooling & Gas Heat)	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$0.00	57	0.062	5.3	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U045	17.6	100%	100%	100%	100%	229	177
Home Energy Squad - MN	Programmable Thermostat	Install Second Programmable Thermostat	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$17.50	13	0.014	2.5	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U049	17.6	100%	100%	100%	100%	5	5
Home Energy Squad - MN	Programmable Thermostat	Programming of Existing T-stat (Elec Cooling & Gas Heat)	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Base modeled home w/ 10 SEER AC and no setup temp	10	$35.00	$0.00	71	0.077	4.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U053	17.6	100%	100%	100%	100%	222	145
Home Energy Squad - MN	Saver's Switch	Residential AC Switch	Utility Load Control for control period with smart switch	No Control, No Switch	15	$90.00	$25.00	0	0.026	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	U058	17.8	100%	100%	100%	100%	208	-
Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$50.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	U070	17.7	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$50.00	$62.50	1	0.003	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U072	17.7	100%	100%	100%	100%	282	282
Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$50.00	$0.00	1	0.003	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Electric Only	U077	17.7	100%	100%	100%	100%	241	-
Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - GAS Only	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$50.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Gas Only	U082	17.7	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.25	$0.00	74	0.010	0.0	$6.11	MN-RES-SFWHT	Res	Electric Only	Combo	S021	19.1	100%	100%	100%	100%	32	-
Home Energy Squad - MN	Aerators - EWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$1.50	$0.00	82	0.012	0.0	$8.05	MN-RES-SFWHT	Res	Electric Only	Combo	S022	19.1	100%	100%	100%	100%	204	-
Home Energy Squad - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.25	$0.00	0	0.000	0.3	$6.00		Res	Gas Only	Combo	S048	19.1	100%	100%	100%	100%	-	178
Home Energy Squad - MN	Aerators - GWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$1.50	$0.00	0	0.000	0.4	$7.81		Res	Gas Only	Combo	S049	19.1	100%	100%	100%	100%	-	735
Home Energy Squad - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.50	$0.00	510	0.037	0.0	$48.77	MN-RES-SFWHT	Res	Electric Only	Combo	S115	19.1	100%	100%	100%	100%	216	-
Home Energy Squad - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.50	$0.00	343	0.025	0.0	$33.55	MN-RES-SFWHT	Res	Electric Only	Combo	S116	19.1	100%	100%	100%	100%	61	-
Home Energy Squad - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$9.50	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S117	19.1	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$9.50	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S118	19.1	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.50	$0.00	0	0.000	2.2	$47.22		Res	Gas Only	Combo	S153	19.1	100%	100%	100%	100%	-	796
Home Energy Squad - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.50	$0.00	0	0.000	1.5	$31.21		Res	Gas Only	Combo	S154	19.1	100%	100%	100%	100%	-	203
Home Energy Squad - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$9.50	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S155	19.1	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$9.50	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S156	19.1	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Water Heater DR	Demand response capability on grid enabled electric resistance water heater	Demand response from electric resistance water heater	No management of water heater time of use	1	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	S182	19.2	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Gas Water Heater Setback	Gas Water Heater Setback	setback WH setpoint to 120 F	Existing WH at setpoint of 130 F	8	$0.00	$0.00	0	0.000	0.4	$0.00		RES	Gas Only	Combo	S191	19.2	100%	100%	100%	100%	-	603
Home Energy Squad - MN	Electric Water Heater Setback	Electric Water Heater Setback	setback WH setpoint to 120 F	Existing WH at setpoint of 130 F	8	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S192	19.2	100%	100%	100%	100%	-	-
Home Energy Squad - MN	Water Heater Pipe Insulation	Water Heater Pipe Insulation - ER water heater	R-2 Pipe insulation added to 6ft after water heater	Bare pipe	13	$21.78	$3.93	50	0.006	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	S270	19.5	100%	100%	100%	100%	155	-
Home Energy Squad - MN	Water Heater Pipe Insulation	Water Heater Pipe Insulation - Gas water heater	R-2 Pipe insulation added to 6ft after water heater	Bare pipe	13	$21.78	$3.90	0	0.000	0.3	$0.00	MN-RES-FLAT	Res	Gas Only	Combo	S271	19.5	100%	100%	100%	100%	-	622
Home Energy Squad - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$1.50	$0.00	82	0.012	0.0	$7.32	MN-RES-SFWHT	Res	Electric Only	Combo	S279	19.1	100%	100%	100%	100%	6	-
Home Energy Squad - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$1.50	$0.00	0	0.000	0.4	$7.58		Res	Gas Only	Combo	S280	19.1	100%	100%	100%	100%	-	42
Home Lighting - MN	Residential Home Lighting - Residential Customers	Connected Lighting	Smart Bulb	45 lm/W EISA Equivalent	18	$2.00	$9.74	9	0.001	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K051	13.1	100%		99%	100%	3,762	
Home Lighting - MN	Residential Home Lighting - Residential Customers	LED Bulb - GSL	LED Bulb GSL	45 lm/W EISA Equivalent	19	$1.37	$1.54	10	0.001	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K060	13.1	100%		99%	100%	2,872,869	
Home Lighting - MN	Residential Home Lighting - Residential Customers	LED Bulb - GSL Specialty	LED Bulb Specialty GSL	Incandecent Equivalent	20	$1.50	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K061	13.1	100%		99%	100%	-	
Home Lighting - MN	Residential Home Lighting - Residential Customers	LED Bulb - Fixtures	LED Fitxture	Incandecent Equivalent	20	$2.07	$13.00	69	0.009	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K062	13.1	100%		99%	100%	100,050	
Home Lighting - MN	Residential Home Lighting - Residential Customers	LED Tubes (Linear Lamps)	LED Linear Tube	Fluorescent Equivalent	20	$2.50	$8.21	12	0.002	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K063	13.1	100%		99%	100%	6,452	
Home Lighting - MN	Residential Home Lighting - Business Customers	LED Bulb - GSL	LED Bulb GSL	45 lm/W EISA Equivalent	4	$1.37	$1.54	52	0.008	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Combo	K064	13.1	100%		100%	100%	182,575	
Home Lighting - MN	Residential Home Lighting - Business Customers	LED Bulb - GSL Specialty	LED Bulb Specialty GSL	Incandecent Equivalent	5	$1.50	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Combo	K065	13.1	100%		100%	100%	-	
Home Lighting - MN	Residential Home Lighting - Business Customers	LED Bulb - Fixtures	LED Fitxture	Incandecent Equivalent	9	$2.07	$13.00	379	0.058	0.0	$0.00	MN-BUS-Light Troffer	BUS	Electric Only	Combo	K066	13.1	100%		100%	100%	6,386	
Home Lighting - MN	Residential Home Lighting - Business Customers	LED Tubes (Linear Lamps)	LED Linear Tube	Fluorescent Equivalent	10	$2.50	$8.21	87	0.013	0.0	$0.00	MN-BUS-Light Tube	BUS	Electric Only	Combo	K067	13.1	100%		100%	100%	21,167	
Home Lighting - MN	Residential Home Lighting - Residential Customers	LED Holiday Lights	LED Holiday Lights	Incandecent Holiday Lights	8	$2.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	RES	Electric Only	Combo	K068	13.1	100%		99%	100%	-	
Home Lighting - MN	Residential Home Lighting - Residential Customers	LED Nightlight	LED Nightlight	Incandecent Nightlight	8	$2.00	$2.21	26	0.000	0.0	$0.00	MN-BUS-RECM_OUT	RES	Electric Only	Combo	K069	13.1	100%		99%	100%	141,498	
HVAC+R - MN	Ozone Laundry	Ozone Washer Extractor	New ozone laundry system(Venturi Injection or Bubble Diffusion) is added-on to new or existing commercial washing machine using hot water heated with natural gas	new or existing commercial washing machine using hot water heated with natural gas	10	$3,028.26	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A050	1.3	100%	100%	100%	100%	-	-
HVAC+R - MN	Custom Cooling Project	Custom Cooling Projects	New Efficient Equipment	Existing or New Inefficient Equipment	18	$8,843.85	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	G001	7.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Custom Motors Project	Custom Motors Project	New Equipment	Existing or New Inefficient	17	$6,751.12	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	G011	7.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Custom Heating Project	Custom Heating Project	New Efficient Equipment	Less Efficient Product/Systems	18	$663.88	$7,000.00	0	0.000	54.0	$0.00		BUS	Gas Only	Gas Only	G019	7.1	100%	100%	100%	100%	-	1
HVAC+R - MN	Custom Refrigeration Project	Custom Refrigeration Project	New Efficient Equipment	Less Efficient Product/Systems	16	$12,257.79	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTOM_	Bus	Electric Only	Electric Only	G028	7.1	100%	100%	100%	100%	-	-
HVAC+R - MN	DX	DX Units < 5.4 tons	DX unit size 3.71 tons, 12.88 EER, 15.15 SEER	DX unit size 3.71 tons, 11.05 EER, 13.00 SEER	15	$347.36	$613.45	191	0.207	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L001	11.1	100%	100%	100%	100%	516	-
HVAC+R - MN	DX	DX Units 5.4 - 11.3 tons	DX unit size 8.06 tons, 12.13 EER, 14.78 SEER	DX unit size 8.06 tons, 11.00 EER, 12.60 SEER	15	$1,101.41	$1,248.08	756	0.235	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L002	11.1	100%	100%	100%	100%	236	-
HVAC+R - MN	DX	DX Units 11.4 - 19.9 tons	DX unit size 14.69 tons, 12.04 EER, 14.67 SEER	DX unit size 14.69 tons, 10.80 EER, 12.20 SEER	15	$2,284.71	$1,969.45	1,346	0.548	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L003	11.1	100%	100%	100%	100%	79	-

Measure Description					Economic Assumptions								Customer Information						Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
HVAC+R - MN	DX	DX Units 20 - 63.3 tons	DX unit size 26.64 tons, 11.45 EER, 13.94 SEER	DX unit size 26.64 tons, 9.80 EER, 11.40 SEER	15	$3,471.13	$3,397.44	4,009	2.628	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L004	11.1	100%	100%	100%	100%	68	-
HVAC+R - MN	DX	DX Units ≥ 63.3 tons	DX unit size 95.68 tons, 11.28 EER, 13.73 SEER	DX unit size 95.68 tons, 9.50 EER, 11.00 SEER	15	$11,194.90	$8,350.00	6,169	4.269	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L005	11.1	100%	100%	100%	100%	1	-
HVAC+R - MN	WSHP	Water Source Heat Pumps	WSHP unit size 2.81 tons, 14.20 EER, 15.78 SEER	WSHP unit size 2.81 tons, 13.00 EER, 14.44 SEER	15	$242.15	$696.31	255	0.526	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L006	11.2	100%	100%	100%	100%	24	-
HVAC+R - MN	DX	PTAC Units	PTAC unit size 0.60 tons, 13.00 EER, 15.29 SEER	PTAC unit size 0.60 tons, 11.83 EER, 13.92 SEER	15	$21.12	$184.21	69	0.096	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L007	11.3	100%	100%	100%	100%	38	-
HVAC+R - MN	Chiller	Scroll/Screw Chiller < 75 tons	Chiller size 67 tons, 0.73 FLV kW/ton, 0.57 IPLV kW/ton	Chiller size 67 tons, 0.75 FLV kW/ton, 0.60 IPLV kW/ton	20	$965.47	$2,712.80	6,178	18.967	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L008	11.4	100%	100%	100%	100%	1	-
HVAC+R - MN	Chiller	Scroll/Screw chiller 75 to 150 tons	Chiller size 111.1 tons, 0.70 FLV kW/ton, 0.53 IPLV kW/ton	Chiller size 111.1 tons, 0.72 FLV kW/ton, 0.56 IPLV kW/ton	20	$1,600.37	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L009	11.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Chiller	Scroll/Screw chiller 150 to 300 tons	Chiller size 225 tons, 0.64 FLV kW/ton, 0.51 IPLV kW/ton	Chiller size 225 tons, 0.66 FLV kW/ton, 0.54 IPLV kW/ton	20	$3,242.25	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L010	11.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Chiller	Scroll/Screw chiller ≥ 300 tons	Chiller size 500 tons, 0.59 FLV kW/ton, 0.49 IPLV kW/ton	Chiller size 500 tons, 0.61 FLV kW/ton, 0.52 IPLV kW/ton	20	$7,205.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L011	11.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Chiller	Centrifugal Chillers < 150 tons	Chiller size 75.00 tons, 0.60 FLV kW/ton, 0.55 IPLV kW/ton	Chiller size 75.00 tons, 0.61 FLV kW/ton, 0.55 IPLV kW/ton	20	$791.13	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L012	11.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Chiller	Centrifugal Chillers 150 - 300 tons	Chiller size 206.00 tons, 0.57 FLV kW/ton, 0.35 IPLV kW/ton	Chiller size 206.00 tons, 0.61 FLV kW/ton, 0.55 IPLV kW/ton	20	$5,775.82	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L013	11.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Chiller	Centrifugal Chillers 300 - 600 tons	Chiller size 435.33 tons, 0.54 FLV kW/ton, 0.32 IPLV kW/ton	Chiller size 435.33 tons, 0.58 FLV kW/ton, 0.55 IPLV kW/ton	20	$14,510.70	$34,400.00	106,737	7.852	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L014	11.5	100%	100%	100%	100%	1	-
HVAC+R - MN	Chiller	Centrifugal Chillers ≥ 600 tons	Chiller size 918.18 tons, 0.53 FLV kW/ton, 0.34 IPLV kW/ton	Chiller size 918.18 tons, 0.56 FLV kW/ton, 0.50 IPLV kW/ton	20	$28,194.63	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L015	11.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Chiller	Air-Cooled Chillers < 150 tons	Chiller size 69.77 tons, 11.60 EER, 15.98 SEER	Chiller size 69.77 tons, 10.10 EER, 13.70 SEER	20	$2,532.49	$4,822.53	2,600	2.024	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L016	11.6	100%	100%	100%	100%	13	-
HVAC+R - MN	Chiller	Air-Cooled Chillers ≥ 150 tons	Chiller size 273.16 tons, 11.04 EER, 19.40 SEER	Chiller size 273.16 tons, 10.10 EER, 14.00 SEER	20	$14,516.72	$18,582.57	20,060	11.735	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L017	11.6	100%	100%	100%	100%	7	-
HVAC+R - MN	Chiller VFD	Chiller VFD Retrofit	VFD Chiller size 583 tons, 0.55 FLV kW/ton, 0.34 IPLV	Const Speed Chiller size 583 tons, 0.54 FLV kW/ton, 0.44 IPLV	15	$8,483.88	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L018	11.7	100%	100%	100%	100%	-	-
HVAC+R - MN	MN ERV	ERV Install on RTU/AHU for reduced cooling & heating load	130% Sensible Effectiveness Heat Recovery on 3755 CFM OA (Cooling Mode)	No heat recovery on 3755 CFM OA	15	$3,754.93	$9,600.00	1,016	0.000	930.0	$0.00	MN-BUS-COOLING	BUS	Combo	Combo	L019	11.8	100%	100%	100%	100%	6	1
HVAC+R - MN	Mini Split	Mini-Split Heat Pump	MSHP size 1.2 tons, 21.27 SEER, 10.50 HSPF	MSHP size 1.2 tons, 14 SEER, 8.2 HSPF	18	$227.30	$577.31	699	0.303	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L020	11.9	100%	100%	100%	100%	68	-
HVAC+R - MN	Mini Split	Mini-Split AC - Data Centers	MSAC size 2.2 tons, 17.79 SEER	MSAC size 2.2 tons, 14 SEER	15	$107.84	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	L021	11.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Mini Split	Mini-Split AC	MSAC size 2.2 tons, 17.79 SEER	MSAC size 2.2 tons, 14 SEER	15	$107.84	$432.98	697	0.133	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	L022	11.1	100%	100%	100%	100%	4	-
HVAC+R - MN	DX ACCU	DX ACCU > 11.3 tons	efficient ACCU full refrigerant circuit replacement, no HVAC fans	MN TRM baseline ACCU full refrigerant circuit replacement, no HVAC fans	20	$3,846.84	$1,793.53	944	1.427	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	L031	11.1A	100%	100%	100%	100%	9	-
HVAC+R - MN	Boiler	Hot Water Boiler - Non-condensing 0 - 0.299 MMBTUH	85% Efficient Boiler	80% Efficient Boiler	20	$248.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M001	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Hot Water Boiler - Non-condensing 0.3 - 0.499 MMBTUH	85% Efficient Boiler	80% Efficient Boiler	20	$248.00	$4,650.00	0	0.000	107.2	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M002	12.2	100%	100%	100%	100%	-	27
HVAC+R - MN	Boiler	Hot Water Boiler - Non-condensing 0.5 - 0.999 MMBTUH	85% Efficient Boiler	80% Efficient Boiler	20	$496.00	$13,200.00	0	0.000	169.2	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M003	12.2	100%	100%	100%	100%	-	2
HVAC+R - MN	Boiler	Hot Water Boiler - Non-condensing 1 - 1.999 MMBTUH	85% Efficient Boiler	80% Efficient Boiler	20	$864.00	$22,500.00	0	0.000	374.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M004	12.2	100%	100%	100%	100%	-	3
HVAC+R - MN	Boiler	Hot Water Boiler - Non-condensing 2 - 2.499 MMBTUH	85% Efficient Boiler	80% Efficient Boiler	20	$1,600.00	$26,500.00	0	0.000	502.7	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M005	12.2	100%	100%	100%	100%	-	7
HVAC+R - MN	Boiler	Hot Water Boiler - Non-condensing 2.5 - 3.999 MMBTUH	85% Efficient Boiler	80% Efficient Boiler	20	$2,400.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M006	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Hot Water Boiler - Non-condensing 4 - 5.999 MMBTUH	85% Efficient Boiler	80% Efficient Boiler	20	$3,200.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M007	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Hot Water Boiler - Non-condensing 6 - 7.999 MMBTUH	85% Efficient Boiler	82% Efficient Boiler	20	$4,800.00	$40,000.00	0	0.000	1,072.4	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M008	12.2	100%	100%	100%	100%	-	4
HVAC+R - MN	Boiler	Hot Water Boiler - Non-condensing 8 -9.999 MMBTUH	85% Efficient Boiler	82% Efficient Boiler	20	$6,400.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M009	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Hot Water Boiler - Condensing 0 - 0.299 MMBTUH	88% Efficient Boiler	80% Efficient Boiler	20	$980.00	$1,500.00	0	0.000	40.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M010	12.2	100%	100%	100%	100%	-	15
HVAC+R - MN	Boiler	Hot Water Boiler - Condensing 0.3 - 0.499 MMBTUH	88% Efficient Boiler	80% Efficient Boiler	20	$980.00	$1,500.00	0	0.000	374.8	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M011	12.2	100%	100%	100%	100%	-	10
HVAC+R - MN	Boiler	Hot Water Boiler - Condensing 0.5 - 0.999 MMBTUH	88% Efficient Boiler	80% Efficient Boiler	20	$2,170.00	$5,000.00	0	0.000	137.9	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M012	12.2	100%	100%	100%	100%	-	3
HVAC+R - MN	Boiler	Hot Water Boiler - Condensing 1 - 1.999 MMBTUH	88% Efficient Boiler	80% Efficient Boiler	20	$4,690.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M013	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Hot Water Boiler - Condensing 2 - 2.499 MMBTUH	88% Efficient Boiler	80% Efficient Boiler	20	$7,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M014	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Hot Water Boiler - Condensing 2.5 - 3.999 MMBTUH	88% Efficient Boiler	82% Efficient Boiler	20	$10,255.00	$14,500.00	0	0.000	554.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M015	12.2	100%	100%	100%	100%	-	4
HVAC+R - MN	Boiler	Hot Water Boiler - Condensing 4 - 5.999 MMBTUH	88% Efficient Boiler	82% Efficient Boiler	20	$17,640.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M016	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Hot Water Boiler - Condensing 6 - 7.999 MMBTUH	88% Efficient Boiler	82% Efficient Boiler	20	$21,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M017	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Hot Water Boiler - Condensing 8 - 9.999 MMBTUH	88% Efficient Boiler	82% Efficient Boiler	20	$28,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M018	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Condensing Boiler Upgrade; 0 - 0.499 MMBTUH; for space heating	88% Efficient Boiler	78% Efficient Boiler	20	$2,030.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M019	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Condensing Boiler Upgrade; 0.500 - 0.999 MMBTUH; for space heating	88% Efficient Boiler	78% Efficient Boiler	20	$4,900.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M020	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Condensing Boiler Upgrade; 1 - 1.999 MMBTUH; for for space heating	88% Efficient Boiler	78% Efficient Boiler	20	$7,000.00	$7,700.00	0	0.000	265.4	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M021	12.2	100%	100%	100%	100%	-	3
HVAC+R - MN	Boiler	Condensing Boiler Upgrade; 2 - 3.999 MMBTUH; for for space heating	88% Efficient Boiler	78% Efficient Boiler	20	$17,920.00	$14,500.00	0	0.000	554.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M022	12.2	100%	100%	100%	100%	-	1
HVAC+R - MN	Boiler	Condensing Boiler Upgrade; 4 - 5.999 MMBTUH; for for space heating	88% Efficient Boiler	78% Efficient Boiler	20	$28,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M023	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Condensing Boiler Upgrade; 6 - 7.999 MMBTUH; for for space heating	88% Efficient Boiler	78% Efficient Boiler	20	$42,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M024	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Condensing Boiler Upgrade; 8 - 9.999 MMBTUH; for for space heating	88% Efficient Boiler	78% Efficient Boiler	20	$56,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M025	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Low Pressure Steam Boiler; 0 - 0.499 MMBTUH	84% Efficient Boiler	79% Efficient Boiler	20	$230.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M026	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Low Pressure Steam Boiler; 0.5 - 4.999 MMBTUH	84% Efficient Boiler	79% Efficient Boiler	20	$1,755.00	$3,150.00	0	0.000	739.1	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M027	12.2	100%	100%	100%	100%	-	4
HVAC+R - MN	Boiler	Low Pressure Steam Boiler; 5 - 9.999 MMBTUH	84% Efficient Boiler	79% Efficient Boiler	20	$4,385.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M028	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	High Pressure Steam Boiler; 0 - 0.499 MMBTUH	83% Efficient Boiler	79% Efficient Boiler	20	$150.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M029	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	High Pressure Steam Boiler; 0.5 - 4.99 MMBTUH	83% Efficient Boiler	79% Efficient Boiler	20	$2,205.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M030	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	High Pressure Steam Boiler; 5 - 9.999 MMBTUH	83% Efficient Boiler	79% Efficient Boiler	20	$4,155.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M031	12.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Furnace	90% Efficient Furnaces	90% Efficient Furnaces	78% Eff Furnace	20	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M032	12.3	100%	100%	100%	100%	-	-
HVAC+R - MN	Furnace	92% Efficient Furnaces	92% Efficient Furnaces	78% Eff Furnace	20	$200.00	$1,241.89	0	0.000	13.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M033	12.3	100%	100%	100%	100%	-	4
HVAC+R - MN	Furnace	94% Efficient Furnaces	94% Efficient Furnaces	78% Eff Furnace	20	$250.00	$1,429.93	0	0.000	14.9	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M034	12.3	100%	100%	100%	100%	-	14
HVAC+R - MN	Furnace	96% Efficient Furnaces	96% Efficient Furnaces	78% Eff Furnace	20	$300.00	$4,557.97	0	0.000	13.9	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M035	12.3	100%	100%	100%	100%	-	193
HVAC+R - MN	Unit Heater	Non-Condensing Power Vent (83% efficiency)	Non-condensing power vent unit heater	Non-condensing standard forced-air unit heater	20	$152.87	$630.34	0	0.000	11.8	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M036	12.4	100%	100%	100%	100%	-	22

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
HVAC+R - MN	Unit Heater	Condensing (>90% efficiency)	Condensing power vent unit heater	Non-condensing standard forced-air unit heater	20	$102.77	$2,713.27	0	0.000	65.8	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M037	12.4	100%	100%	100%	100%	-	5
HVAC+R - MN	Unit Heater Infrared	Infrared	Infrared Heater	Non-condensing standard forced-air unit heater	15	$185.94	$0.00	0	0.000	0.0	$0.00	MN-BUS-ECM	Bus	Combo	Combo	M038	12.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Tune Up	Non-Condensing Boiler Tune-Up <= 300 MBTUH	Boiler Tune-up - 2.2% energy savings; Boiler now at 80% efficiency	Existing boiler Poorly functioning at 78.24% efficiency	2	$108.75	$580.93	0	0.000	11.8	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M039	12.5	100%	100%	100%	100%	-	41
HVAC+R - MN	Boiler Tune Up	Non-Condensing Boiler Tune-Up 301 - 1 MMBTUH	Boiler Tune-up - 2.2% energy savings; Boiler now at 80% efficiency	Existing boiler Poorly functioning at 78.24% efficiency	2	$108.25	$670.77	0	0.000	14.3	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M040	12.5	100%	100%	100%	100%	-	263
HVAC+R - MN	Boiler Tune Up	Non-Condensing Boiler Tune-Up 1 - 10 MMBTUH	Boiler Tune-up - 2.2% energy savings; Boiler now at 80% efficiency	Existing boiler Poorly functioning at 78.24% efficiency	2	$174.25	$541.50	0	0.000	157.2	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M041	12.5	100%	100%	100%	100%	-	30
HVAC+R - MN	Boiler Tune Up	Non-Condensing Boiler Tune-Up >= 10 MMBTUH	Boiler Tune-up - 2.2% energy savings; Boiler now at 80% efficiency	Existing boiler Poorly functioning at 78.24% efficiency	2	$182.50	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M042	12.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Tune Up	Condensing Boiler Tune-Up	Condensing Boiler Tune-up - 0.8% additive improvement in efficiency; Boiler now at 88% average annual operating efficiency	Existing condensing boiler Poorly functioning at 87.2% efficiency	2	$108.25	$1,326.59	0	0.000	11.8	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M043	12.5	100%	100%	100%	100%	-	133
HVAC+R - MN	Water Heater	Commercial Water Heaters - Tankless	95% Efficient Tankless Water Heater	80% Efficient Storage Water Heater	20	$1,050.00	$1,222.63	0	0.000	62.8	-$105.45	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M044	12.1	100%	100%	100%	100%	-	22
HVAC+R - MN	Water Heater	Commercial Water Heaters - Storage	96% Efficient Storage Water Heater	80% Efficient Storage Water Heater	15	$874.86	$1,283.80	0	0.000	168.8	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M045	12.1	100%	100%	100%	100%	-	37
HVAC+R - MN	Boiler Controls	Outdoor Air Reset on Non Condensing Boiler <= 300MBTUH	83.16% Efficient Boiler. 3.8% energy savings	80% Efficient existing boiler	5	$200.00	$2,500.00	0	0.000	25.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M046	12.10	100%	100%	100%	100%	-	2
HVAC+R - MN	Boiler Controls	Outdoor Air Reset on Non-Condensing Boiler 301 - 1 MMBTUH	83.16% Efficient Boiler. 3.8% energy savings	80% Efficient existing boiler	5	$200.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M047	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Outdoor Air Reset on Non-Condensing Boiler 1 - 10 MMBTUH	83.16% Efficient Boiler. 3.8% energy savings	80% Efficient existing boiler	5	$200.00	$1,125.42	0	0.000	72.6	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M048	12.10	100%	100%	100%	100%	-	3
HVAC+R - MN	Boiler Controls	Outdoor Air Reset on Non-Condensing Boiler >= 10 MMBTUH	83.16% Efficient Boiler. 3.8% energy savings	80% Efficient existing boiler	5	$200.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M049	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Stack Dampers on Non Condensing Boiler <= 300MBTUH	84.2% Efficient Boiler. 5% energy savings	80% Efficient existing boiler	5	$121.50	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M050	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Stack Dampers on Non-Condensing Boiler 301 - 1 MMBTUH	84.2% Efficient Boiler. 5% energy savings	80% Efficient existing boiler	5	$127.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M051	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Stack Dampers on Non-Condensing Boiler 1 - 10 MMBTUH	84.2% Efficient Boiler. 5% energy savings	80% Efficient existing boiler	5	$200.00	$670.68	0	0.000	9.7	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M052	12.10	100%	100%	100%	100%	-	7
HVAC+R - MN	Boiler Controls	Stack Dampers on Non-Condensing Boiler >= 10 MMBTUH	84.2% Efficient Boiler. 5% energy savings	80% Efficient existing boiler	5	$250.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M053	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Modulating Burners on Non Condensing Boiler <= 300MBTUH	83% Efficient Boiler	80% Efficient existing boiler	15	$375.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M054	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Modulating Burners on Non-Condensing Boiler 301 - 1 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	15	$810.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M055	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Modulating Burners on Non-Condensing Boiler 1 - 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	15	$3,300.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M056	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Modulating Burners on Non-Condensing Boiler >= 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	15	$7,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M057	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Turbulators on Non Condensing Boiler <= 300MBTUH	82.47% Efficient Boiler	80% Efficient existing boiler	20	$400.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M058	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Turbulators on Non-Condensing Boiler 301 - 1 MMBTUH	82.47% Efficient Boiler	80% Efficient existing boiler	20	$400.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M059	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Turbulators on Non-Condensing Boiler 1 - 10 MMBTUH	82.47% Efficient Boiler	80% Efficient existing boiler	20	$400.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M060	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Turbulators on Non-Condensing Boiler >= 10 MMBTUH	82.47% Efficient Boiler	80% Efficient existing boiler	20	$400.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M061	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	O2 Trim Control on Non Condensing Boiler <= 300MBTUH	81.1% Efficient Boiler	80% Efficient existing boiler	5	$1,827.75	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M062	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	O2 Trim Control on Non-Condensing Boiler 301 - 1 MMBTUH	81.1% Efficient Boiler	80% Efficient existing boiler	5	$1,827.75	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M063	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	O2 Trim Control on Non-Condensing Boiler 1 - 10 MMBTUH	81.1% Efficient Boiler	80% Efficient existing boiler	5	$1,827.75	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M064	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	O2 Trim Control on Non-Condensing Boiler >= 10 MMBTUH	81.1% Efficient Boiler	80% Efficient existing boiler	5	$1,827.75	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M065	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Linkageless Controls on Non Condensing Boiler <= 300MBTUH	83% Efficient Boiler	80% Efficient existing boiler	16	$75.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M066	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Linkageless Controls on Non-Condensing Boiler 301 - 1 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	16	$162.00	$6,047.59	0	0.000	826.2	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M067	12.10	100%	100%	100%	100%	-	2
HVAC+R - MN	Boiler Controls	Linkageless Controls on Non-Condensing Boiler 1 - 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	16	$660.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M068	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Controls	Linkageless Controls on Non-Condensing Boiler >= 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	16	$6,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M069	12.10	100%	100%	100%	100%	-	-
HVAC+R - MN	Steam Traps	Steam Traps - Low Pressure	New Steam Traps	Existing Boiler, malfunctioning steam traps	6	$50.00	$531.75	0	0.000	41.1	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M070	12.6	100%	100%	100%	100%	-	233
HVAC+R - MN	Steam Traps	Steam Traps - High Pressure	New Steam Traps	Existing Boiler, malfunctioning steam traps	6	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M071	12.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pipe Insulation	Pipe Insulation 105-200 Degree	100 ft of pipe with new insulation	100 ft of pipe with no or old insulation	13	$1,067.50	$1,934.99	0	0.000	14.3	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M072	12.7	100%	100%	100%	100%	-	13
HVAC+R - MN	Pipe Insulation	Pipe Insulation 201-250 Degree	101 ft of pipe with new insulation	101 ft of pipe with no or old insulation	13	$1,428.75	$316.30	0	0.000	7.2	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M073	12.7	100%	100%	100%	100%	-	1
HVAC+R - MN	Pipe Insulation	Pipe Insulation 251-350 Degree	102 ft of pipe with new insulation	102 ft of pipe with no or old insulation	13	$1,686.25	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M074	12.7	100%	100%	100%	100%	-	-
HVAC+R - MN	Destratification Fans	Destratification Fans	HVLS Destratification Fan, 14 ft to <24 ft	No destratification fan	15	$2,000.00	$4,450.25	0	0.000	84.7	$0.00	MN-BUS-FLAT	Bus	Cross Fuel	Gas Only	M075	12.9	100%	100%	100%	100%	-	9
HVAC+R - MN	Dual Fuel RTUs	Dual Fuel RTUs < 5.4 tons	Dual Fuel Packaged Rooftop Unit With ASHP Cooling	Packaged Rooftop Unit With DX Cooling	20	$310.35	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Electric Only	M078	12.11	100%	100%	100%	100%	-	-
HVAC+R - MN	Dual Fuel RTUs	Dual Fuel RTUs < 5.4 tons	Dual Fuel Packaged Rooftop Unit With ASHP (coolingheating) and Gas-fired Backup Heating	Packaged Rooftop Unit With DX Cooling and Gas Heating	20	$79.64	$0.00	0	0.000	0.0	$0.00	MN-BUS-DFRTX	Bus	Beneficial Electrification	Combo	M121	12.11	100%	100%	100%	100%	-	-
HVAC+R - MN	Dual Fuel RTUs	Dual Fuel RTUs 5.4 - 11.3 tons	Dual Fuel Packaged Rooftop Unit With ASHP Cooling	Packaged Rooftop Unit With DX Cooling	20	$587.38	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Electric Only	M079	12.11	100%	100%	100%	100%	-	-
HVAC+R - MN	Dual Fuel RTUs	Dual Fuel RTUs 5.4 - 11.3 tons	Dual Fuel Packaged Rooftop Unit With ASHP (coolingheating) and Gas-fired Backup Heating	Packaged Rooftop Unit With DX Cooling and Gas Heating	20	$139.76	$0.00	0	0.000	0.0	$0.00	MN-BUS-DFRTX	Bus	Beneficial Electrification	Combo	M122	12.11	100%	100%	100%	100%	-	-
HVAC+R - MN	Dual Fuel RTUs	Dual Fuel RTUs 11.4 - 19.9 tons	Dual Fuel Packaged Rooftop Unit With ASHP Cooling	Packaged Rooftop Unit With DX Cooling	20	$972.53	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Electric Only	M080	12.11	100%	100%	100%	100%	-	-
HVAC+R - MN	Dual Fuel RTUs	Dual Fuel RTUs 11.4 - 19.9 tons	Dual Fuel Packaged Rooftop Unit With ASHP (coolingheating) and Gas-fired Backup Heating	Packaged Rooftop Unit With DX Cooling and Gas Heating	20	$196.14	$0.00	0	0.000	0.0	$0.00	MN-BUS-DFRTX	Bus	Beneficial Electrification	Combo	M123	12.11	100%	100%	100%	100%	-	-
HVAC+R - MN	Dual Fuel RTUs	Dual Fuel RTUs 20 - 63.3 tons	Dual Fuel Packaged Rooftop Unit With ASHP Cooling	Packaged Rooftop Unit With DX Cooling	20	$1,728.39	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Electric Only	M081	12.11	100%	100%	100%	100%	-	-
HVAC+R - MN	Dual Fuel RTUs	Dual Fuel RTUs 20 - 63.3 tons	Dual Fuel Packaged Rooftop Unit With ASHP (coolingheating) and Gas-fired Backup Heating	Packaged Rooftop Unit With DX Cooling and Gas Heating	20	$351.97	$0.00	0	0.000	0.0	$0.00	MN-BUS-DFRTX	Bus	Beneficial Electrification	Combo	M124	12.11	100%	100%	100%	100%	-	-
HVAC+R - MN	Dual Fuel RTUs	Dual Fuel RTUs >= 63.3 tons	Dual Fuel Packaged Rooftop Unit With ASHP Cooling	Packaged Rooftop Unit With DX Cooling	20	$4,646.08	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Electric Only	M082	12.11	100%	100%	100%	100%	-	-
HVAC+R - MN	Dual Fuel RTUs	Dual Fuel RTUs >= 63.3 tons	Dual Fuel Packaged Rooftop Unit With ASHP (coolingheating) and Gas-fired Backup Heating	Packaged Rooftop Unit With DX Cooling and Gas Heating	20	$956.51	$0.00	0	0.000	0.0	$0.00	MN-BUS-DFRTX	Bus	Beneficial Electrification	Combo	M125	12.11	100%	100%	100%	100%	-	-
HVAC+R - MN	Steam Traps	Process Steam Traps - Low pressure: psig < 15	New Steam Traps	Existing Boiler, malfunctioning steam traps	6	$100.00	$77.00	0	0.000	146.2	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M083	12.13	100%	100%	100%	100%	-	3
HVAC+R - MN	Steam Traps	Process Steam Traps - Medium Pressure: 15 ≤ psig < 30	New Steam Traps	Existing Boiler, malfunctioning steam traps	6	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M084	12.13	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
HVAC+R - MN	Steam Traps	Process Steam Traps - Medium Pressure: 30 ≤ psig < 75	New Steam Traps	Existing Boiler, malfunctioning steam traps	6	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M085	12.13	100%	100%	100%	100%	-	-
HVAC+R - MN	Steam Traps	Process Steam Traps - High pressure: 75 ≤ psig < 125	New Steam Traps	Existing Boiler, malfunctioning steam traps	6	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M086	12.13	100%	100%	100%	100%	-	-
HVAC+R - MN	Steam Traps	Process Steam Traps - High pressure: 125 ≤ psig < 175	New Steam Traps	Existing Boiler, malfunctioning steam traps	6	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M087	12.13	100%	100%	100%	100%	-	-
HVAC+R - MN	Steam Traps	Process Steam Traps - High Pressure: 175 ≤ psig < 250	New Steam Traps	Existing Boiler, malfunctioning steam traps	6	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M088	12.13	100%	100%	100%	100%	-	-
HVAC+R - MN	Steam Traps	Process Steam Traps - High Pressure: 250 ≤ psig < 300	New Steam Traps	Existing Boiler, malfunctioning steam traps	6	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M089	12.13	100%	100%	100%	100%	-	-
HVAC+R - MN	Heat Pump Water Heater	Commercial Size Heat Pump Water Heater	50 MBH Capacity Heat Pump Water Heater	Baseline Electric Water Heater	10	$600.00	$2,166,788.00	18,949	2.163	0.0	$0.00	MN-BUS-HPWH	Bus	Electric Only	Electric Only	M092	12.12	100%	100%	100%	100%	1	-
HVAC+R - MN	Heat Pump Water Heater	Commercial Size Heat Pump Water Heater EFS	50 MBH Capacity Heat Pump Water Heater	Baseline Gas Water Heater	10	$600.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-HPWH	Bus	Beneficial Electrification	Combo	M094	12.14	100%	100%	100%	100%	-	-
HVAC+R - MN	Heat Pump Water Heater	Residential Style Heat Pump Water Heater	15 MBH Capacity Heat Pump Water Heater	Baseline Electric Water Heater	10	$400.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-HPWH	Bus	Electric Only	Electric Only	M090	12.12	100%	100%	100%	100%	-	-
HVAC+R - MN	Heat Pump Water Heater	Residential Style Heat Pump Water Heater EFS	15 MBH Capacity Heat Pump Water Heater	Baseline Gas Water Heater	10	$400.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-HPWH	Bus	Beneficial Electrification	Combo	M091	12.14	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Steam Process Boiler	83% Eff Steam Boiler,	79% Efficient existing boiler	20	$8,270.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M096	12.15	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Hot Water Non-Condensing Process Boiler	85% Eff Hot Water Boiler	82% Efficient existing boiler	20	$8,270.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M097	12.15	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler	Hot Water Condensing Process Boiler	88% Efficient Hot Water Boiler	82% Efficient existing boiler	20	$16,540.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M098	12.15	100%	100%	100%	100%	-	-
HVAC+R - MN	Boiler Tune Up	Process Boiler Tune Up	Process Boiler Tune Up - 2.2% savings	Existing Boiler - no efficiency required	20	$3,432.05	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M099	12.16	100%	100%	100%	100%	-	-
HVAC+R - MN	Retrofit Refrigerated	LED Refrigerated Case Lighting	LED Strip lighting	T8 or T12 Fluorescent	20	$45.00	$158.57	352	0.062	0.0	$0.00	MN-BUS-Light Refrigerated	BUS	Electric Only	Electric Only	B200	13.2	100%	100%	100%	100%	37	-
HVAC+R - MN	Direct Install Refrigerated	LED Ref and Frz Screw In Fixture Retrofit	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$3.15	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Refrigerated	BUS	Electric Only	Electric Only	B201	13.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	1 HP Enhanced Efficiency Motor	1 hp motor 1% more efficient than NEMA Premium	1 hp NEMA Premium motor	20	$15.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N001	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	1.5 HP Enhanced Efficiency Motor	1.5 hp motor 1% more efficient than NEMA Premium	1.5 hp NEMA Premium motor	20	$15.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N002	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	2 HP Enhanced Efficiency Motor	2 hp motor 1% more efficient than NEMA Premium	2 hp NEMA Premium motor	20	$15.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N003	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	3 HP Enhanced Efficiency Motor	3 hp motor 1% more efficient than NEMA Premium	3 hp NEMA Premium motor	20	$20.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N004	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	5 HP Enhanced Efficiency Motor	5 hp motor 1% more efficient than NEMA Premium	5 hp NEMA Premium motor	20	$20.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N005	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	7.5 HP Enhanced Efficiency Motor	7.5 hp motor 1% more efficient than NEMA Premium	7.5 hp NEMA Premium motor	20	$30.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N006	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	10 HP Enhanced Efficiency Motor	10 hp motor 1% more efficient than NEMA Premium	10 hp NEMA Premium motor	20	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N007	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	15 HP Enhanced Efficiency Motor	15 hp motor 1% more efficient than NEMA Premium	15 hp NEMA Premium motor	20	$45.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N008	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	20 HP Enhanced Efficiency Motor	20 hp motor 1% more efficient than NEMA Premium	20 hp NEMA Premium motor	20	$60.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N009	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	25 HP Enhanced Efficiency Motor	25 hp motor 1% more efficient than NEMA Premium	25 hp NEMA Premium motor	20	$75.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N010	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	30 HP Enhanced Efficiency Motor	30 hp motor 1% more efficient than NEMA Premium	30 hp NEMA Premium motor	20	$90.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N011	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	40 HP Enhanced Efficiency Motor	40 hp motor 1% more efficient than NEMA Premium	40 hp NEMA Premium motor	20	$110.00	$4,366.31	1,268	0.202	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N012	14.1	100%	100%	100%	100%	1	-
HVAC+R - MN	Motors	50 HP Enhanced Efficiency Motor	50 hp motor 1% more efficient than NEMA Premium	50 hp NEMA Premium motor	20	$137.50	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N013	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	60 HP Enhanced Efficiency Motor	60 hp motor 1% more efficient than NEMA Premium	60 hp NEMA Premium motor	20	$160.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N014	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	75 HP Enhanced Efficiency Motor	75 hp motor 1% more efficient than NEMA Premium	75 hp NEMA Premium motor	20	$187.50	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N015	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	100 HP Enhanced Efficiency Motor	100 hp motor 1% more efficient than NEMA Premium	100 hp NEMA Premium motor	20	$250.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N016	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	125 HP Enhanced Efficiency Motor	125 hp motor 1% more efficient than NEMA Premium	125 hp NEMA Premium motor	20	$312.50	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N017	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	150 HP Enhanced Efficiency Motor	150 hp motor 1% more efficient than NEMA Premium	150 hp NEMA Premium motor	20	$375.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N018	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	200 HP Enhanced Efficiency Motor	200 hp motor 1% more efficient than NEMA Premium	200 hp NEMA Premium motor	20	$450.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N019	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	250 HP Enhanced Efficiency Motor	250 hp motor 1% more efficient than NEMA Premium	250 hp NEMA Premium motor	20	$562.50	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N020	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	300 HP Enhanced Efficiency Motor	300 hp motor 1% more efficient than NEMA Premium	300 hp NEMA Premium motor	20	$675.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N021	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	350 HP Enhanced Efficiency Motor	350 hp motor 1% more efficient than NEMA Premium	350 hp NEMA Premium motor	20	$787.50	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N022	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	400 HP Enhanced Efficiency Motor	400 hp motor 1% more efficient than NEMA Premium	400 hp NEMA Premium motor	20	$900.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N023	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	450 HP Enhanced Efficiency Motor	450 hp motor 1% more efficient than NEMA Premium	450 hp NEMA Premium motor	20	$1,012.50	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N024	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	500 HP Enhanced Efficiency Motor	500 hp motor 1% more efficient than NEMA Premium	500 hp NEMA Premium motor	20	$1,125.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N025	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	VFDs	1 HP Variable Frequency Drive	1 hp centrifugal fan or pump coupled with a VFD	1 hp centrifugal fan or pump without a VFD	15	$400.00	$2,182.10	1,101	0.218	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N026	14.2	100%	100%	100%	100%	11	-
HVAC+R - MN	VFDs	1.5 HP Variable Frequency Drive	1.5 hp centrifugal fan or pump coupled with a VFD	1.5 hp centrifugal fan or pump without a VFD	15	$400.00	$2,493.50	1,488	0.330	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N027	14.2	100%	100%	100%	100%	11	-
HVAC+R - MN	VFDs	2 HP Variable Frequency Drive	2 hp centrifugal fan or pump coupled with a VFD	2 hp centrifugal fan or pump without a VFD	15	$400.00	$2,741.03	2,745	0.403	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N028	14.2	100%	100%	100%	100%	51	-
HVAC+R - MN	VFDs	3 HP Variable Frequency Drive	3 hp centrifugal fan or pump coupled with a VFD	3 hp centrifugal fan or pump without a VFD	15	$400.00	$3,132.19	3,669	0.605	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N029	14.2	100%	100%	100%	100%	37	-
HVAC+R - MN	VFDs	5 HP Variable Frequency Drive	5 hp centrifugal fan or pump coupled with a VFD	5 hp centrifugal fan or pump without a VFD	15	$600.00	$3,705.41	5,432	1.080	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N030	14.2	100%	100%	100%	100%	46	-
HVAC+R - MN	VFDs	7.5 HP Variable Frequency Drive	7.5 hp centrifugal fan or pump coupled with a VFD	7.5 hp centrifugal fan or pump without a VFD	15	$750.00	$4,234.18	11,327	1.681	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N031	14.2	100%	100%	100%	100%	62	-
HVAC+R - MN	VFDs	10 HP Variable Frequency Drive	10 hp centrifugal fan or pump coupled with a VFD	10 hp centrifugal fan or pump without a VFD	15	$1,000.00	$4,654.52	15,374	2.196	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N032	14.2	100%	100%	100%	100%	31	-
HVAC+R - MN	VFDs	15 HP Variable Frequency Drive	15 hp centrifugal fan or pump coupled with a VFD	15 hp centrifugal fan or pump without a VFD	15	$1,250.00	$5,309.38	15,119	2.974	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N033	14.2	100%	100%	100%	100%	71	-
HVAC+R - MN	VFDs	20 HP Variable Frequency Drive	20 hp centrifugal fan or pump coupled with a VFD	20 hp centrifugal fan or pump without a VFD	15	$1,600.00	$5,846.74	21,775	3.774	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N034	14.2	100%	100%	100%	100%	59	-
HVAC+R - MN	VFDs	25 HP Variable Frequency Drive	25 hp centrifugal fan or pump coupled with a VFD	25 hp centrifugal fan or pump without a VFD	15	$2,000.00	$6,292.12	27,213	4.827	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N035	14.2	100%	100%	100%	100%	50	-
HVAC+R - MN	VFDs	30 HP Variable Frequency Drive	30 hp centrifugal fan or pump coupled with a VFD	30 hp centrifugal fan or pump without a VFD	15	$2,400.00	$6,681.09	30,273	6.042	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N036	14.2	100%	100%	100%	100%	33	-
HVAC+R - MN	VFDs	40 HP Variable Frequency Drive	40 hp centrifugal fan or pump coupled with a VFD	40 hp centrifugal fan or pump without a VFD	15	$3,000.00	$7,344.33	46,362	7.940	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N037	14.2	100%	100%	100%	100%	24	-
HVAC+R - MN	VFDs	50 HP Variable Frequency Drive	50 hp centrifugal fan or pump coupled with a VFD	50 hp centrifugal fan or pump without a VFD	15	$3,500.00	$7,903.80	51,176	8.196	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N038	14.2	100%	100%	100%	100%	26	-
HVAC+R - MN	VFDs	60 HP Variable Frequency Drive	60 hp centrifugal fan or pump coupled with a VFD	60 hp centrifugal fan or pump without a VFD	15	$4,000.00	$8,392.40	77,436	11.444	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N039	14.2	100%	100%	100%	100%	14	-
HVAC+R - MN	VFDs	75 HP Variable Frequency Drive	75 hp centrifugal fan or pump coupled with a VFD	75 hp centrifugal fan or pump without a VFD	15	$5,000.00	$9,763.80	104,144	15.532	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N040	14.2	100%	100%	100%	100%	21	-
HVAC+R - MN	VFDs	100 HP Variable Frequency Drive	100 hp centrifugal fan or pump coupled with a VFD	100 hp centrifugal fan or pump without a VFD	15	$6,000.00	$9,928.29	90,579	13.230	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N041	14.2	100%	100%	100%	100%	3	-
HVAC+R - MN	VFDs	125 HP Variable Frequency Drive	125 hp centrifugal fan or pump coupled with a VFD	125 hp centrifugal fan or pump without a VFD	15	$7,000.00	$10,684.59	187,399	24.671	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N042	14.2	100%	100%	100%	100%	4	-
HVAC+R - MN	VFDs	150 HP Variable Frequency Drive	150 hp centrifugal fan or pump coupled with a VFD	150 hp centrifugal fan or pump without a VFD	15	$7,000.00	$11,345.11	166,882	24.293	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N043	14.2	100%	100%	100%	100%	6	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
HVAC+R - MN	VFDs	200 HP Variable Frequency Drive	200 hp centrifugal fan or pump coupled with a VFD	200 hp centrifugal fan or pump without a VFD	15	$8,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N044	14.2	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	1 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$100.00	$1,060.13	75	0.016	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N045	14.1	100%	100%	100%	100%	12	-
HVAC+R - MN	Motors	1.5 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$100.00	$1,550.73	110	0.021	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N046	14.1	100%	100%	100%	100%	19	-
HVAC+R - MN	Motors	2 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$100.00	$1,551.77	126	0.027	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N047	14.1	100%	100%	100%	100%	23	-
HVAC+R - MN	Motors	3 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$112.50	$1,184.69	209	0.036	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N048	14.1	100%	100%	100%	100%	26	-
HVAC+R - MN	Motors	5 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$150.00	$2,190.59	352	0.048	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N049	14.1	100%	100%	100%	100%	58	-
HVAC+R - MN	Motors	7.5 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$225.00	$1,399.30	586	0.096	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N050	14.1	100%	100%	100%	100%	53	-
HVAC+R - MN	Motors	10 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$250.00	$1,784.69	842	0.138	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N051	14.1	100%	100%	100%	100%	44	-
HVAC+R - MN	Motors	15 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$375.00	$2,921.80	730	0.120	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N052	14.1	100%	100%	100%	100%	29	-
HVAC+R - MN	Motors	20 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$425.00	$3,373.63	1,009	0.177	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N053	14.1	100%	100%	100%	100%	29	-
HVAC+R - MN	Motors	25 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$500.00	$3,890.20	909	0.147	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N054	14.1	100%	100%	100%	100%	16	-
HVAC+R - MN	Motors	30 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$500.00	$4,032.73	1,058	0.207	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N055	14.1	100%	100%	100%	100%	18	-
HVAC+R - MN	Motors	40 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$600.00	$4,510.79	1,333	0.260	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N056	14.1	100%	100%	100%	100%	12	-
HVAC+R - MN	Motors	50 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$750.00	$5,374.89	1,448	0.333	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N057	14.1	100%	100%	100%	100%	6	-
HVAC+R - MN	Motors	60 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$900.00	$6,289.05	2,065	0.477	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N058	14.1	100%	100%	100%	100%	4	-
HVAC+R - MN	Motors	75 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$1,125.00	$7,423.84	3,248	0.749	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N059	14.1	100%	100%	100%	100%	6	-
HVAC+R - MN	Motors	100 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$1,500.00	$9,591.64	4,734	0.482	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N060	14.1	100%	100%	100%	100%	2	-
HVAC+R - MN	Motors	125 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$1,875.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N061	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	150 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$2,250.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N062	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	200 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$2,500.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N063	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	250 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$3,125.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N064	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	300 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$3,125.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N065	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	350 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$3,125.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N066	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	400 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$5,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N067	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	450 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$5,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N068	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Motors	500 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	$5,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N069	14.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	1 HP Well Water Pump Variable Frequency Drive	1 hp well water pump coupled with a VFD	1 hp well water pump without a VFD	15	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N070	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	1.5 HP Well Water Pump Variable Frequency Drive	1.5 hp well water pump coupled with a VFD	1.5 hp well water pump without a VFD	15	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N071	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	2 HP Well Water Pump Variable Frequency Drive	2 hp well water pump coupled with a VFD	2 hp well water pump without a VFD	15	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N072	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	3 HP Well Water Pump Variable Frequency Drive	3 hp well water pump coupled with a VFD	3 hp well water pump without a VFD	15	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N073	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	5 HP Well Water Pump Variable Frequency Drive	5 hp well water pump coupled with a VFD	5 hp well water pump without a VFD	15	$150.00	$3,705.41	1,235	0.434	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N074	14.5	100%	100%	100%	100%	1	-
HVAC+R - MN	Well Pump VFD	7.5 HP Well Water Pump Variable Frequency Drive	7.5 hp well water pump coupled with a VFD	7.5 hp well water pump without a VFD	15	$150.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N075	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	10 HP Well Water Pump Variable Frequency Drive	10 hp well water pump coupled with a VFD	10 hp well water pump without a VFD	15	$225.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N076	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	15 HP Well Water Pump Variable Frequency Drive	15 hp well water pump coupled with a VFD	15 hp well water pump without a VFD	15	$350.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N077	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	20 HP Well Water Pump Variable Frequency Drive	20 hp well water pump coupled with a VFD	20 hp well water pump without a VFD	15	$450.00	$5,344.74	10,087	1.884	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N078	14.5	100%	100%	100%	100%	1	-
HVAC+R - MN	Well Pump VFD	25 HP Well Water Pump Variable Frequency Drive	25 hp well water pump coupled with a VFD	25 hp well water pump without a VFD	15	$550.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N079	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	30 HP Well Water Pump Variable Frequency Drive	30 hp well water pump coupled with a VFD	30 hp well water pump without a VFD	15	$662.50	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N080	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	40 HP Well Water Pump Variable Frequency Drive	40 hp well water pump coupled with a VFD	40 hp well water pump without a VFD	15	$825.00	$7,344.33	10,084	1.884	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N081	14.5	100%	100%	100%	100%	1	-
HVAC+R - MN	Well Pump VFD	50 HP Well Water Pump Variable Frequency Drive	50 hp well water pump coupled with a VFD	50 hp well water pump without a VFD	15	$1,000.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N082	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	60 HP Well Water Pump Variable Frequency Drive	60 hp well water pump coupled with a VFD	60 hp well water pump without a VFD	15	$1,225.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N083	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	75 HP Well Water Pump Variable Frequency Drive	75 hp well water pump coupled with a VFD	75 hp well water pump without a VFD	15	$1,475.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N084	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	100 HP Well Water Pump Variable Frequency Drive	100 hp well water pump coupled with a VFD	100 hp well water pump without a VFD	15	$1,700.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N085	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	125 HP Well Water Pump Variable Frequency Drive	125 hp well water pump coupled with a VFD	125 hp well water pump without a VFD	15	$1,925.00	$10,884.59	246,166	25.444	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N086	14.5	100%	100%	100%	100%	2	-
HVAC+R - MN	Well Pump VFD	150 HP Well Water Pump Variable Frequency Drive	150 hp well water pump coupled with a VFD	150 hp well water pump without a VFD	15	$2,125.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N087	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Well Pump VFD	200 HP Well Water Pump Variable Frequency Drive	200 hp well water pump coupled with a VFD	200 hp well water pump without a VFD	15	$2,375.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N088	14.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	1 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	19	$180.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N089	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	1.5 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$200.00	$1,060.13	640	0.109	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N090	14.4	100%	100%	100%	100%	1	-
HVAC+R - MN	Fan Efficiency (FEI)	2 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$240.00	$854.98	936	0.134	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N091	14.4	100%	100%	100%	100%	2	-
HVAC+R - MN	Fan Efficiency (FEI)	3 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$280.00	$3,379.13	810	0.171	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N092	14.4	100%	100%	100%	100%	3	-
HVAC+R - MN	Fan Efficiency (FEI)	5 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$300.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N093	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	7.5 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$340.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N094	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	10 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$380.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N095	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	15 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$400.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N096	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	20 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$440.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N097	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	25 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$480.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N098	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	30 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$540.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N099	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	40 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$580.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N100	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	50 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$640.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N101	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	60 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$680.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N102	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	75 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$740.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N103	14.4	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
HVAC+R - MN	Fan Efficiency (FEI)	100 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$800.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N104	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	125 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$860.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N105	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	150 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$1,080.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N106	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	200 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	$1,420.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N107	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	1 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$580.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N108	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	1.5 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$600.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N109	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	2 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$640.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N110	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	3 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$680.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N111	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	5 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$900.00	$3,596.24	3,181	0.671	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N112	14.4	100%	100%	100%	100%	15	-
HVAC+R - MN	Fan Efficiency (FEI)	7.5 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$1,090.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N113	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	10 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$1,380.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N114	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	15 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$1,650.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N115	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	20 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$2,040.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N116	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	25 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$2,480.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N117	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	30 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$2,940.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N118	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	40 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$3,580.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N119	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	50 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$4,140.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N120	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	60 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$4,680.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N121	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	75 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$5,740.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N122	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	100 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$6,800.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N123	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	125 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$7,860.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N124	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	150 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$8,080.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N125	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Fan Efficiency (FEI)	200 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	$9,420.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N126	14.4	100%	100%	100%	100%	-	-
HVAC+R - MN	Refigeration Fans	PMSM - Medium Temp Display Case	PMSM Motor	Shaded Pole Motor	15	$40.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	N127	14.3	100%	100%	100%	100%	-	-
HVAC+R - MN	Refigeration Fans	PMSM - Low Temp Display Case	PMSM Motor	Shaded Pole Motor	15	$40.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	N128	14.3	100%	100%	100%	100%	-	-
HVAC+R - MN	Refigeration Fans	ECM Motors - Medium Temp Display Case	ECM Motor	Shaded Pole Motor	15	$40.00	$140.71	414	0.047	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	N129	14.3	100%	100%	100%	100%	57	-
HVAC+R - MN	Refigeration Fans	ECM Motors - Low Temp Display Case	ECM Motor	Shaded Pole Motor	15	$40.00	$140.71	489	0.056	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	N130	14.3	100%	100%	100%	100%	18	-
HVAC+R - MN	Refigeration Fans	ECM Motors - Medium Temp Walk-in, Evap fan <= 15" Diameter	ECM Motor	Shaded Pole Motor	15	$70.00	$269.01	793	0.091	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	N131	14.3	100%	100%	100%	100%	132	-
HVAC+R - MN	Refigeration Fans	ECM Motors - Low Temp Walk-in, Evap fan <= 15" Diameter	ECM Motor	Shaded Pole Motor	15	$70.00	$269.01	937	0.107	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	N132	14.3	100%	100%	100%	100%	79	-
HVAC+R - MN	Refigeration Fans	ECM Motors - Medium Temp Walk-in, Evap fan > 15" Diameter	ECM Motor	PSC	15	$70.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	N133	14.3	100%	100%	100%	100%	-	-
HVAC+R - MN	Refigeration Fans	ECM Motors - Low Temp Walk-in, Evap fan > 15" Diameter	ECM Motor	PSC	15	$70.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	N134	14.3	100%	100%	100%	100%	-	-
HVAC+R - MN	Refigeration Fans	PMSM Motors - Medium Temp Walk-in	PMSM Motor	Shaded Pole Motor	15	$70.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	N135	14.3	100%	100%	100%	100%	-	-
HVAC+R - MN	Refigeration Fans	PMSM Motors - Low Temp Walk-in	PMSM Motor	Shaded Pole Motor	15	$70.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	N136	14.3	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Circ. Pumps	1/20 HP Circulator Pump	1/20 HP Circulator Pump with an ECM	1/20 HP Circulator Pump with a PSC	15	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N137	14.7	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Circ. Pumps	1/15 HP Circulator Pump	1/15 HP Circulator Pump with an ECM	1/15 HP Circulator Pump with a PSC	15	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N138	14.7	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Circ. Pumps	1/6 HP Circulator Pump	1/6 HP Circulator Pump with an ECM	1/6 HP Circulator Pump with a PSC	15	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N139	14.7	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Circ. Pumps	1/4 HP Circulator Pump	1/4 HP Circulator Pump with an ECM	1/4 HP Circulator Pump with a PSC	15	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N140	14.7	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Circ. Pumps	1/3 HP Circulator Pump	1/3 HP Circulator Pump with an ECM	1/3 HP Circulator Pump with a PSC	15	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N141	14.7	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Circ. Pumps	1/2 HP Circulator Pump	1/2 HP Circulator Pump with an ECM	1/2 HP Circulator Pump with a PSC	15	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N142	14.7	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Circ. Pumps	3/4 HP Circulator Pump	3/4 HP Circulator Pump with an ECM	3/4 HP Circulator Pump with a PSC	15	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N143	14.7	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Circ. Pumps	7/8 HP Circulator Pump	7/8 HP Circulator Pump with an ECM	7/8 HP Circulator Pump with a PSC	15	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N144	14.7	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Fan Motors	1/20 HP Fan Motor	1/20 HP Fan with an ECM	1/20 HP Fan with a PSC	15	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N145	14.8	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Fan Motors	1/15 HP Fan Motor	1/15 HP Fan with an ECM	1/15 HP Fan with a PSC	15	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N146	14.8	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Fan Motors	1/6 HP Fan Motor	1/6 HP Fan with an ECM	1/6 HP Fan with a PSC	15	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N147	14.8	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Fan Motors	1/4 HP Fan Motor	1/4 HP Fan with an ECM	1/4 HP Fan with a PSC	15	$50.00	$177.37	924	0.329	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N148	14.8	100%	100%	100%	100%	35	-
HVAC+R - MN	Fractional HP Fan Motors	1/3 HP Fan Motor	1/3 HP Fan with an ECM	1/3 HP Fan with a PSC	15	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N149	14.8	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Fan Motors	1/2 HP Fan Motor	1/2 HP Fan with an ECM	1/2 HP Fan with a PSC	15	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N150	14.8	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Fan Motors	3/4 HP Fan Motor	3/4 HP Fan with an ECM	3/4 HP Fan with a PSC	15	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N151	14.8	100%	100%	100%	100%	-	-
HVAC+R - MN	Fractional HP Fan Motors	7/8 HP Fan Motor	7/8 HP Fan with an ECM	7/8 HP Fan with a PSC	15	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N152	14.8	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	1 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum efficency	20	$200.00	$20.43	377	0.068	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N153	14.6	100%	100%	100%	100%	1	-
HVAC+R - MN	Pump Efficiency (PEI)	1.5 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum efficency	20	$240.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N154	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	2 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum efficency	20	$260.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N155	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	3 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum efficency	20	$320.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N156	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	5 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum efficency	20	$360.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N157	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	7.5 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum efficency	20	$420.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N158	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	10 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum efficency	20	$460.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N159	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	15 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum efficency	20	$540.00	$568.94	5,662	0.883	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N160	14.6	100%	100%	100%	100%	1	-
HVAC+R - MN	Pump Efficiency (PEI)	20 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum efficency	20	$580.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N161	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	25 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum efficency	20	$640.00	$74.50	4,248	0.765	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N162	14.6	100%	100%	100%	100%	1	-
HVAC+R - MN	Pump Efficiency (PEI)	30 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum efficency	20	$680.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N163	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	40 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum efficency	20	$740.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N164	14.6	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
HVAC+R - MN	Pump Efficiency (PEI)	50 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum effiecncy	20	$800.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N165	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	60 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum effiecncy	20	$860.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N166	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	75 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum effiecncy	20	$920.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N167	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	100 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum effiecncy	20	$1,020.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N168	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	125 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum effiecncy	20	$1,100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N169	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	150 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum effiecncy	20	$1,180.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N170	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	200 HP Efficient Pump	Pump at least 0.02 PEI better than minimum effiecncy	Pump at minimum effiecncy	20	$1,280.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N171	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	1 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$600.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N172	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	1.5 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$640.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N173	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	2 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$660.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N174	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	3 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$720.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N175	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	5 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$960.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N176	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	7.5 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$1,170.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N177	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	10 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$1,460.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N178	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	15 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$1,790.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N179	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	20 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$2,180.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N180	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	25 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$2,640.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N181	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	30 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$3,080.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N182	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	40 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$3,740.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N183	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	50 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$4,300.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N184	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	60 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$4,860.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N185	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	75 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$5,920.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N186	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	100 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$7,020.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N187	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	125 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$8,100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N188	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	150 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$8,180.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N189	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Pump Efficiency (PEI)	200 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum effiecncy with a VFD	Pump at minimum effiecncy	15	$9,280.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N190	14.6	100%	100%	100%	100%	-	-
HVAC+R - MN	Integrated Drives	1 HP Switched Reluctance Motor with controller	1 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	1 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$415.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N191	14.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Integrated Drives	1.5 HP Switched Reluctance Motor with controller	1.5 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	1.5 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$415.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N192	14.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Integrated Drives	2 HP Switched Reluctance Motor with controller	2 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	2 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$415.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N193	14.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Integrated Drives	3 HP Switched Reluctance Motor with controller	3 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	3 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$420.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N194	14.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Integrated Drives	5 HP Switched Reluctance Motor with controller	5 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	5 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$620.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N195	14.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Integrated Drives	7.5 HP Switched Reluctance Motor with controller	7.5 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	7.5 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$780.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N196	14.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Integrated Drives	10 HP Switched Reluctance Motor with controller	10 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	10 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$1,035.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N197	14.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Integrated Drives	15 HP Switched Reluctance Motor with controller	15 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	15 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$1,295.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N198	14.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Integrated Drives	20 HP Switched Reluctance Motor with controller	20 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	20 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$1,660.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N199	14.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Integrated Drives	1 HP ECM	1 HP centrifugal fan or pump coupled with an ECM	1 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$415.00	$2,599.79	1,758	0.327	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N200	14.9	100%	100%	100%	100%	12	-
HVAC+R - MN	Integrated Drives	1.5 HP ECM	1.5 HP centrifugal fan or pump coupled with an ECM	1.5 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$415.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N201	14.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Integrated Drives	2 HP ECM	2 HP centrifugal fan or pump coupled with an ECM	2 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$415.00	$2,914.80	4,068	0.928	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N202	14.9	100%	100%	100%	100%	3	-
HVAC+R - MN	Integrated Drives	3 HP ECM	3 HP centrifugal fan or pump coupled with an ECM	3 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$420.00	$3,388.43	6,232	1.647	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N203	14.9	100%	100%	100%	100%	13	-
HVAC+R - MN	Integrated Drives	5 HP ECM	5 HP centrifugal fan or pump coupled with an ECM	5 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$620.00	$3,944.60	10,360	1.240	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N204	14.9	100%	100%	100%	100%	1	-
HVAC+R - MN	Integrated Drives	7.5 HP ECM	7.5 HP centrifugal fan or pump coupled with an ECM	7.5 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$780.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N205	14.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Integrated Drives	10 HP ECM	10 HP centrifugal fan or pump coupled with an ECM	10 HP centrifugal fan or pump coupled with a Premium efficency motor	15	$1,035.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-MOTORS	BUS	Electric Only	Electric Only	N206	14.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Anti-Sweat Heater Controls	Anti-Sweat Heater Controls, Medium Temperature Case	Anti-Sweat Heater Controls	Anti-Sweat Heaters running constantly	12	$60.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P001	16.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Anti-Sweat Heater Controls	Anti-Sweat Heater Controls, Low Temperature Case	Anti-Sweat Heater Controls	Anti-Sweat Heaters running constantly	12	$60.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P002	16.1	100%	100%	100%	100%	-	-
HVAC+R - MN	No Heat Case Doors	No Heat Case Doors - Medium Temp	No Heat Case Doors	Anti-Sweat Heaters running constantly	12	$100.00	$4,537.00	13,927	1.668	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P003	16.2	100%	100%	100%	100%	2	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
HVAC+R - MN	No Heat Case Doors	No Heat Case Doors - Low Temp	No Heat Case Doors	Anti-Sweat Heaters running constantly	12	$150.00	$12,800.00	33,323	3.804	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P004	16.2	100%	100%	100%	100%	2	-
HVAC+R - MN	Evaporator Fan Motor Controller	Evaporator Fan Motor Controller (EFMC) (Cooler)	Evaporator fan motor control on medium temp walk-in	No fan motor controls on medium temp walk-in	15	$35.00	$351.49	432	0.049	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P005	16.3	100%	100%	100%	100%	4	-
HVAC+R - MN	Evaporator Fan Motor Controller	Evaporator Fan Motor Controller (EFMC) (Freezer)	Evaporator fan motor control on low temp walk-in	No fan motor controls on low temp walk-in	15	$35.00	$351.49	269	0.031	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P006	16.3	100%	100%	100%	100%	1	-
HVAC+R - MN	Medium-temp Enclosed Reach-In Case	Medium-temp Enclosed Reach-In Case (per linear foot)	Medium-temp Reach-In Cases with Doors	Medium-temp Open Reach-In Cases	15	$70.00	$3,431.45	4,852	0.554	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P007	16.4	100%	100%	100%	100%	1	-
HVAC+R - MN	Medium-temp Enclosed Reach-In Case	New Medium-temp Enclosed Reach-In Case (per linear foot)	New Medium-temp Reach-In Cases with Doors	New Medium-temp Open Reach-In Cases	15	$70.00	$675.16	1,941	0.222	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P008	16.4	100%	100%	100%	100%	1	-
HVAC+R - MN	Retrofit of open multi-deck cases with solid glass doors	Retrofit of open multi-deck cooler cases with solid glass doors (per linear foot of case)	Closed Case with Doors	Open Case with No Doors	12	$100.00	$11,383.75	24,680	2.817	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P009	16.5	100%	100%	100%	100%	1	-
HVAC+R - MN	Retrofit of open multi-deck cases with solid glass doors	Retrofit of open multi-deck freezer cases with solid glass doors (per linear foot of case)	Closed Case with Doors	Open Case with No Doors	12	$150.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P010	16.5	100%	100%	100%	100%	-	-
HVAC+R - MN	Walk-in Freezer Defrost Controls	Controls that only operate defrost when needed in a Walk-in Freezer	Demand Defrost Controls installed in Walk-in Freezer	Walk-in Freezer with Electric Defrost on Timer Controls	15	$598.00	$1,351.00	10,981	1.253	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P011	16.6	100%	100%	100%	100%	3	-
HVAC+R - MN	Floating Head Pressure Controls	Floating head pressure controls added onto a commercial refrigeration system	Electronic solenoids connected to floating head pressure controls to reduce minimum head pressure	Mechanical solenoids set at fixed head pressure	15	$2,200.00	$4,185.00	35,745	0.000	0.0	$0.00	MN-BUS-FLHP_CONTROLS	BUS	Electric Only	Electric Only	P012	16.7	100%	100%	100%	100%	1	-
HVAC+R - MN	Strip Curtains - Direct Install	Strip Curtains - Doorway to Freezer Space	Installation of new strip curtain at least 0.06 inches thick added to a walk-in freezer covering entire doorway when open	Walk-in freezer than previously had either no strip curtain installed or an old, ineffective strip curtain installed	4	$270.83	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P013	16.8	100%	100%	100%	100%	-	-
HVAC+R - MN	Auto Closers - Direct Install	Auto-Close Doors - Walk-in Cooler	Installation of new automatic, hydraulic-type door closer on main walk-in cooler door	Walk-in cooler without an automatic closure	8	$156.82	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P014	16.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Auto Closers - Direct Install	Auto-Close Doors - Walk-in Freezer	Installation of new automatic, hydraulic-type door closer on main walk-in freezer door	Walk-in freezer without an automatic closure	8	$156.82	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P015	16.9	100%	100%	100%	100%	-	-
HVAC+R - MN	Refrigeration Recommissioning - Custom	Refrigeration Recommissioning Implementation	Commercial refrigeration system after recommissioning implemented	Commercial refrigeration system prior to recommissioning	7	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Electric Only	P016	16.1	100%	100%	100%	100%	-	-
HVAC+R - MN	In-Depth Study	Cooling Studies				$38,945.63	$0.00	0	0.000	0.0	$0.00		BUS	Electric Only	Electric Only	R011		100%	100%	100%	100%	-	-
HVAC+R - MN	In-Depth Study	Motors Studies				$28,933.33	$0.00	0	0.000	0.0	$0.00		BUS	Electric Only	Electric Only	R012		100%	100%	100%	100%	-	-
HVAC+R - MN	In-Depth Study	Heating Studies				$43,400.00	$0.00	0	0.000	0.0	$0.00		BUS	Gas Only	Gas Only	R013		100%	100%	100%	100%	-	-
HVAC+R - MN	Assessment	Refrigeration Assessment				$3,000.00	$0.00	0	0.000	0.0	$0.00		BUS	Electric Only	Electric Only	R014		100%	100%	100%	100%	-	-
HVAC+R - MN	In-Depth Study	Refrigeration Study				$11,286.25	$0.00	0	0.000	0.0	$0.00		BUS	Electric Only	Electric Only	R015		100%	100%	100%	100%	-	-
HVAC+R - MN	In-Depth Study	Beneficial Electrification Studies				$8,680.00	$0.00	0	0.000	0.0	$0.00		BUS	Beneficial Electrification	Electric Only	R022		100%	100%	100%	100%	-	-
HVAC+R - MN	Aerators	Sink Aerator -restroom, elec water heating (per aerator)	.6 gallons per minute restroom faucet aerator	2.2 gallons per minute faucet	9	$8.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Combo	S001	19.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Aerators	Sink Aerator -kitchen, elec water heating (per aerator)	1.5 gallons per minute kitchen faucet aerator	2.2 gallons per minute faucet	9	$8.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Combo	S002	19.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Aerators	CHW Pre-Rinse Sprayer - electric water heating	1.28 gallons per minute sprayer	1.60 gallons per minute sprayer	5	$45.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Combo	S003	19.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Aerators	Faucet Aerator (Restroom), gas water heating	.5 gallons per minute restroom faucet aerator	2.2 gallons per minute faucet	9	$8.00	$0.00	0	0.000	0.0	$0.00		Bus	Gas Only	Combo	S004	19.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Aerators	Faucet Aerator (Kitchen), gas water heating	1.5 gallons per minute kitchen faucet aerator	2.2 gallons per minute faucet	9	$8.00	$0.00	0	0.000	0.0	$0.00		Bus	Gas Only	Combo	S005	19.1	100%	100%	100%	100%	-	-
HVAC+R - MN	Aerators	CHW Pre-Rinse Sprayer - gas water heating	1.28 gallons per minute sprayer	1.60 gallons per minute sprayer	5	$45.00	$0.00	0	0.000	0.0	$0.00		Bus	Gas Only	Combo	S006	19.1	100%	100%	100%	100%	-	-
Indirect Impact EFS (Market Transformation) - MN	Panel Upgrade	Panel Upgrade	Upgraded panel to handle electrification load	As built panel		$2,000.00	$2,000.00	0	0.000	0.0	$0.00		RES	Beneficial Electrification	Electric Only	A118		100%	100%	100%	100%	1	
Insulation Rebates - MN	Attic Insulation - Electric Heating and Cooling	Attic insulation in homes with electric heating / electric cooling	Home with R49 or more attic insulation	Existing home with R19 or less attic insulation	20	$679.84	$2,682.29	1,340	0.104216	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I031	8.1	100%	100%	100%	100%	37	-
Insulation Rebates - MN	Attic Insulation - Electric Heating Only	Attic insulation in homes with electric heating / no cooling	Home with R49 or more attic insulation	Existing home with R19 or less attic insulation	20	$525.65	$2,634.35	980	0.025	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I032	8.1	100%	100%	100%	100%	6	-
Insulation Rebates - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for combo customers	Home with R49 or more attic insulation	Existing home with R19 or less attic insulation	20	$828.09	$1,323.80	61	0.151285	11.9	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I033	8.1	100%	100%	100%	100%	794	567
Insulation Rebates - MN	Attic Insulation - Gas Heating Only	Attic insulation in homes with gas heating / no cooling	Home with R49 or more attic insulation	Existing home with R19 or less attic insulation	20	$779.05	$3,351.72	0	0.000	13.8	$0.00		Res	Gas Only	Combo	I034	8.1	100%	100%	100%	100%	-	18
Insulation Rebates - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for gas-only customers	Home with R49 or more attic insulation	Existing home with R19 or less attic insulation	20	$930.14	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I035	8.1	100%	100%	100%	100%	-	-
Insulation Rebates - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for electric-only customers	Home with R49 or more attic insulation	Existing home with R19 or less attic insulation	20	$120.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Electric Only	I036	8.1	100%	100%	100%	100%	-	-
Insulation Rebates - MN	Wall Insulation - Electric Heating and Cooling	Wall insulation in homes with electric heating / electric cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$1,200.00	$6,634.33	4,755	0.500667	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I037	8.2	100%	100%	100%	100%	6	-
Insulation Rebates - MN	Wall Insulation - Electric Heating Only	Wall insulation in homes with electric heating / no cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$1,200.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I038	8.2	100%	100%	100%	100%	-	-
Insulation Rebates - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall insulation in homes with gas heating / electric cooling for combo customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$1,048.74	$2,227.20	197	0.495896	39.5	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I039	8.2	100%	100%	100%	100%	154	119
Insulation Rebates - MN	Wall Insulation - Gas Heating Only	Wall insulation in homes with gas heating / no cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$906.00	$3,253.23	0	0.000	47.7	$0.00		Res	Gas Only	Combo	I040	8.2	100%	100%	100%	100%	-	3
Insulation Rebates - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall insulation in homes with gas heating / electric cooling for gas-only customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$961.60	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I041	8.2	100%	100%	100%	100%	-	-
Insulation Rebates - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall insulation in homes with gas heating / electric cooling for electric-only customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$75.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Electric Only	I042	8.2	100%	100%	100%	100%	-	-
Insulation Rebates - MN	Air Sealing - Electric Heating and Cooling	Air sealing in homes with electric heating / electric cooling	Home with bypass air sealing performed	Existing home without air sealing	10	$348.57	$1,037.12	1,842	0.113395	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I043	8.3	100%	100%	100%	100%	38	-
Insulation Rebates - MN	Air Sealing - Electric Heating Only	Air sealing in homes with electric heating / no cooling	Home with bypass air sealing performed	Existing home without air sealing	10	$200.00	$1,996.28	1,469	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I044	8.3	100%	100%	100%	100%	3	-
Insulation Rebates - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for combo customers	Home with bypass air sealing performed	Existing home without air sealing	10	$335.57	$679.02	57	0.142678	15.5	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I045	8.3	100%	100%	100%	100%	765	550
Insulation Rebates - MN	Air Sealing - Gas Heating Only	Air sealing in homes with gas heating / no cooling	Home with bypass air sealing performed	Existing home without air sealing	10	$451.57	$1,797.57	0	0.000	28.6	$0.00		Res	Gas Only	Combo	I046	8.3	100%	100%	100%	100%	-	14
Insulation Rebates - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for gas-only customers	Home with bypass air sealing performed	Existing home without air sealing	10	$351.82	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I047	8.3	100%	100%	100%	100%	-	-
Insulation Rebates - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for electric-only customers	Home with bypass air sealing performed	Existing home without air sealing	10	$45.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Electric Only	I048	8.3	100%	100%	100%	100%	-	-
Lighting - MN	Custom Lighting Project	Custom Lighting	High Efficiency Lighting	Existing Lower Efficiency Lighting	18	$12,500.84	$62,548.60	137,636	13.079	0.0	-$814.60	MN-BUS-LIGHTING	BUS	Electric Only	Electric Only	G010	7.1	100%	100%	100%	100%	10	
Lighting - MN	Indoor Agricultural Lighting	LED Grow Lighting Fixtures	LED Grow Lighting Fixture	HID or Fluorescent Fixture	20	$518.82	$237.45	3,649	0.603	0.0	$0.00	MN-BUS-GROW_LIGHTING	BUS	Electric Only	Electric Only	B009	13.6	100%	100%	100%	100%	225	
Lighting - MN	New Construction Indoor Agricultural Lighting	LED Grow Lighting Fixtures	LED Grow Lighting Fixture	HID or Fluorescent Fixture	0	$518.82	$0.00	0	0.000	0.0	$0.00	MN-BUS-GROW_LIGHTING	BUS	Electric Only	Electric Only	B156	13.6	100%	100%	100%	100%	-	
Lighting - MN	New Construction Exterior	LED Area Lighting - 200-550W	LED Fixture	HID Fixture	20	$90.00	$658.80	3,786	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B182	13.4	100%	100%	100%	100%	251	
Lighting - MN	Retrofit Exterior	LED Area Lighting - 200-550W	LED Area Lighting	HID Fixture	20	$90.00	$854.48	3,652	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B053	13.2	100%	100%	100%	100%	419	
Lighting - MN	New Construction Flat	LED Parking Garage Wall Pack 61W - 150W	LED Wall Pack Fixture	HID Wall Pack Fixture	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B195	13.4	100%	100%	100%	100%	-	
Lighting - MN	New Construction Exterior	LED Area Lighting - 141-199W	LED Fixture	HID Fixture	20	$60.00	$364.77	3,346	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B181	13.4	100%	100%	100%	100%	154	
Lighting - MN	New Construction High Bay	LED High Bay Fixture - 465-625W	LED High Bay Fixture	HID Fixture	0	$115.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B168	13.4	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Flat	LED Parking Garage Wall Pack 61W - 150W	LED Parking Garage Wall Packs	Fluorescent Fixture	20	$75.00	$514.77	2,584	0.295	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B061	13.2	100%	100%	100%	100%	8	
Lighting - MN	New Construction High Bay	LED High Bay Fixture - 291-464W	LED High Bay Fixture	HID Fixture	20	$110.00	$257.68	2,822	0.521	0.0	-$9.43	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B167	13.4	100%	100%	100%	100%	464	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 465-625W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	0	$165.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B031	13.2	100%	100%	100%	100%	-	

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 465-625W (Fluorescent Baseline)	LED High Bay Kit	Fluorescent Fixture	0	$105.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B038	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Exterior	LED Area Lighting - 141-199W	LED Area Lighting	HID Fixture	20	$60.00	$555.80	1,834	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B052	13.2	100%	100%	100%	100%	440	
Lighting - MN	Retrofit Exterior	LED Exterior Lamps - 120-144W (HID Base)	LED Screw-in Lamps	HID Lamp	9	$75.00	$192.41	481	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B088	13.2	100%	100%	100%	100%	6	
Lighting - MN	Retrofit High Bay	LED Lamps - 120-144W (HID Base)	LED Screw-in Lamps	HID Lamp	8	$75.00	$192.41	1,385	0.218	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B094	13.2	100%	100%	100%	100%	3	
Lighting - MN	Midstream High Bay	LED Lamps - 120-144W (HID Base)	LED Screw-in Lamps	HID Lamp	0	$75.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B145	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 291-464W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	20	$130.00	$717.22	748	0.132	0.0	-$2.78	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B030	13.2	100%	100%	100%	100%	75	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 291-464W (Fluorescent Baseline)	LED High Bay Kit	Fluorescent Fixture	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B037	13.2	100%	100%	100%	100%	-	
Lighting - MN	New Construction Flat	LED Parking Garage lighting 61W - 83W	LED Parking Garage Fixture	HID Fixture	20	$35.00	$113.07	1,866	0.213	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B163	13.4	100%	100%	100%	100%	23	
Lighting - MN	Retrofit Exterior	LED Outdoor Canopy or Soffit lighting 61W - 150W	LED Outdoor Canopy Lighting	HID Fixture	20	$25.00	$273.95	1,232	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B063	13.2	100%	100%	100%	100%	159	
Lighting - MN	Retrofit High Bay	LED Lamps - 145-230W (HID Base)	LED Screw-in Lamps	HID Lamp	8	$75.00	$243.81	1,452	0.214	0.0	-$5.39	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B095	13.2	100%	100%	100%	100%	15	
Lighting - MN	Midstream High Bay	LED Lamps - 145-230W (HID Base)	LED Screw-in Lamps	HID Lamp	0	$75.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B146	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Flat	LED Parking Garage Wall Pack 26W - 60W	LED Parking Garage Wall Packs	Fluorescent Fixture	20	$60.00	$223.64	946	0.108	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B060	13.2	100%	100%	100%	100%	5	
Lighting - MN	New Construction Exterior	LED Outdoor Canopy or Soffit lighting 61W - 150W	LED Canopy Fixture	HID Fixture	20	$25.00	$68.30	1,718	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B197	13.4	100%	100%	100%	100%	30	
Lighting - MN	New Construction Exterior	LED Area Lighting - 120-140W	LED Fixture	HID Fixture	20	$50.00	$395.10	1,585	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B180	13.4	100%	100%	100%	100%	164	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 465-625W	LED High Bay Fixture	HID Fixture	0	$250.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B017	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 465-625W	LED High Bay Fixture	HID Fixture	0	$105.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B024	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit High Bay	LED Lamps - 80-119W (HID Base)	LED Screw-in Lamps	HID Lamp	8	$60.00	$192.41	858	0.071	0.0	-$2.87	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B093	13.2	100%	100%	100%	100%	3	
Lighting - MN	Midstream High Bay	LED Lamps - 80-119W (HID Base)	LED Screw-in Lamps	HID Lamp	0	$60.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B144	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 291-464W	LED High Bay Fixture	HID Fixture	20	$200.00	$682.79	1,375	0.157	0.0	-$5.10	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B016	13.2	100%	100%	100%	100%	77	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 291-464W	LED High Bay Fixture	HID Fixture	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B023	13.2	100%	100%	100%	100%	-	
Lighting - MN	New Construction Exterior	LED Exterior Wall Pack 61W - 150W	LED Wall Pack Fixture	HID Wall Pack Fixture	20	$50.00	$188.78	1,549	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B192	13.4	100%	100%	100%	100%	270	
Lighting - MN	Retrofit High Bay	LED Lamps - 50-79W (HID Base)	LED Screw-in Lamps	HID Lamp	8	$50.00	$111.66	921	0.133	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B092	13.2	100%	100%	100%	100%	50	
Lighting - MN	Midstream High Bay	LED Lamps - 50-79W (HID Base)	LED Screw-in Lamps	HID Lamp	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B143	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 190-290W	LED High Bay Fixture	HID Fixture	20	$100.00	$551.14	1,316	0.203	0.0	-$4.20	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B015	13.2	100%	100%	100%	100%	286	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 190-290W	LED High Bay Fixture	HID Fixture	0	$40.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B022	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Exterior	LED Area Lighting - 120-140W	LED Area Lighting	HID Fixture	20	$50.00	$614.84	1,743	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B051	13.2	100%	100%	100%	100%	95	
Lighting - MN	New Construction Flat	LED Parking Garage Wall Pack 26W - 60W	LED Wall Pack Fixture	HID Wall Pack Fixture	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B194	13.4	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Flat	LED Parking Garage Lighting 25W-60W	LED Parking Garage Lighting	HID Fixture	20	$115.00	$252.92	1,155	0.132	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B110	13.2	100%	100%	100%	100%	272	
Lighting - MN	New Construction Flat	LED Parking Garage Lighting 25W-60W	LED Parking Garage Fixture	HID Fixture	20	$25.00	$158.63	1,322	0.151	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B162	13.4	100%	100%	100%	100%	165	
Lighting - MN	Retrofit Exterior	LED Exterior Wall Pack 61W - 150W	LED Exterior Wall Packs	HID Wall Pack Fixture	20	$50.00	$363.39	1,238	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B058	13.2	100%	100%	100%	100%	332	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 95-189W	LED High Bay Fixture	HID Fixture	20	$90.00	$309.44	939	0.164	0.0	-$2.40	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B014	13.2	100%	100%	100%	100%	727	
Lighting - MN	New Construction High Bay	LED High Bay Fixture - 190-290W	LED High Bay Fixture	HID Fixture	20	$90.00	$374.66	1,244	0.225	0.0	-$3.95	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B166	13.4	100%	100%	100%	100%	1,096	
Lighting - MN	Retrofit Flat	LED Parking Garage lighting 61W - 83W	LED Parking Garage Lighting	HID Fixture	0	$125.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B111	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Exterior	LED Exterior Lamps - 145-230W (HID Base)	LED Screw-in Lamps	HID Lamp	9	$75.00	$252.41	1,242	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B089	13.2	100%	100%	100%	100%	52	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 190-290W (Fluorescent Baseline)	LED High Bay Kit	Fluorescent Fixture	0	$40.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B036	13.2	100%	100%	100%	100%	-	
Lighting - MN	New Construction Exterior	LED Street Lighting - 140-209W	LED Street Lighting	HID Fixture	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B176	13.4	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Exterior	LED Street Lighting - 140-209W	LED Street Lighting	HID Fixture	20	$50.00	$602.26	1,500	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B044	13.2	100%	100%	100%	100%	6	
Lighting - MN	Retrofit Exterior	LED Exterior Lamps - 80-119W (HID Base)	LED Screw-in Lamps	HID Lamp	9	$60.00	$168.25	1,200	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B087	13.2	100%	100%	100%	100%	32	
Lighting - MN	Retrofit Exterior	LED Area Lighting - 90-119W	LED Area Lighting	HID Fixture	20	$40.00	$358.03	987	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B050	13.2	100%	100%	100%	100%	81	
Lighting - MN	Retrofit High Bay	LED Lamps - 40-49W (HID Base)	LED Screw-in Lamps	HID Lamp	8	$40.00	$93.11	602	0.104	0.0	-$2.01	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B091	13.2	100%	100%	100%	100%	35	
Lighting - MN	Midstream High Bay	LED Lamps - 40-49W (HID Base)	LED Screw-in Lamps	HID Lamp	0	$40.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B142	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 190-290W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	20	$100.00	$533.14	638	0.114	0.0	-$2.02	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B029	13.2	100%	100%	100%	100%	816	
Lighting - MN	Retrofit Exterior	LED Exterior Lamps - 50-79W (HID Base)	LED Screw-in Lamps	HID Lamp	9	$50.00	$88.34	1,073	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B086	13.2	100%	100%	100%	100%	17	
Lighting - MN	Retrofit Flat	LED Parking Garage Wall Pack <= 25W	LED Parking Garage Wall Packs	Fluorescent Fixture	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B059	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Exterior	LED Area Lighting - 66-89W	LED Area Lighting	HID Fixture	20	$35.00	$361.20	342	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B049	13.2	100%	100%	100%	100%	180	
Lighting - MN	Retrofit Exterior	LED Exterior Wall Pack 26W - 60W	LED Exterior Wall Packs	HID Wall Pack Fixture	20	$30.00	$188.78	781	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B057	13.2	100%	100%	100%	100%	341	
Lighting - MN	New Construction Exterior	LED Area Lighting - 90-119W	LED Fixture	HID Fixture	20	$40.00	$363.73	948	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B179	13.4	100%	100%	100%	100%	30	
Lighting - MN	Retrofit Exterior	LED Area Lighting - 45-65W	LED Area Lighting	HID Fixture	20	$35.00	$469.81	628	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B048	13.2	100%	100%	100%	100%	3	
Lighting - MN	New Construction Flat	LED Parking Garage Wall Pack <= 25W	LED Wall Pack Fixture	HID Wall Pack Fixture	0	$15.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B193	13.4	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Exterior	LED Street Lighting - 110-139W	LED Street Lighting	HID Fixture	0	$40.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B043	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 95-189W	LED High Bay Fixture	HID Fixture	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B021	13.2	100%	100%	100%	100%	-	
Lighting - MN	New Construction Exterior	LED Street Lighting - 110-139W	LED Street Lighting	HID Fixture	0	$40.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B175	13.4	100%	100%	100%	100%	-	
Lighting - MN	New Construction Troffer	LED Interior Fixture 26W - 50W	LED Downlight Fixture	Incandescent Fixture	20	$40.00	$164.72	724	0.135	0.0	-$2.42	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B158	13.4	100%	100%	100%	100%	2,566	
Lighting - MN	New Construction Exterior	LED Outdoor Canopy or Soffit lighting 25W - 60W	LED Canopy Fixture	HID Fixture	20	$20.00	$193.39	672	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B196	13.4	100%	100%	100%	100%	103	
Lighting - MN	Retrofit Exterior	LED Outdoor Canopy or Soffit lighting 25W - 60W	LED Outdoor Canopy Lighting	HID Fixture	0	$20.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B062	13.2	100%	100%	100%	100%	-	
Lighting - MN	New Construction High Bay	LED High Bay Fixture - 95-189W	LED High Bay Fixture	HID Fixture	20	$80.00	$194.64	725	0.126	0.0	-$2.46	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B165	13.4	100%	100%	100%	100%	4,496	
Lighting - MN	Retrofit Exterior	LED Exterior Lamps - 40-49W (HID Base)	LED Screw-in Lamps	HID Lamp	0	$40.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B085	13.2	100%	100%	100%	100%	-	
Lighting - MN	New Construction Exterior	LED Exterior Wall Pack 26W - 60W	LED Wall Pack Fixture	HID Wall Pack Fixture	20	$30.00	$39.34	678	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B191	13.4	100%	100%	100%	100%	179	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 95-189W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	20	$90.00	$392.49	555	0.093	0.0	-$1.21	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B028	13.2	100%	100%	100%	100%	4,125	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 55-74W	LED High Bay Fixture	HID Fixture	20	$50.00	$89.79	605	0.069	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B012	13.2	100%	100%	100%	100%	44	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 55-74W	LED High Bay Fixture	HID Fixture	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B019	13.2	100%	100%	100%	100%	-	
Lighting - MN	New Construction Exterior	LED Area Lighting - 66-89W	LED Fixture	HID Fixture	20	$35.00	$274.71	684	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B178	13.4	100%	100%	100%	100%	38	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 95-189W (Fluorescent Baseline)	LED High Bay Kit	Fluorescent Fixture	20	$30.00	$286.38	420	0.082	0.0	-$1.43	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B035	13.2	100%	100%	100%	100%	105	
Lighting - MN	New Construction Exterior	LED Exterior Downlight 26W - 50W	LED Downlight Fixture	Incandescent Fixture	20	$40.00	$111.54	405	0.000	0.0	$0.00	MN-BUS-RECM_OUT	Bus	Electric Only	Electric Only	B160	13.4	100%	100%	100%	100%	14	
Lighting - MN	New Construction Exterior	LED Street Lighting - 56-79W	LED Street Lighting	HID Fixture	0	$25.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B173	13.4	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Exterior	LED Street Lighting - 56-79W	LED Street Lighting	HID Fixture	20	$25.00	$442.13	613	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B041	13.2	100%	100%	100%	100%	6	
Lighting - MN	Retrofit High Bay	LED Lamps - 30-39W (HID Base)	LED Screw-in Lamps	HID Lamp	8	$30.00	$75.85	445	0.081	0.0	-$1.46	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B090	13.2	100%	100%	100%	100%	96	
Lighting - MN	Midstream High Bay	LED Lamps - 30-39W (HID Base)	LED Screw-in Lamps	HID Lamp	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B141	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Troffer	LED Interior Fixture 26W - 50W	LED Interior Fixtures	Incandescent Fixture	20	$50.00	$160.51	430	0.076	0.0	-$1.44	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B101	13.2	100%	100%	100%	100%	929	
Lighting - MN	Midstream Troffer	LED Interior Fixture 26W - 50W	LED Interior Fixtures	Incandescent Fixture	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B151	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Flat	LED Parking Garage lighting 61W-83W (Fluorescent Baseline)	LED Parking Garage Lighting	Fluorescent Fixture	0	$125.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B108	13.2	100%	100%	100%	100%	-	
Lighting - MN	New Construction High Bay	LED High Bay Fixture - 75-94W	LED High Bay Fixture	HID Fixture	20	$40.00	$54.46	517	0.100	0.0	-$1.75	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B164	13.4	100%	100%	100%	100%	145	
Lighting - MN	New Construction Exterior	LED Street Lighting - 80-109W	LED Street Lighting	HID Fixture	0	$25.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B174	13.4	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Exterior	LED Street Lighting - 80-109W	LED Street Lighting	HID Fixture	0	$25.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B042	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Exterior	LED Exterior Downlight 26W - 50W	LED Interior Fixtures	Incandescent Fixture	20	$50.00	$187.44	427	0.000	0.0	$0.00	MN-BUS-RECM_OUT	Bus	Electric Only	Electric Only	B105	13.2	100%	100%	100%	100%	50	
Lighting - MN	Retrofit Exterior	LED Exterior Wall Pack <= 25W	LED Exterior Wall Packs	HID Wall Pack Fixture	20	$15.00	$194.25	373	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B056	13.2	100%	100%	100%	100%	58	
Lighting - MN	Retrofit Troffer	LED Linear Ambient >=61W	LED Linear Ambients	Fluorescent Fixture	20	$38.00	$264.00	389	0.070	0.0	-$1.30	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B066	13.2	100%	100%	100%	100%	1,082	
Lighting - MN	Retrofit Troffer	LED Linear Ambient Retrofit Kit >=61W	LED Linear Ambient Kits	Fluorescent Fixture	20	$38.00	$170.86	412	0.063	0.0	-$1.48	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B069	13.2	100%	100%	100%	100%	129	
Lighting - MN	New Construction Troffer	LED Linear Ambient >=61W	LED Linear Ambient Fixture	Fluorescent Fixture	20	$25.00	$256.23	537	0.103	0.0	-$1.80	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B186	13.4	100%	100%	100%	100%	1,261	
Lighting - MN	New Construction Troffer	LED Linear Ambient Retrofit Kit >=61W	LED Linear Ambient Kits	Fluorescent Fixture	0	$38.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B189	13.4	100%	100%	100%	100%	-	

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 45-54W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	20	$50.00	$159.19	344	0.061	0.0	-$1.15	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B025	13.2	100%	100%	100%	100%	155	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 45-54W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B032	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Troffer	LED Interior Fixture <= 25W	LED Interior Fixtures	Incandescent Fixture	20	$35.00	$68.21	197	0.033	0.0	-$0.66	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B099	13.2	100%	100%	100%	100%	1,908	
Lighting - MN	Midstream Troffer	LED Interior Fixture <= 25W	LED Interior Fixtures	Incandescent Fixture	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B149	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 45-54W	LED High Bay Fixture	HID Fixture	20	$50.00	$57.18	92	0.016	0.0	-$0.31	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B011	13.2	100%	100%	100%	100%	6	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 45-54W	LED High Bay Fixture	HID Fixture	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B018	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 75-94W	LED High Bay Fixture	HID Fixture	20	$50.00	$184.82	791	0.149	0.0	-$2.73	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B013	13.2	100%	100%	100%	100%	120	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 75-94W	LED High Bay Fixture	HID Fixture	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B020	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 55-74W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	20	$50.00	$215.82	719	0.152	0.0	-$2.40	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B026	13.2	100%	100%	100%	100%	135	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 55-74W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	20	$30.00	$146.14	262	0.045	0.0	-$0.88	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B033	13.2	100%	100%	100%	100%	8	
Lighting - MN	Retrofit Exterior	LED Exterior Downlight <= 25W	LED Interior Fixtures	Incandescent Fixture	20	$35.00	$47.47	497	0.000	0.0	$0.00	MN-BUS-RECM_OUT	Bus	Electric Only	Electric Only	B103	13.2	100%	100%	100%	100%	59	
Lighting - MN	New Construction Flat	LED Stairwell Fixtures	LED Stairwell Fixture	HID or Fluorescent Fixture	20	$40.00	$133.63	449	0.061	0.0	-$1.49	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B169	13.4	100%	100%	100%	100%	99	
Lighting - MN	Retrofit Exterior	LED Exterior Lamps - 30-39W (HID Base)	LED Screw-in Lamps	HID Lamp	9	$30.00	$68.34	438	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B084	13.2	100%	100%	100%	100%	44	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 75-94W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	20	$50.00	$192.12	363	0.059	0.0	-$0.35	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B027	13.2	100%	100%	100%	100%	506	
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 75-94W (Fluorescent Baseline)	LED High Bay Kit	Fluorescent Fixture	20	$30.00	$252.76	296	0.052	0.0	-$0.99	MN-BUS-Light High Bay	BUS	Electric Only	Electric Only	B034	13.2	100%	100%	100%	100%	85	
Lighting - MN	New Construction Exterior	LED Street Lighting - 45-55W	LED Street Lighting	HID Fixture	0	$25.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B172	13.4	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Exterior	LED Street Lighting - 45-55W	LED Street Lighting	HID Fixture	0	$25.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B040	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Flat	LED Stairwell Fixtures	LED Stairwell Fixture	HID or Fluorescent Fixture	20	$40.00	$144.59	496	0.067	0.0	-$1.67	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B010	13.2	100%	100%	100%	100%	393	
Lighting - MN	Retrofit Exterior	LED Area Lighting - 35-44W	LED Area Lighting	HID Fixture	20	$35.00	$141.10	530	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B047	13.2	100%	100%	100%	100%	4	
Lighting - MN	Retrofit Flat	LED Parking Garage Lighting 15W-24W	LED Parking Garage Lighting	HID or Fluorescent Fixture	0	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B109	13.2	100%	100%	100%	100%	-	
Lighting - MN	New Construction Exterior	LED Area Lighting - 45-65W	LED Fixture	HID Fixture	20	$35.00	$358.44	360	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B177	13.4	100%	100%	100%	100%	56	
Lighting - MN	Retrofit Refrigerated	LED Ref and Frz Cases 5' or 6' doors	LED Linear Tubes	Fluorescent Tubes	0	$45.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Refrigerated	BUS	Electric Only	Electric Only	B071	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Flat	LED Exit Sign	Exit Sign Retrofit and Replacement	Incandescent Exit Sign	20	$25.00	$76.42	290	0.039	0.0	-$0.88	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B070	13.2	100%	100%	100%	100%	522	
Lighting - MN	New Construction Refrigerated	LED Ref and Frz Cases 5' or 6' doors	LED Strip Lighting	Fluorescent Tubes	20	$35.00	$125.39	469	0.073	0.0	$0.00	MN-BUS-Light Refrigerated	BUS	Electric Only	Electric Only	B161	13.4	100%	100%	100%	100%	220	
Lighting - MN	Retrofit Flat	LED Parking Garage Lighting 25W-60W (Fluorescent Baseline)	LED Parking Garage Lighting	Fluorescent Fixture	0	$115.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Flat	BUS	Electric Only	Electric Only	B107	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Troffer	LED Linear Ambient 36-60W	LED Linear Ambients	Fluorescent Fixture	20	$25.00	$170.16	274	0.049	0.0	-$0.91	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B065	13.2	100%	100%	100%	100%	1,770	
Lighting - MN	Retrofit Troffer	LED Linear Ambient Retrofit Kit 36-60W	LED Linear Ambient Kits	Fluorescent Fixture	20	$25.00	$156.37	296	0.054	0.0	-$0.81	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B068	13.2	100%	100%	100%	100%	843	
Lighting - MN	New Construction Troffer	LED Linear Ambient 36-60W	LED Linear Ambient Fixture	Fluorescent Fixture	20	$20.00	$157.44	246	0.046	0.0	-$0.82	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B185	13.4	100%	100%	100%	100%	2,552	
Lighting - MN	New Construction Troffer	LED Linear Ambient Retrofit Kit 36-60W	LED Linear Ambient Kits	Fluorescent Fixture	20	$25.00	$127.02	308	0.052	0.0	-$1.03	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B188	13.4	100%	100%	100%	100%	12	
Lighting - MN	Retrofit Troffer	LED Troffer Fixture	LED Troffer Fixture	Fluorescent Fixture	20	$29.42	$151.83	295	0.053	0.0	-$0.09	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B054	13.2	100%	100%	100%	100%	22,607	
Lighting - MN	New Construction Exterior	LED Exterior Wall Pack <= 25W	LED Wall Pack Fixture	HID Wall Pack Fixture	20	$15.00	$28.61	318	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B190	13.4	100%	100%	100%	100%	408	
Lighting - MN	Retrofit Exterior	LED Area Lighting - 15-24W	LED Area Lighting	HID Fixture	20	$35.00	$61.33	221	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B045	13.2	100%	100%	100%	100%	26	
Lighting - MN	Retrofit Exterior	LED Area Lighting - 25-34W	LED Area Lighting	HID Fixture	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B046	13.2	100%	100%	100%	100%	-	
Lighting - MN	Network Lighting Controls	Networked Lighting Controls	Lighting Fixture with Networked Lighting Controls or Networked LLLC	Lighting Fixture with Manual Switch	15	$35.64	$6,278.51	20,620	3.491	0.0	-$6.89	MN-BUS-Light-Network-Controls	BUS	Electric Only	Electric Only	B001	13.1	100%	100%	100%	100%	18	
Lighting - MN	New Construction Lighting Controls	Networked Lighting Controls	Lighting Fixture with Networked Lighting Controls or Networked LLLC	Lighting Fixture with Manual Switch	15	$35.64	$12,016.84	37,891	6.237	0.0	-$13.22	MN-BUS-Light-Sensor	BUS	Electric Only	Electric Only	B155	13.1	100%	100%	100%	100%	4	
Lighting - MN	New Construction Troffer	LED Interior Fixture <= 25W	LED Downlight Fixture	Incandescent Fixture	20	$25.00	$50.10	215	0.037	0.0	-$0.72	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B157	13.4	100%	100%	100%	100%	10,103	
Lighting - MN	New Construction Exterior	LED Street Lighting - 30-44W	LED Street Lighting	HID Fixture	0	$15.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B171	13.4	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Exterior	LED Street Lighting - 30-44W	LED Street Lighting	HID Fixture	0	$15.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B039	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Troffer	LED Troffer Retrofit Kit	LED Troffer Kit	Fluorescent Fixture	9	$29.19	$37.34	194	0.034	0.0	$0.00	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B055	13.2	100%	100%	100%	100%	131	
Lighting - MN	Retrofit Troffer	LED Linear Ambient <=35W	LED Linear Ambients	Fluorescent Fixture	20	$20.00	$123.30	133	0.026	0.0	-$0.42	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B064	13.2	100%	100%	100%	100%	1,903	
Lighting - MN	Retrofit Troffer	LED Linear Ambient Retrofit Kit <=35W	LED Linear Ambient Kits	Fluorescent Fixture	20	$20.00	$113.12	150	0.028	0.0	-$0.50	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B067	13.2	100%	100%	100%	100%	89	
Lighting - MN	New Construction Troffer	LED Linear Ambient <=35W	LED Linear Ambient Fixture	Fluorescent Fixture	20	$15.00	$103.82	122	0.022	0.0	-$0.41	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B184	13.4	100%	100%	100%	100%	3,023	
Lighting - MN	New Construction Troffer	LED Linear Ambient Retrofit Kit <=35W	LED Linear Ambient Kits	Fluorescent Fixture	20	$20.00	$66.39	89	0.017	0.0	-$0.30	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B187	13.4	100%	100%	100%	100%	29	
Lighting - MN	Retrofit Troffer	LED Interior Fixture 26W - 50W (CFL Base)	LED Interior Fixtures	CFL Fixture	20	$35.00	$151.57	165	0.033	0.0	-$0.54	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B102	13.2	100%	100%	100%	100%	293	
Lighting - MN	Midstream Troffer	LED Interior Fixture 26W - 50W (CFL Base)	LED Interior Fixtures	CFL Fixture	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B152	13.3	100%	100%	100%	100%	-	
Lighting - MN	New Construction Exterior	LED Exterior Downlight <= 25W	LED Downlight Fixture	Incandescent Fixture	20	$25.00	$42.20	202	0.000	0.0	$0.00	MN-BUS-RECM_OUT	Bus	Electric Only	Electric Only	B159	13.4	100%	100%	100%	100%	64	
Lighting - MN	New Construction Troffer	LED Troffer Fixture	LED Troffer Fixture	Fluorescent Fixture	20	$30.00	$93.99	224	0.040	0.0	-$0.07	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B183	13.4	100%	100%	100%	100%	9,469	
Lighting - MN	Retrofit Exterior	LED Exterior Downlight 26W - 50W (CFL Base)	LED Interior Fixtures	CFL Fixture	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	Bus	Electric Only	Electric Only	B106	13.2	100%	100%	100%	100%	-	
Lighting - MN	Midstream Tube	LED Tube Type B 4 foot T5	LED Linear Tubes	T5 Fluorescent Tubes	0	$3.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B139	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Tube	LED Tube Type B 4 foot T5	LED Linear Tubes	T5 Fluorescent Tubes	10	$3.00	$23.70	174	0.030	0.0	-$0.51	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B079	13.2	100%	100%	100%	100%	4,288	
Lighting - MN	Retrofit Troffer	LED Interior Fixture <= 25W (CFL Base)	LED Interior Fixtures	CFL Fixture	20	$25.00	$41.81	127	0.025	0.0	-$0.42	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B100	13.2	100%	100%	100%	100%	3,711	
Lighting - MN	Midstream Troffer	LED Interior Fixture <= 25W (CFL Base)	LED Interior Fixtures	CFL Fixture	0	$25.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B150	13.3	100%	100%	100%	100%	-	
Lighting - MN	Midstream Tube	LED Tube Type A 4 foot T5	LED Linear Tubes	T5 Fluorescent Tubes	0	$2.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B138	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Tube	LED Tube Type A 4 foot T5	LED Linear Tubes	T5 Fluorescent Tubes	10	$2.00	$13.71	201	0.037	0.0	-$0.67	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B078	13.2	100%	100%	100%	100%	480	
Lighting - MN	Retrofit Exterior	LED Exterior Downlight <= 25W (CFL Base)	LED Interior Fixtures	CFL Fixture	0	$25.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	Bus	Electric Only	Electric Only	B104	13.2	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Troffer	LED PL/G based CFL Replacement lamp Type B	LED PL/G based CFL Replacement lamp	CFL Lamp	11	$7.00	$25.17	162	0.030	0.0	-$0.54	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B097	13.2	100%	100%	100%	100%	4,822	
Lighting - MN	Midstream Troffer	LED PL/G based CFL Replacement lamp Type B	LED PL/G based CFL Replacement lamp	CFL Lamp	0	$7.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B148	13.3	100%	100%	100%	100%	-	
Lighting - MN	Lighting Controls	High End Trim - LLLC	Luminaire Level Sensor	Manual Switch	0	$20.03	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light-Sensor	BUS	Electric Only	Electric Only	B008	13.1	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Screw In	LED Interior Screw In Fixture Retrofit	LED Retrofit Kit	Halogen, Incandescent, or CFL Fixture	0	$10.07	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B121	13.3	100%	100%	100%	100%	-	
Lighting - MN	Midstream Screw In	LED Interior Screw In Fixture Retrofit	LED Retrofit Kit	Halogen, Incandescent, or CFL Fixture	9	$10.07	$19.50	119	0.021	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B131	13.3	100%	100%	100%	100%	969	
Lighting - MN	Retrofit Troffer	LED Track Lighting 15W - 30W	LED Track Lighting Fixture	Halogen, Incandescent Fixture	20	$15.00	$71.56	388	0.068	0.0	-$1.30	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B098	13.2	100%	100%	100%	100%	45	
Lighting - MN	Retrofit Troffer	LED PL/G based CFL Replacement lamp	LED PL/G based CFL Replacement lamp	CFL Lamp	11	$7.00	$8.14	94	0.016	0.0	-$0.32	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B096	13.2	100%	100%	100%	100%	4,071	
Lighting - MN	Midstream Troffer	LED PL/G based CFL Replacement lamp	LED PL/G based CFL Replacement lamp	CFL Lamp	0	$7.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B147	13.3	100%	100%	100%	100%	-	
Lighting - MN	Lighting Controls	Occupancy & Photo Cell Sensor	Sensor	Manual Switch	8	$8.58	$9,470.02	42,846	7.551	0.0	-$11.16	MN-BUS-Light-Sensor	BUS	Electric Only	Electric Only	B004	13.1	100%	100%	100%	100%	13	
Lighting - MN	Lighting Controls	Occupancy & Photo Cell Sensor - LLLC	Luminaire Level Sensor	Manual Switch	15	$8.58	$2,360.09	8,739	1.348	0.0	-$0.48	MN-BUS-Light-Sensor	BUS	Electric Only	Electric Only	B007	13.1	100%	100%	100%	100%	4	
Lighting - MN	Midstream Tube	LED Tube Type C 4 foot T5	LED Linear Tubes	T5 Fluorescent Tubes	0	$5.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B140	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Tube	LED Tube Type C 4 foot T5	LED Linear Tubes	T5 Fluorescent Tubes	20	$5.00	$34.67	126	0.024	0.0	-$0.42	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B080	13.2	100%	100%	100%	100%	438	
Lighting - MN	Midstream Tube	LED Linear Tube Type A 4 foot	LED Linear Tubes	Fluorescent Tubes	0	$2.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B135	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Tube	LED Linear Tube Type A 4 foot	LED Linear Tubes	Fluorescent Tubes	10	$2.00	$6.97	92	0.016	0.0	-$0.25	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B075	13.2	100%	100%	100%	100%	15,576	
Lighting - MN	New Construction Tube	LED Tubes	LED Linear Tubes	Fluorescent Tubes	10	$5.00	$14.77	87	0.015	0.0	-$0.28	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B170	13.4	100%	100%	100%	100%	7,419	
Lighting - MN	Midstream Tube	LED Linear Tube Type B 4 foot	LED Linear Tubes	Fluorescent Tubes	0	$3.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B136	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Tube	LED Linear Type B 4 foot	LED Linear Tubes	Fluorescent Tubes	10	$3.00	$16.16	77	0.015	0.0	-$0.24	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B076	13.2	100%	100%	100%	100%	70,999	
Lighting - MN	Midstream Tube	LED Linear Tube Type C 4 foot	LED Linear Tubes	Fluorescent Tubes	0	$5.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B137	13.3	100%	100%	100%	100%	-	

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Lighting - MN	Retrofit Tube	LED Linear Tube Type C 4 foot	LED Linear Tubes	Fluorescent Tubes	20	$5.00	$23.98	88	0.012	0.0	$0.22	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B077	13.2	100%	100%	100%	100%	3,623	
Lighting - MN	Retrofit Tube	LED Linear Tube Type A 3 foot	LED Linear Tubes	Fluorescent Tubes	10	$2.00	$3.98	38	0.011	0.0	$0.19	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B081	13.2	100%	100%	100%	100%	345	
Lighting - MN	Retrofit Screw In	LED Interior Lamp - PAR38	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$10.85	$9.10	111	0.018	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B116	13.3	100%	100%	100%	100%	584	
Lighting - MN	Midstream Screw In	LED Interior Lamp - PAR38	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$10.85	$10.10	147	0.023	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B126	13.3	100%	100%	100%	100%	6,909	
Lighting - MN	Lighting Controls	Occupancy Sensor	Sensor	Manual Switch	6	$3.00	$3,413.13	1,431	1.094	0.0	$1.49	MN-BUS-Light-Sensor	BUS	Electric Only	Electric Only	B002	13.1	100%	100%	100%	100%	40	
Lighting - MN	Lighting Controls	Occupancy Sensor - LLLC	Luminaire Level Sensor	Manual Switch	10	$3.00	$1,854.27	1,193	0.195	0.0	$1.06	MN-BUS-Light-Sensor	BUS	Electric Only	Electric Only	B005	13.1	100%	100%	100%	100%	17	
Lighting - MN	New Construction Lighting Controls	Occupancy & Photo Cell Sensor	Sensor	Manual Switch	6	$3.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light-Sensor	BUS	Electric Only	Electric Only	B154	13.1	100%	100%	100%	100%	-	
Lighting - MN	New Construction Lighting Controls	Occupancy Sensor	Sensor	Manual Switch	6	$3.00	$0.00 [$2,352.57]	[15,678]	0.144	0.0	$0.00	MN-BUS-Light-Sensor	BUS	Electric Only	Electric Only	B153	13.1	100%	100%	100%	100%	12	
Lighting - MN	Retrofit Screw In	LED Interior Lamp - BR40	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$6.58	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B117	13.3	100%	100%	100%	100%	-	
Lighting - MN	Midstream Screw In	LED Interior Lamp - BR40	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$6.58	$5.91	68	0.012	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B127	13.3	100%	100%	100%	100%	525	
Lighting - MN	Retrofit Screw In	LED Interior Lamp - A Lamps	LED Lamp	Halogen, Incandescent, or CFL Lamp	4	$3.99	$10.22	75	0.013	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B112	13.3	100%	100%	100%	100%	2,665	
Lighting - MN	Midstream Screw In	LED Interior Lamp - A Lamps	LED Lamp	Halogen, Incandescent, or CFL Lamp	4	$3.99	$4.87	69	0.012	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B122	13.3	100%	100%	100%	100%	60,504	
Lighting - MN	Lighting Controls	Photocell Sensor	Sensor	Manual Switch	6	$5.16	$70.20	1025	0.000	0.0	$0.00	MN-BUS-Light-Sensor	BUS	Electric Only	Electric Only	B003	13.1	100%	100%	100%	100%	2	
Lighting - MN	Lighting Controls	Photocell Sensor - LLLC	Luminaire Level Sensor	Manual Switch	10	$5.16	$2,42.97	1025	0.000	0.0	$0.00	MN-BUS-Light-Sensor	BUS	Electric Only	Electric Only	B006	13.1	100%	100%	100%	100%	2	
Lighting - MN	Midstream Tube	LED Linear Tube Type A 2 foot	LED Linear Tubes	Fluorescent Tubes	6	$2.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B132	13.3	100%	100%	100%	100%	-	
Lighting - MN	Retrofit Tube	LED Linear Tube Type A 2 foot	LED Linear Tubes	Fluorescent Tubes	10	$2.00	$3.98	37	0.007	0.0	$0.13	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B072	13.2	100%	100%	100%	100%	586	
Lighting - MN	Retrofit Tube	LED Linear Tube Type C 3 foot	LED Linear Tubes	Fluorescent Tubes	20	$5.00	$25.47	66	0.012	0.0	$0.21	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B083	13.2	100%	100%	100%	100%	519	
Lighting - MN	Retrofit Tube	LED Linear Tube Type B 3 foot	LED Linear Tubes	Fluorescent Tubes	10	$3.00	$13.58	55	0.010	0.0	$0.19	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B082	13.2	100%	100%	100%	100%	1,133	
Lighting - MN	Retrofit Screw In	LED Interior Lamp - PAR30	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$5.41	$6.46	81	0.013	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B114	13.3	100%	100%	100%	100%	221	
Lighting - MN	Midstream Screw In	LED Interior Lamp - PAR30	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$5.41	$7.34	93	0.017	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B124	13.3	100%	100%	100%	100%	6,512	
Lighting - MN	Retrofit Screw In	LED Interior Lamp - BR30	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$5.76	$11.35	134	0.023	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B115	13.3	100%	100%	100%	100%	1,169	
Lighting - MN	Midstream Screw In	LED Interior Lamp - BR30	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$5.76	$4.55	53	0.009	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B125	13.3	100%	100%	100%	100%	2,547	
Lighting - MN	Midstream Tube	LED Linear Tube Type B 2 foot	LED Linear Tubes	Fluorescent Tubes	6	$3.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B133	13.3	100%	100%	100%	100%		
Lighting - MN	Retrofit Tube	LED Linear Tube Type B 2 foot	LED Linear Tubes	Fluorescent Tubes	10	$3.00	$16.75	97	0.007	0.0	$0.13	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B073	13.2	100%	100%	100%	100%	1,278	
Lighting - MN	Midstream Tube	LED Linear Tube Type C 2 foot	LED Linear Tubes	Fluorescent Tubes	6	$5.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B134	13.3	100%	100%	100%	100%		
Lighting - MN	Retrofit Tube	LED Linear Tube Type C 2 foot	LED Linear Tubes	Fluorescent Tubes	20	$5.00	$23.98	88	0.012	0.0	$0.22	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B074	13.2	100%	100%	100%	100%	12	
Lighting - MN	Retrofit Screw In	LED Interior Lamp - PAR20, R20	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$4.38	$1.01	30	0.005	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B113	13.3	100%	100%	100%	100%	97	
Lighting - MN	Midstream Screw In	LED Interior Lamp - PAR20, R20	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$4.38	$4.38	34	0.006	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B123	13.3	100%	100%	100%	100%	1,889	
Lighting - MN	Retrofit Screw In	LED Interior Lamp - MR16	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$5.45	$7.34	177	0.031	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B119	13.3	100%	100%	100%	100%	107	
Lighting - MN	Midstream Screw In	LED Interior Lamp - MR16	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$5.45	$5.34	128	0.022	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B129	13.3	100%	100%	100%	100%	6,444	
Lighting - MN	Retrofit Screw In	LED Interior Lamp - Decorative (B, BA, Candle)	LED Lamp	Halogen, Incandescent, or CFL Lamp	4	$4.19	$4.38	178	0.031	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B120	13.3	100%	100%	100%	100%	368	
Lighting - MN	Midstream Screw In	LED Interior Lamp - Decorative (B, BA, Candle)	LED Lamp	Halogen, Incandescent, or CFL Lamp	4	$4.19	$5.68	178	0.031	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B130	13.3	100%	100%	100%	100%	5,248	
Lighting - MN	Retrofit Screw In	LED Interior Lamp - PAR16	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$3.29	$0.00	0	0.000	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B118	13.3	100%	100%	100%	100%	-	
Lighting - MN	Midstream Screw In	LED Interior Lamp - PAR16	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	$3.29	$2.32	87	0.015	0.0	$0.00	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B128	13.3	100%	100%	100%	100%	282	
Lighting - MN	Lighting Redesign	Lighting Redesign Implementation	Redesign Lighting Solution Installed	Existing Overlit Lighting System	0	$9,174.72	$0.00	0	0.000	0.0	$0.00	MN-BUS-LIGHTING	BUS	Electric Only	Electric Only	R017		100%	100%	100%	100%	-	
Lighting - MN	Lighting Redesign	Lighting Redesign Studies	Redesign Lighting Solution Study	Existing Overlit Lighting System	0	$23,392.50	$0.00	0	0.000	0.0	$0.00		BUS	Electric Only	Electric Only	R016		100%	100%	100%	100%	-	
Load Strategy Analysis - MN	Behavioral Load Strategy Analysis	Behavioral Changes	Behavior changes that reduce energy use	No change in behavior	0	$1,462.25	$0.00	414,927	103.964	0.0	[$83.75]	MN-BUS-RECOM	Bus	Combo	Combo	C004		100%	100%	100%	100%	4	
Load Strategy Analysis - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	0	$3,657.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T015	4.2	100%	100%	100%	100%	-	
Load Strategy Analysis - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	0	$3,657.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T016	4.2	100%	100%	100%	100%	-	
Load Strategy Analysis - MN	Custom Load Strategy Analysis Project	Custom Load Strategy Analysis Project	New Equipment	Less Efficient Product/Systems	0	$13,157.33	$0.00	170,000	13.046	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	G020	7.1	100%	100%	100%	100%	1	
Load Strategy Analysis - MN	Custom Load Strategy Analysis Gas Project	Custom Load Strategy Analysis Gas Project	New or Optimized System or Equipment	Old or less efficient systems or equipment	0	$3,688.67	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTOM_	Bus	Gas Only	Gas Only	G034	7.1	100%	100%	100%	100%	-	
Load Strategy Analysis - MN	Efficiency Controls Electric Project	Load Strategy Analysis Efficiency Controls Electric Project	New Building Controls	Old Building Controls	0	$6,375.64	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	Bus	Electric Only	Electric Only	G035	7.1	100%	100%	100%	100%	-	
Load Strategy Analysis - MN	Efficiency Controls Gas Project	Load Strategy Analysis Efficiency Controls Gas Project	New Building Controls	Old Building Controls	0	$4,005.47	$0.00	0	0.000	0.0	$0.00		Bus	Gas Only	Gas Only	G036	7.1	100%	100%	100%	100%	-	
Load Strategy Analysis - MN	Load Strategy Analysis Prescriptive	Average Compressed Air/FSO Project	Optimized System	Old System	10	$9,000.00	$0.00 [$2,401.85]	19,000	2.170	0.0	$0.00	MN-BUS-CUSTCAIR	BUS	Electric Only	Electric Only	3048	9.1	100%	100%	100%	100%	5	
Load Strategy Analysis - MN	Energy Information Installation	Energy Information Installation	New Load Strategy Analysis	No Load Strategy Analysis	0	$12,495.71	$0.00	0	0.000	0.0	$0.00			Combo	Combo	R020		100%	100%	100%	100%		
Low Income Home Energy Squad - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	7	$15.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A003	1.5	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Dehumidifier Recycling	Dehumidifier Removal and Recycling	Removal of dehumidifier	Existing dehumidifier	5	$15.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	A009	1.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	ENERGY STAR Dehumidifier	Installation of ENERGY STAR Dehumidifier	ENERGY STAR Dehumidifier (Current ENERGY STAR Criteria)	Standard Efficiency Dehumidifier (Current Federal Standard)	12	$220.00	$0.00	0	0.000	0.0	$0.00	MN-RES-ESTARREF	Res	Electric Only	Combo	A071	1.8	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Weatherstripping - Electric Heating and Cooling	Weatherstripping in homes with electric heating / electric cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$12.00	$13.00	147	0.029 [0.041]	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I076	8.4	100%	100%	100%	100%	13	-
Low Income Home Energy Squad - MN	Weatherstripping - Electric Heating Only	Weatherstripping in homes with electric heating / no cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$12.00	$12.00	278	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I077	8.4	100%	100%	100%	100%	10	-
Low Income Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for combo customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$12.00	$3.87	4	0.0008 [0.0012]	1.2	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I078	8.4	100%	100%	100%	100%	1,319	527
Low Income Home Energy Squad - MN	Weatherstripping - Gas Heating Only	Weatherstripping in homes with gas heating / no cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$12.00	$12.00	0	0.000	1.2	$0.00		Res	Gas Only	Combo	I079	8.4	100%	100%	100%	100%	-	254
Low Income Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for gas-only customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$12.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I080	8.4	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for electric-only customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	10	$12.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Electric Only	I081	8.4	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Low Income Home Energy Squad - MN	Home Energy Squad Service	Home Energy Squad Service	Tier One Energy Squad Service			$70.00	$0.00	0	0.000	0.0	$0.00			Combo	Combo	J022	9.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Home Lighting DI	3-WAY 5W-9W-16W	3-WAY 5W-9W-16W	Existing Incandecent Bulb	18	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K023	13.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Home Lighting DI	LED - A-lamp (15W)	15w Standard LED (100w Equivalent)	Existing Incandecent Bulb	18	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K024	13.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Home Lighting DI	LED - A-lamp (9W)	9w Standard LED (60w Equivalent)	Existing Incandecent Bulb	18	$5.00	$16.64	342	0.044	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K025	13.1	100%	100%	100%	100%	1,195	-
Low Income Home Energy Squad - MN	Home Lighting DI	LED - Candelabra (5W)	LED - Candelabra (5W)	Existing Incandecent Bulb	20	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K026	13.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Home Lighting DI	LED - Flood (10W)	10W VALUE led (60W Equivalent)	Existing Incandecent Bulb	20	$5.00	$20.00	291	0.037	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K027	13.1	100%	100%	100%	100%	746	-
Low Income Home Energy Squad - MN	Home Lighting DI	LED - Globe (6W)	6w Globe LED Dim	Existing Incandecent Bulb	20	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K028	13.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Home Lighting DI	Replace Compact Flourescent Lamps (CFLs) with LEDs	A-Line LED	Existing CFL	18	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K029	13.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Home Lighting DI	Replace Compact Flourescent Lamps (CFLs) with LEDs	Specialty LED	Existing CFL	20	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K030	13.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Home Lighting DI	A19 Smart LED Bulb	A19 Smart LED Bulb	Existing Incandecent Bulb	18	$12.99	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K072	13.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Home Lighting DI	BR30 Smart LED Bulb	BR30 Smart LED Bulb	Existing Incandecent Bulb	18	$17.99	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K073	13.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Programmable Thermostat	Install Programmable T-stat (Elec Cooling & Gas Heat) - Gas Only Customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Gas Only	U046	17.6	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Programmable Thermostat	Install Programmable T-stat (Elec Cooling & Gas Heat) combo customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$0.00	44	0.048	5.1	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U047	17.6	100%	100%	100%	100%	155	128
Low Income Home Energy Squad - MN	Programmable Thermostat	Install Programmable T-stat (Elec Cooling & Gas Heat) electric only customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Electric Only	U048	17.6	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Programmable Thermostat	Install Second Programmable Thermostat - Combo Customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U050	17.6	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Programmable Thermostat	Install Second Programmable Thermostat - Electric Only	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Electric Only	U051	17.6	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Programmable Thermostat	Install Second Programmable Thermostat - Gas Only Customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Gas Only	U052	17.6	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Programmable Thermostat	Programming of Existing T-stat (Elec Cooling & Gas Heat) - Combo Customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$0.00	59	0.063	3.3	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U054	17.6	100%	100%	100%	100%	84	63
Low Income Home Energy Squad - MN	Programmable Thermostat	Programming of Existing T-stat (Elec Cooling & Gas Heat) - Electric Only Customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.1 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	$35.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Electric Only	U055	17.6	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Saver's Switch	Residential AC Switch	Utility Load Control for control period with smart switch	No Control, No Switch	15	$90.00	$190.00	0	0.029	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	U059	17.8	100%	100%	100%	100%	67	-
Low Income Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$125.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	U071	17.7	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$125.00	$55.00	14	0.032	0.9	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U073	17.7	100%	100%	100%	100%	184	184
Low Income Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$125.00	$5.03	7	0.017	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Electric Only	U078	17.7	100%	100%	100%	100%	146	-
Low Income Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - GAS ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$125.00	$110.00	0	0.000	2.1	$0.00		RES	Gas Only	Gas Only	U083	17.7	100%	100%	100%	100%	-	8
Low Income Home Energy Squad - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.25	$0.00	74	0.010	0.0	$5.71	MN-RES-SFWHT	Res	Electric Only	Combo	S023	19.1	100%	100%	100%	100%	30	-
Low Income Home Energy Squad - MN	Aerators - EWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$1.50	$0.00	89	0.013	0.0	$7.91	MN-RES-SFWHT	Res	Electric Only	Combo	S024	19.1	100%	100%	100%	100%	80	-
Low Income Home Energy Squad - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.25	$0.00	0	0.000	0.4	$7.39		Res	Gas Only	Combo	S050	19.1	100%	100%	100%	100%	-	279
Low Income Home Energy Squad - MN	Aerators - GWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$1.50	$0.00	0	0.000	0.3	$7.67		Res	Gas Only	Combo	S051	19.1	100%	100%	100%	100%	-	30
Low Income Home Energy Squad - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.50	$0.00	510	0.037	0.0	$46.25	MN-RES-SFWHT	Res	Electric Only	Combo	S119	19.1	100%	100%	100%	100%	88	-
Low Income Home Energy Squad - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.50	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S120	19.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$9.50	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S121	19.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$9.50	$0.00	343	0.025	0.0	$30.70	MN-RES-SFWHT	Res	Electric Only	Combo	S122	19.1	100%	100%	100%	100%	25	-
Low Income Home Energy Squad - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.50	$0.00	0	0.000	2.2	$46.54		Res	Gas Only	Combo	S157	19.1	100%	100%	100%	100%	-	293
Low Income Home Energy Squad - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.50	$0.00	0	0.000	1.5	$31.31		Res	Gas Only	Combo	S158	19.1	100%	100%	100%	100%	-	57
Low Income Home Energy Squad - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$9.50	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S159	19.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$9.50	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S160	19.1	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Water Heater DR	Demand response capability on grid enabled electric resistance water heater	Demand response from electric resistance water heater	No management of water heater time of use	1	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	S183	19.2	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Electric Water Heater Setback	Electric Water Heater Setback	setback WH setpoint to 120 F	Existing WH at setpoint of 130 F	8	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S193	19.2	100%	100%	100%	100%	-	-
Low Income Home Energy Squad - MN	Gas Water Heater Setback	Gas Water Heater Setback	setback WH setpoint to 120 F	Existing WH at setpoint of 130 F	8	$0.00	$0.00	0	0.000	0.4	$0.00		RES	Gas Only	Combo	S194	19.2	100%	100%	100%	100%	-	233
Low Income Home Energy Squad - MN	Water Heater Pipe Insulation	Water Heater Pipe Insulation - ER water heater	R-2 Pipe insulation added to 6ft after water heater	Bare pipe	13	$21.78	$4.05	51	0.006	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	S272	19.5	100%	100%	100%	100%	69	-
Low Income Home Energy Squad - MN	Water Heater Pipe Insulation	Water Heater Pipe Insulation - Gas water heater	R-2 Pipe insulation added to 6ft after water heater	Bare pipe	13	$21.78	$3.93	0	0.000	0.3	$0.00	MN-RES-FLAT	Res	Gas Only	Combo	S273	19.5	100%	100%	100%	100%	-	277
Low Income Multi-Family Building Efficiency - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	7	$18.00	$18.00	68	0.009	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A074	1.5	100%	100%	75%	100%	2,249	-
Low Income Multi-Family Building Efficiency - MN	Refrigerator Recycling	Freezer Removal and Recycling	Removal of freezer	Existing primary unit - age mostly >10 years	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A078	1.11	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Primary Refrigerator	Existing Primary Unit - age mostly > 15 years	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A107	1.11	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Secondary Refrigerator	Existing Secondary Unit - age mostly > 15 years	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A079	1.11	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	ENERGY STAR Refrigerator	Freezer Replacement	ENERGY STAR ® Freezers	Industry Standard	0	$347.94	$0.00	0	0.000	0.0	$0.00	MN-RES-SFRF1	Res	Electric Only	Combo	A082	1.9	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	ENERGY STAR Refrigerator	Refrigerator Replacement	ENERGY STAR ® Refrigerators	Industry Standard	14	$823.87	$823.87	493	0.056	0.0	$0.00	MN-RES-SFRF1	Res	Electric Only	Combo	A084	1.9	100%	100%	100%	100%	463	-
Low Income Multi-Family Building Efficiency - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T027	4.3	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T028	4.3	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	AC Rewards - Business	Business Smart Thermostat - DR Direct Install	New Installation of DR Capable Smart Thermostat	Non communicating thermostat	0	$255.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T034	4.4	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	AC Rewards - Business	Business Smart Thermostat - BYOT	Existing Dispatchable Device	Non communicating thermostat	0	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T035	4.4	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & GAS	Energy Star Certified Thermostat	Manual or programmable thermostat	0	$95.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	BUS	Combo	Combo	T036	4.4	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC ONLY	Energy Star Certified Thermostat	Manual or programmable thermostat	0	$95.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	BUS	Electric Only	Electric Only	T037	4.4	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Low Income Multi-Family Building Efficiency - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Energy Star Certified Thermostat	Manual or programmable thermostat	0	$95.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	BUS	Electric Only	Electric Only	T038	4.4	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Custom Electric Low Income Multi-Family Building Efficiency Project	Custom Electric LI MFBE	Efficient Equipment	Inefficient Equipment	18	$959.11	$2,357.00	9,595	0.360	0.0	-$19.33	MN-RES-FLAT	BUS	Electric Only	Electric Only	G037	7.1	100%	100%	100%	100%	3	-
Low Income Multi-Family Building Efficiency - MN	Custom Gas Low Income Multi-Family Building Efficiency Project	Custom Gas LI MFBE	Efficient Equipment	Inefficient Equipment	0	$2,750.17	$0.00	0	0.000	0.0	$0.00		BUS	Gas Only	Gas Only	G038	7.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Weatherstripping - Electric Heating and Cooling	Weatherstripping in homes with electric heating / electric cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$30.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I088	8.4	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Weatherstripping - Electric Heating Only	Weatherstripping in homes with electric heating / no cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I089	8.4	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for combo customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$30.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I090	8.4	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Weatherstripping - Gas Heating Only	Weatherstripping in homes with gas heating / no cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$30.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	I091	8.4	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for electric-only customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$30.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Electric Only	I092	8.4	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Renter Kit Window Film - Gas Heating Only	Window film in homes with gas heating	Window with seasonal window film installed	Untreated window	0	$0.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	I093	8.5	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Cooling Project	Efficient Cooling Equipment	Baseline System	20	$1,650.67	$869.74	1,439	0.704	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Combo	J028	9.1	100%	100%	100%	100%	31	-
Low Income Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Lighting Project	LED Lighting	Old System	12	$385.85	$44.51	124	0.016	0.0	-$0.10	MN-BUS-LITE_CI_	BUS	Electric Only	Combo	J029	9.1	100%	100%	100%	100%	2,067	-
Low Income Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Motor Project	Efficient Motors & Drives	Old System	15	$58.33	$529.29	1,011	0.207	0.0	$0.00	MN-BUS-MOTORASD	BUS	Electric Only	Combo	J030	9.1	100%	100%	100%	100%	31	-
Low Income Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Electric Heating Project	Efficient Heating Equipment	Old System	20	$96.00	$6,766.00	0	0.000	47.6	$0.00	MN-BUS-FLAT	BUS	Electric Only	Combo	J031	9.1	100%	100%	100%	100%	-	1
Low Income Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Gas Heating Project	Efficient Heating Equipment	Old System	17	$473.56	$2,516.30	0	0.000	33.9	$0.00		BUS	Gas Only	Combo	J032	9.1	100%	100%	100%	100%	-	30
Low Income Multi-Family Building Efficiency - MN	Home Lighting DI	Replace screw-in CFL within tenant units with LEDs	LED Bulbs	Removed CFL Lamp	20	$5.50	$207.62	316	0.040	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K052	13.1	100%	100%	100%	100%	74	-
Low Income Multi-Family Building Efficiency - MN	Home Lighting DI	Replace screw-in incandescents within tenant units with LEDs	LED Bulbs	Existing Incandecent Bulb	20	$4.97	$168.38	1,384	0.177	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K053	13.1	100%	100%	100%	100%	117	-
Low Income Multi-Family Building Efficiency - MN	Home Lighting DI	LED Nightlight	LED Nightlight	Incandecent Nightlight	0	$1.40	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	RES	Electric Only	Combo	K054	13.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Home Lighting DI	Renter Kit 9W LED	9W LED	Existing Incandecent Bulb	0	$4.80	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K058	13.1	100%	100%	92%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Home Lighting DI	Renter Kit 11W LED	11W LED	Existing Incandecent Bulb	0	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K059	13.1	100%	100%	92%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Pipe Insulation	Pipe Insulation 120-150 Degree - Direct Install - GWH	6 ft of pipe with new insulation	6 ft of pipe with no or old insulation	0	$31.88	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	M101	12.7	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Pipe Insulation	Pipe Insulation 120-150 Degree - Direct Install - EWH	6 ft of pipe with new insulation	6 ft of pipe with no or old insulation	0	$57.38	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Combo	M104	12.7	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Programmable Thermostats - DI	Install programmable thermostats - AC & GAS - Combo Customer	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Combo	Combo	M111	12.17	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Programmable Thermostats - DI	Install programmable thermostats - AC & GAS - Electric Only Customer	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Combo	Electric Only	M112	12.17	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Programmable Thermostats - DI	Install programmable thermostats - AC & GAS - Gas Only Customer	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Combo	Gas Only	M113	12.17	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Programmable Thermostats - DI	Install programmable thermostats - AC ONLY	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Electric Only	Combo	M114	12.17	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Programmable Thermostats - DI	Install programmable thermostats - AC & ELEC HEAT	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Electric Only	Combo	M115	12.17	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Lighting DI	Replace screw-in incandescents in common areas with screw-in LEDs	LED Bulbs	Existing Incandescent Bulb	6	$5.00	$4.88	303	0.041	0.0	-$1.05	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B202	13.5	100%	100%	100%	100%	106	-
Low Income Multi-Family Building Efficiency - MN	Lighting DI	Replace screw-in CFLs in common areas with screw-in LEDs	LED Bulbs	Existing CFL Bulb	6	$4.85	$9.05	65	0.009	0.0	-$0.22	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B203	13.5	100%	100%	100%	100%	611	-
Low Income Multi-Family Building Efficiency - MN	Lighting DI	Replace fluorescent tubes in common areas with LED tubes - 2ft T8 Type A	Linear LED Tubes	Existing Fluorescent Tube	7	$6.50	$6.50	123	0.018	0.0	-$0.42	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B208	13.5	100%	100%	100%	100%	27	-
Low Income Multi-Family Building Efficiency - MN	Lighting DI	Replace fluorescent tubes in common areas with LED tubes - 4ft T8 Type A	Linear LED Tubes	Existing Fluorescent Tube	7	$13.00	$13.00	127	0.018	0.0	-$0.43	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B209	13.5	100%	100%	100%	100%	1,760	-
Low Income Multi-Family Building Efficiency - MN	Wall AC	Wall Air Conditioner Replacement	Average Energy Star Wall AC w/o Louvers 10,000 Btu/hr 10.8 CEER Window AC Unit	Existing Window AC Unit	9	$706.69	$706.69	53	0.086	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U168	17.11	100%	100%	100%	100%	218	-
Low Income Multi-Family Building Efficiency - MN	Room Air Conditioner Recycling	Wall Air Conditioner Removal and Recycling	Removal of Standard 10,000 Btu/hr 9.8 EER Window AC Unit	Existing Window AC Unit	0	$40.75	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U169	17.11	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Window AC	Window Air Conditioner Replacement	Average Energy Star Window AC with Louvers 10,000 Btu/hr 10.8 CEER Window AC Unit	Existing Window AC Unit	0	$443.12	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U170	17.11	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Room Air Conditioner Recycling	Window Air Conditioner Removal and Recycling	Removal of Standard 10,000 Btu/hr Window AC Unit	Existing Window AC Unit	0	$40.75	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U171	17.11	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Res MSHP	Non-ducted Multi-Split Heat Pump w/ Electric Resistance baseline	Residential Mini-Split Heat Pump (Nominal 1.8 Tons with 18.9 SEER2, 12.9 EER2, 10.2 HSPF2) with electric resistance heat backup	Spot Cooling Solution needed with Exsisting Electric Resistance Heating	0	$506.11	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U176	17.4	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Res ASHP	Centrally ducted ASHP Cooling size basis w/ER baseline	Quality Installation of Qualifying ASHP sized for Cooling Load - 2 Ton 16 SEER2 & 12 EER2 & 9 HSPF2 with existing ER heat backup	Non-Quality Installation of 13.4 SEER2 AC Sized at 2 tons in home with existing electric resistance heat	0	$9,942.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U177	17.3	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	EFS - Res ASHP Cooling	Centerally ducted dual fuel ASHP	Cooling Portion of Quality Installation of High Efficiency Residential Air Source Heat Pump - 2.75 Ton 16 SEER2 & 10 EER2 & 7.8 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	0	$5,373.17	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U180	17.3	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	EFS - Res ASHP Heating	Centerally ducted dual fuel ASHP	Heating Portion of Quality Installation of High Efficiency Residential Air Source Heat Pump - 2.75 Ton 16 SEER2 & 10 EER2 & 7.8 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	0	$5,373.17	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ASHP	RES	Beneficial Electrification	Combo	U181	17.3	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Res ccASHP	Centerally ducted cold climate ASHP w/ electric resistance baseline	Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 8.1 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	0	$11,011.81	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ccASHP	RES	Electric Only	Combo	U182	17.12	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Res ccMSHP	Non-ducted cold climate Multi-Split Heat Pump w/ Electric Resistance Heat backup	Installation of Cold Climate Mini-Split Heat Pump (2.75 Tons 20.5 SEER2, 13.3 EER2, 11.5 HSPF2) with 3 indoor heads and Electric Resistance heat backup	Installation of comparable size code minimum AC with Exsisting Electric Resistance Heating	0	$9,255.48	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U184	17.13	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	EFS - Res ccMSHP Cooling	Non-ducted cold climate Multi-Split Heat Pump w/ Gas Furance backup	Cooling Portion of Installation of Cold Climate Mini-Split Heat Pump (2 Tons 22 SEER2, 9.3 EER2, 9.5 HSPF2) with 3 indoor heads and Gas Furnace heat backup	Non-Quality Installation of comparable size code minimum AC and Gas Furnace	0	$5,393.09	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U221	17.13	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	EFS - Res ccMSHP Heating	Non-ducted cold climate Multi-Split Heat Pump w/ Gas Furance backup	Heating Portion of Installation of Cold Climate Mini-Split Heat Pump (2 Tons 22 SEER2, 9.3 EER2, 9.5 HSPF2) with 3 indoor heads and Gas Furnace heat backup	Non-Quality Installation of comparable size code minimum AC and Gas Furnace	0	$5,393.09	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ccASHP	RES	Beneficial Electrification	Combo	U222	17.13	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	EFS - Res MSHP Cooling	Non-ducted dual fuel MSHP w/ gas furnace backup	Cooling Portion of Installation of Residential Mini-Split Heat Pump Equipment - 2 Ton 18.9 SEER2 & 11.5 EER2 & 10.3 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	0	$3,427.65	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U223	17.4	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	EFS - Res MSHP Heating	Non-ducted dual fuel MSHP w/ gas furnace backup	Heating Portion of Installation of Residential Mini-Split Heat Pump Equipment - 2 Ton 18.9 SEER2 & 11.5 EER2 & 10.3 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	0	$3,427.65	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ASHP	RES	Beneficial Electrification	Combo	U224	17.4	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Low Income Multi-Family Building Efficiency - MN	EFS - Res ccASHP Cooling	Centerally ducted dual fuel cold climate ASHP	Cooling Portion of Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 9 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	0	$9,741.82	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Combo	Combo	U225	17.12	100%	100%	100%	100%	0	0.00
Low Income Multi-Family Building Efficiency - MN	EFS - Res ccASHP Heating	Centerally ducted dual fuel cold climate ASHP	Heating Portion of Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 9 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	0	$9,741.82	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ccASHP	RES	Beneficial Electrification	Combo	U226	17.12	100%	100%	100%	100%	0	0.00
Low Income Multi-Family Building Efficiency - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	0	$2.86	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S224	19.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Aerators - EWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S225	19.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S226	19.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Aerators - EWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$4.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S227	19.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$4.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S228	19.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Aerators - EWH	Renter Kit Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	0	$2.86	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S229	19.1	100%	100%	60%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Aerators - EWH	Renter Kit Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S230	19.1	100%	100%	60%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$2.86	$2.86	0	0.000	0.4	$7.39		Res	Gas Only	Combo	S231	19.1	100%	100%	100%	100%	-	452
Low Income Multi-Family Building Efficiency - MN	Aerators - GWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S232	19.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S233	19.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Aerators - GWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$4.00	$4.00	0	0.000	0.4	$9.21		Res	Gas Only	Combo	S234	19.1	100%	100%	100%	100%	-	335
Low Income Multi-Family Building Efficiency - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$4.00	$4.00	0	0.000	0.4	$9.21		Res	Gas Only	Combo	S235	19.1	100%	100%	100%	100%	-	105
Low Income Multi-Family Building Efficiency - MN	Aerators - GWH	Renter Kit Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	0	$2.86	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S236	19.1	100%	100%	60%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Aerators - GWH	Renter Kit Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S237	19.1	100%	100%	60%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	0	$5.60	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S238	19.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	0	$5.60	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S239	19.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	0	$16.25	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S240	19.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	0	$16.25	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S241	19.1	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Showerheads - EWH	Renter Kit Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	0	$5.60	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S242	19.1	100%	100%	65%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$5.60	$5.60	0	0.000	2.6	$54.00		Res	Gas Only	Combo	S243	19.1	100%	100%	100%	100%	-	277
Low Income Multi-Family Building Efficiency - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$5.60	$5.60	0	0.000	0.3	$7.04		Res	Gas Only	Combo	S244	19.1	100%	100%	100%	100%	-	41
Low Income Multi-Family Building Efficiency - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$16.25	$16.25	0	0.000	2.6	$54.00		Res	Gas Only	Combo	S245	19.1	100%	100%	100%	100%	-	21
Low Income Multi-Family Building Efficiency - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$16.25	$16.25	0	0.000	0.4	$7.04		Res	Gas Only	Combo	S246	19.1	100%	100%	100%	100%	-	2
Low Income Multi-Family Building Efficiency - MN	Showerheads - GWH	Renter Kit Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	0	$5.60	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S247	19.1	100%	100%	65%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Water Heater Setback	Water Heater Setback	Building hot water system with setback	Building hot water system without setback	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S248	19.2	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Water Heater Setback	Water Heater Setback	Building hot water system with setback	Building hot water system without setback	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S249	19.2	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	7	$18.00	$18.00	68	0.009	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A005	1.5	100%	100%	100%	100%	5,434	-
Multi-Family Building Efficiency - MN	Refrigerator Recycling	Freezer Removal and Recycling	Removal of freezer	Existing primary unit - age mostly >10 years	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A076	1.11	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Secondary Refrigerator	Existing Secondary Unit - age mostly > 15 years	14	$50.00	$823.87	565	0.065	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A077	1.11	100%	100%	100%	100%	92	-
Multi-Family Building Efficiency - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Primary Refrigerator	Existing Primary Unit - age mostly > 15 years	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A105	1.11	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T017	4.3	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T018	4.3	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	AC Rewards - Business	Business Smart Thermostat - DR Direct Install	New Installation of DR Capable Smart Thermostat	Non communicating thermostat	0	$255.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T029	4.4	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	AC Rewards - Business	Business Smart Thermostat - BYOT	Existing Dispatchable Device	Non communicating thermostat	0	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T030	4.4	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & GAS	Energy Star Certified Thermostat	Manual or programmable thermostat	0	$95.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	BUS	Combo	Combo	T031	4.4	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC ONLY	Energy Star Certified Thermostat	Manual or programmable thermostat	0	$95.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	BUS	Electric Only	Electric Only	T032	4.4	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Energy Star Certified Thermostat	Manual or programmable thermostat	0	$95.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	BUS	Electric Only	Electric Only	T033	4.4	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Custom Electric Multi-Family Building Efficiency Project	Custom Electric MFBE	Efficient Equipment	Inefficient Equipment	17	$959.11	$793.49	600	118.859	0.0	-$1.49	MN-RES-FLAT	BUS	Electric Only	Electric Only	G012	7.1	100%	100%	100%	100%	62	-
Multi-Family Building Efficiency - MN	Custom Gas Multi-Family Building Efficiency Project	Custom Gas MFBE	Efficient Equipment	Inefficient Equipment	19	$2,750.17	$2,385.00	0	0.000	22.2	$0.00		BUS	Gas Only	Gas Only	G013	7.1	100%	100%	100%	100%	-	1
Multi-Family Building Efficiency - MN	Weatherstripping - Electric Heating and Cooling	Weatherstripping in homes with electric heating / electric cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$30.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I082	8.4	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Weatherstripping - Electric Heating Only	Weatherstripping in homes with electric heating / no cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I083	8.4	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for combo customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$30.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I084	8.4	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Weatherstripping - Gas Heating Only	Weatherstripping in homes with gas heating / no cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$30.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	I085	8.4	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for electric-only customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$30.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Electric Only	I086	8.4	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Multi-Family Building Efficiency - MN	Renter Kit Window Film - Gas Heating Only	Window film in homes with gas heating	Window with seasonal window film installed	Untreated window	0	$0.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	I087	8.5	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Cooling Project	Efficient Cooling Equipment	Baseline System	18	$1,650.67	$781.40	228	0.098	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Combo	J023	9.1	100%	100%	100%	100%	152	-
Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Lighting Project	LED Lighting	Old System	18	$385.85	$121.42	147	0.018	0.0	-$0.37	MN-BUS-LITE_CI_	BUS	Electric Only	Combo	J024	9.1	100%	100%	100%	100%	2,038	-
Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Motor Project	Efficient Motors & Drives	Old System	15	$58.33	$1,881.07	1,872	0.438	0.0	$0.00	MN-BUS-MOTORASD	BUS	Electric Only	Combo	J025	9.1	100%	100%	100%	100%	9	-
Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Electric Heating Project	Efficient Heating Equipment	Old System	15	$96.00	$3,771.06	2,772	0.204	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Combo	J026	9.1	100%	100%	100%	100%	102	-
Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Gas Heating Project	Efficient Heating Equipment	Old System	7	$473.56	$1,274.63	0	0.000	39.3	$0.00		BUS	Gas Only	Combo	J027	9.1	100%	100%	100%	100%	-	44
Multi-Family Building Efficiency - MN	Home Lighting DI	Renter Kit 11W LED	11W LED	Existing Incandescent Bulb	0	$5.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K037	13.1	100%	100%	92%	100%	-	-
Multi-Family Building Efficiency - MN	Home Lighting DI	Renter Kit 9W LED	9W LED	Existing Incandescent Bulb	0	$4.80	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K038	13.1	100%	100%	92%	100%	-	-
Multi-Family Building Efficiency - MN	Home Lighting DI	Replace screw-in CFL within tenant units with LEDs	LED Bulbs	Removed CFL Lamp	20	$5.50	$199.46	301	0.039	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K039	13.1	100%	100%	100%	100%	182	-
Multi-Family Building Efficiency - MN	Home Lighting DI	Replace screw-in incandescents within tenant units with LEDs	LED Bulbs	Existing Incandescent Bulb	20	$4.97	$232.96	1,869	0.239	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K040	13.1	100%	100%	100%	100%	388	-
Multi-Family Building Efficiency - MN	Home Lighting DI	LED Nightlight	LED Nightlight	Incandecent Nightlight	0	$1.40	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	RES	Electric Only	Combo	K041	13.1	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Pipe Insulation	Pipe Insulation 120-150 Degree - Direct Install - GWH	6 ft of pipe with new insulation	6 ft of pipe with no or old insulation	0	$31.88	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	M100	12.7	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Pipe Insulation	Pipe Insulation 120-150 Degree - Direct Install - EWH	6 ft of pipe with new insulation	6 ft of pipe with no or old insulation	0	$57.38	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Combo	M103	12.7	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Programmable Thermostats - DI	Install programmable thermostats - AC & GAS - Combo Customer	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Combo	Combo	M106	12.17	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Programmable Thermostats - DI	Install programmable thermostats - AC & GAS - Electric Only Customer	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Combo	Electric Only	M107	12.17	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Programmable Thermostats - DI	Install programmable thermostats - AC & GAS - Gas Only Customer	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Combo	Gas Only	M108	12.17	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Programmable Thermostats - DI	Install programmable thermostats - AC ONLY	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Electric Only	Combo	M109	12.17	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Programmable Thermostats - DI	Install programmable thermostats - AC & ELEC HEAT	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Electric Only	Combo	M110	12.17	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Lighting DI	Replace screw-in incandescents in common areas with screw-in LEDs	LED Bulbs	Existing Incandescent Bulb	6	$5.00	$4.88	305	0.039	0.0	-$1.09	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B198	13.5	100%	100%	100%	100%	264	-
Multi-Family Building Efficiency - MN	Lighting DI	Replace screw-in CFLs in common areas with screw-in LEDs	LED Bulbs	Existing CFL Bulb	6	$4.85	$8.96	77	0.009	0.0	-$0.28	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B199	13.5	100%	100%	100%	100%	1,063	-
Multi-Family Building Efficiency - MN	Lighting DI	Replace fluorescent tubes in common areas with LED tubes - 2ft T8 Type A	Linear LED Tubes	Existing Fluorescent Tube	7	$6.50	$6.50	154	0.022	0.0	-$0.51	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B206	13.5	100%	100%	100%	100%	60	-
Multi-Family Building Efficiency - MN	Lighting DI	Replace fluorescent tubes in common areas with LED tubes - 4ft T8 Type A	Linear LED Tubes	Existing Fluorescent Tube	7	$13.00	$13.00	134	0.017	0.0	-$0.44	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B207	13.5	100%	100%	100%	100%	2,578	-
Multi-Family Building Efficiency - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	0	$2.86	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S025	19.1	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Aerators - EWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S026	19.1	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S027	19.1	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Aerators - EWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$4.00	$4.00	103	0.015	0.0	$9.21	MN-RES-SFWHT	Res	Electric Only	Combo	S028	19.1	100%	100%	100%	100%	3	-
Multi-Family Building Efficiency - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$4.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S029	19.1	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Aerators - EWH	Renter Kit Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S030	19.1	100%	100%	60%	100%	-	-
Multi-Family Building Efficiency - MN	Aerators - EWH	Renter Kit Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S031	19.1	100%	100%	60%	100%	-	-
Multi-Family Building Efficiency - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$2.86	$2.86	0	0.000	0.4	$7.39		Res	Gas Only	Combo	S052	19.1	100%	100%	100%	100%	-	632
Multi-Family Building Efficiency - MN	Aerators - GWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S053	19.1	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S054	19.1	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Aerators - GWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$4.00	$4.00	0	0.000	0.4	$9.21		Res	Gas Only	Combo	S055	19.1	100%	100%	100%	100%	-	567
Multi-Family Building Efficiency - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$4.00	$4.00	0	0.000	0.4	$9.21		Res	Gas Only	Combo	S056	19.1	100%	100%	100%	100%	-	82
Multi-Family Building Efficiency - MN	Aerators - GWH	Renter Kit Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	0	$0.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S057	19.1	100%	100%	60%	100%	-	-
Multi-Family Building Efficiency - MN	Aerators - GWH	Renter Kit Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$0.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S058	19.1	100%	100%	60%	100%	-	-
Multi-Family Building Efficiency - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	0	$5.60	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S123	19.1	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	0	$5.60	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S124	19.1	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	0	$16.25	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S125	19.1	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$16.25	$16.25	79	0.006	0.0	$7.04	MN-RES-SFWHT	Res	Electric Only	Combo	S126	19.1	100%	100%	100%	100%	6	-
Multi-Family Building Efficiency - MN	Showerheads - EWH	Renter Kit Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	0	$5.60	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S127	19.1	100%	100%	65%	100%	-	-
Multi-Family Building Efficiency - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$5.60	$5.60	0	0.000	2.6	$54.00		Res	Gas Only	Combo	S161	19.1	100%	100%	100%	100%	-	501
Multi-Family Building Efficiency - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$5.60	$5.60	0	0.000	0.3	$7.04		Res	Gas Only	Combo	S162	19.1	100%	100%	100%	100%	-	72
Multi-Family Building Efficiency - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$16.25	$16.25	0	0.000	2.6	$54.00		Res	Gas Only	Combo	S163	19.1	100%	100%	100%	100%	-	87
Multi-Family Building Efficiency - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$16.25	$16.25	0	0.000	0.3	$7.04		Res	Gas Only	Combo	S164	19.1	100%	100%	100%	100%	-	3
Multi-Family Building Efficiency - MN	Showerheads - GWH	Renter Kit Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	0	$5.60	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S165	19.1	100%	100%	65%	100%	-	-
Multi-Family Building Efficiency - MN	Water Heater Setback	Electric Water Heater Setback	Electrically heated Building hot water system with setback	Building hot water system without setback	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S195	19.2	100%	100%	100%	100%	-	-
Multi-Family Building Efficiency - MN	Water Heater Setback	Gas Water Heater Setback	Gas heated Building hot water system with setback	Building hot water system without setback	2	$30.00	$0.00	0	0.000	3.7	$0.00		RES	Gas Only	Combo	S196	19.2	100%	100%	100%	100%	-	1
Nonprofit Energy Savings Program - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	7	$20.00	$12.00	68	0.009	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A075	1.5	100%	100%	75%	100%	300,523	-
Nonprofit Energy Savings Program - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Primary Refrigerator	Existing Primary Unit - age mostly > 15 years	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A109	1.11	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Refrigerator Recycling	Freezer Removal and Recycling	Removal of freezer	Existing primary unit - age mostly >10 years	0	$50.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A080	1.11	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Secondary Refrigerator	Existing Secondary Unit - age mostly > 15 years	14	$50.00	$823.87	226	0.026	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A081	1.11	100%	100%	100%	100%	72	-
Nonprofit Energy Savings Program - MN	ENERGY STAR Refrigerator	Freezer Replacement	ENERGY STAR ® Freezers	Industry Standard	11	$347.94	$347.94	226	0.026	0.0	$0.00	MN-RES-SFRF1	Res	Electric Only	Combo	A083	1.9	100%	100%	100%	100%	2	-
Nonprofit Energy Savings Program - MN	ENERGY STAR Refrigerator	Refrigerator Replacement	ENERGY STAR ® Refrigerators	Industry Standard	0	$823.87	$0.00	0	0.000	0.0	$0.00	MN-RES-SFRF1	Res	Electric Only	Combo	A085	1.9	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	0	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T023	4.3	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	$0.00	$0.00	22	15.522	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T024	4.3	100%	100%	100%	100%	1	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Nonprofit Energy Savings Program - MN	AC Rewards - Business	Business Smart Thermostat - DR Direct Install	New Installation of DR Capable Smart Thermostat	Non communicating thermostat	0	$255.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T039	4.4	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	AC Rewards - Business	Business Smart Thermostat - BYOT	Existing Dispatchable Device	Non communicating thermostat	0	$100.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T040	4.4	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & GAS	Energy Star Certified Thermostat	Manual or programmable thermostat	0	$110.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	BUS	Combo	Combo	T041	4.4	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC ONLY	Energy Star Certified Thermostat	Manual or programmable thermostat	0	$110.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	BUS	Electric Only	Electric Only	T042	4.4	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Energy Star Certified Thermostat	Manual or programmable thermostat	0	$110.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	BUS	Electric Only	Electric Only	T043	4.4	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Custom Electric Nonprofit Building Efficiency Project	Custom Electric NESP	Efficient Equipment	Inefficient Equipment	0	$959.11	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	BUS	Electric Only	Electric Only	G039	7.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Custom Gas Nonprofit Building Efficiency Project	Custom Gas NESP	Efficient Equipment	Inefficient Equipment	0	$2,750.17	$0.00	0	0.000	0.0	$0.00		BUS	Gas Only	Gas Only	G040	7.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Weatherstripping - Electric Heating and Cooling	Weatherstripping in homes with electric heating / electric cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$33.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I094	8.4	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Weatherstripping - Electric Heating Only	Weatherstripping in homes with electric heating / no cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$33.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I095	8.4	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for combo customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$33.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I096	8.4	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Weatherstripping - Gas Heating Only	Weatherstripping in homes with gas heating / no cooling	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$33.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	I097	8.4	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for electric-only customers	Weatherstripped door achieving 0.18 CFM/(linear ft of crack) leakage rate	Existing door with 0.55 CFM/(linear ft of crack) leakage rate	0	$33.00	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Electric Only	I098	8.4	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Non-Profit Prescriptive	Average Cooling Project	Efficient Cooling Equipment	Baseline System	20	$1,650.67	$794.57	483	0.428	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Combo	J043	9.1	100%	100%	100%	100%	30	-
Nonprofit Energy Savings Program - MN	Non-Profit Prescriptive	Average Lighting Project	LED Lighting	Old System	12	$385.85	$1,439.62	173	0.023	0.0	-$0.12	MN-BUS-LITE_CI_	BUS	Electric Only	Combo	J044	9.1	100%	100%	100%	100%	1,299	-
Nonprofit Energy Savings Program - MN	Non-Profit Prescriptive	Average Motor Project	Efficient Motors & Drives	Old System	15	$58.33	$2,621.24	4,494	0.419	0.0	$0.00	MN-BUS-MOTORASD	BUS	Electric Only	Combo	J045	9.1	100%	100%	100%	100%	10	-
Nonprofit Energy Savings Program - MN	Non-Profit Prescriptive	Average Electric Heating Project	Efficient Heating Equipment	Old System	0	$96.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	BUS	Electric Only	Combo	J046	9.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Non-Profit Prescriptive	Average Gas Heating Project	Efficient Heating Equipment	Old System	18	$473.56	$3,351.91	0	0.000	38.0	$0.00		BUS	Gas Only	Combo	J049	9.1	100%	100%	100%	100%	-	15
Nonprofit Energy Savings Program - MN	Non-Profit Prescriptive	Average Foodservice Project	Efficient Foodservice Equipment	Old System	11	$784.04	$1,200.00	0	0.000	60.5	$0.00	MN-BUS-FLAT	BUS	Combo	Combo	J047	9.1	100%	100%	100%	100%	-	3
Nonprofit Energy Savings Program - MN	Home Lighting – LI Kit Giveaways	4 x 9W A-lamp	LED: 4 x 9W A lamp	Existing Incandescent Bulb	18	$4.26	$3.48	38	0.004	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K001	13.1	100%	100%	99%	100%	464,448	-
Nonprofit Energy Savings Program - MN	Home Lighting – LI Kit Giveaways	LED Nightlight	LED Nightlight	Incandecent Nightlight	8	$1.40	$1.89	30	0.000	0.0	$0.00	MN-BUS-RECM_OUT	RES	Electric Only	Combo	K002	13.1	100%	100%	99%	100%	464,448	-
Nonprofit Energy Savings Program - MN	Home Lighting DI	Replace screw-in CFL within tenant units with LEDs	LED Bulbs	Removed CFL Lamp	20	$5.50	$99.91	159	0.020	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K055	13.1	100%	100%	100%	100%	9	-
Nonprofit Energy Savings Program - MN	Home Lighting DI	Replace screw-in incandescents within tenant units with LEDs	LED Bulbs	Existing Incandescent Bulb	20	$4.97	$114.22	1,056	0.135	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K056	13.1	100%	100%	100%	100%	17	-
Nonprofit Energy Savings Program - MN	Home Lighting DI	LED Nightlight	LED Nightlight	Incandecent Nightlight	0	$1.40	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECM_OUT	RES	Electric Only	Combo	K057	13.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Mini Split	Mini-Split Heat Pump	MSHP size 1.2 tons, 21.27 SEER, 10.50 HSPF	DX cooling, 1.2 tons, 13 SEER; ER heating, 3.412 HSPF	18	$3,439.53	$988.39	1,438	1.389	0.0	$0.00	MN-BUS-COOLING	Bus	Electric Only	Electric Only	L032	11.9	100%	100%	100%	100%	5	-
Nonprofit Energy Savings Program - MN	Pipe Insulation	Pipe Insulation 120-150 Degree - Direct Install - GWH	6 ft of pipe with new insulation	6 ft of pipe with no or old insulation	0	$31.88	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	M102	12.7	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Pipe Insulation	Pipe Insulation 120-150 Degree - Direct Install - EWH	6 ft of pipe with new insulation	6 ft of pipe with no or old insulation	0	$57.38	$0.00	0	0.000	0.0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Combo	M105	12.7	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Programmable Thermostats - DI	Install programmable thermostats - AC & GAS - Combo Customer	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Combo	Combo	M116	12.17	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Programmable Thermostats - DI	Install programmable thermostats - AC & GAS - Electric Only Customer	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Combo	Electric Only	M117	12.17	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Programmable Thermostats - DI	Install programmable thermostats - AC & GAS - Gas Only Customer	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Combo	Gas Only	M118	12.17	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Programmable Thermostats - DI	Install programmable thermostats - AC ONLY	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Electric Only	Combo	M119	12.17	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Programmable Thermostats - DI	Install programmable thermostats - AC & ELEC HEAT	Programmable thermostat	Existing manual thermostat	0	$35.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	Bus	Electric Only	Combo	M120	12.17	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Lighting DI	Replace screw-in incandescents in common areas with screw-in LEDs	LED Bulbs	Existing Incandescent Bulb	6	$5.00	$5.02	310	0.045	0.0	-$1.04	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B204	13.5	100%	100%	100%	100%	313	-
Nonprofit Energy Savings Program - MN	Lighting DI	Replace screw-in CFLs in common areas with screw-in LEDs	LED Bulbs	Existing Incandescent Bulb	6	$5.00	$5.42	69	0.010	0.0	-$0.24	MN-BUS-Light Screw In	BUS	Electric Only	Electric Only	B205	13.5	100%	100%	100%	100%	180	-
Nonprofit Energy Savings Program - MN	Lighting DI	Replace fluorescent tubes with LED tubes - 2ft T8 Type A	Linear LED Tubes	Existing Fluorescent Tube	7	$6.50	$6.50	94	0.014	0.0	-$0.31	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B210	13.5	100%	100%	100%	100%	31	-
Nonprofit Energy Savings Program - MN	Lighting DI	Replace fluorescent tubes with LED tubes - 4ft T8 Type A	Linear LED Tubes	Existing Fluorescent Tube	7	$13.00	$13.00	121	0.017	0.0	-$0.40	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B211	13.5	100%	100%	100%	100%	8,479	-
Nonprofit Energy Savings Program - MN	Wall AC	Wall Air Conditioner Replacement	Average Energy Star Wall AC w/o Louvers 10,000 Btu/hr 10.8 CEER Window AC Unit	Existing Window AC Unit	0	$706.69	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U172	17.11	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Room Air Conditioner Recycling	Wall Air Conditioner Removal and Recycling	Removal of Standard 10,000 Btu/hr 9.8 EER Window AC Unit	Existing Window AC Unit	0	$40.75	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U173	17.11	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Window AC	Window Air Conditioner Replacement	Average Energy Star Window AC with Louvers 10,000 Btu/hr 10.8 CEER Window AC Unit	Existing Window AC Unit	0	$443.12	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U174	17.11	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Room Air Conditioner Recycling	Window Air Conditioner Removal and Recycling	Removal of Standard 10,000 Btu/hr Window AC Unit	Existing Window AC Unit	0	$40.75	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U175	17.11	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$2.86	$0.94	90	0.013	0.0	$6.96	MN-RES-SFWHT	Res	Electric Only	Combo	S197	19.1	100%	100%	100%	100%	24,590	-
Nonprofit Energy Savings Program - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$2.86	$0.75	0	0.000	0.3	$5.57		Res	Gas Only	Combo	S198	19.1	100%	100%	100%	100%	-	225,442
Nonprofit Energy Savings Program - MN	Aerators - EWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$4.00	$0.94	78	0.011	0.0	$6.99	MN-RES-SFWHT	Res	Electric Only	Combo	S199	19.1	100%	100%	100%	100%	49,183	-
Nonprofit Energy Savings Program - MN	Aerators - GWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$4.00	$1.55	0	0.000	0.3	$6.57		Res	Gas Only	Combo	S200	19.1	100%	100%	100%	100%	-	154
Nonprofit Energy Savings Program - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$5.60	$5.60	604	0.044	0.0	$54.00	MN-RES-SFWHT	Res	Electric Only	Combo	S201	19.1	100%	100%	100%	100%	2	-
Nonprofit Energy Savings Program - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$5.60	$5.60	0	0.000	2.6	$54.00		Res	Gas Only	Combo	S202	19.1	100%	100%	100%	100%	-	16
Nonprofit Energy Savings Program - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	0	$16.25	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S203	19.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	$16.25	$16.25	0	0.000	2.6	$54.00		Res	Gas Only	Combo	S204	19.1	100%	100%	100%	100%	-	2
Nonprofit Energy Savings Program - MN	Water Heater Setback	Electric Water Heater Setback	Electrically heated Building hot water system with setback	Building hot water system without setback	0	$30.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S205	19.2	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Water Heater Setback	Gas Water Heater Setback	Gas heated Building hot water system with setback	Building hot water system without setback	0	$30.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S206	19.2	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Aerators - EWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S250	19.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S251	19.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$4.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S252	19.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Aerators - GWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$1.48	$0.75	0	0.000	0.3	$5.59		Res	Gas Only	Combo	S253	19.1	100%	100%	100%	100%	-	450,944

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Nonprofit Energy Savings Program - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$1.48	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S254	19.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	0	$4.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S255	19.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	0	$5.60	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S256	19.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	0	$16.25	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	Res	Electric Only	Combo	S257	19.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	0	$5.60	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S258	19.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	0	$16.25	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S259	19.1	100%	100%	100%	100%	-	-
Nonprofit Energy Savings Program - MN	Showerheads	Foodbank Energy Efficiency Distribution - Primary Showerhead	1.5 GPM showerhead w/ mixed fuel type water heater	2.5 GPM showerhead w/ mixed fuel type water heater	10	$6.22	$1.85	61	0.004	1.9	$22.83	MN-RES-SFWHT	RES	Combo	Combo	S278	19.1	100%	100%	48%	100%	250,000	250,000
Outdoor Equipment - MN	Electric Lawn Mower	Push Lawn Mower - EFS between electric and gasoline fuel	Electric Push Lawn Mower	Gasoline Powered Push Lawn Mower	10	$75.00	$75.00	-26	0.000	6.9	$0.00	MN-RES-Lawn Mower	Res	Electrification - Gasoline	Electric Only	A098	1.12	100%	100%	100%	100%	736	736
Outdoor Equipment - MN	Electric Lawn Mower	Riding Lawn Mower - EFS between electric and gasoline fuel	Electric Riding Lawn Mower	Gasoline Powered Riding Lawn Mower	10	$200.00	$800.00	-140	0.000	20.0	$0.00	MN-RES-Lawn Mower	Res	Electrification - Gasoline	Electric Only	A099	1.12	100%	100%	100%	100%	27	27
Outdoor Equipment - MN	Electric Lawn Mower	Electric Commercial Lawn Mower	Electric Commercial Lawn Mower, Push	Gas Lawn Mower	10	$300.00	$75.00	-500	-0.050	150.0	$0.00	MN-BUS-Lawn Mower	BUS	Electrification - Gasoline	Electric Only	A111	1.13	100%	100%	100%	100%	1,163	1,163
Outdoor Equipment - MN	Electric Lawn Mower	Electric Commercial Lawn Mower	Electric Commercial Lawn Mower, Riding	Gas Lawn Mower	10	$800.00	$800.00	-1,750	-0.233	250.0	$0.00	MN-BUS-Lawn Mower	BUS	Electrification - Gasoline	Electric Only	A112	1.13	100%	100%	100%	100%	39	39
Peak Partner Rewards - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	$7,261.00	$0.00	1,357	226.213	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T009	4.2	100%	100%	100%	100%	-	
Peak Partner Rewards - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	$7,261.00	$0.00	244	143.068	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T010	4.2	100%	100%	100%	100%	133	
Process & Commercial Efficiency - MN	Behavioral	Behavioral Changes	Behavior changes that reduce energy use	No change in behavior	0	$1,462.25	$0.00	0	0.000	0.0	$0.00	MN-BUS-RECOM	Bus	Electric Only	Electric Only	C003		100%	100%	100%	100%	-	-
Process & Commercial Efficiency - MN	EDA	PE/CE Parent for gas EDA projects	More Efficient than Code Building	Code-Compliant Building	20	$15,693.46	$133,972.78	0	0.000	3,686.0	$0.00	MN-BUS-CUSTOM	BUS	Gas Only	Gas Only	D008		100%	100%	100%	100%	-	1
Process & Commercial Efficiency - MN	EDA	PE/CE Parent for electric EDA projects	More Efficient than Code Building	Code-Compliant Building	20	$74,044.20	$262,701.77	592,392	72.000	0.0	-$132.40	MN-BUS-CUSTOM	BUS	Electric Only	Electric Only	D009		100%	100%	100%	100%	5	-
Process & Commercial Efficiency - MN	EEB	PE/CE Parent for gas EEB projects	More Efficient than Code Building	Code-Compliant Building	10	$3,748.77	$379.67	0	0.000	29.4	$210.03	MN-BUS-CUSTOM	BUS	Gas Only	Gas Only	D022		100%	100%	100%	100%	-	1
Process & Commercial Efficiency - MN	EEB	PE/CE Parent for electric EEB projects	More Efficient than Code Building	Code-Compliant Building	20	$3,378.93	$5,225.44	32,309	4.588	0.0	-$2.37	MN-BUS-CUSTOM	BUS	Electric Only	Electric Only	D023		100%	100%	100%	100%	12	-
Process & Commercial Efficiency - MN	Custom Electric Process & Commercial Efficiency Project	Custom Electric PE/CE Project	New or Optimized System or Equipment	Old or less efficient systems or equipment	19	$15,075.21	$570,789.19	538,255	130.055	0.0	$90,314.72	MN-BUS-CUSTOM	BUS	Electric Only	Electric Only	G014	7.1	100%	100%	100%	100%	95	-
Process & Commercial Efficiency - MN	Custom Gas Process & Commercial Efficiency Project	Custom Gas PE/CE Project	New or Optimized System or Equipment	Old or less efficient systems or equipment	17	$49,050.12	$232,546.20	0	0.000	3,940.7	$8,904.10		Bus	Gas Only	Gas Only	G015	7.1	100%	100%	100%	100%	-	10
Process & Commercial Efficiency - MN	Efficiency Controls Gas Project	Commercial Efficiency Controls Gas Project	New Building Controls	Old Building Controls	15	$4,005.47	$3,036.00	0	0.000	168.3	$0.00		Bus	Gas Only	Gas Only	G025	7.1	100%	100%	100%	100%	-	1
Process & Commercial Efficiency - MN	Efficiency Controls Electric Project	Commercial Efficiency Controls Electric Project	New Building Controls	Old Building Controls	15	$8,375.64	$4,994.82	51,470	8.575	0.0	$0.00	MN-BUS-RECM_OUT	Bus	Electric Only	Electric Only	G026	7.1	100%	100%	100%	100%	28	-
Process & Commercial Efficiency - MN	Data Center Efficiency Implementation	CE Data Center Custom Project	High Efficiency Product/system	Less Efficient Product/Systems	0	$5,708.54	$0.00	0	0.000	0.0	$0.00	MN-BUS-Data Center Blend	Bus	Electric Only	Electric Only	G027	7.1	100%	100%	100%	100%	-	-
Process & Commercial Efficiency - MN	Load Shifting	Equipment Based Load Shift	Equipment-based load shift to off peak hours	Unshifted peak load	0	$22,500.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOLING	BUS	Electric Only	Electric Only	G044	7.1	100%	100%	100%	100%	-	-
Process & Commercial Efficiency - MN	Custom Electrification Equipment	Custom Efficient Fuel Switching	Gas equipment	Efficient electric equipment	0	$862.70	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTOM	BUS	Beneficial Electrification	Combo	G049	7.1	100%	100%	100%	100%	-	-
Process & Commercial Efficiency - MN	Custom Electrification Equipment	Custom Efficient Fuel Switching	Gasoline Equipment	Efficient electric equipment	0	$862.70	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTOM	BUS	Electrification - Gasoline	Combo	G054	7.1	100%	100%	100%	100%	-	-
Process & Commercial Efficiency - MN	Custom Electrification Equipment	Custom Efficient Fuel Switching	Propane Equipment	Efficient electric equipment	0	$862.70	$0.00	0	0.000	0.0	$0.00	MN-BUS-CUSTOM	BUS	Electrification - Propane	Combo	G055	7.1	100%	100%	100%	100%	-	-
Process & Commercial Efficiency - MN	Process & Commercial Efficiency - MN	Average Cooling Project	More efficient cooling equipment	Baseline System	20	$2,966.07	$4,744.79	30,857	4.989	0.0	$2.04	MN-BUS-COOLING	BUS	Electric Only	Electric Only	J012	9.1	100%	100%	100%	100%	91	-
Process & Commercial Efficiency - MN	Process & Commercial Efficiency - MN	Average Compressed Air/FSO Project	Optimized System	Old System	12	$4,987.86	$1,947.77	19,583	2.377	0.0	$0.00	MN-BUS-CUSTCAIR	BUS	Electric Only	Electric Only	J013	9.1	100%	100%	100%	100%	193	-
Process & Commercial Efficiency - MN	Process & Commercial Efficiency - MN	Average Lighting Project	Optimized System	Old System	18	$6,332.44	$55.07	179	0.031	0.0	-$0.44	MN-BUS-LIGHTING	BUS	Electric Only	Electric Only	J014	9.1	100%	100%	100%	100%	84,545	-
Process & Commercial Efficiency - MN	Process & Commercial Efficiency - MN	Average Motor Project	Optimized System	Old System	15	$10,536.68	$4,706.05	24,395	3.881	0.0	$0.00	MN-BUS-MOTORASD	BUS	Electric Only	Electric Only	J015	9.1	100%	100%	100%	100%	1,235	-
Process & Commercial Efficiency - MN	Process & Commercial Efficiency - MN	Average Heating Project	New System	Old System	4	$2,354.60	$240.55	0	0.000	150.9	$0.00		BUS	Gas Only	Gas Only	J016	9.1	100%	100%	100%	100%	-	1,285
Process & Commercial Efficiency - MN	Load Shifting	Average Load Shift Project	Load Shifted Operation	Existing Operation	0	$750.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-EIS Load Shift	BUS	Electric Only	Electric Only	J050	9.1	100%	100%	100%	100%	-	-
Process & Commercial Efficiency - MN	CE	System Optimization and Annual Achievement Bonuses			0	$7,832.30	$0.00	0	0.000	0.0	$0.00		BUS	Combo	Combo	R006		100%	100%	100%	100%	-	-
Process & Commercial Efficiency - MN	In-Depth Study	Study			0	$9,398.80	$0.00	0	0.000	0.0	$0.00		BUS	Combo	Combo	R018		100%	100%	100%	100%	-	-
Process & Commercial Efficiency - MN	PE Bonuses	System Optimization and Annual Achievement Bonuses			0	$30,067.90	$0.00	0	0.000	0.0	$0.00		BUS	Combo	Combo	R019		100%	100%	100%	100%	-	-
Process & Commercial Efficiency - MN	In-Depth Study	Beneficial Electrification Studies			0	$8,680.00	$0.00	0	0.000	0.0	$0.00		BUS	Beneficial Electrification	Electric Only	R023		100%	100%	100%	100%	-	-
Refrigerator Recycling - MN	Dehumidifier Recycling	Dehumidifier Removal and Recycling	Removal of dehumidifier	Existing dehumidifier	5	$0.00	$0.00	824	0.426	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	A006	1.1	100%	100%	100%	100%	13	
Refrigerator Recycling - MN	Refrigerator Recycling	Freezer Removal and Recycling	Removal of freezer	Existing primary unit - age mostly >10 years	7	$50.00	$0.00	739	0.085	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A056	1.11	100%	100%	100%	100%	336	
Refrigerator Recycling - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Primary Refrigerator	Existing Primary Unit - age mostly > 15 years	8	$50.00	$0.00	572	0.065	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A104	1.11	100%	100%	100%	100%	641	
Refrigerator Recycling - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Secondary Refrigerator	Existing Secondary Unit - age mostly > 15 years	8	$50.00	$0.00	745	0.085	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A057	1.11	100%	100%	100%	100%	1,077	
Refrigerator Recycling - MN	Saver's Switch	Residential AC Switch	Utility Load Control for control period with smart switch	No Control, No Switch	15	$90.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	U061	17.8	100%	100%	100%	100%	-	
Refrigerator Recycling - MN	Room Air Conditioner Recycling	Remove and Recycling Room AC	Removal of Standard 10,000 Btu/hr Window AC Unit	Existing Window AC Unit	5	$0.00	$0.00	124	0.178	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U106	17.11	100%	100%	100%	100%	3	
Residential Demand Response - MN	Behavioral Residential	Behavioral Demand Response	Treatment	Control	1	$0.00	$0.00	0	0.016	0.0	$0.00	MN-RES-PEAK_CNT	Res	DR	Combo	C019		100%	100%	100%	100%	516,675	-
Residential Demand Response - MN	AC Rewards-DR	Residential Smart Thermostat - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilzed Tier I Thermostat	5	$190.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	U001	17.7	100%	100%	100%	100%	-	-
Residential Demand Response - MN	AC Rewards-DR	Residential Smart Thermostat - Townhomes - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilzed Tier I Thermostat	5	$190.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	U020	17.7	100%	100%	100%	100%	-	-
Residential Demand Response - MN	AC Rewards-DR	Residential Smart Thermostat - Multifamily - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilzed Tier I Thermostat	5	$190.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	U022	17.7	100%	100%	100%	100%	-	-
Residential Demand Response - MN	AC Rewards-DR	Residential Smart Thermostat - BYOT	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilzed Tier I Thermostat	5	$100.00	$0.05	2	1.109	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	U028	17.7	100%	100%	100%	100%	11,948	-
Residential Demand Response - MN	Saver's Switch	MN - Residential AC Switch	Utility Load Control for control period with smart switch	No control, no switch	15	$0.00	$0.00	1	0.984	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	U056	17.8	100%	100%	100%	100%	22,507	-
Residential Demand Response - MN	Saver's Switch	MN - Residential WH Switch	Utility Load Control for control period with smart switch	No control, no switch	15	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	U057	17.8	100%	100%	100%	100%	-	-
Residential Demand Response - MN	AC Rewards-DR	Residential Smart Thermostat Annual Incentive	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilzed Tier I Thermostat	1	$25.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	U227	17.7	100%	100%	100%	100%	-	-
Residential Demand Response - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045)	Heat Pump Water Heater w/ DR Management	No management of water heater time of use	1	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HPWH_DR	RES	DR	Combo	S184	19.2	100%	100%	100%	100%	-	-
Residential Demand Response - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045) - Annual Re Enrollment	Heat Pump Water Heater w/ DR Management - Re Enrollment of Existing Customer	No management of water heater time of use	1	$25.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HPWH_DR	RES	DR	Combo	S185	19.2	100%	100%	100%	100%	-	-
Residential Demand Response - MN	Water Heater DR	Demand response capability on grid enabled electric resistance water heater (CTA 2045)	Electric Resistance Water Heater w/ DR Management	No management of water heater time of use	1	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	S189	19.2	100%	100%	100%	100%	-	-
Residential Demand Response - MN	Water Heater DR	Demand response capability on existing electric resistance water heater equipped with demand response capable retrofit device (DR switch w/ Non-CTA 2045)	Electric Resistance Water Heater w/ DR Management	No management of water heater time of use	1	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	RES	DR	Combo	S190	19.2	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Residential HVAC - MN	ENERGY STAR Dehumidifier	Installation of ENERGY STAR Dehumidifier	ENERGY STAR Dehumidifier (Current ENERGY STAR Criteria)	Standard Efficiency Dehumidifier (Current Federal Standard)	12	$35.00	$0.00	0	0.000	0.0	$0.00	MN-RES-ESTARREF	Res	Electric Only	Combo	A068	1.8	100%	100%	100%	100%	-	-
Residential HVAC - MN	Smart Thermostat	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$110.00	$0.00	0	0.000	0.0	$0.00	MN-RES-RATE_AC	RES	Combo	Combo	U002	17.7	100%	100%	100%	100%	-	-
Residential HVAC - MN	Smart Thermostat	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo - Townhomes	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$110.00	$0.00	0	0.000	0.0	$0.00	MN-RES-RATE_AC	RES	Combo	Combo	U021	17.7	100%	100%	100%	100%	-	-
Residential HVAC - MN	Smart Thermostat	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo - Multifamily	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$110.00	$0.00	0	0.000	0.0	$0.00	MN-RES-RATE_AC	RES	Combo	Combo	U023	17.7	100%	100%	100%	100%	-	-
Residential HVAC - MN	Boiler	95% Efficient Boiler	95% Efficient Boiler	84% Efficient Boiler	20	$400.00	$3,997.50	0	0.000	23.0	$0.00		RES	Gas Only	Combo	U032	17.5	100%	100%	100%	100%		399
Residential HVAC - MN	Furnace	95% Efficient Furnace in existing home	95% Efficient Furnace in existing home	80% Efficient Furnace	18	$200.00	$787.78	0	0.000	17.7	$0.00		RES	Gas Only	Combo	U035	17.5	100%	100%	100%	100%		232
Residential HVAC - MN	Furnace	95% Efficient Furnace in New Home	95% Efficient Furnace in new home	90% Efficient Furnace	18	$100.00	$393.89	0	0.000	8.8	$0.00		RES	Gas Only	Combo	U037	17.5	100%	100%	100%	100%		9
Residential HVAC - MN	Furnace	96% Efficient Furnace in Existing Home	96% Efficient Furnace in existing home	80% Efficient Furnace	18	$300.00	$930.56	0	0.000	20.5	$0.00		RES	Gas Only	Combo	U038	17.5	100%	100%	100%	100%		3,726
Residential HVAC - MN	Furnace	96% Efficient Furnace in New Home	96% Efficient Furnace in new home	90% Efficient Furnace	18	$150.00	$579.28	0	0.000	6.9	$0.00		RES	Gas Only	Combo	U040	17.5	100%	100%	100%	100%		59
Residential HVAC - MN	Furnace	97% Efficient Furnace in Existing Home	97% Efficient Furnace in existing home	80% Efficient Furnace	18	$400.00	$1,370.94	0	0.000	23.8	$0.00		RES	Gas Only	Combo	U041	17.5	100%	100%	100%	100%		3,037
Residential HVAC - MN	Furnace	97% Efficient Furnace in New Home	97% Efficient Furnace in new home	90% Efficient Furnace	18	$200.00	$685.47	0	0.000	7.1	$0.00		RES	Gas Only	Combo	U043	17.5	100%	100%	100%	100%		9
Residential HVAC - MN	Smart Thermostat	Eco+	Smart Thermostat Optimization with eco+	Smart thermostat	10	$0.00	$0.00	0	0.000	0.0	$0.00	MN-RES-RATE_AC	RES	Electric Only	Combo	U064	17.1	100%	100%	100%	100%		-
Residential HVAC - MN	Res MSHP	Non-Ducted Mini-Split Heat Pump w/ Electric Resistance Baseline	Residential Mini-Split Heat Pump (Nominal 1.8 Tons with 18.9 SEER2, 12.9 EER2, 10.2 HSPF2) with Electric Resistance baseline	Spot Cooling Solution needed with Existing Electric Resistance Heating	15	$600.00	$3,213.67	5,085	0.934	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U107	17.4	100%	100%	100%	100%	64	-
Residential HVAC - MN	Res AC	Installation of new AC 15.2 SEER2 2.25 tons	Quality Installation of 15.2 SEER2 2.25 tons	Non-Quality Installation of 13.4 SEER2 (Baseline and Model) 2 tons	18	$450.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U111	17.1	100%	100%	100%	100%	-	-
Residential HVAC - MN	Res AC w/ Furnace	Installation of new AC 15.2 SEER2 2.25 tons w/ assoc furnace	Non - Quality Installation of 15.2 SEER2 2.25 tons with Associated Furnace	Non-Quality Installation of 13.4 SEER2 (Baseline and Model) 2.25 tons	18	$300.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U113	17.1	100%	100%	100%	100%	-	-
Residential HVAC - MN	Res AC	Provide Quality Installation of new AC 13.4 SEER2 2.25 tons	Quality Installation of 13.4 SEER2 2.25 tons	Non-Quality Installation of 13.4 SEER2 2 tons	18	$150.00	$278.57	531	0.634	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U115	17.1	100%	100%	100%	100%	10,696	1,150
Residential HVAC - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 13.4 SEER2 2.25 tons w/ assoc furnace	Quality Installation of 13.4 SEER2 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.5 Ton AC 13.4 SEER2 2 tons	18	$150.00	$123.29	158	0.468	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U116	17.1	100%	100%	100%	100%	2,521	2,521
Residential HVAC - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 15.2 SEER2 2.25 tons w/ assoc furnace	Quality Installation of 15.2 SEER2 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.25 Ton AC 15.2 SEER2	18	$150.00	$203.16	260	0.637	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U117	17.1	100%	100%	100%	100%	2,218	2,218
Residential HVAC - MN	Res ASHP	Centrally ducted ASHP Cooling size basis wER baseline	Quality Installation of Qualifying ASHP sized for Cooling Load - 2 Ton 15.2 SEER2 & 10 EER2 & 9 HSPF2 with existing ER heat backup	Non-Quality Installation of 13.4 SEER2 AC Sized at 2 tons in home with existing electric resistance heat	18	$350.00	$2,676.62	5,085	0.442	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U127	17.3	100%	100%	100%	100%	41	-
Residential HVAC - MN	Res GSHP	Installation of High Efficiency GSHP equipment Existing Home	Quality Installation of GLHP Brine to Air with 55,690 BTUH heating, 18 EER2, 4.0 COP	Non-Quality Installation of 2.5 Ton 13.4 SEER2 AC and Electric Resistance Heat	20	$2,320.42	$14,764.54	21,581	0.757	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U131	17.3	100%	100%	100%	100%	21	-
Residential HVAC - MN	Res GSHP	Installation of High Efficiency GSHP equipment New Home	Quality Installation of GLHP Brine to Air with 55,690 BTUH heating, 18 EER2, 4.0 COP	Non-Quality Installation of 2.5 Ton 13.4 SEER2 AC and Electric Resistance Heat	20	$2,320.42	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U132	17.3	100%	100%	100%	100%	-	-
Residential HVAC - MN	Res ccASHP	Centerally ducted cold climate ASHP w/ electric resistance baseline	Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 8.1 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$2,000.00	$10,295.66	7,316	0.238	0.0	$0.00	MN-EFS-RES ccASHP	RES	Electric Only	Combo	U149	17.12	100%	100%	100%	100%	69	0.00
Residential HVAC - MN	Res ccMSHP	Non-ducted cold climate Multi-Split Heat Pump w/ Electric Resistance Heat backup	Installation of Cold Climate Mini Split Heat Pump (2.75 Tons 20.5 SEER2, 13.3 EER2, 11.5 HSPF2) with 3 indoor heads and Electric Resistance heat backup	Installation of comparable size code minimum AC with Existing Electric Resistance Heating	15	$2,000.00	$5,324.23	6,818	0.216	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U157	17.13	100%	100%	100%	100%	151	-
Residential HVAC - MN	EFS - Res GSHP Cooling	Cooling Portion - GSHP replacing Gas Furnace & AC	Quality Installation of closed loop GSHP with 43,000 BTUH heating capcity and 16 EER cooling	Non-Quality Installation of 1.5 Ton 13.4 SEER2 AC and 80% AFUE gas fired furnace heating	20	$895.83	$10,661.38	299	0.969	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U228	17.3	100%	100%	100%	100%	5	-
Residential HVAC - MN	EFS - Res GSHP Heating	Heating Portion - GSHP replacing Gas Furnace & AC	Quality Installation of closed loop GSHP with 43,000 BTUH heating capcity and 16 EER cooling	Non-Quality Installation of 1.5 Ton 13.4 SEER2 AC and 80% AFUE gas fired furnace heating	20	$895.83	$0.00	-7,364	0.000	125.2	$0.00	MN-EFS-RES GSHP	RES	Beneficial Electrification	Combo	U229	17.3	100%	100%	100%	100%	5	5
Residential HVAC - MN	EFS - Res GSHP Cooling	Cooling Portion - GSHP replacing Gas Furnace & AC	Quality Installation of closed loop GSHP with 43,000 BTUH heating capcity and 16 EER cooling	Non-Quality Installation of 1.5 Ton 13.4 SEER2 AC and 80% AFUE gas fired furnace heating	20	$895.83	$9,922.03	228	0.766	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Electric Only	U237	17.3	100%	100%	100%	100%	9	-
Residential HVAC - MN	EFS - Res GSHP Heating	Heating Portion - GSHP replacing Gas Furnace & AC	Quality Installation of closed loop GSHP with 43,000 BTUH heating capcity and 16 EER cooling	Non-Quality Installation of 1.5 Ton 13.4 SEER2 AC and 80% AFUE gas fired furnace heating	20	$895.83	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES GSHP	RES	Beneficial Electrification	Electric Only	U238	17.3	100%	100%	100%	100%	9	-
Residential HVAC - MN	Smart Thermostat	BYOT EE - AC & Electric Heating	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$50.00	$140.69	1,319	0.189	0.0	$0.00	MN-RES-HMEFF	RES	Electric Only	Electric Only	U185	17.7	100%	100%	100%	100%	29	-
Residential HVAC - MN	Smart Thermostat	BYOT EE - AC & Gas Heating - Combo Customer	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$50.00	$66.39	75	0.179	5.4	$0.00	MN-RES-RATE_AC	RES	Combo	Combo	U186	17.7	100%	100%	100%	100%	537	537
Residential HVAC - MN	Smart Thermostat	BYOT EE - AC & Gas Heating - Electric Only Customer	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$50.00	$93.97	75	0.179	0.0	$0.00	MN-RES-RATE_AC	RES	Combo	Electric Only	U187	17.7	100%	100%	100%	100%	619	-
Residential HVAC - MN	Smart Thermostat	BYOT EE - Gas Heating Gas Only Customer	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$50.00	$64.68	0	0.000	5.3	$0.00		RES	Gas Only	Gas Only	U188	17.7	100%	100%	100%	100%	-	97
Residential HVAC - MN	EFS - Res ASHP Cooling	Centerally ducted dual fuel ASHP	Cooling Portion of Quality Installation of High Efficiency Residential Air Source Heat Pump - 2 Ton 16 SEER2 & 9.6 EER2 & 7.8 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$500.00	$3,993.97	911	0.458	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U189	17.3	100%	100%	100%	100%	371	366
Residential HVAC - MN	EFS - Res ASHP Heating	Centerally ducted dual fuel ASHP	Heating Portion of Quality Installation of High Efficiency Residential Air Source Heat Pump - 2 Ton 16 SEER2 & 9.6 EER2 & 7.8 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$1,100.00	$0.00	-4,999	0.000	69.8	$0.00	MN-EFS-RES ASHP	RES	Beneficial Electrification	Combo	U190	17.3	100%	100%	100%	100%	371	366

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Residential HVAC - MN	EFS - Res ASHP Cooling	Centerally ducted dual fuel ASHP	Cooling Portion of Quality Installation of High Efficiency Residential Air Source Heat Pump - 2 Ton 16 SEER2 & 9.6 EER2 & 7.8 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$500.00	$4,725.87	510	0.435	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Electric Only	U233	17.3	100%	100%	100%	100%	535	-
Residential HVAC - MN	EFS - Res ASHP Heating	Centerally ducted dual fuel ASHP	Heating Portion of Quality Installation of High Efficiency Residential Air Source Heat Pump - 2 Ton 16 SEER2 & 9.6 EER2 & 7.8 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$600.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ASHP	RES	Beneficial Electrification	Electric Only	U234	17.3	100%	100%	100%	100%	535	-
Residential HVAC - MN	EFS - Res ccASHP Cooling	Centerally ducted dual fuel cold climate ASHP	Cooling Portion of Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 9 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$500.00	$0.00	179	0.127	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U197	17.12	100%	100%	100%	100%	814	0.00
Residential HVAC - MN	EFS - Res ccASHP Heating	Centerally ducted dual fuel cold climate ASHP	Heating Portion of Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 9 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$1,500.00	$0.00	1,025	0.000	49.0	$0.00	MN-EFS-RES ccASHP	RES	Beneficial Electrification	Combo	U198	17.12	100%	100%	100%	100%	814	868.00
Residential HVAC - MN	EFS - Res ccASHP Cooling	Centerally ducted dual fuel cold climate ASHP	Cooling Portion of Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 9 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$500.00	$6,331.93	172	0.212	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Electric Only	U239	17.12	100%	100%	100%	100%	1,212	0.00
Residential HVAC - MN	EFS - Res ccASHP Heating	Centerally ducted dual fuel cold climate ASHP	Heating Portion of Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 9 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$1,500.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ccASHP	RES	Beneficial Electrification	Electric Only	U240	17.12	100%	100%	100%	100%	1,212	0.00
Residential HVAC - MN	EFS - Res ccMSHP Cooling	Non-ducted cold climate Multi-Split Heat Pump w/ Gas Furance backup	Cooling Portion of Installation of Cold Climate Mini-Split Heat Pump (2 Tons 22 SEER2, 9.3 EER2, 9.5 HSPF2) with 3 indoor heads and Gas Furnace heat backup	Non-Quality Installation of comparable size code minimum AC and Gas Furnace	15	$500.00	$3,979.43	238	0.367	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U205	17.13	100%	100%	100%	100%	573	-
Residential HVAC - MN	EFS - Res ccMSHP Heating	Non-ducted cold climate Multi-Split Heat Pump w/ Gas Furance backup	Heating Portion of Installation of Cold Climate Mini-Split Heat Pump (2 Tons 22 SEER2, 9.3 EER2, 9.5 HSPF2) with 3 indoor heads and Gas Furnace heat backup	Non-Quality Installation of comparable size code minimum AC and Gas Furnace	15	$1,500.00	$0.00	-1,114	0.000	39.7	$0.00	MN-EFS-RES ccASHP	RES	Beneficial Electrification	Combo	U206	17.13	100%	100%	100%	100%	573	612
Residential HVAC - MN	EFS - Res ccMSHP Cooling	Non-ducted cold climate Multi-Split Heat Pump w/ Gas Furance backup	Cooling Portion of Installation of Cold Climate Mini-Split Heat Pump (2 Tons 22 SEER2, 9.3 EER2, 9.5 HSPF2) with 3 indoor heads and Gas Furnace heat backup	Non-Quality Installation of comparable size code minimum AC and Gas Furnace	15	$500.00	$2,594.23	7	0.011	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Electric Only	U235	17.13	100%	100%	100%	100%	24,000	-
Residential HVAC - MN	EFS - Res ccMSHP Heating	Non-ducted cold climate Multi-Split Heat Pump w/ Gas Furance backup	Heating Portion of Installation of Cold Climate Mini-Split Heat Pump (2 Tons 22 SEER2, 9.3 EER2, 9.5 HSPF2) with 3 indoor heads and Gas Furnace heat backup	Non-Quality Installation of comparable size code minimum AC and Gas Furnace	15	$1,500.00	$0.00	-5	0.000	0.0	$0.00	MN-EFS-RES ccASHP	RES	Beneficial Electrification	Electric Only	U236	17.13	100%	100%	100%	100%	24,000	-
Residential HVAC - MN	EFS - Res MSHP Cooling	Non-ducted dual fuel MSHP w/ gas furnace backup	Cooling Portion of Installation of Residential Mini-Split Heat Pump Equipment - 2 Ton 19 SEER2 & 9.3 EER2 & 9.5 HSPF2	Installation of comparable size code minimum AC with Gas Furnace	15	$500.00	$287.28	5.61	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U213	17.4	100%	100%	100%	100%	314	-
Residential HVAC - MN	EFS - Res MSHP Heating	Non-ducted dual fuel MSHP w/ gas furnace backup	Heating Portion of Installation of Residential Mini-Split Heat Pump Equipment - 2 Ton 19 SEER2 & 9.3 EER2 & 9.5 HSPF2	Installation of comparable size code minimum AC with Gas Furnace	15	$1,100.00	$0.00	-2,870	0.000	39.7	$0.00	MN-EFS-RES ASHP	RES	Beneficial Electrification	Combo	U214	17.4	100%	100%	100%	100%	314	275
Residential HVAC - MN	EFS - Res MSHP Cooling	Non-ducted dual fuel MSHP w/ gas furnace backup	Cooling Portion of Installation of Residential Mini-Split Heat Pump Equipment - 2 Ton 19 SEER2 & 9.3 EER2 & 9.5 HSPF2	Installation of comparable size code minimum AC with Gas Furnace	15	$500.00	$315.99	327	0.401	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Electric Only	U241	17.4	100%	100%	100%	100%	258	-
Residential HVAC - MN	EFS - Res MSHP Heating	Non-ducted dual fuel MSHP w/ gas furnace backup	Heating Portion of Installation of Residential Mini-Split Heat Pump Equipment - 2 Ton 19 SEER2 & 9.3 EER2 & 9.5 HSPF2	Installation of comparable size code minimum AC with Gas Furnace	15	$1,100.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ASHP	RES	Beneficial Electrification	Electric Only	U242	17.4	100%	100%	100%	100%	258	-
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Electric Resistance Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$400.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S067	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling ASHP Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$400.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S068	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$400.00	$784.99	1,022	0.391	0.0	$9.94	MN-RES-SFWHT	RES	Electric Only	Combo	S069	19.2	100%	100%	100%	100%	246	-
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Electric Resistance Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$400.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S070	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling ASHP Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$400.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S071	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$400.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S072	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Electric Resistance Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S073	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling ASHP Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S074	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Natural Gas Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$500.00	$784.99	1,172	0.413	0.0	$10.50	MN-RES-SFWHT	RES	Electric Only	Combo	S075	19.2	100%	100%	100%	100%	48	-
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Electric Resistance Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S076	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling ASHP Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S077	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Natural Gas Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S078	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater <= 40 Gal - Medium Draw	Minimum Efficiency Storage Water Heater	13	$75.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	S169	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater <= 40 Gal - High Draw	Minimum Efficiency Storage Water Heater	13	$75.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	S170	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater > 40 Gal - Medium Draw	Minimum Efficiency Storage Water Heater	13	$75.00	$218.93	0	0.000	0.0	$0.00		RES	Gas Only	Combo	S171	19.2	100%	100%	100%	100%	-	512
Residential HVAC - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater > 40 Gal - High Draw	Minimum Efficiency Storage Water Heater	13	$75.00	$0.00	-5	0.000	0.0	$0.00		RES	Gas Only	Combo	S172	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	Water Heater	High Efficiency Tankless Water Heater	High Efficiency Tankless Water Heater - High Draw	Minimum Efficiency Storage Water Heater	20	$250.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	S173	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	Water Heater	High Efficiency Tankless Water Heater	High Efficiency Tankless Water Heater - Medium Draw	Minimum Efficiency Storage Water Heater	20	$250.00	$690.63	0	0.000	0.7	$0.00		RES	Gas Only	Combo	S174	19.2	100%	100%	100%	100%	-	335

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Residential HVAC - MN	HP Water Heater - Gas Baseline	Heat Pump Water Heater - Gas Water Heater Baseline Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Gas Storage Water Heater	13	$400.00	$679.52	-901	-0.081	18.4	$0.00	MN-EFS-RES HPWH	RES	Beneficial Electrification	Combo	S216	19.2	100%	100%	100%	100%	57	57
Residential HVAC - MN	HP Water Heater - Gas Baseline	Heat Pump Water Heater - Gas Water Heater Baseline Non-Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Gas Storage Water Heater	13	$400.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES HPWH	RES	Beneficial Electrification	Combo	S217	19.2	100%	100%	100%	100%	-	-
Residential HVAC - MN	HP Water Heater - Gas Baseline	Heat Pump Water Heater - Gas Water Heater Baseline Refrigerant Based Cooling Natural Gas Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Gas Storage Water Heater	13	$500.00	$679.52	-1,119	-0.104	20.0	$0.00	MN-EFS-RES HPWH	RES	Beneficial Electrification	Combo	S218	19.2	100%	100%	100%	100%	6	6
Residential HVAC - MN	HP Water Heater - Gas Baseline	Heat Pump Water Heater - Gas Water Heater Baseline Non-Refrigerant Based Cooling Natural Gas Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Gas Storage Water Heater	13	$500.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES HPWH	RES	Beneficial Electrification	Combo	S219	19.2	100%	100%	100%	100%	-	-
Saver's Switch for Business - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	$0.00	$0.00	2	1.323	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T002	4.3	100%	100%	100%	100%	791	-
Saver's Switch for Business - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	$0.00	$0.00	4	2.548	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T003	4.3	100%	100%	100%	100%	361	-
Saver's Switch for Business - MN	AC Rewards - Business	Business Smart Thermostat - DR Direct Install	New Installation of DR Capable Smart Thermostat	Non communicating thermostat	5	$520.91	$520.91	13	1.995	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T004	4.4	100%	100%	100%	100%	782	-
Saver's Switch for Business - MN	AC Rewards - Business	Business Smart Thermostat - BYOT	Existing Dispatchable Device	Non communicating thermostat	5	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only	T005	4.4	100%	100%	100%	100%	-	-
Saver's Switch for Business - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & GAS	Energy Star Certified Thermostat	Manual or programmable thermostat	10	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	BUS	Combo	Combo	T006	4.4	100%	100%	100%	100%	-	-
Saver's Switch for Business - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC ONLY	Energy Star Certified Thermostat	Manual or programmable thermostat	10	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-COOL_OUT	BUS	Electric Only	Electric Only	T007	4.4	100%	100%	100%	100%	-	-
Saver's Switch for Business - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Energy Star Certified Thermostat	Manual or programmable thermostat	10	$70.15	$70.15	911	0.000	0.0	$0.00	MN-BUS-COOL_OUT	BUS	Electric Only	Electric Only	T008	4.4	100%	100%	100%	100%	9	-
Saver's Switch for Business - MN	Commercial AC Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	Electric Only	Electric Only	L029	11.14	100%	100%	100%	100%	-	-
Saver's Switch for Business - MN	Commercial AC Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	$0.00	$0.00	0	0.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	Electric Only	Electric Only	L030	11.14	100%	100%	100%	100%	-	-
School Education Kits - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	7	$20.00	$20.00	68	0.009	0.0	$0.00	MN-RES-FLAT	RES	Electric Only	Combo	A117	1.5	100%	100%	92%	100%	5,741	-
School Education Kits - MN	Home Lighting DI	2x 11 Watt LED Bulbs	LED: 2 x 11 W	45 lm/W Equivalent	18	$9.62	$9.62	63	0.008	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K042	13.1	100%	100%	89%	100%	26,209	-
School Education Kits - MN	Home Lighting DI	15 Watt LED Bulbs	LED: 15W	45 lm/W Equivalent	18	$2.79	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K043	13.1	100%	100%	0%	100%	-	-
School Education Kits - MN	Home Lighting DI	4W-8W-14W 3-WAY LED	4W-8W-14W 3-WAY LED	45 lm/W Equivalent	18	$2.65	$2.65	35	0.004	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K044	13.1	100%	100%	92%	100%	11,844	-
School Education Kits - MN	Home Lighting DI	4x 5W Candle LED	4x 5W Candle LED	Incandecent Equivalent	20	$10.60	$10.60	95	0.012	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K045	13.1	100%	100%	92%	100%	6,545	-
School Education Kits - MN	Home Lighting DI	2x 6W Globe LED	2x 6W Globe LED	45 lm/W Equivalent	20	$5.30	$5.30	45	0.006	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K046	13.1	100%	100%	92%	100%	6,545	-
School Education Kits - MN	Home Lighting DI	8W Reflector LED	8W Reflector LED	45 lm/W Equivalent	20	$2.65	$2.65	56	0.007	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K047	13.1	100%	100%	92%	100%	6,545	-
School Education Kits - MN	Home Lighting DI	2x 9 Watt LED Bulbs	LED: 2 x 9W	45 lm/W Equivalent	18	$3.19	$6.38	67	0.009	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K048	13.1	100%	100%	90%	100%	36,760	-
School Education Kits - MN	Home Lighting - Direct Install	2x 13 Watt LED Bulbs	LED: 2 x 13W	45 lm/W Equivalent	18	$10.18	$5.02	58	0.007	0.0	$0.00	MN-RES-SFLIT	RES	Electric Only	Combo	K049	13.1	100%	100%	92%	100%	16,701	-
School Education Kits - MN	Home Lighting - Direct Install	LED Nightlight	LED Nightlight	Incandecent Nightlight	8	$1.40	$1.40	31	0.000	0.0	$0.00	MN-BUS-RECM_OUT	RES	Electric Only	Combo	K050	13.1	100%	100%	85%	100%	43,141	-
School Education Kits - MN	Programmable Thermostat	Programming of Existing T-stat (Elec Cooling & Gas Heat)	Program Existing T-stat w/ Auto setup by 1 F for cooling and setback of 1 F for heating	Existing home w/ no auto setup or setback temps	10	$0.00	$0.00	150	0.163	7.4	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U232	17.6	100%	100%	40%	100%	27,244	12,603
School Education Kits - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with unknown DHW heater (EWH portion)	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.22	$0.49	9	0.001	0.3	$2.29	MN-RES-SFWHT	Res	Electric Only	Combo	S032	19.1	100%	100%	39%	100%	28,628	16,885
School Education Kits - MN	Aerators - EWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with unknown DHW heater (EWH portion)	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.48	$0.20	8	0.001	0.2	$2.38	MN-RES-SFWHT	Res	Electric Only	Combo	S033	19.1	100%	100%	42%	100%	32,418	20,675
School Education Kits - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with unknown DHW heater (GWH portion)	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	$1.22	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S059	19.1	100%	100%	0%	100%	-	-
School Education Kits - MN	Aerators - GWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with unknown DHW heater (GWH portion)	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	$0.48	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S060	19.1	100%	100%	0%	100%	-	-
School Education Kits - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with unknown DHW heater (EWH portion)	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.22	$1.45	61	0.004	1.9	$20.49	MN-RES-SFWHT	Res	Electric Only	Combo	S128	19.1	100%	100%	46%	100%	29,550	22,524
School Education Kits - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with unknown DHW heater (GWH portion)	1.5 GPM Showerhead	2.5 GPM Showerhead	10	$3.22	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	S166	19.1	100%	100%	0%	100%	-	-
Self Direct - MN	Custom Self-Direct Project	Self Direct Project	New Efficient Equipment	Old or less efficient systems or equipment	20	$137,301.23	$62,716.56	220,514	29.257	0.0	$0.00	MN-BUS-01BAC	BUS	Combo	Combo	G016	7.1	100%	100%	100%	100%	9	-
Whole Home Efficiency - MN	ENERGY STAR Clothes Dryer	ENERGY STAR Clothes Dryer	Energy Star Clothes Dryer >= 4.4 Cu.Ft.	Industry Standard	12	$40.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFLIT	Res	Electric Only	Combo	A017	1.6	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	ENERGY STAR Clothes Washer	Energy Star Front-loading Clothes Washer - Combo Customers w/ Electric DHW	Energy Star Front-Loading Clothes Washer w/ electric DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A029	1.7	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	ENERGY STAR Clothes Washer	Energy Star Front-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Front-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Combo	A030	1.7	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	ENERGY STAR Clothes Washer	Energy Star Front-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Front-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Electric Only	A094	1.7	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	ENERGY STAR Clothes Washer	Energy Star Front-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Front-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Gas Only	A095	1.7	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	ENERGY STAR Clothes Washer	Energy Star Top-loading Clothes Washer - Combo Customers w/ Electric DHW	Energy Star Top-Loading Clothes Washer w/ electric DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Electric Only	Combo	A031	1.7	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	ENERGY STAR Clothes Washer	Energy Star Top-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Top-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Electric Only	A096	1.7	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	ENERGY STAR Clothes Washer	Energy Star Top-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Top-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Gas Only	A097	1.7	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	ENERGY STAR Clothes Washer	Energy Star Top-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Top-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	$10.00	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	Res	Combo	Combo	A032	1.7	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	ENERGY STAR Refrigerator	Refrigerator Replacement	ENERGY STAR ® Refrigerators	Industry Standard	14	$15.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFRF1	Res	Electric Only	Combo	A038	1.9	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	ENERGY STAR Dehumidifier	Installation of ENERGY STAR Dehumidifier	ENERGY STAR Dehumidifier (Current ENERGY STAR Criteria)	Standard Efficiency Dehumidifier (Current Federal Standard)	12	$35.00	$0.00	0	0.000	0.0	$0.00	MN-RES-ESTARREF	Res	Electric Only	Combo	A073	1.8	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Attic Insulation - Electric Heating and Cooling	Attic insulation in homes with electric heating / electric cooling	Home with 868 sqft avg attic area and R50 avg upgraded insulation	Existing home with 868 sqft avg attic area and R21 avg baseline insulation	20	$683.50	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I049	8.1	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Attic Insulation - Electric Heating Only	Attic insulation in homes with electric heating / no cooling	Home with 868 sqft avg attic area and R50 avg upgraded insulation	Existing home with 868 sqft avg attic area and R21 avg baseline insulation	20	$1,722.95	$154.00	45	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I050	8.1	100%	100%	100%	100%	1	-
Whole Home Efficiency - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for combo customers	Home with 868 sqft avg attic area and R50 avg upgraded insulation	Existing home with 868 sqft avg attic area and R21 avg baseline insulation	20	$495.80	$927.80	30	0.073466667	6.1	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I051	8.1	100%	100%	100%	100%	15	15
Whole Home Efficiency - MN	Attic Insulation - Gas Heating Only	Attic insulation in homes with gas heating / no cooling	Home with 868 sqft avg attic area and R50 avg upgraded insulation	Existing home with 868 sqft avg attic area and R21 avg baseline insulation	20	$696.64	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	I052	8.1	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for gas-only customers	Home with 868 sqft avg attic area and R50 avg upgraded insulation	Existing home with 868 sqft avg attic area and R21 avg baseline insulation	20	$390.93	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I053	8.1	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Wall Insulation - Electric Heating and Cooling	Wall insulation in homes with electric heating / electric cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$1,737.19	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I054	8.2	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Whole Home Efficiency - MN	Wall Insulation - Electric Heating Only	Wall insulation in homes with electric heating / no cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$2,153.83	$3,471.00	8,958	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I055	8.2	100%	100%	100%	100%	1	-
Whole Home Efficiency - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall insulation in homes with gas heating / electric cooling for combo customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$2,230.18	$2,301.80	257	0.029325850	53.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I056	8.2	100%	100%	100%	100%	17	17
Whole Home Efficiency - MN	Wall Insulation - Gas Heating Only	Wall insulation in homes with gas heating / no cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$1,813.50	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	I057	8.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall insulation in homes with gas heating / electric cooling for gas-only customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	$1,551.75	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I058	8.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Air Sealing - Electric Heating and Cooling	Air sealing in homes with electric heating / electric cooling	Home with bypass air sealing performed	Existing home without air sealing	10	$860.79	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I059	8.3	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Air Sealing - Electric Heating Only	Air sealing in homes with electric heating / no cooling	Home with bypass air sealing performed	Existing home without air sealing	10	$825.00	$458.00	2,545	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I060	8.3	100%	100%	100%	100%	1	-
Whole Home Efficiency - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for combo customers	Home with bypass air sealing performed	Existing home without air sealing	10	$730.33	$1,042.90	75	0.008584000	13.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I061	8.3	100%	100%	100%	100%	18	18
Whole Home Efficiency - MN	Air Sealing - Gas Heating Only	Air sealing in homes with gas heating / no cooling	Home with bypass air sealing performed	Existing home without air sealing	10	$791.00	$0.00	0	0.000	0.0	$0.00		Res	Gas Only	Combo	I062	8.3	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for gas-only customers	Home with bypass air sealing performed	Existing home without air sealing	10	$387.75	$0.00	0	0	0.0	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I063	8.3	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Boiler	95% Efficient Boiler	95% Efficient Boiler	84% Efficient Boiler	20	$400.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	U033	17.5	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Furnace	95% Efficient Furnace in Existing Home	95% Efficient Furnace in existing home	80% Efficient Furnace	18	$200.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	U036	17.5	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Furnace	96% Efficient Furnace in Existing Home	96% Efficient Furnace in existing home	80% Efficient Furnace	18	$300.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	U039	17.5	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Furnace	97% Efficient Furnace in Existing Home	97% Efficient Furnace in existing home	80% Efficient Furnace	18	$400.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	U042	17.5	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$50.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U076	17.7	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$50.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Electric Only	U081	17.7	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Smart Thermostat	Install Energy Star certified smart thermostat - GAS Only	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	$50.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Gas Only	U086	17.7	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Res MSHP	Non-Ducted Mini-Split Heat Pump w/ Electric Resistance Baseline	Residential Mini-Split Heat Pump (Nominal 1.8 Tons with 18.9 SEER2, 12.9 EER2, 10.2 HSPF2) with electric resistance heat backup	Spot Cooling Solution needed with Existing Electric Resistance Heating	15	$600.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U108	17.4	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Res AC	Installation of new AC 15.2 SEER2 2.25 tons	Quality Installation of 15.2 SEER2 2.25 tons	Non-Quality Installation of 13.4 SEER2 (Baseline and Model) 2 tons	18	$450.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U119	17.1	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Res AC w/ Furnace	Installation of new AC 15.2 SEER2 2.25 tons w/ assoc furnace	Non - Quality Installation of 15.2 SEER2 2.25 tons with Associated Furnace	Non-Quality Installation of 13.4 SEER2 (Baseline and Model) 2.25 tons	18	$300.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U121	17.1	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Res AC	Provide Quality Installation of new AC 13.4 SEER2 2.25 tons	Quality Installation of 13.4 SEER2 2.25 tons	Non-Quality Installation of 2.5 Ton AC 13.4 SEER2 2 tons	18	$150.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U123	17.1	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 13.4 SEER2 2.25 tons w/ assoc furnace	Quality Installation of 13.4 SEER2 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.5 Ton AC 13.4 SEER2 2 tons	18	$150.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U124	17.1	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 15.2 SEER2 2.25 tons w/ assoc furnace	Quality Installation of 15.2 SEER2 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.25 Ton AC 15.2 SEER2	18	$150.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U125	17.1	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Res GSHP	Installation of High Efficiency GSHP equipment Existing Home	Quality Installation of GLHP Brine to Air with 55,690 BTUH heating, 18 EER2, 4.0 COP	Non-Quality Installation of 2.5 Ton 13.4 SEER2 AC and Electric Resistance Heat	20	$2,320.42	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U133	17.3	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Res GSHP	Installation of High Efficiency GSHP equipment New Home	Quality Installation of GLHP Brine to Air with 55,690 BTUH heating, 18 EER2, 4.0 COP	Non-Quality Installation of 2.5 Ton 13.4 SEER2 AC and Electric Resistance Heat	20	$2,320.42	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U134	17.3	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Res ASHP	Centrally ducted ASHP Cooling size basis wER baseline	Quality Installation of Qualifying ASHP sized for Cooling Load - 2 Ton 15.2 SEER2 & 10 EER2 & 9 HSPF2 with existing ER heat backup	Non-Quality Installation of 13.4 SEER2 AC Sized at 2 tons in home with existing electric resistance heat	18	$350.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U135	17.3	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Res ccASHP	Centerally ducted cold climate ASHP w/ electric resistance baseline	Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 8.1 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$2,000.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ccASHP	RES	Electric Only	Combo	U150	17.12	100%	100%	100%	100%	0.0	0.00
Whole Home Efficiency - MN	Res ccMSHP	Non-ducted cold climate Multi-Split Heat Pump w/ Electric Resistance Heat backup	Installation of Cold Climate Mini-Split Heat Pump (2.75 Tons 20.5 SEER2, 13.3 EER2, 11.5 HSPF2) with 3 indoor heads and Electric Resistance heat backup	Installation of comparable size code minimum AC with Existing Electric Resistance Heating	15	$2,000.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U158	17.13	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	EFS - Res GSHP Cooling	Cooling Portion - GSHP replacing Gas Furnace & AC	Quality Installation of closed loop GSHP with 43,000 BTUH heating capcity and 16 EER cooling	Non-Quality Installation of 1.5 Ton 13.4 SEER2 AC and 80% AFUE gas fired furnace heating	20	$895.83	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Electric Only	Combo	U230	17.3	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	EFS - Res GSHP Heating	Heating Portion - GSHP replacing Gas Furnace & AC	Quality Installation of closed loop GSHP with 43,000 BTUH heating capcity and 16 EER cooling	Non-Quality Installation of 1.5 Ton 13.4 SEER2 AC and 80% AFUE gas fired furnace heating	20	$895.83	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES GSHP	RES	Beneficial Electrification	Combo	U231	17.3	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	EFS - Res ASHP Cooling	Centerally ducted dual fuel ASHP	Cooling Portion of Quality Installation of High Efficiency Residential Air Source Heat Pump - 2.75 Ton 16 SEER2 & 10 EER2 & 7.8 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U191	17.3	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	EFS - Res ASHP Heating	Centerally ducted dual fuel ASHP	Heating Portion of Quality Installation of High Efficiency Residential Air Source Heat Pump - 2.75 Ton 16 SEER2 & 10 EER2 & 7.8 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$1,100.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ASHP	RES	Beneficial Electrification	Combo	U192	17.3	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	EFS - Res ccASHP Cooling	Centerally ducted dual fuel cold climate ASHP	Cooling Portion of Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 9 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX	RES	Combo	Combo	U199	17.12	100%	100%	100%	100%	0	0.00
Whole Home Efficiency - MN	EFS - Res ccASHP Heating	Centerally ducted dual fuel cold climate ASHP	Heating Portion of Quality Installation of High Efficiency cold climate Residential Air Source Heat Pump - 3 Ton 16 SEER2 & 10 EER2 & 9 HSPF2	Non-Quality Installation of comparable size code minimum AC with Gas Furnace	18	$1,500.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ccASHP	RES	Beneficial Electrification	Combo	U200	17.12	100%	100%	100%	100%	0	0.00
Whole Home Efficiency - MN	EFS - Res ccMSHP Cooling	Non-ducted cold climate Multi-Split Heat Pump w/ Gas Furance backup	Cooling Portion of Installation of Cold Climate Mini-Split Heat Pump (2 Tons 22 SEER2, 9.3 EER2, 9.5 HSPF2) with 3 indoor heads and Gas Furnace heat backup	Non-Quality Installation of comparable size code minimum AC and Gas Furnace	15	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U207	17.13	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	EFS - Res ccMSHP Heating	Non-ducted cold climate Multi-Split Heat Pump w/ Gas Furance backup	Heating Portion of Installation of Cold Climate Mini-Split Heat Pump (2 Tons 22 SEER2, 9.3 EER2, 9.5 HSPF2) with 3 indoor heads and Gas Furnace heat backup	Non-Quality Installation of comparable size code minimum AC and Gas Furnace	15	$1,500.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ccASHP	RES	Beneficial Electrification	Combo	U208	17.13	100%	100%	100%	100%	-	-

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Whole Home Efficiency - MN	EFS - Res MSHP Cooling	Non-ducted dual fuel MSHP w/ gas furnace backup	Cooling Portion of Installation of Residential Mini-Split Heat Pump Equipment - 2 Ton 19.8 SEER2 & 12.7 EER2 & 10.3 HSPF2	Installation of comparable size code minimum AC with Gas Furnace	15	$500.00	$0.00	0	0.000	0.0	$0.00	MN-RES-Cooling_DX_Heating_DX	RES	Electric Only	Combo	U215	17.4	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	EFS - Res MSHP Heating	Non-ducted dual fuel MSHP w/ gas furnace backup	Heating Portion of Installation of Residential Mini-Split Heat Pump Equipment - 2 Ton 19.8 SEER2 & 12.7 EER2 & 10.3 HSPF2	Installation of comparable size code minimum AC with Gas Furnace	15	$1,100.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES ASHP	RES	Beneficial Electrification	Combo	U216	17.4	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Electric Resistance Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$450.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S079	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling ASHP Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$450.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S080	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$450.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S081	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Electric Resistance Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$450.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S082	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling ASHP Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$450.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S083	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	13	$450.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S084	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Electric Resistance Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$550.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S085	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling ASHP Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$550.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S086	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Natural Gas Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$550.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S087	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Electric Resistance Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$550.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S088	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling ASHP Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$550.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S089	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Natural Gas Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	13	$550.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SFWHT	RES	Electric Only	Combo	S090	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater <= 40 Gal - Medium Draw	Minimum Efficiency Storage Water Heater	13	$100.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	S175	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater <= 40 Gal - High Draw	Minimum Efficiency Storage Water Heater	13	$100.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	S176	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater > 40 Gal - Medium Draw	Minimum Efficiency Storage Water Heater	13	$100.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	S177	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater > 40 Gal - High Draw	Minimum Efficiency Storage Water Heater	13	$100.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	S178	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Water Heater	Tankless Water Heater	High Efficiency Tankless Water Heater - High Draw	Minimum Efficiency Storage Water Heater	20	$275.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	S179	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Water Heater	Tankless Water Heater	High Efficiency Tankless Water Heater - Medium Draw	Minimum Efficiency Storage Water Heater	20	$275.00	$0.00	0	0.000	0.0	$0.00		RES	Gas Only	Combo	S180	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045)	Heat Pump Water Heater w/ DR Management	No management of water heater time of use	1	$100.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HPWH_DR	RES	DR	Combo	S186	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045) - Annual Re Enrollment	Heat Pump Water Heater w/ DR Management - Re Enrollment of Existing Customer	No management of water heater time of use	1	$25.00	$0.00	0	0.000	0.0	$0.00	MN-RES-HPWH_DR	RES	DR	Combo	S187	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater - Gas Baseline	Heat Pump Water Heater - Gas Water Heater Baseline Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Gas Storage Water Heater	13	$450.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES HPWH	RES	Beneficial Electrification	Combo	S220	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater - Gas Baseline	Heat Pump Water Heater - Gas Water Heater Baseline Non-Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Gas Storage Water Heater	13	$450.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES HPWH	RES	Beneficial Electrification	Combo	S221	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater - Gas Baseline	Heat Pump Water Heater - Gas Water Heater Baseline Refrigerant Based Cooling Natural Gas Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Gas Storage Water Heater	13	$550.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES HPWH	RES	Beneficial Electrification	Combo	S222	19.2	100%	100%	100%	100%	-	-
Whole Home Efficiency - MN	HP Water Heater - Gas Baseline	Heat Pump Water Heater - Gas Water Heater Baseline Non-Refrigerant Based Cooling Natural Gas Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Gas Storage Water Heater	13	$550.00	$0.00	0	0.000	0.0	$0.00	MN-EFS-RES HPWH	RES	Beneficial Electrification	Combo	S223	19.2	100%	100%	100%	100%	-	-
Low Income Multi-Family Building Efficiency - MN	Boiler	Condensing Boiler Upgrade; 0 - 0.299 MMBTUH	88% Efficient Boiler	78% Efficient Boiler	20	$3,915.00	$4,600.00	0	0.000	85.8	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M127	12.2	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Attic Insulation - Electric Heating and Cooling	Attic Insulation in multifamily buildings with electric heating / electric cooling	Multifamily building with R-49 attic insulation	Existing 5-20 unit multifamily building w/ R-17 insulation	20	$3,877.52	$6,344.80	7,275	0.324	0.0	$0.00	MN-RES-Cooling_DX_Heating_EI ec	Res	Electric Only	Combo	I104	8.1	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Attic Insulation - Electric Heating Only	Attic Insulation in multifamily buildings with electric heating / no cooling	Multifamily building with R-49 attic insulation	Existing 5-20 unit multifamily building w/ R-17 insulation	20	$3,877.52	$6,344.80	7,125	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I105	8.1	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic Insulation in multifamily buildings with gas heating / electric cooling for combo customers	Multifamily building with R-49 attic insulation	Existing 5-20 unit multifamily building w/ R-17 insulation	20	$3,877.52	$6,344.80	150	0.324	30.4	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I106	8.1	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Attic Insulation - Gas Heating Only	Attic Insulation in multifamily buildings with gas heating / no cooling	Multifamily building with R-49 attic insulation	Existing 5-20 unit multifamily building w/ R-17 insulation	20	$3,877.52	$6,344.80	0	0.000	30.4	$0.00	0	Res	Gas Only	Combo	I107	8.1	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic Insulation in multifamily buildings with gas heating / electric cooling for gas-only customers	Multifamily building with R-49 attic insulation	Existing 5-20 unit multifamily building w/ R-17 insulation	20	$3,877.52	$6,344.80	150	0.324	30.4	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I108	8.1	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic Insulation in multifamily buildings with gas heating / electric cooling for electric-only customers	Multifamily building with R-49 attic insulation	Existing 5-20 unit multifamily building w/ R-17 insulation	20	$3,877.52	$6,344.80	150	0.324	30.4	$0.00	MN-RES-Cooling_DX	Res	Combo	Electric Only	I109	8.1	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Wall Insulation - Electric Heating and Cooling	Wall Insulation in multifamily buildings with electric heating / electric cooling	Multifamily building with R-11 wall insulation	Existing 5-20 unit multifamily building with no insulation	20	$7,829.00	$13,238.13	59,915	2.666	0.0	$0.00	MN-RES-Cooling_DX_Heating_EI ec	Res	Electric Only	Combo	I110	8.2	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Wall Insulation - Electric Heating Only	Wall Insulation in multifamily buildings with electric heating / no cooling	Multifamily building with R-11 wall insulation	Existing 5-20 unit multifamily building with no insulation	20	$7,829.00	$13,238.13	58,678	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I111	8.2	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall Insulation in multifamily buildings with gas heating / electric cooling for combo customers	Multifamily building with R-11 wall insulation	Existing 5-20 unit multifamily building with no insulation	20	$7,829.00	$13,238.13	1,237	2.666	250.3	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I112	8.2	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Wall Insulation - Gas Heating Only	Wall Insulation in multifamily buildings with gas heating / no cooling	Multifamily building with R-11 wall insulation	Existing 5-20 unit multifamily building with no insulation	20	$7,829.00	$13,238.13	0	0.000	250.3	$0.00		Res	Gas Only	Combo	I113	8.2	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall Insulation in multifamily buildings with gas heating / electric cooling for gas-only customers	Multifamily building with R-11 wall insulation	Existing 5-20 unit multifamily building with no insulation	20	$7,829.00	$13,238.13	1,237	2.666	250.3	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I114	8.2	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall Insulation in multifamily buildings with gas heating / electric cooling for electric-only customers	Multifamily building with R-11 wall insulation	Existing 5-20 unit multifamily building with no insulation	20	$7,829.00	$13,238.13	1,237	2.666	250.3	$0.00	MN-RES-Cooling_DX	Res	Combo	Electric Only	I115	8.2	100%	100%	100%	100%		

Measure Description					Economic Assumptions								Customer Information					Stipulated Factors				Forecast Units	
Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount ($)	Incremental Cost ($)	Annual Customer kWh Savings (kWh/yr)	Annual Customer Peak Coincident Demand Savings (PCkW)	Gas Savings (Dth)	Non-Energy O&M Savings ($)	Load Shape	Loss Factor Segment	Savings Type	Customer Type	Index	Deemed Sheet Number	NTG (%)	Gas NTG (%)	Install Rate (%)	Realization Rate (%)	2024 Electric Units	2024 Gas Units
Low Income Multi-Family Building Efficiency - MN	Attic Air Sealing - Electric Heating and Cooling	Attic air sealing in multifamily buildings with electric heating / electric cooling	Multifamily building with attic air sealing	Existing leaky 5-20 unit multifamily building	10	$272.40	$1,225.80	1,065	0.032	0.0	$0.00	MN-RES-Cooling_DX_Heating_Elec	Res	Electric Only	Combo	I116	8.3	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Attic Air Sealing - Electric Heating Only	Attic air sealing in multifamily buildings with electric heating / no cooling	Multifamily building with attic air sealing	Existing leaky 5-20 unit multifamily building	10	$272.40	$1,225.80	1,050	0.000	0.0	$0.00	MN-RES-Heating_Elec	Res	Electric Only	Combo	I117	8.3	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Attic Air Sealing - Gas Heating / Electric Cooling	Attic air sealing in multifamily buildings with gas heating / electric cooling for combo customers	Multifamily building with attic air sealing	Existing leaky 5-20 unit multifamily building	10	$272.40	$1,225.80	15	0.032	4.5	$0.00	MN-RES-Cooling_DX	Res	Combo	Combo	I118	8.3	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Attic Air Sealing - Gas Heating Only	Attic air sealing in multifamily buildings with gas heating / no cooling	Multifamily building with attic air sealing	Existing leaky 5-20 unit multifamily building	10	$272.40	$1,225.80	0	0.000	4.5	$0.00	0	Res	Gas Only	Combo	I119	8.3	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Attic Air Sealing - Gas Heating / Electric Cooling	Attic air sealing in multifamily buildings with gas heating / electric cooling for gas-only customers	Multifamily building with attic air sealing	Existing leaky 5-20 unit multifamily building	10	$272.40	$1,225.80	15	0.032	4.5	$0.00	MN-RES-Cooling_DX	Res	Combo	Gas Only	I120	8.3	100%	100%	100%	100%		
Low Income Multi-Family Building Efficiency - MN	Attic Air Sealing - Gas Heating / Electric Cooling	Attic air sealing in multifamily buildings with gas heating / electric cooling for electric-only customers	Multifamily building with attic air sealing	Existing leaky 5-20 unit multifamily building	10	$272.40	$1,225.80	15	0.032	4.5	$0.00	MN-RES-Cooling_DX	Res	Combo	Electric Only	I121	8.3	100%	100%	100%	100%		
Multi-Family Building Efficiency - MN	Boiler	Condensing Boiler Upgrade; 0 - 0.299 MMBTUH	88% Efficient Boiler	78% Efficient Boiler	20	$3,915.00	$4,284.29	0	0.000	169.6	$0.00	MN-BUS-FLAT	Bus	Gas Only	Gas Only	M126	12.2	100%	100%	100%	100%		3.00
Peak Day Partners - MN	Peak Day Partners	Peak Day Partners	Customer kW with load shedding	Customer kW without load shedding	1	$27,484.80	$0.00	19,632	1227.000	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only		4.6	100%	100%	100%	100%		
Lighting - MN	Retrofit LED to LED	LED to LED Interior Fixture	New Generation LED Fixture	Old Generation LED Fixture (2015)	20	$51.00	$210.80	428	0.071	0.0	$0.14	MN-BUS-Light Troffer	BUS	Electric Only	Electric Only	B212	13.7	100%	100%	100%	100%	1,586	
Lighting - MN	Retrofit LED to LED	LED to LED Exterior Fixture	New Generation LED Fixture	Old Generation LED Fixture (2015)	20	$62.00	$256.96	193	0.000	0.0	$0.00	MN-BUS-RECM_OUT	BUS	Electric Only	Electric Only	B213	13.7	100%	100%	100%	100%	7	
Lighting - MN	Retrofit LED to LED	LED to LED Type B Tube	New Generation LED Tube	Old Generation LED Tube (2015)	20	$3.00	$9.66	93	0.000	0.0	$0.01	MN-BUS-Light Tube	BUS	Electric Only	Electric Only	B214	13.7	100%	100%	100%	100%	6,223	
Home Lighting - MN	Residential Home Lighting - Residential Customers	Smart Switch	Standard Switch	Standard Switch	10	$2.00	$0.00	0	0.000	0.0	$0.00	MN-RES-SPLIT	RES	Electric Only	Combo		13.1	100%	100%	99%	100%	0	
Home Lighting - MN	Residential Home Lighting - Residential Customers	Grow Lighting	LED Grow Light	T8 and T5HO 4' 2-4L fixtures	15	$16.20	$0.00	0	0.000	0.0	$0.00	MN-BUS-GROW_LIGHTING	RES	Electric Only	Combo		13.1	100%	100%	99%	100%	0	
Home Lighting - MN	Residential Home Lighting - Business Customers	Grow Lighting	LED Grow Light	T8 and T5HO 4' 2-4L fixtures	15	$16.20	$0.00	0	0.000	0.0	$0.00	MN-BUS-GROW_LIGHTING	Bus	Electric Only	Combo		13.1	100%	100%	100%	100%	0	
Home Lighting - MN	Residential Home Lighting - Residential Customers	Smart Socket	Smart Socket	Standard Socket	7	$4.50	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	RES	Electric Only	Combo		13.1	100%	100%	99%	100%	0	
Home Lighting - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	7	$8.39	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	RES	Electric Only	Combo		1.5	100%	100%	99%	100%	0	
Home Lighting - MN	Advanced Power Strip	Advanced Power Strip	Tier 2 Advanced Power Strip	Standard Power Strip	8	$17.50	$0.00	0	0.000	0.0	$0.00	MN-RES-FLAT	RES	Electric Only	Combo		1.5	100%	100%	99%	100%	0	
Outdoor Equipment - MN	Electric Snowblower	Push Snowblower - EFS between electric and gasoline fuel	Electric Snowblower	Gasoline Snowblower	10	$100.00	$1,425.00	-3	0.000	8.0	$0.00	MN-RES-Snowblower	Res	Electrification - Gasoline	Combo	A119	1.16	100%	100%	100%	100%	85	85.00
Outdoor Equipment - MN	Trimmers	Electric Trimmer - EFS between electric and gasoline fuel	Electric Trimmers	Gasoline powered Equipment	8	$30.00	$271.95	-1	0.000	3.0	$0.00	MN-RES-Outdoor Equipment	Res	Electrification - Gasoline	Combo	A120	1.15	100%	100%	100%	100%	12	12.00
Outdoor Equipment - MN	Trimmers	Electric Trimmer - EFS between electric and gasoline fuel	Electric Trimmers	Gasoline powered Equipment	2	$120.00	$594.94	-59	0.000	115.0	$0.00	MN-BUS-Lawn Mower	Bus	Electrification - Gasoline	Combo	A121	1.15	100%	100%	100%	100%	0	0.00
Outdoor Equipment - MN	Edgers	Electric Edgers - EFS between electric and gasoline fuel	Electric Edgers	Gasoline powered Equipment	8	$30.00	$271.95	-1	0.000	3.0	$0.00	MN-RES-Outdoor Equipment	Res	Electrification - Gasoline	Combo	A122	1.15	100%	100%	100%	100%	8	8.00
Outdoor Equipment - MN	Edgers	Electric Edgers - EFS between electric and gasoline fuel	Electric Edgers	Gasoline powered Equipment	2	$120.00	$594.94	-59	0.000	115.0	$0.00	MN-BUS-Lawn Mower	Bus	Electrification - Gasoline	Combo	A123	1.15	100%	100%	100%	100%	0	0.00
Outdoor Equipment - MN	Cultivators	Electric Cultivators - EFS between electric and gasoline fuel	Electric Cultivators	Gasoline powered Equipment	8	$30.00	$271.95	-1	0.000	3.0	$0.00	MN-RES-Outdoor Equipment	Res	Electrification - Gasoline	Combo	A124	1.15	100%	100%	100%	100%	1	1.00
Outdoor Equipment - MN	Cultivators	Electric Cultivators - EFS between electric and gasoline fuel	Electric Cultivators	Gasoline powered Equipment	2	$120.00	$594.94	-59	0.000	115.0	$0.00	MN-BUS-Lawn Mower	Bus	Electrification - Gasoline	Combo	A125	1.15	100%	100%	100%	100%	0	0.00
Outdoor Equipment - MN	Chainsaws	Electric Chainsaws - EFS between electric and gasoline fuel	Electric Chainsaws	Gasoline powered Equipment	8	$30.00	$383.95	-1	0.000	3.0	$0.00	MN-RES-Outdoor Equipment	Res	Electrification - Gasoline	Combo	A126	1.15	100%	100%	100%	100%	4	4.00
Outdoor Equipment - MN	Chainsaws	Electric Chainsaws - EFS between electric and gasoline fuel	Electric Chainsaws	Gasoline powered Equipment	2	$120.00	$777.45	-131	0.000	115.0	$0.00	MN-BUS-Lawn Mower	Bus	Electrification - Gasoline	Combo	A127	1.15	100%	100%	100%	100%	0	0.00
Outdoor Equipment - MN	Leafblowers	Electric Leafblowers - EFS between electric and gasoline fuel	Electric Leafblowers	Gasoline powered Equipment	8	$30.00	$206.20	-1	0.000	3.0	$0.00	MN-RES-Outdoor Equipment	Res	Electrification - Gasoline	Combo	A128	1.15	100%	100%	100%	100%	32	32.00
Outdoor Equipment - MN	Leafblowers	Electric Leafblowers - EFS between electric and gasoline fuel	Electric Leafblowers	Gasoline powered Equipment	2	$120.00	$569.94	-122	0.000	115.0	$0.00	MN-BUS-Lawn Mower	Bus	Electrification - Gasoline	Combo	A129	1.15	100%	100%	100%	100%	0	0.00
Peak Day Partners - MN	Peak Day Partners	Peak Day Partners	Customer kW with load shedding	Customer kW without load shedding	1	$27,484.80	$0.00	0	1180.800	0.0	$0.00	MN-BUS-PEAK_CNT	BUS	DR	Electric Only		4.6	100%	100%	100%	100%	87	
Battery Connect - MN	Battery - DR Enrollment	Customer battery used during DR event - non-TOU customer	Non-Time of Use Customer battery used during DR event - 60 Events	Non-Time of Use Customer battery only used for backup	5	$0.00	$0.00	0	2.118	0.0	$0.00	MN-RES-PEAK_CNT	Res	DR	Combo	B009	22.1	100%	100%	100%	100%	0	
Battery Connect - MN	Battery - DR Ongoing	Customer battery used during DR event - non-TOU customer	Non-Time of Use Customer battery used during DR event - 60 Events	Non-Time of Use Customer battery only used for backup	1	$87.48	$0.00	0	0.000	0.0	$0.00	MN-RES-PEAK_CNT	Res	DR	Combo	B010	22.1	100%	100%	100%	100%	0	
Indirect Impact EFS (Market Transformation) - MN	Home Wiring Rebate	Home Wiring - Market Rate	Wiring for level 2 EV Charger	No Wiring for level 2 EV charger	20	$500.00		0	0	0	$0.00		RES	Electrification - Gasoline	Electric Only	A135		100%	100%	100%	100%		
Indirect Impact EFS (Market Transformation) - MN	Home Wiring Rebate	Home Wiring - Income Qualified	Wiring for level 2 EV Charger	No Wiring for level 2 EV charger	20	$1,200.00		0	0	0	$0.00		RES	Electrification - Gasoline	Electric Only	A136		100%	100%	100%	100%		
Foodservice Equipment - MN	ENERGY STAR Griddles	Commercial Electric Griddle	ENERGY STAR 3' x 2' Electric Griddle	Standard 3' x 2' Electric Griddle	12	$360.00	$2,162.00	1,972	0.454	0	$0.00	MN-BUS-FLAT	Bus	Electric Only	Combo	A133	1.17	100%	100%	100%	100%	0	0
Foodservice Equipment - MN	ENERGY STAR Griddles	Commercial Gas Griddle	ENERGY STAR 3' x 2' Gas Griddle	Standard 3' x 2' Gas Griddle	12	$360.00	$1,912.00	0	0	7.5	$0.00	MN-BUS-FLAT	Bus	Gas Only	Combo	A134	1.17	100%	100%	100%	100%	0	0
Home Lighting - MN	Residential Home Lighting - Large Scale Grow	Large Scale Home Grow Lighting	LED Grow Lighting	HID or Fluorescent Fixture	20	$518.82	0	0	0	0	$0.00	MN-BUS-GROW_LIGHTING	RES	Electric Only	Combo	K077	10.2	100%	100%	100%	100%	0	

APPENDIX E: NATURAL GAS INNOVATION ACT (NGIA) PROJECTS

APPENDIX E:
Natural Gas Innovation Act (NGIA) Plan

At the Minnesota Public Utilities Commission on February 6, 2025, the Commission heard Docket No. G002/M-23-0518. While a final Order has not yet been given in this docket, the Company files this compliance to Xcel Alternative 32a as approved during the hearing.

> Xcel Alternative 32a. Require Xcel to provide an informational appendix in its 2024 ECO Status Report, due to be filed on April 1, 2025, with high level information regarding customer projects which did not receive an incentive under ECO in 2024, but which might have been eligible for support under the Custom Projects for Large Customers pilot. For each such project, the Company will include an explanation of why the project did not receive ECO funding and an estimate of the energy and emissions impact of the project. No customer-identifying or trade secret information will be included in the project summaries.

Project 1: OID5487813

Project Type: Electrification by installing a geothermal-based heating and cooling system.

The project did not pass the MN Test and it had an excessively long payback.

KWH	PCKW	DTH	LIFETIME CO2	SOURCE ENERGY	PAYBACK	ANNUAL COST IMPACT	MN TEST
-2,721,649	705	84,660	231,277,105	1,442,206,956	77.48	345,412	-$429,206

Project 2: OID5541143

Project Type: New system uses heat pumps for heating; when the heat pumps can no longer heat, the chiller will make ice and use the excess heat to heat the building. Below 0°F, the electric boiler will turn on. For cooling, the new system will use the chiller to make ice overnight. When the ice is not enough to cool the building all day, the ASHPs will turn on.

The project would not result in operating cost savings, so it would never pay back.

KWH	PCKW	DTH	LIFETIME CO2	SOURCE ENERGY	PAYBACK	ANNUAL COST IMPACT	MN TEST
-293,995	13.28	3,049	6,643,924	31,674,130.	Never	-$19,160	$278,840

APPENDIX F: ENERGY ACTION DAYS REPORT

Energy Action Days Behavioral Demand Response Impacts

Prepared for Xcel Energy

Submitted by Evergreen Economics

January 31, 2024

Table of Contents

1 EXECUTIVE SUMMARY 1

2 INTRODUCTION 4

2.1 Energy Action Days Program 4

2.2 Measurement and Verification 6

3 METHODS 7

3.1 Data 7

3.2 Quality Checks and Cleaning/Validation 8

3.3 Analysis Methodology 9

4 RESULTS 13

4.1 Treatment Control Validation 14

4.2 Estimated Savings, Replicating Oracle's Model 15

4.3 Estimated Savings, Recommended Model 19

4.4 Total Savings 21

4.5 Savings by Cohort 22

4.6 Total Capacity Estimate 24

5 CONCLUSIONS AND RECOMMENDATIONS 25

APPENDIX A: IMPACTS BY EVENT DAY 27

Replicating Oracle's Model 27

Comparison to Reported Savings 31

APPENDIX B: ALTERNATIVE DEFINITION OF NON-EVENT DAYS 34

APPENDIX C: SAVINGS BY COHORT AND EVENT DAY 37

1 Executive Summary

Oracle's Opower pilot program in Minnesota provided messaging to 588,000 of Xcel Energy's residential customers to encourage demand response event participation via behavioral changes. The pilot program used a randomized control trial design and involved notifying customers assigned to the treatment group of peak days (referred to as "Energy Action Days"), while those in the control group did not receive a notification. For the five energy events that occurred between July and September 2023, Oracle calculated estimates of the net savings impacts from the hourly interval advanced metering infrastructure (AMI) data.

Evergreen Economics was tasked with measurement and verification (M&V) of Oracle's calculations. This report documents the methods and results from Evergreen Economics' M&V process, which included:

1. Confirming the balance between the treatment and control groups;
2. Conducting M&V of the program impacts to confirm that Oracle's impact estimates were reliable for each cohort and event; and
3. Estimating the total capacity of AMI online and available for the summer of 2024, as of December 31, 2023.

Summary of Findings and Recommendations

The treatment and control groups were well matched, except from 2 p.m. to 6 p.m. In evaluating the balance between the randomly assigned treatment and control groups, Evergreen found that the groups had similar energy use during non-event days, except from 2 p.m. to 6 p.m.. During that period the treatment group used slightly less energy on average compared to the control group. This is meaningful because the targeted "peak hours" for energy events were 4 p.m. to 7 p.m. for the first three events and 3 p.m. to 6 p.m. for the last two events. Though these differences were small and not statistically significant, the event impacts are also small during these hours. Oracle did not appear to account for these existing differences in their impact estimates.

We observed small and insignificant savings during events. Evergreen's hourly savings estimates for each event were not significantly different from Oracle's and were nearly the same. Both Oracle and Evergreen found that savings were not significantly different between the control and treatment groups during most of the event hours (15 out of 20 peak hours). Messaging treatments that rely on behavioral changes typically produce savings in a subset of treated homes. A large sample is required to be able to detect statistically significant savings across the population of customers who received the messaging treatment. Insignificant savings suggest that either the Opower program had no consistent impact in changing customer behavior to reduce energy or the

sample size was too small to detect a change of this magnitude. As more AMI meters are installed, the program could be offered to more customers, increasing the sample size available for analysis.

Recommendation

1	Evergreen recommends reassessing the significance of savings with a larger sample.

The hourly savings are consistently positive, suggesting that savings are feasible with this intervention. A larger sample is necessary to detect savings of this magnitude.

When we used the same data and analysis methods as Oracle, our savings estimates were not statistically significantly different from Oracle's. Evergreen compared our calculated energy savings across peak hours for all events to Oracle's reported savings (Table 1). When Evergreen ran the same simple differences model as Oracle did, we observed slightly higher total savings than Oracle observed, at 12.16 MWh compared to 11.82 MWh, respectively.

When we controlled for the pre-existing differences between the treatment and control groups, our savings estimates were lower (though still not statistically significantly different from Oracle's). When Evergreen controlled for the differences that we observed on non-event days (with a difference-in-differences model), we observed lower total savings than Oracle, at 9.0 MWh (Table 1). The lower savings from the difference-in-differences model was expected, as the treatment group naturally uses less energy than the control group on non-event days, so we are no longer attributing the full difference to the program intervention. Oracle focused exclusively on event days in its model, so it attributed all the event day differences in energy use to the impact of the program, when some of that difference was preexisting. That is, Oracle may have overstated the program impacts by not accounting for the lower average energy use of the treatment group compared to the control group on non-event days.

Recommendation

2	We recommend that Oracle use data from non-event days to control for any pre-existing differences in energy use between the treatment and control groups for all future impact calculations.

Even if the difference in claimable savings is not statistically significantly different, there is still a practical difference in which estimate Xcel Energy chooses to use for planning purposes.

Table 1: Total Savings Estimate (MWh) Oracle Reported vs. Evergreen Evaluated

Event Date (2023)	Oracle Reported Savings (MWh)	Evergreen Savings, Same Model (MWh)	Difference in Savings (MWh)	Evergreen Savings, Recommended Model (MWh)	Difference in Savings (MWh)
7/26	1.807	1.849	0.043	1.350	-0.457
7/27	2.582	2.712	0.130	2.007	-0.575
8/3	3.840	3.950	0.110	2.903	-0.937
8/22	1.896	2.021	0.124	2.067	0.171
9/5	1.695	1.629	-0.066	0.669	-1.026
Total	**11.821**	**12.162**	**0.341**	**8.996**	**-2.825**

Customers who received AMI messaging with a smart thermostat had the highest total average savings compared to other cohorts. As an additional step in our analysis, we also ran the difference-in-differences model for each customer cohort (AMI treatment without a smart thermostat, AMI treatment with a smart thermostat, non-AMI treatment without a smart thermostat, non-AMI treatment with a smart thermostat) for Event 4 and Event 5 and elaborate on results in Section 4.5: Savings by Cohort. The AMI treatment with a smart thermostat cohort had the highest total average savings, followed by the non-AMI treatment without a smart thermostat cohort (though the magnitude of savings for the latter was much smaller). The results are encouraging for the prospect of additional AMI rollout (and thus an opportunity for additional AMI messaging) leading to greater future savings. However, the differences between cohorts were statistically insignificant, and the analysis sample was limited (as only Event 4 and Event 5 delivered AMI messaging as intended), so no definitive conclusions can be drawn.

2 Introduction

Oracle implemented its Opower demand response program in Minnesota in the summer of 2023; the program targeted Xcel Energy's residential customers and encouraged demand response event participation via behavioral changes. Oracle evaluated the pilot program savings impacts, providing Xcel Energy with hourly impact estimates for each event.

2.1 Energy Action Days Program

Demand response programs generally encourage customers to curb or shift energy use when energy demand is at its highest, so as to lower energy costs and reduce the risk of power failure.[1] The Energy Action Days program was designed to achieve demand response by sending event notifications to customers, which encouraged them to make behavioral changes to reduce energy consumption during peak hours. Notifications were sent for five events (referred to as "Energy Action Days") that occurred during the summer of 2023. Event dates and peak hours are shown in Table 2.

Table 2: Energy Action Day Event Information (2023)

Event Date	Event Hours	Pre-Event Notification Sent
Wed, July 26th	4 – 7 p.m.	Day-of
Thu, July 27th	4 – 7 p.m.	Day-of
Thu, August 3rd	4 – 7 p.m.	Day-before
Tue, August 22nd	3 – 6 p.m.	Day-before
Tue, September 5th	3 – 6 p.m.	Day-before

The program was designed as a **randomized control trial (RCT)** with an intended treatment group of 588,000 customers who received event notifications and a control group of 25,000 customers who did not receive event notifications.

The Energy Action Days program included the following primary components:

[1] U.S. Department of Energy, Office of Electricity. "Demand Response," January 5, 2024. https://www.energy.gov/oe/demand-response#:~:text=Demand%20response%20provides%20an%20opportunity,other%20forms%20of%20financial%20incentives.

1. **Pre-season welcome letter:** A letter was sent to customers on June 16, 2023 explaining the concept of Energy Action Days and providing tips for reducing their energy usage during events.
2. **Event notifications:** Participants in the treatment group were notified of events via email, and customers with landlines also received interactive voice response (IVR) calls. As seen in Table 2, notifications for the first two events were sent on the event day, and notifications for the last three events were sent the day prior.
3. **Performance feedback:** One day after each event, Oracle emailed information to participants regarding the event. The post-event communication was intended to be different for customers with advanced metering infrastructure messaging (AMI messaging) and those without (non-AMI messaging). The non-AMI messaging simply thanked the customer for participating while the AMI messaging also told participants how they performed relative to other households. The AMI messaging feedback on performance is designed to motivate customers to seek continuous improvement. Because data were only available for customers with AMI, Oracle applied the AMI messaging treatment to a subset of customers with AMI and applied the non-AMI messaging treatment to another subset of customers with AMI. AMI messaging was only applied for Event 3 (1,200 of 12,000 intended communications), Event 4, and Event 5.

Participant Cohorts

In addition to conducting measurement and verification of program impacts for the overall program, Evergreen estimated the impacts within four cohorts. Specifically, program participants were segmented by:

1. If they received the AMI messaging treatment and did not have a connected smart thermostat in their home (AMI treatment, no smart thermostat),
2. If they received the AMI messaging treatment and have a connected smart thermostat in their home (AMI treatment, smart thermostat),
3. If they received the non-AMI messaging treatment and did not have a connected smart thermostat in their home (non-AMI treatment, no smart thermostat), and
4. If they received the non-AMI messaging treatment and have a connected smart thermostat in their home (non-AMI treatment, smart thermostat).

The AMI distinction is important because the AMI messaging group gets additional feedback on their performance during events that could potentially lead to behavioral change. Note that the non-AMI messaging treatment was also offered to a group of customers with AMI meters so that hourly impacts could be estimated for this cohort (as hourly measurement intervals are required for the analysis). The presence of a smart thermostat indicates that the customer is enrolled in Xcel Energy's AC Rewards program, which adjusted participants' smart thermostats for the event

called on June 22, 2023 to help reduce their load. During all other events, the smart thermostats would have to be manually adjusted to achieve savings during the event, just like any other thermostat. The four specific customer cohorts, as assigned by Oracle, are shown in Table 3.

Table 3: Cohort Definitions and Size

Cohort	Sample Size (n)
AMI treatment, no smart thermostat	13,544
AMI treatment, smart thermostat	98
Non-AMI treatment, no smart thermostat	29,145
Non-AMI treatment, smart thermostat	213

It is worth noting that the sample size of the cohorts varies by event due to differences in AMI and non-AMI messaging across events. For Event 1 and Event 2, non-AMI messaging was sent but AMI messaging was not. For Event 3, only 1,200 of the 12,000 planned AMI messages were sent. All non-AMI messaging and AMI messaging was sent as planned for Event 4 and Event 5. Our cohort analysis in Section 4.5: Savings by Cohort focuses on the specific customers and events when the AMI messaging was utilized.

2.2 Measurement and Verification

Xcel Energy hired Evergreen Economics to conduct measurement and verification (M&V) of Oracle's impact estimates. The main objective of this evaluation was to conduct measurement and verification (M&V) of Oracle's calculated savings impacts to ensure that Oracle's calculation methods are reliable and repeatable for future evaluations of the program.

Our tasks included:

1. Receiving utility meter data, identical to the data extract utilized by Oracle;
2. Confirming the balance between the randomly assigned treatment and control groups;
3. Estimating program impacts for each event day;
4. Estimating program impacts by cohort; and
5. Estimating the total capacity of residential AMI online and available for the summer of 2024, as of December 31, 2023.

In Section 3 of this report, we describe the source data, cleaning/validation procedures and quality check process, and the data analysis methodology. Section 4 provides more detail on our savings estimates and other results and offers recommendations for future demand response program evaluations.

3 Methods

This section provides details on Evergreen Economics' methods for data cleaning and analysis.

Evergreen Economics received data from Oracle and replicated the cleaning steps outlined in the "Opower Behavioral Demand Response: Measurement of Peak Reduction"[2] documentation (BDR documentation). The BDR documentation defines Oracle's methods for measuring demand reduction from behavioral demand response programs with a randomized control trial (RCT) design. It specifies modeling approaches that will be used and lists variations to use if the preferred data are unavailable. Our methods, described below, are a replication of Oracle's methods as outlined in the BDR documentation. Evergreen performed quality checks, conducted treatment and control group validation, selected the appropriate modeling approach given the data received, and calculated energy savings for each event and cohort.

3.1 Data

Evergreen received the following data from Oracle in October 2023:

- Customer account data (e.g. Opower customer IDs, treatment/control group indicator)
- Electric consumption data
  - **Event day AMI:** Hourly AMI data on the **day of** the event
  - **Pre-season AMI:** Hourly AMI for the **month prior** to the event, on the same day of the week
- Estimated savings by event and hour

We requested, but were unable to receive the following:

- Electric consumption data
  - **Previous year AMI:** Hourly AMI for the **month of the event during the prior year**, on the same day of the week.
  - **Pre-treatment billing:** Daily consumption during the **year prior** to treatment

These items were listed in Oracle's analysis plan but were not ultimately available to be utilized in the analysis.

[2] Opower Company. 2015. "Behavioral Demand Response: Measurement of Peak Reduction.".

The previous year AMI data were not possible to receive because Oracle only started receiving AMI data from Xcel Energy in December 2022. The pre-treatment billing data were not possible to receive because Oracle never received billing data from Xcel Energy. Oracle adjusted its analysis methodology to focus on AMI from the event day only. We limited our analysis to event day AMI and pre-season AMI data.

3.2 Quality Checks and Cleaning/Validation

Quality Checks

Prior to analysis, Evergreen performed a series of quality checks on the customer account data, event day AMI data, and pre-season AMI data. These included checks such as ensuring consistency in treatment/control assignment between AMI data and customer account data and checking for reasonable rates of inactive customers. The data files passed our quality checks, and no major data concerns arose from the checks.

Data Cleaning and Validation

Following the quality checks, we cleaned the AMI data based on the following steps outlined in Oracle's BDR documentation:

1. Dropping outliers, defined as >30 kWh/hr or < -30 kWh/hr.
2. Dropping hours without all four 15-minute interval measurements.
3. Dropping all estimated reads.
4. Removing customers with more than one service point (which would have been removed during the initial customer selection).
5. Excluding an entire day if the customer (i.e., service point) was inactive.

Evergreen's operationalization of Oracle's steps and the result of implementation are listed in Table 4. Dropping estimated reads was not performed due to the lack of an estimate indicator in the AMI files. Evergreen assumes that no usage values were estimated.

Relatively few AMI data rows were removed as a result of the data cleaning and validation steps (Table 4). The most significant additional alteration was the removal of two event dates from the pre-season AMI data. July 27, 2023 and August 22, 2023 were included in the data file as they corresponded to the same day of the week in the month prior to the August 3, 2023 and September 5, 2023 events, respectively. Their removal resulted in the deletion of 3.3 million rows, or 10 percent of the initial rows. Non-event day analysis was performed following removal.

Table 4: AMI Data Cleaning and Validation Steps

Cleaning/Validation Step	Rule	Operationalization	Implication
Dropping Outliers	Drop hours with reads measuring more than 30 kWh/hr or less than -30 kWh/hr	Deleted rows where usage_value > 30 OR usage_value < -30	**Event AMI:** Removed 12 rows (<0.1% of total) **Pre-Season AMI:** Removed 40 rows (<0.1% of total)
Dropping Missing Values	Drop hourly records when data for that hour were missing	Checked for rows where usage_value was NULL	**Event AMI:** No rows removed **Pre-Season AMI:** No rows removed
Dropping Estimated Reads	Remove estimated readings	N/A, no estimate indicator	No rows removed
Check That Each Customer Has Only One Service Point	Check for cases of multiple opower_service_point_ids for a given opower_customer_id	Filtered for IDs with unique service point counts > 1, identified service point for each customer with zero or inconsistent values, deleted rows with these service points	**Event AMI:** Removed four service points for four customers, totaling 11 rows (<0.1% of total) **Pre-Season AMI:** Removed five service points for five customers, totaling 58 rows (<0.1% of total)
Exclude Inactive Customers	Exclude usage data for customer service points at which a customer was inactive on or before the day of the event	Filtered for rows where there was no inactive date or the inactive date was after the event date	**Event AMI:** No rows removed, assessed each event individually **Pre-Season AMI:** N/A

3.3 Analysis Methodology

Linear Regression Equations

Oracle informed Evergreen that it did not have pre-season AMI data available at the time it ran its model and therefore chose to estimate a simple differences model that uses only event day AMI data, as shown in Equation 1.

Because Oracle provided Evergreen with pre-season AMI data, Evergreen was able to run both a simple differences model (Equation 1) and a difference-in-differences model (Equation 2). The primary difference between the two equations is that Equation 2 includes an event variable while Equation 1 does not.

The simple differences model takes the difference between average kWh energy consumption among treatment customers and the average kWh energy consumption among control customers. In Equation 1, the coefficient β_3 represents the average incremental change in energy usage associated with a one-unit change in hour, when the treatment is applied.

Equation 1: Simple Differences Model

$$Usage_i = \beta_0 + \beta_1 Treat_i + \beta_2 Hour + \beta_3 Treat_i * Hour + \varepsilon_i$$

Where:

$Usage_i$ = Energy usage for customer *i*, in kWh.

$Treat_i$ = Treatment status for customer *i* (0 for control, 1 for treatment).

$Hour$ = The hour of the day, 0 – 23.

β_0 = The intercept of the model, representing the baseline level of energy usage.

$\beta_{1,2,3}$ = Coefficients estimated by the model.

ε_i = Random error for customer *i,* assumed to be normally distributed.

The difference-in-differences model subtracts the difference in average demand among treatment and control customers in the pre-season period from the simple difference. In Equation 2, the coefficient β_7 of the three-way interaction between hour, treatment, and event is interpreted as the savings estimate. It represents the average incremental change in energy usage associated with a one-unit change in hour for an event day (relative to a non-event day) when the treatment is applied.

Equation 2: Difference-in-Differences Model

$$Usage_i = \beta_0 + \beta_1 Hour + \beta_2 Treat_i + \beta_3 Event + \beta_4 Hour * Treat_i + \beta_5 \text{Hour} * Event + \beta_6 Treat_i * Event + \beta_7 Hour * Treat_i * Event + \varepsilon_i$$

Where:

$Usage_i$ = Energy usage for customer *i*, in kWh.

$Treat_i$ = Treatment status for customer *i* (0 for control, 1 for treatment).

$Hour$ = The hour of the day, 0 – 23.

$Event$ = An indicator variable for event day (0 for non-event day, 1 for event day)

β_0 = The intercept of the model, representing the baseline level of energy usage.

$\beta_1, \beta_2, \ldots$ = Coefficients estimated by the model.

ε_i = Random error for customer *i,* assumed to be normally distributed.

Model Selection and Inputs

Cleaned and validated AMI data were used to run both models for each event date separately. The simple differences model used event day AMI data as an input, and the differences-in-differences model used a combination of event day AMI data and pre-season AMI data. For the cohort-level difference-in-differences analysis, Evergreen joined customer account data indicator fields to the combined event day and pre-season AMI data, and then filtered to the appropriate cohort. The conditions for cohort assignment are shown in Table 5.

Table 5: Cohort Assignment Conditions

Cohort	Is_ac_rewards	Study_group	Sample Size (n)
AMI treatment, no smart thermostat	N	AMI treatment, control	13,544
AMI treatment, smart thermostat	Y	AMI treatment, control	98
Non-AMI treatment, no smart thermostat	N	Non-AMI treatment, control	29,145
Non-AMI treatment, smart thermostat	Y	Non-AMI treatment, control	213

Calculating Results

Following model runs, Evergreen pulled savings estimates into workbooks by event and performed a series of calculations to replicate the structure of the BDR results workbook shared by Oracle. The primary fields and their calculations are shown in Table 6. Evergreen calculated 90 percent confidence intervals for savings estimates.

Table 6: Results Workbook Field Definitions and Calculations

Field	Interpretation	Calculation/Value
Savings_per_hh	Savings per household	- estimate (savings)
Savings_per_hh_se	Standard error of savings per household estimate	Std..Error (output of model)
Savings_per_hh_u_ci	Upper confidence interval of savings per household estimate	-Estimate+1.64*Std..Error
Savings_per_hh_l_ci	Lower confidence interval of savings per household estimate	-Estimate-1.64*Std..Error
Active_treatment_customers	Number of treatment customers	Model input, treatment_number
Total_savings	Total savings	Active_treatment_customers * savings_per_hh
Total_savings_se	Standard error of total savings estimate	Treatment_number * Std..Error
Total_savings_u_ci	Upper confidence interval of total savings estimate	total_savings+1.64*total_savings_se
Total_savings_l_ci	Lower confidence interval of total savings estimate	total_savings-1.64*total_savings_se
Event_date	Event date	Model input

4 Results

This section provides results from treatment control validation, energy savings estimates overall and by cohort, and an estimate of the capacity of advanced metering infrastructure (AMI) online for the summer of 2024.

Primary findings included the following:

Validation of Treatment and Control Assignments
When assessing the balance between the randomly assigned treatment and control groups, Evergreen found that the groups had similar energy use during non-event days, except from 2 p.m. to 6 p.m. During that period, the treatment group used slightly less energy on average compared to the control group.

Replicating Oracle's Model
When we used the same data and analysis methods as Oracle (a simple differences model) and estimated savings for each event, there were no significant differences between Evergreen and Oracle's estimates. Similar to Oracle, we observed statistically significant savings for just five out of the 20 peak hours. Savings consistently began at least one hour before each event and persisted for a few hours. Evergreen's simple differences model produced slightly higher total savings than Oracle, at 12.16 MWh compared to 11.82 MWh.

Recommended Model
When we controlled for the pre-existing differences between the treatment and control groups and estimated savings (difference-in-differences model), our estimates were further from achieving significance compared to Oracle's model estimates (simple differences). Evergreen's difference-in-differences model produced lower total savings across events than Oracle's simple differences model, at 9.0 MWh compared to 11.82 MWh.

Cohort Analysis
As an additional step in our analysis, we estimated the savings for each customer cohort (grouped by AMI messaging treatment and presence of a smart thermostat) for the two events where the AMI messaging treatment was offered. Customers who received AMI messaging with a smart thermostat had the highest total average savings compared to the other cohorts. However, the differences between cohorts were statistically insignificant and the analysis sample was limited, so no definitive conclusions can be drawn.

Total Capacity Estimate

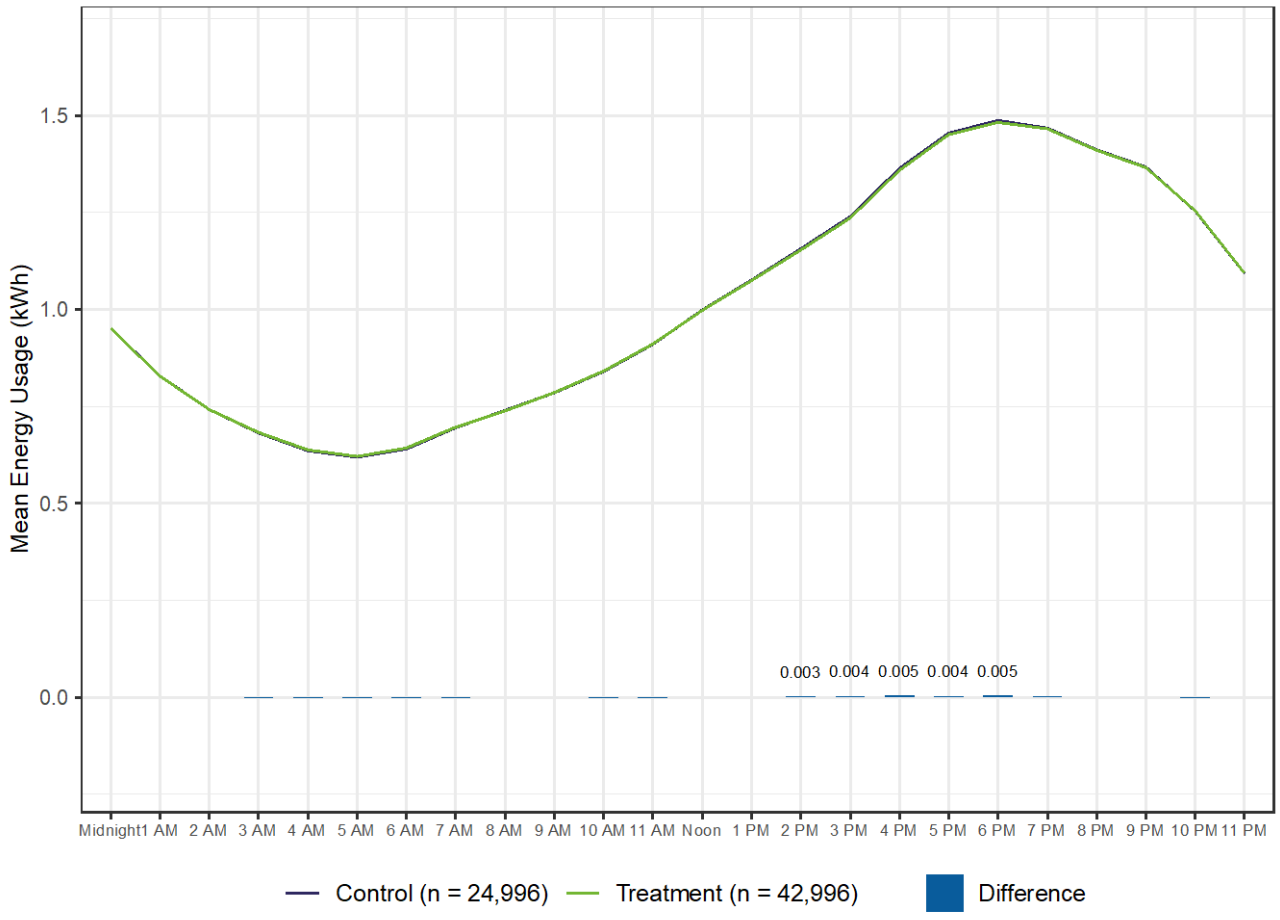
We estimate that for the summer of 2024, Xcel Energy will have capacity for 4,720 kWh or 4.7 MWh of savings per hour through the Energy Action Days AMI messaging treatment. This equates to 18,880 kWh or 18.9 MWh of savings per event day.

This section provides detailed charts and figures to support the findings listed above.

4.1 Treatment Control Validation

Evergreen was tasked with confirming the balance between the treatment and control groups and used pre-season AMI data to compare the average baseline energy usage between the two groups. The treatment and control groups were well-aligned in mean energy usage except from 2 p.m. to 6 p.m. (Figure 1). From 2 p.m. to 6 p.m., those in the treatment group used slightly less energy on average than those in the control group.

Figure 1: Pre-Season Non-Event Dates Mean Hourly Energy Usage (kWh)



4.2 Estimated Savings, Replicating Oracle's Model

Load Shapes

Evergreen constructed load shape charts for all five events based on the results of the simple differences model. The simple differences model is the same model that Oracle used to calculate savings estimates; it exclusively uses event day AMI data. The output, an hourly savings estimate, is the difference between average energy usage among treatment customers and the average energy usage among control customers at a given hour. Figure 2 shows the difference in mean hourly energy usage between the treatment and control groups for the first event. The green line shows mean hourly energy usage for the treatment group (n=41,112), and the dark purple line shows mean hourly energy usage for the control group (n=23,837). The red box outlines the peak hours for Event 1 (4 p.m. to 7 p.m.), and the blue bars indicate the average difference in energy use between the control and treatment groups (green and blue lines), which represents the average savings impact per household.

Figure 2: Event 1 (7/26/23) Mean Hourly Energy Usage (kWh)

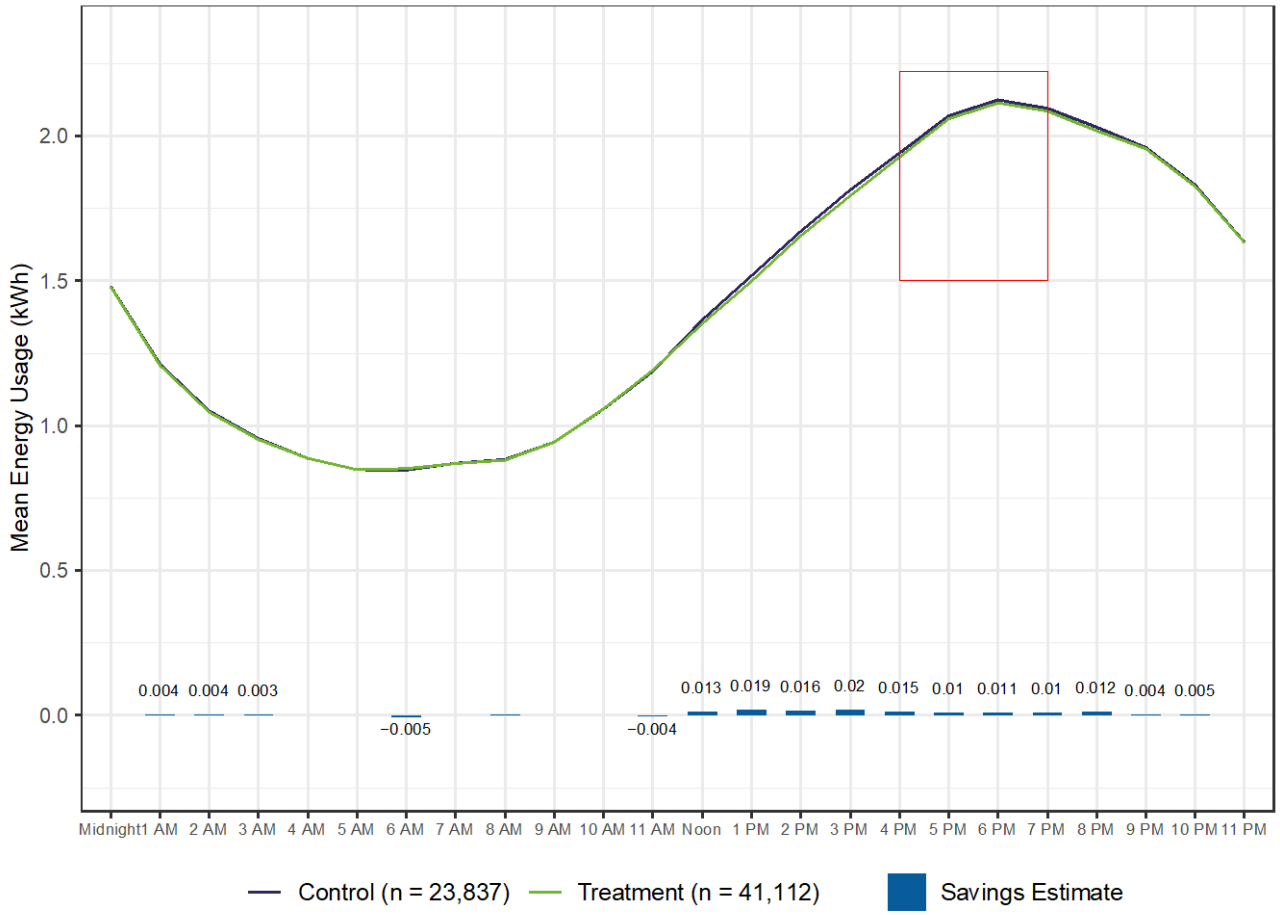
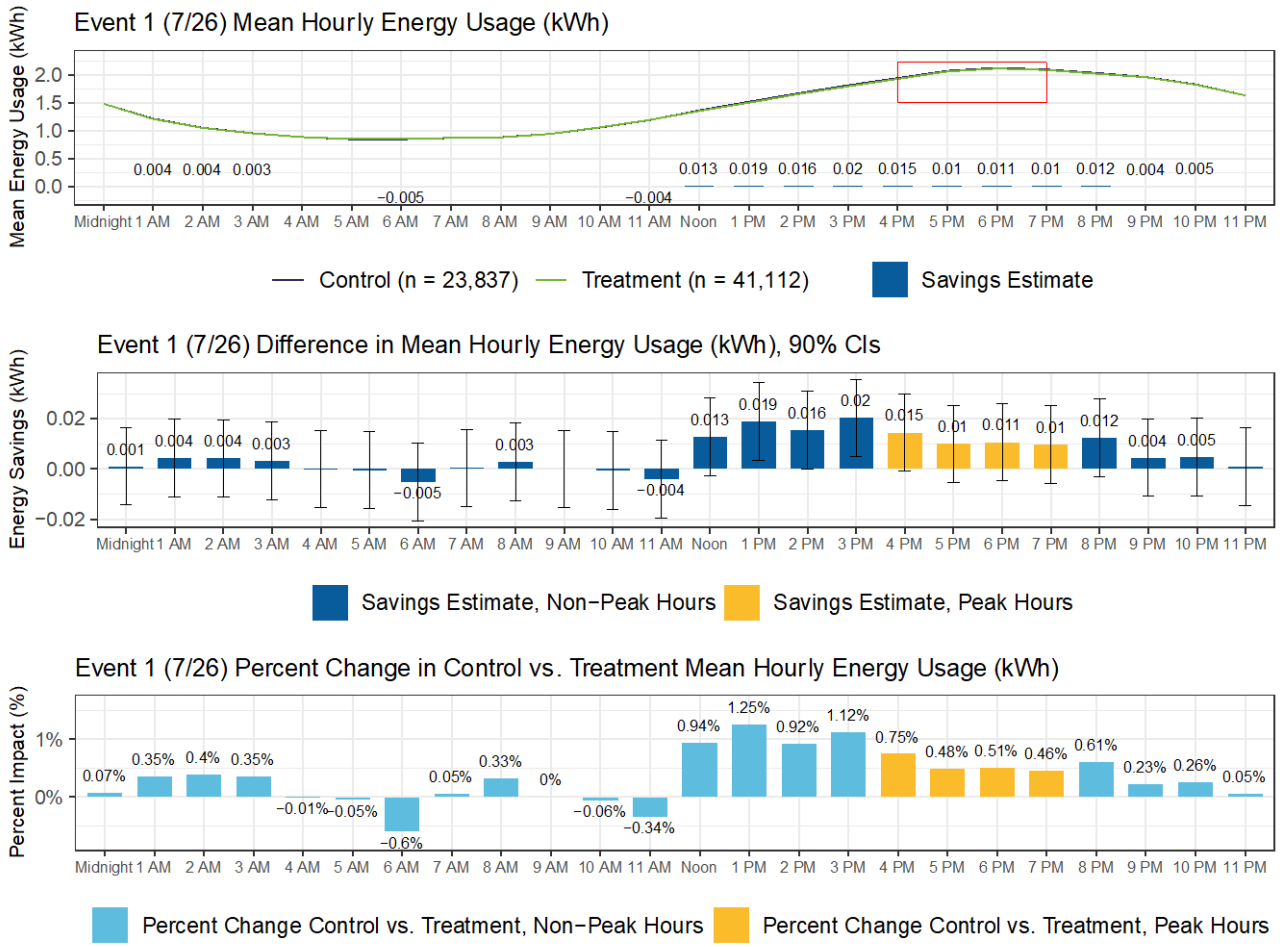


Figure 3 shows the same load shape chart from Figure 2 along with two zoomed-in versions of the bar chart. The center chart shows the average hourly impact estimate with 90 percent confidence intervals, and the bottom chart provides these hourly impacts as a percentage of hourly consumption. From these charts, we observe that savings are small and begin before the peak hours, at 1 p.m. During the peak hours, savings are still present but mostly lower in magnitude. From the error bars in Figure 3 we see that savings are significant at the 90 percent level from 1 p.m. through 3 p.m. but are not significant for any peak hours.

Figure 3: Event 1 (7/26/23) Savings Impacts



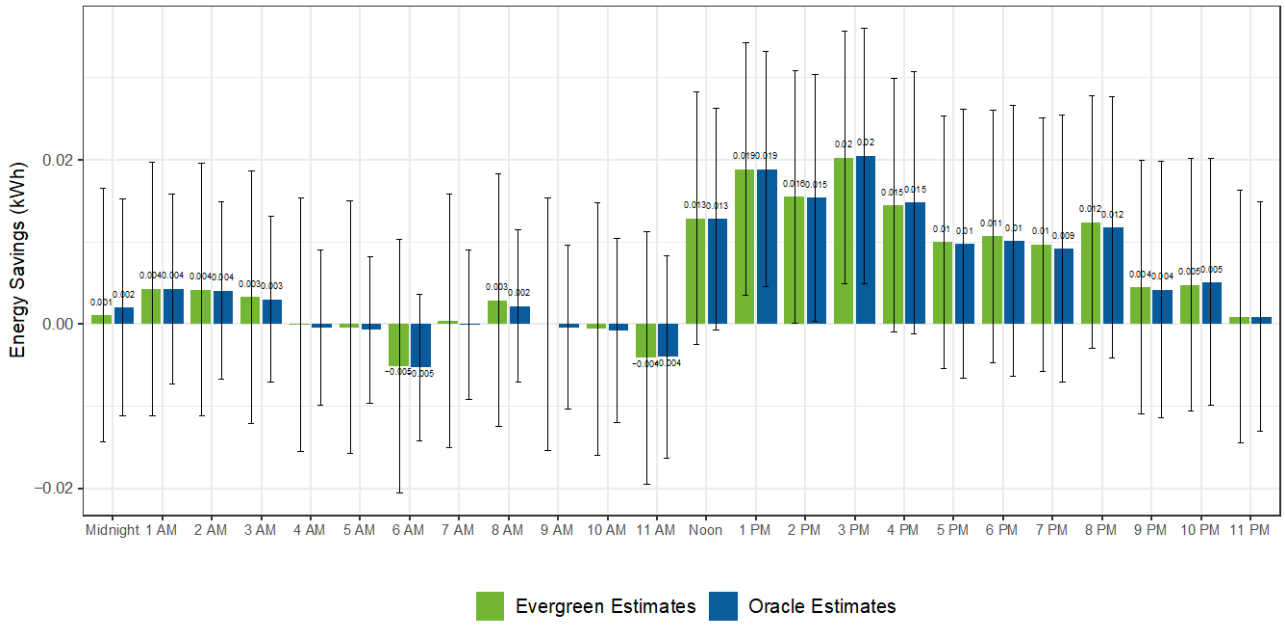
Appendix A provides similar figures with the hourly impacts of the remaining four events.

Savings Comparison

Figure 4 shows a comparison of Evergreen's savings estimates to Oracle's savings estimates for Event 1, with 90 percent confidence intervals included for both Evergreen and Oracle's estimates. There are no significant differences between Evergreen and Oracle's estimates. Evergreen and

Oracle both estimated insignificant savings during peak hours for Event 1. Evergreen's impact estimates align with Oracle's except for some small, insignificant differences.

Figure 4: Event 1 (7/26/23) Oracle vs. Evergreen Energy Savings (kWh) Estimates

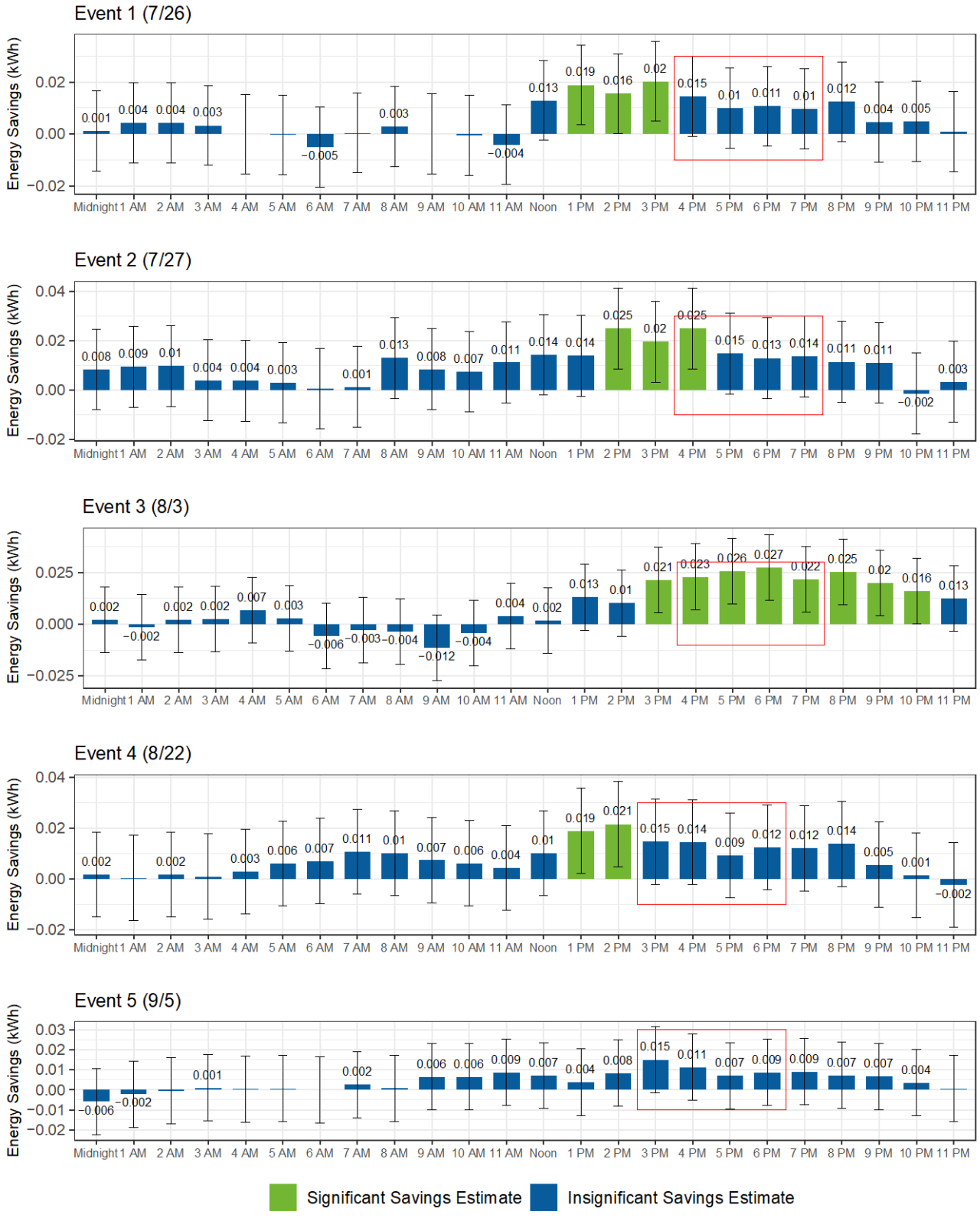


The four remaining events had similar findings; Evergreen's hourly impact estimates were not statistically significantly different from Oracle's. See Appendix A for similar charts for the remaining four events.

Savings Across Events

Figure 5 shows savings estimates calculated from the simple differences model for all events. Ninety percent confidence intervals are provided. The blue bars indicate insignificant savings estimates, and the green bars highlight hours with statistically significant savings. This chart shows that savings consistently began at least one hour before the event and persisted for a few hours, ending before the event in Event 1 and Event 4. Significant savings persisted through the entire event during Event 3. There were significant savings for Event 2 from 2 p.m. to 4 p.m., for Event 3 from 3 p.m. to 10 p.m., and for Event 4 for 1 p.m. and 2 p.m. Overall, there were significant savings for just five out of the 20 peak event hours.

Figure 5: Significant vs. Insignificant Savings Estimates for All Events



Evergreen calculated total savings across peak hours for each event, based on the results from the simple differences model. Evergreen's simple differences model produced slightly higher total savings than Oracle, at 12.16 MWh compared to 11.82 MWh, respectively (Table 7).

Table 7: Simple Differences Model Total Savings Estimates

Event Date (2023)	Oracle Reported Savings (MWh)	Evergreen Savings, Same Model (MWh)	Difference in Savings (MWh)
7/26	1.807	1.849	0.043
7/27	2.582	2.712	0.130
8/3	3.840	3.950	0.110
8/22	1.896	2.021	0.124
9/5	1.695	1.629	-0.066
Total	**11.821**	**12.162**	**0.341**

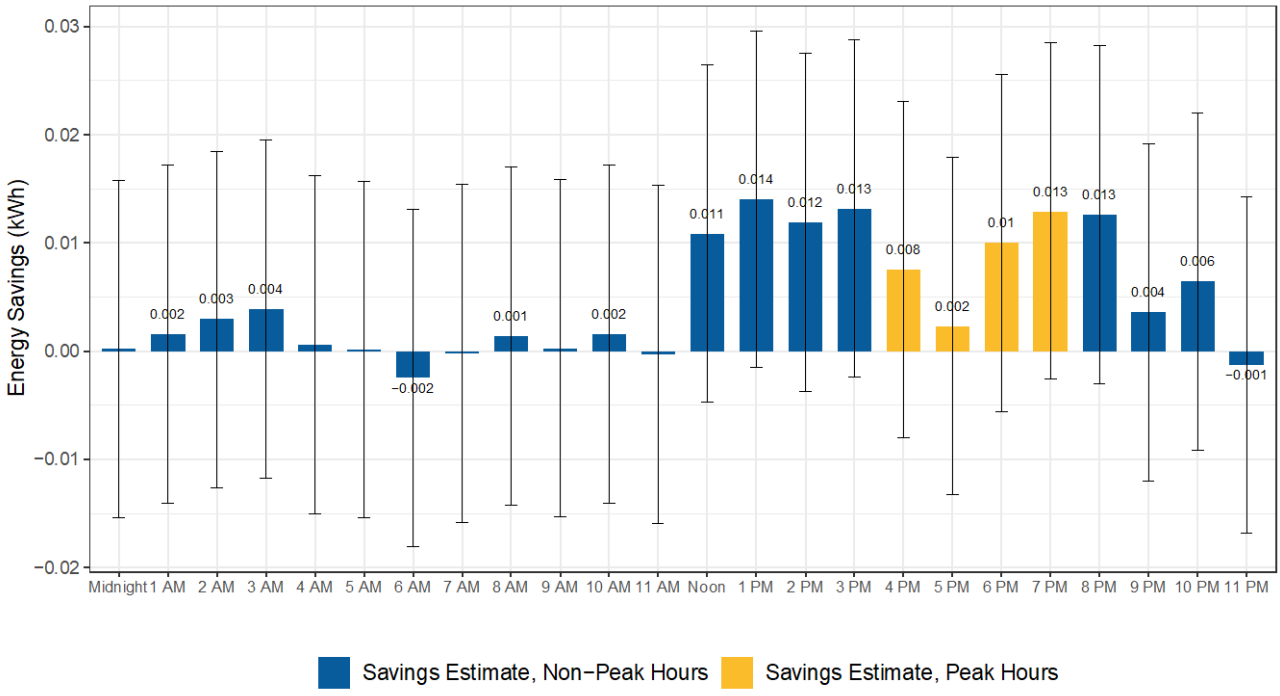
4.3 Estimated Savings, Recommended Model

Model Results

The difference-in-differences model uses both pre-season (non-event) AMI data and event day AMI data to control for pre-existing differences in average usage observed on non-event days. The result is average hourly impact of the messaging treatment, above and beyond the natural differences between these groups observed on non-event days. Evergreen ran the difference-in-differences model for all five events. Figure 6 shows the savings estimates for Event 1, and Figure 7 compares the savings estimates from the two different modeling approaches for Event 1. Both charts provide 90 percent confidence intervals.

All difference-in-differences model savings estimates were insignificant, and the magnitude of savings was highest in the several hours preceding the event hours (shown in orange) (Figure 6).

Figure 6: Event 1 (7/26/23) Difference-in-Differences Model Savings Estimates (kWh)

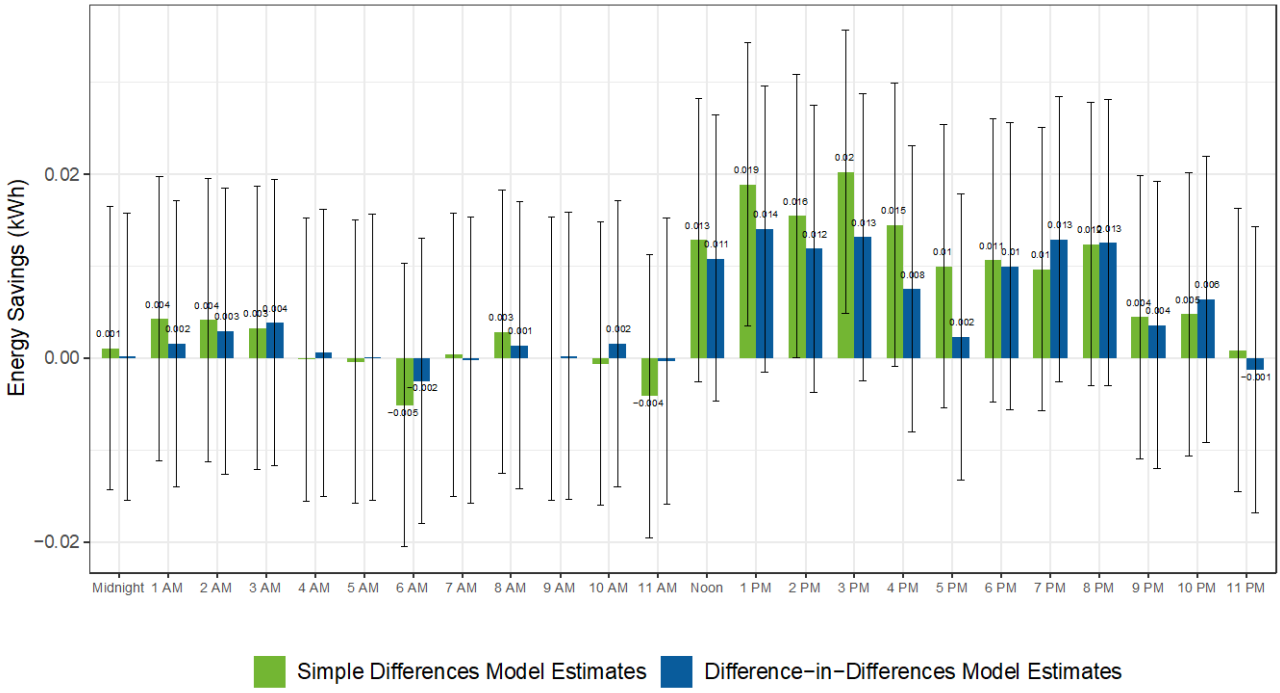


As seen in Figure 7, the simple differences model used by Oracle (in green) found significant savings between 1 p.m. to 3 p.m., but these hours are insignificant once we control for non-event days in our recommended difference-in-differences model (blue bars). Overall, the difference-in-differences model estimates for event hours were further from achieving significance. It is reasonable that the difference-in-differences model savings estimates are smaller and further from significance because the model does not attribute any of the preexisting differences in energy usage to the program.

As an additional exploratory analysis, Evergreen estimated the difference-in-differences model using a subset of non-event day AMI data prior to the date the Energy Action Days welcome letters were sent. Results of this analysis are discussed in Appendix B.[3]

[3] Across Event 1 and Event 2, the impact of using non-event data before versus after the welcome letter is insignificant and the results are inconclusive. It is not clear whether using a subset of non-event dates prior to the welcome letter would increase or decrease savings.

Figure 7: Event 1 (7/26/23) Evergreen Simple Differences Model vs. Difference-in-Differences Model Savings Estimates (kWh)



4.4 Total Savings

To assess the overall impact of the pilot program and compare our results to Oracle's, Evergreen calculated total savings across peak hours for each event. Evergreen's simple differences model produced slightly higher total savings than Oracle, at 12.16 MWh compared to 11.82 MWh, respectively (Table 8). Evergreen's difference-in-differences model estimates lower total savings than Oracle, at 9.0 MWh. This makes sense because the difference-in-differences model estimates the incremental impact of the event, above and beyond the differences observed between the treatment and control group customers in the pre-season, whereas the simple differences model attributes all differences on event days to the program.

Table 8: Total Savings Estimate (MWh) Oracle Reported vs. Evergreen Evaluated

Event Date (2023)	Oracle Reported Savings (MWh)	Evergreen Savings, Same Model (MWh)	Difference in Savings (MWh)	Evergreen Savings, Recommended Model (MWh)	Difference in Savings (MWh)
7/26	1.807	1.849	0.043	1.350	-0.457
7/27	2.582	2.712	0.130	2.007	-0.575
8/3	3.840	3.950	0.110	2.903	-0.937
8/22	1.896	2.021	0.124	2.067	0.171
9/5	1.695	1.629	-0.066	0.669	-1.026
Total	**11.821**	**12.162**	**0.341**	**8.996**	**-2.825**

4.5 Savings by Cohort

Evergreen also calculated average savings by cohort for the difference-in-differences model. Evergreen calculated the average savings per household across peak hours for each event. Due to the lack of AMI messaging for Event 1 and Event 2 and the limited AMI messaging for Event 3, Evergreen limited the cohort analysis to Event 4 and Event 5, where the messaging was sent to the cohorts as intended. See Appendix C for savings estimates for all events.

Results for Event 4 and Event 5 are shown in Table 9 and Figure 8 below. As seen in Figure 8, the cohort with both AMI messaging and the smart thermostat installed had higher total average savings, driven by higher average savings during Event 4. The cohort with the next highest savings did not receive AMI messaging (Non-AMI treatment, no smart thermostat), although the magnitude of savings is lower. Figure 8 shows the average savings per household for Event 4 and Event 5 for the four cohorts. Blue bars show average savings per household for Event 4, and green bars show average savings per household for Event 5, with 90 percent confidence intervals included. There are no significant differences in estimates between cohorts for Event 4 or Event 5. Overall, we see greater savings for the AMI messaging cohort, which is encouraging with the prospect of additional AMI installations resulting in greater potential savings. The thermostats had an inconsistent impact, with greater savings during Event 4 and less savings during Event 5. It is worth noting that the sample was small for the AMI treatment, smart thermostat cohort (n=98), so we cannot be confident that the results from this sample are reflective of the full treated population.

Figure 8: Evergreen Difference-in-Differences Model Average Savings Per Household across Event Hours (kWh), by Cohort

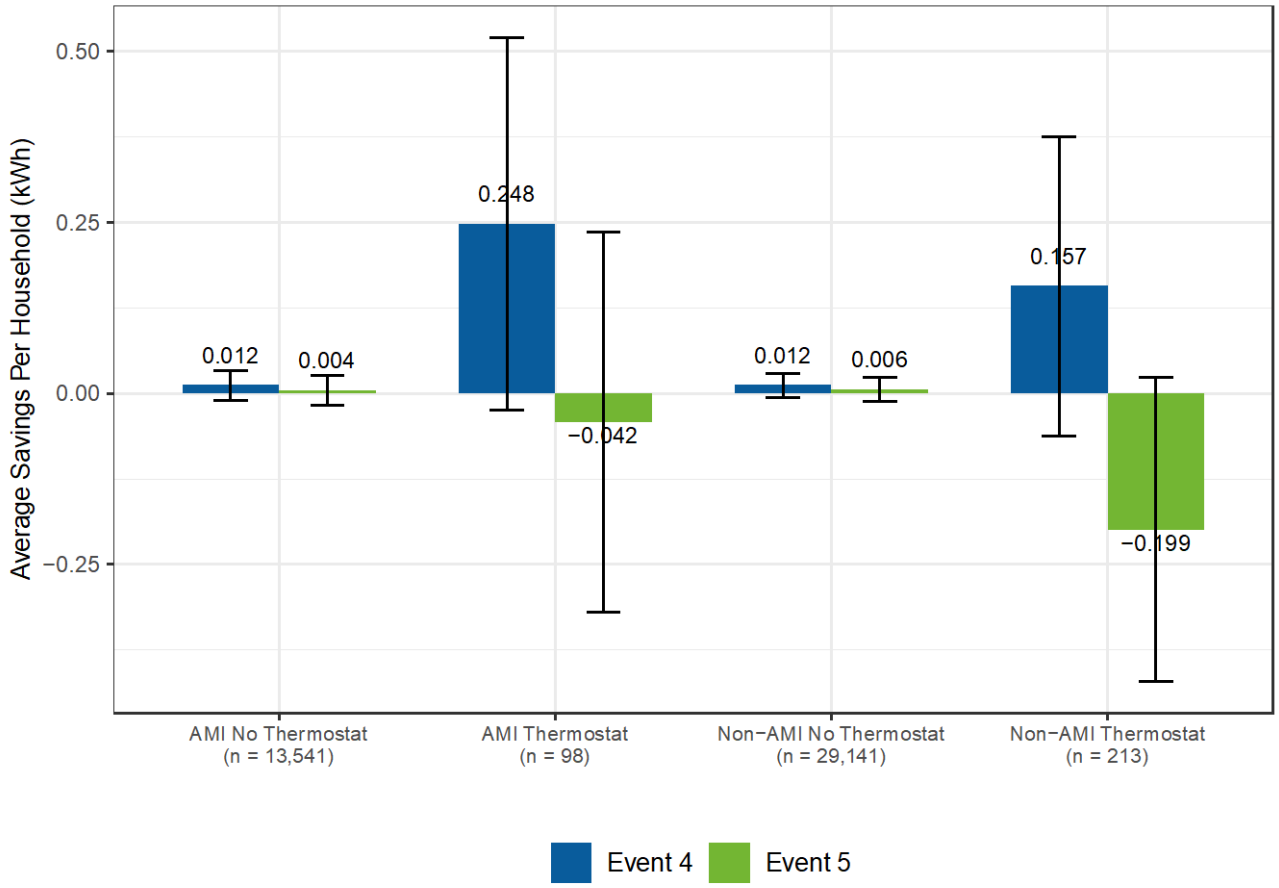


Table 9: Evergreen Difference-in-Differences Model Average Savings Per Household across Peak Hours (kWh), by Cohort

Event Date	Overall Average Savings per HH	AMI Treatment, No Smart Tstat Average Savings per HH (n=13,541)	AMI Treatment, Smart Tstat Average Savings per HH (n=98)	Non-AMI Treatment, No Smart Tstat Average Savings per HH (n=29,141)	Non-AMI Treatment, Smart Tstat Average Savings per HH (n=213)
8/22	0.016	0.012	0.248	0.012	0.157
9/5	0.005	0.004	-0.042	0.006	-0.199
Total	**0.009**	**0.008**	**0.103**	**0.009**	**-0.021**

4.6 Total Capacity Estimate

Xcel Energy has continued to deploy AMI meters across its Minnesota service territory. As of November 2023, Xcel Energy had installed AMI meters for 512,000 customers, and forecasted that total AMI installations would be 615,000 customers by December 31, 2023. To estimate total demand response capacity that Xcel Energy will have available for the summer of 2024, Evergreen assumed 25,000 of the 615,000 available customers would be assigned to a control group, and thus there would be 590,000 customers available for treatment with AMI messaging. The majority of these customers would fall into the AMI treatment, no smart thermostat cohort. The average hourly savings during peak hours for this cohort was 0.008 kWh. This value is multiplied by the projected number of customers eligible for treatment to get the total 2024 capacity per hour. The total 2024 capacity per hour and per event day is shown in Equation 3.

Equation 3: Savings Capacity Estimate

$$\begin{aligned} &Total\ 2024\ capacity\ per\ hour \\ &\quad = 0.008\ kWh\ per\ treated\ HH\ with\ AMI\ *\ 590{,}000\ treatment\ customers \\ &\quad = 4{,}720\ kWh\ per\ hour \end{aligned}$$

$$\begin{aligned} Total\ 2024\ capacity\ per\ event\ day\ &= 4{,}720\ kWh\ per\ hour\ *\ 4\ peak\ hours\ per\ event\ day \\ &= 18{,}880\ kWh\ per\ event\ day \end{aligned}$$

Evergreen therefore projects that for the summer of 2024, Xcel Energy will have capacity for 4,720 kWh or 4.7 MWh of savings per hour through the Energy Action Days AMI messaging treatment. This equates to 18,880 kWh or 18.9 MWh of savings per event day.

5 Conclusions and Recommendations

Evergreen was tasked with measurement and verification (M&V) of Oracle's net savings impacts calculations, confirming the balance between the treatment and control groups, estimating advanced metering infrastructure (AMI) capacity, and calculating savings impacts by cohort.

Primary findings included the following:

The treatment and control groups were well matched, except from 2 p.m. to 6 p.m. In evaluating the balance between the randomly assigned treatment and control groups, Evergreen found that the groups had similar energy use during non-event days, except from 2 p.m. to 6 p.m. During that period, the treatment group used slightly less energy on average compared to the control group. This is meaningful because the targeted "peak hours" for energy events were 4 p.m. to 7 p.m. for the first three events and 3 p.m. to 6 p.m. for the last two events. Though these differences were small and not statistically significant, the event impacts were also small during these hours. Oracle did not appear to account for these existing differences in its impact estimates.

We observed small and insignificant savings during events. Evergreen's hourly savings estimates for each event were not significantly different from Oracle's and were nearly the same. Both Oracle and Evergreen found that savings were not significantly different between the control and treatment groups during most of the event hours (15 out of 20 peak hours). Messaging treatments that rely on behavioral changes typically produce savings in a subset of treated homes. A large sample is required to be able to detect statistically significant savings across the population of customers who received the messaging treatment. Insignificant savings suggest that either the Opower program had no consistent impact in changing customer behavior to reduce energy or the sample size was too small to detect a change of this magnitude. As more AMI meters are installed, the program could be offered to more customers, increasing the sample size available for analysis.

Recommendation

1	Evergreen recommends reassessing the significance of savings with a larger sample.

The hourly savings are consistently positive, suggesting that savings are feasible with this intervention. A larger sample is necessary to detect savings of this magnitude.

When we used the same data and analysis methods as Oracle, our savings estimates were not statistically significantly different from Oracle's. Evergreen compared our calculated energy savings across peak hours for all events to Oracle's reported savings. When Evergreen ran the

same simple differences model as Oracle, we observed slightly higher total savings than Oracle observed, at 12.16 MWh compared to 11.82 MWh, respectively.

When we control for the pre-existing differences between the treatment and control group, our savings estimates are lower (though still not statistically significantly different from Oracle's). When Evergreen controlled for the differences that we observed on non-event days (with a difference-in-differences model), we observed lower total savings than Oracle, at 9.0 MWh. The lower savings from the difference-in-differences model was expected, as the treatment group naturally uses less energy than the control group on non-event days, so we are no longer attributing the full difference to the program intervention. Oracle focused exclusively on event days in their model, so they attributed all the event day differences in energy use to the impact of the program, when some of that difference was preexisting. That is, Oracle may have overstated the program impacts by not accounting for the lower average energy use of the treatment group compared to the control group on non-event days.

Recommendation

2	We recommend that Oracle use data from non-event days to control for any pre-existing differences in energy use between the treatment and control groups for all future impact calculations.

Even if the difference in claimable savings is not statistically significantly different, there is still a practical difference in which estimate Xcel Energy chooses to use for planning purposes.

Customers who received AMI messaging with a smart thermostat had the highest total average savings compared to other cohorts. As an additional step in our analysis, we also ran the difference-in-differences model for each customer cohort (AMI treatment without a smart thermostat, AMI treatment with a smart thermostat, non-AMI treatment without a smart thermostat, non-AMI treatment with a smart thermostat) for Event 4 and Event 5 and elaborate on results in Section 4.5: Savings by Cohort. The AMI treatment with a smart thermostat cohort had the highest total average savings, followed by the non-AMI treatment without a smart thermostat cohort (though the magnitude of savings for the latter was much smaller). The results are encouraging for the prospect of additional AMI rollout (and thus an opportunity for additional AMI messaging) leading to greater future savings. However, the differences between cohorts were statistically insignificant, and the analysis sample was limited (as only Event 4 and Event 5 delivered AMI messaging as intended) so no definitive conclusions can be drawn.

Appendix A: Impacts by Event Day

Replicating Oracle's Model

This section provides the event savings impacts charts for Event 2 through Event 5. This is the same type of chart that was shown for Event 1 in Section 4.2: Estimated Savings, Replicating Oracle's Model (Figure 3).

The top chart in Figure 9 shows the difference in mean hourly energy usage between the treatment and control groups for Event 2. The green line shows mean hourly energy usage for the treatment group (n=41,081), and the dark purple line shows mean hourly energy usage for the control group (n=23,824). The red box outlines the peak hours for Event 2 (4 p.m. to 7 p.m.), and the blue bars represent the average difference in energy use between the control and treatment groups, which represents the average savings impact per household.

The center chart in Figure 9 shows the average hourly impact estimate with 90 percent confidence intervals, and **the bottom chart** provides these hourly impacts as a percentage of hourly consumption.

From these three charts within Figure 9, we observe that savings are small and begin before the peak hours, at 2 p.m. From the error bars in the center chart, we see that savings are significant at the 90 percent level from 2 p.m. to 4 p.m.; 4 p.m. is the only peak hour for which savings are significant.

Figure 9: Event 2 (7/27/23) Savings Impacts

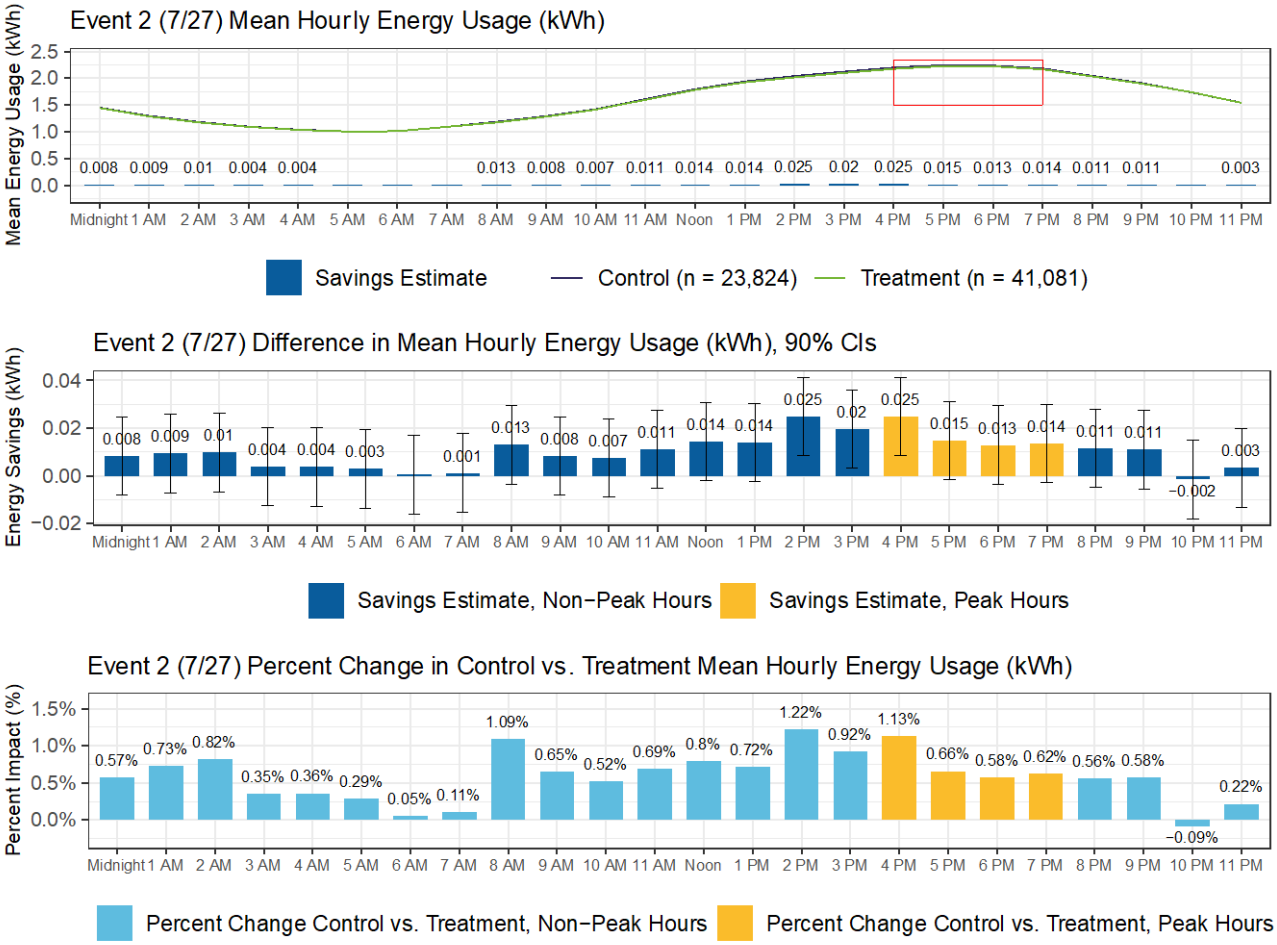


Figure 10: Event 3 (8/3/23) Savings Impacts

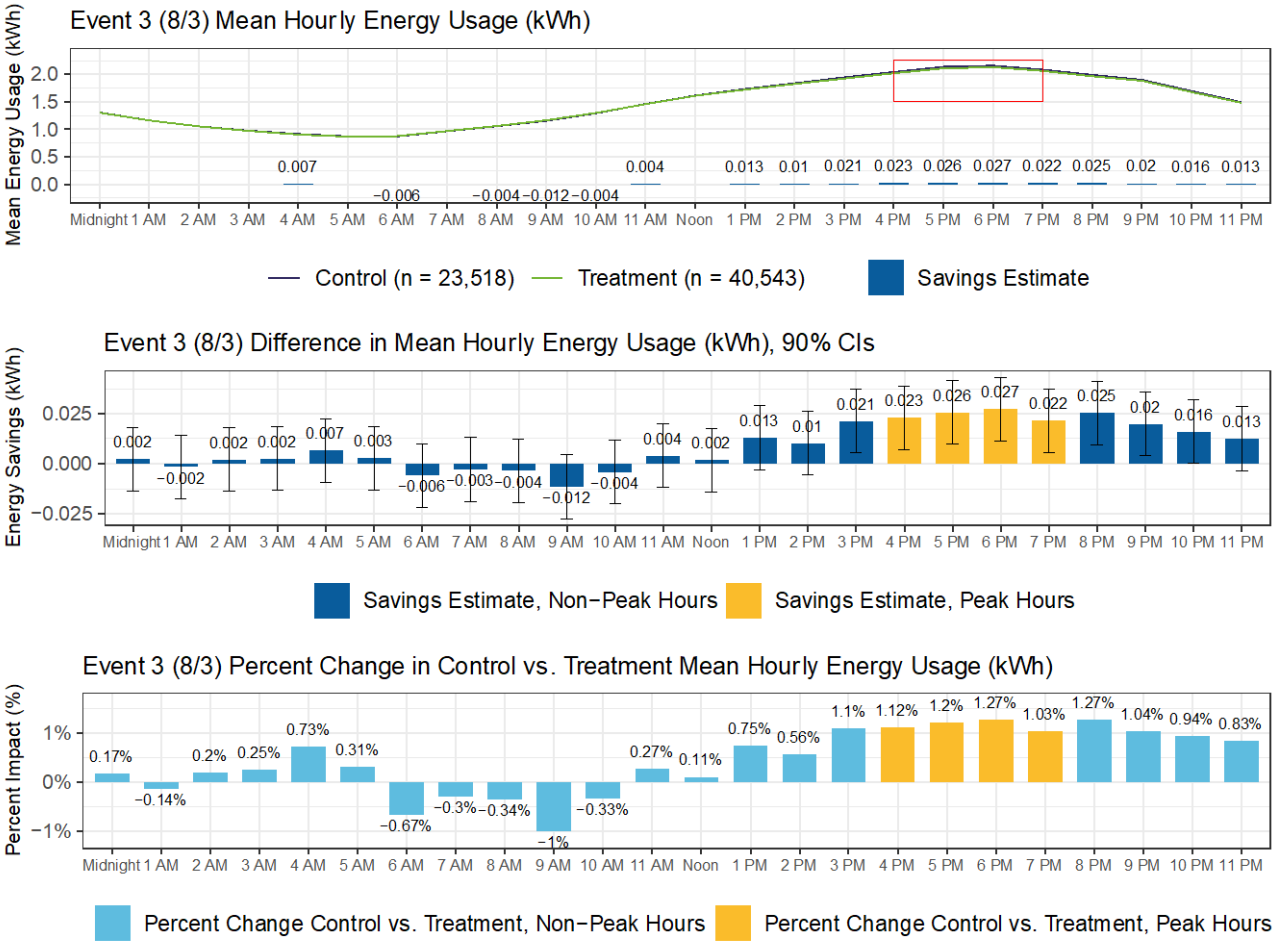


Figure 11: Event 4 (8/22/23) Savings Impacts

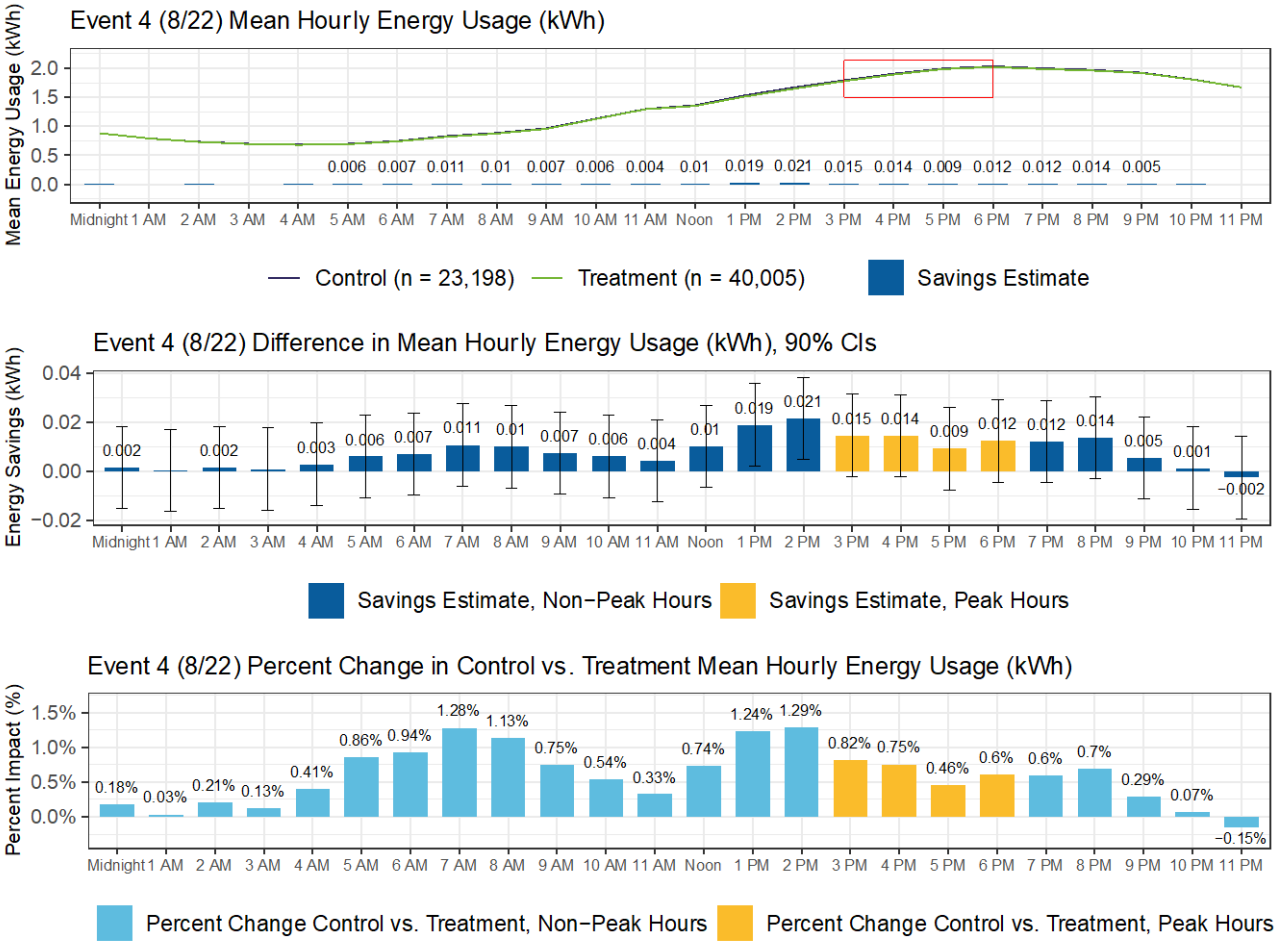
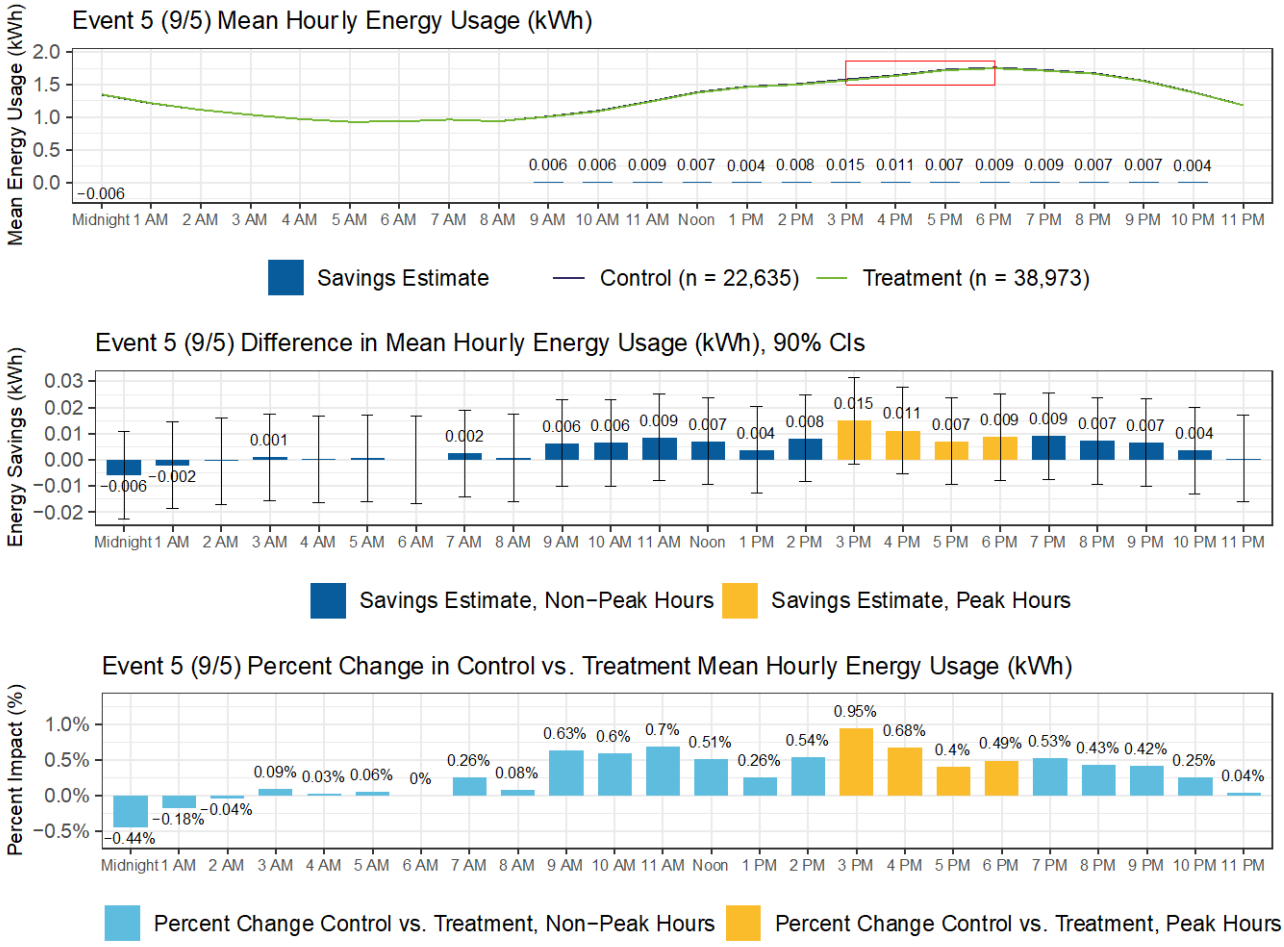


Figure 12: Event 5 (9/5/23) Savings Impacts



Comparison to Reported Savings

This section provides charts that compare Evergreen's savings estimates from the simple differences model to Oracle's reported savings for Event 2 through Event 5. This is the same type of chart that was shown for Event 1 in Section 4.2: Estimated Savings, Replicating Oracle's Model (Figure 4).

Figure 13 shows a comparison of Evergreen's savings estimates (green bars) to Oracle's savings estimates (blue bars) for Event 2, with 90 percent confidence intervals included for both Evergreen and Oracle estimates. There are no significant differences between Evergreen and Oracle's estimates (Evergreen and Oracle's confidence intervals overlap for each hourly estimate). Evergreen and Oracle both estimated significant savings at 2 p.m. through 4 p.m.. Evergreen's impact estimates align with Oracle's except for some small, insignificant differences. For example, Oracle's savings estimates tend to be slightly smaller in magnitude; otherwise, Evergreen and Oracle align in terms of savings significance.

Figure 13: Event 2 (7/27/23) Oracle vs. Evergreen Energy Savings (kWh) Estimates

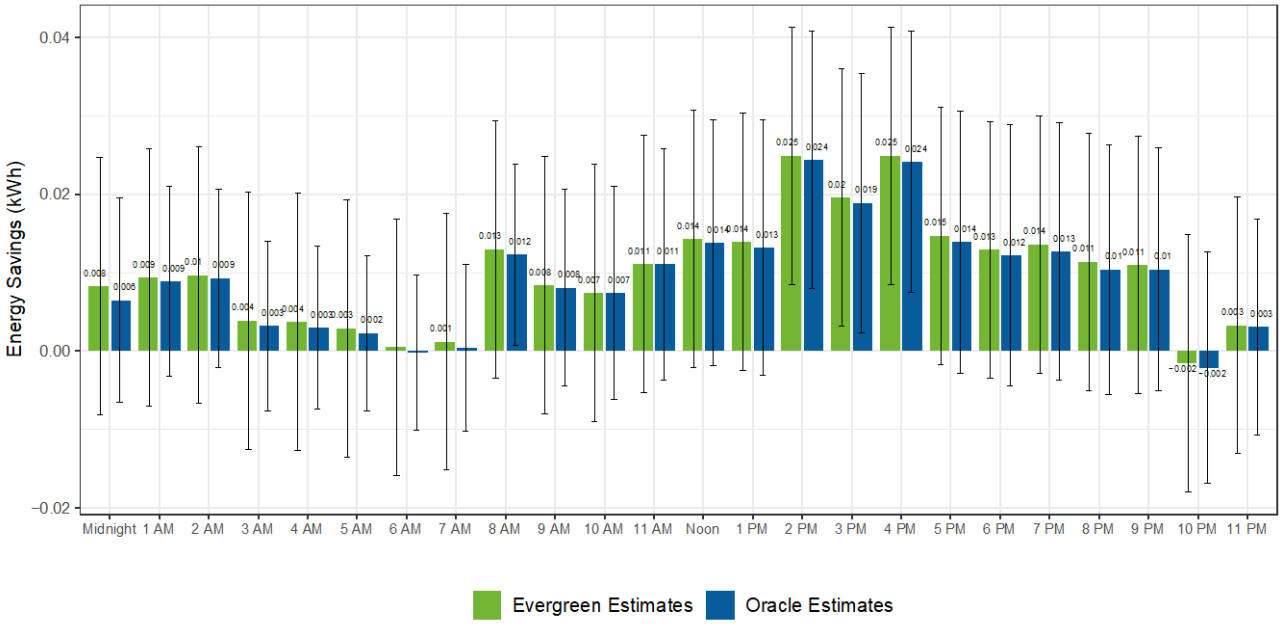


Figure 14: Event 3 (8/3/23) Oracle vs. Evergreen Energy Savings (kWh) Estimates

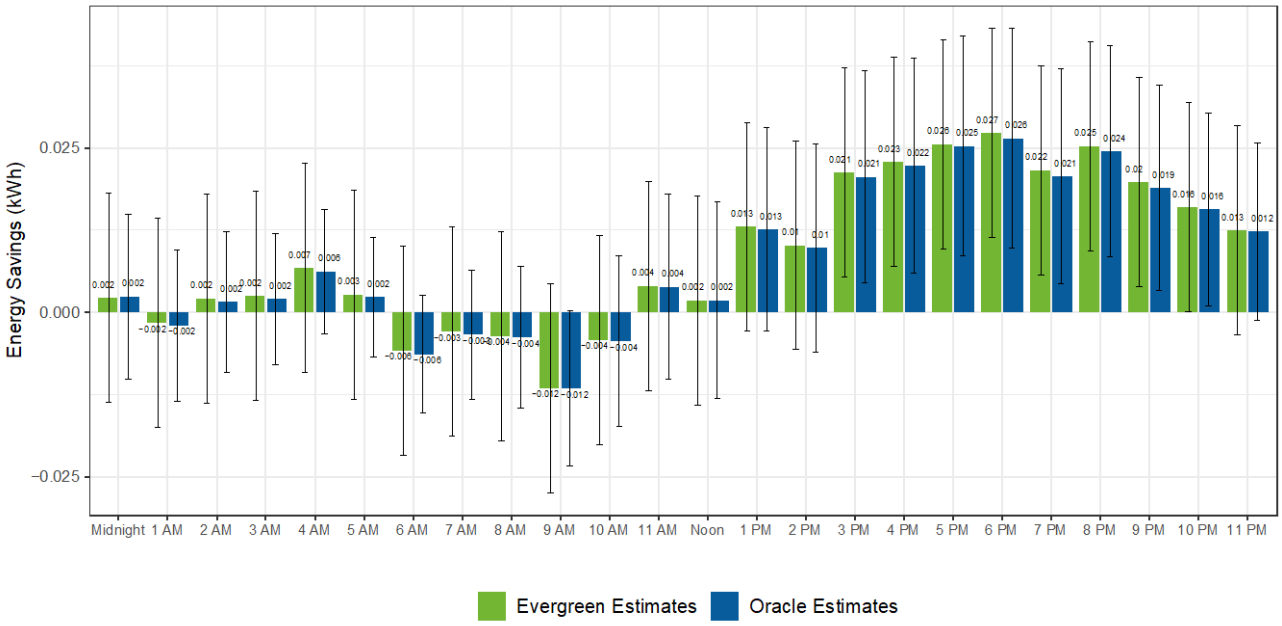


Figure 15: Event 4 (8/22/23) Oracle vs. Evergreen Energy Savings (kWh) Estimates

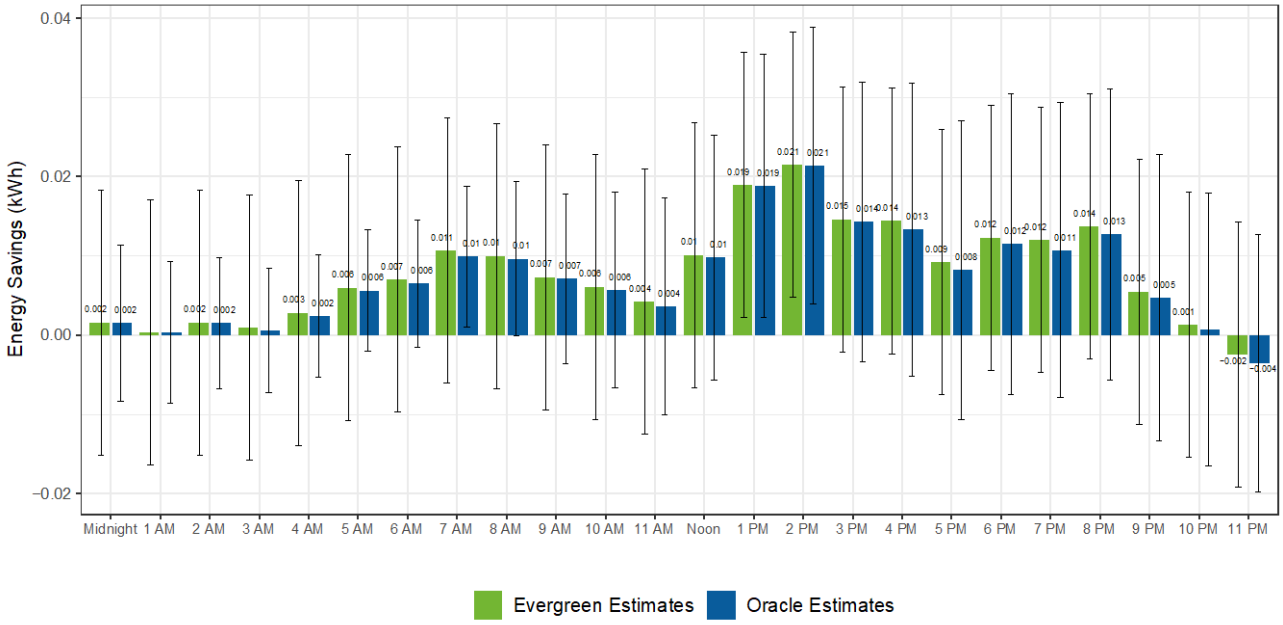
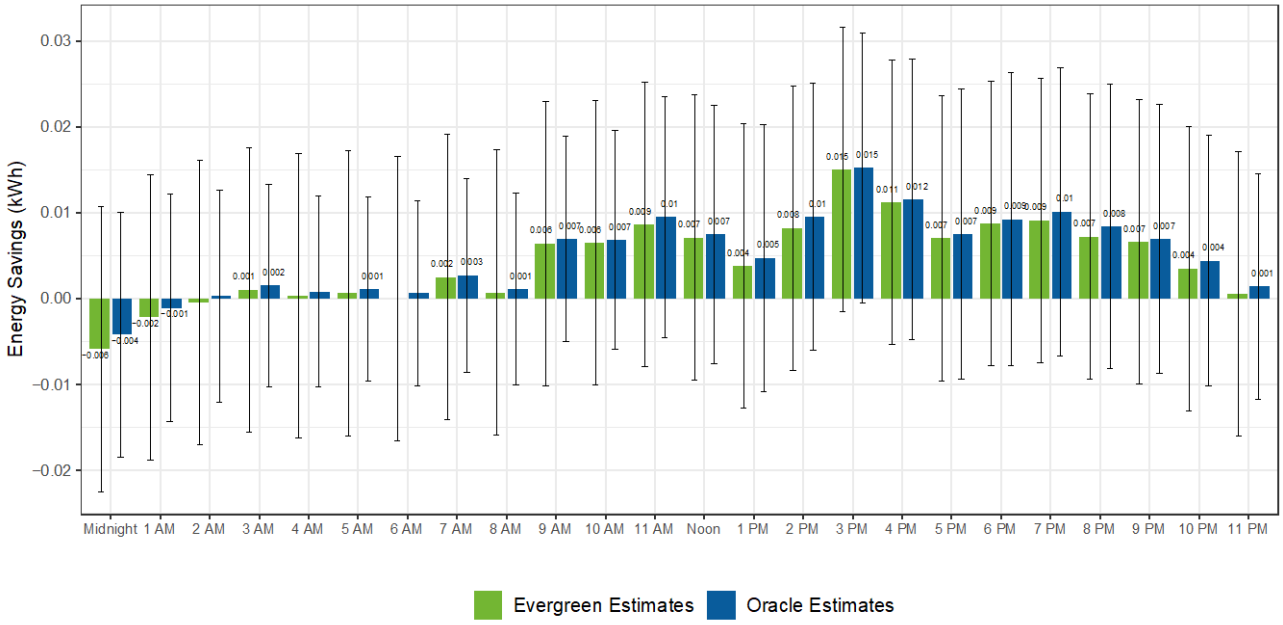


Figure 16: Event 5 (9/5/23) Oracle vs. Evergreen Energy Savings (kWh) Estimates



Appendix B: Alternative Definition of Non-Event Days

This exploratory analysis was performed due to concerns that the pre-season welcome letter, which was sent to participants on June 16, 2023, may have led to some behavior change on non-event dates, creating the gap between the treatment and control groups. For example, a customer may have adjusted their thermostat set points after receiving the mailer but before the first event; thus, including non-event dates that occurred after June 16, 2023 in the difference-in-differences model would not give the program credit for any savings achieved by the welcome letter.

This section provides charts that compare Evergreen's difference-in-differences model savings estimates for the model that uses all non-event days against a new version that uses only a subset of non-event days prior to the welcome letter.

The original difference-in-differences model for Event 1 used non-event AMI data from one month prior to the event on the same day of the week, including June 7, June 14, June 21, and June 28. In the new model version, we only used non-event AMI data from June 7 and June 14, as these are similar non-event days prior to the welcome letter. A comparison of savings estimates is shown in Figure 17. The blue bars show savings estimates for the original model with all non-event dates, and the green bars show savings estimates for the new model with non-event dates prior to June 16. There are no significant differences in estimates. For peak hours (4 p.m. to 7 p.m.), this model variation, which compares events to a non-event day prior to the welcome letter, produced slightly lower average hourly savings (though not significantly lower) than when we use all similar non-event days.

Figure 17: Event 1 Difference-in-Differences Model Comparison, All Non-Event Days vs. Non-Event Days Prior to the Welcome Letter

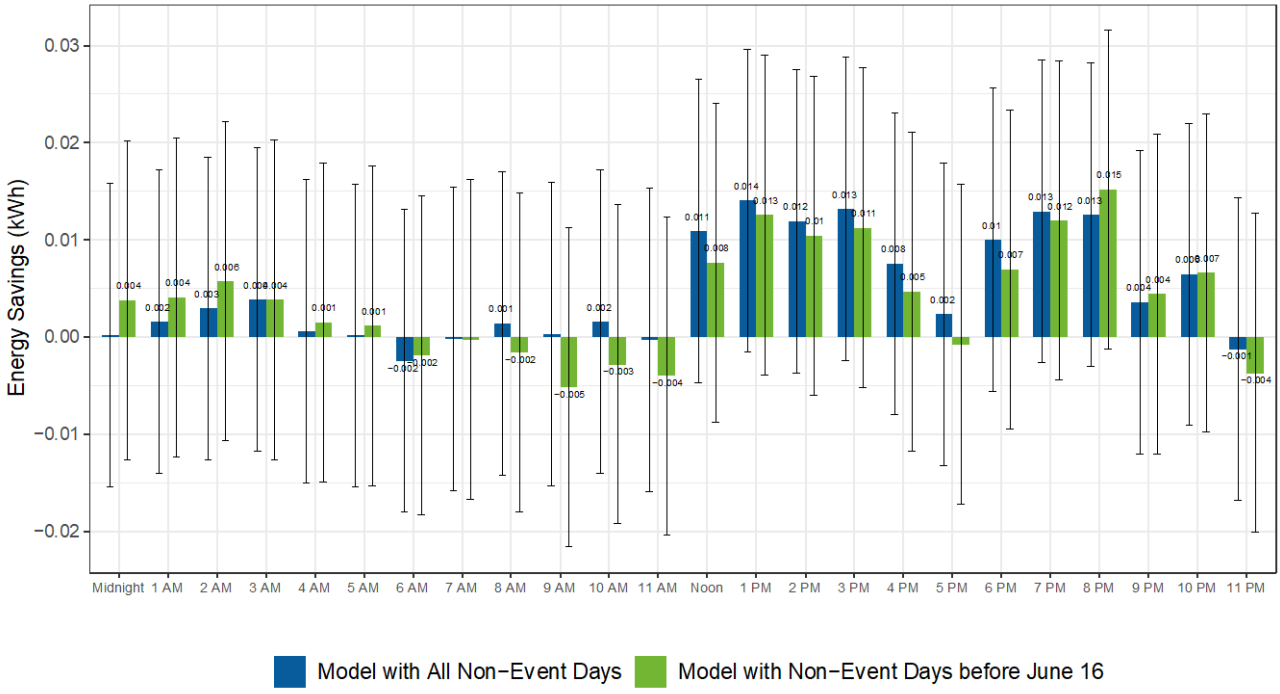
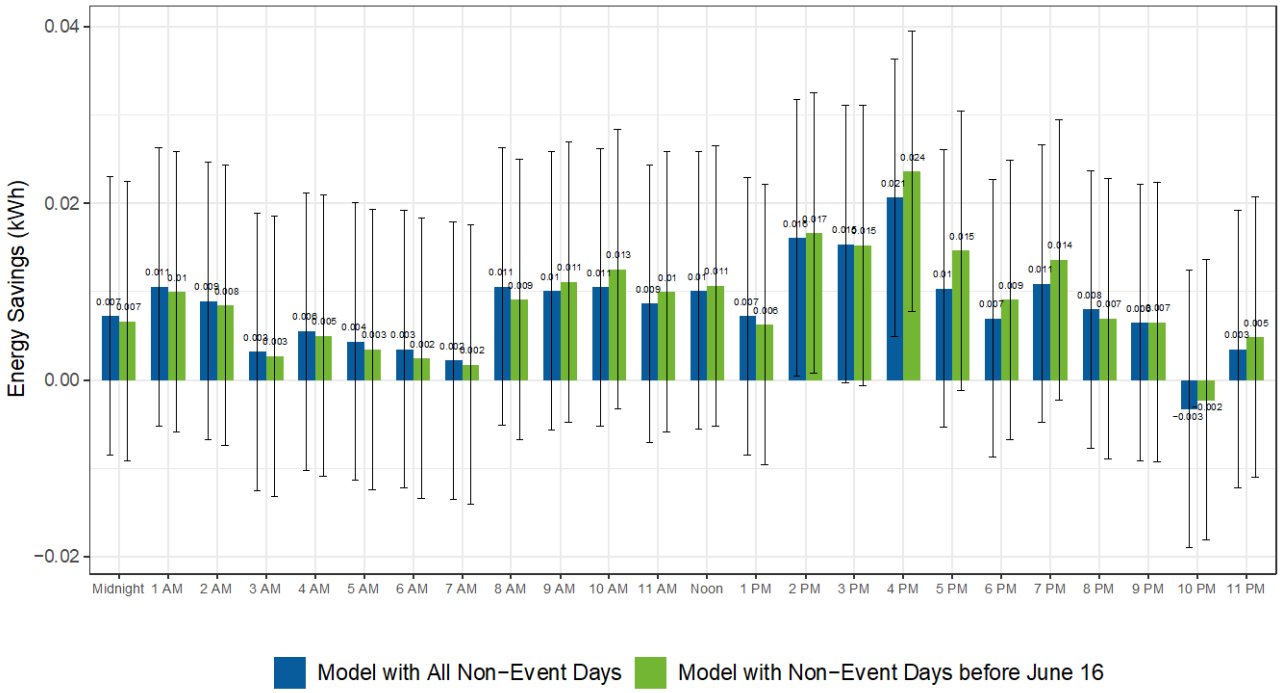


Figure 18 shows the same comparison for Event 2. The original difference-in-differences model for Event 2 used non-event AMI data from June 1, June 8, June 15, June 22, and June 29. In the new model version, we used non-event AMI data from June 1, June 8, and June 15. Similar to Event 1, there were no significant differences in estimates. Unlike Event 1, for estimates during peak hours (4 p.m. to 7 p.m.), the original model with all non-event days produced lower average hourly savings than the new model with a subset of non-event days.

Figure 18: Event 2 Difference-in-Differences Model Comparison, All Non-Event Days vs. Subset



Across these two events, the impact of using non-event data before vs. after the welcome letter is insignificant, and the results are **inconclusive**. It is not clear whether using a subset of non-event days prior to the welcome letter would increase or decrease savings.

Appendix C: Savings by Cohort and Event Day

Table 10 provides results from the difference-in-differences model average savings per household calculations for all events. The AMI messaging cohort savings are only shown for Event 4 and Event 5 because these are the only two events when AMI messaging was consistently issued to this cohort. The smart thermostats were only controlled on June 22, 2023, which did not coincide with an Energy Action Day. Therefore, differences in cohorts with or without a smart thermostat cannot be attributed to direct control of thermostats. Furthermore, it is possible that homes have a smart thermostat but are not participating in the AC Rewards program, and thus are not reflected in the cohorts with a smart thermostat.

The AMI treatment with a smart thermostat cohort had the highest total average savings (Table 10), which matches the finding from the cohort analysis for Event 4 and Event 5. The non-AMI treatment with a smart thermostat cohort had the next highest average savings, driven primarily by non-negative average savings in Event 3 and Event 4. Both the AMI treatment with a smart thermostat cohort and non-AMI treatment with a smart thermostat cohort had small sample sizes (n=98 and n=213, respectively), so we cannot be confident that the results from this sample are reflective of the full treated population.

Table 10: Evergreen Difference-in-Differences Model Average Savings Per Household across Peak Hours (kWh), by Cohort, All Events

Event Date (2023)	Average Savings per HH	AMI Treatment, No Smart Tstat Average Savings per HH (n = 13,544)	AMI Treatment, Smart Tstat Average Savings per HH (n = 98)	Non-AMI Treatment, No Smart Tstat Average Savings per HH (n = 29,145)	Non-AMI Treatment, Smart Tstat Average Savings per HH (n = 213)
7/26	0.010	NA	NA	0.009	-0.024
7/27	0.015	NA	NA	0.013	-0.055
8/3	0.022	NA	NA	0.017	0.190
8/22	0.016	0.012	0.248	0.012	0.157
9/5	0.005	0.004	-0.042	0.006	-0.199
Overall	**0.011**	**0.008**	**0.103**	**0.011**	**0.014**

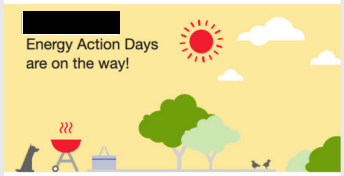
Note: The AMI Treatment cohorts received non-AMI messaging during the first three events. These savings are omitted from the table because they are not representative of the intended treatment.

APPENDIX G: BEHAVIORAL DEMAND RESPONSE WELCOME MESSAGING

Xcel Energy

Account #[redacted]

[redacted]



Welcome to Energy Action Days

When extreme temperatures hit, finding ways to save energy is the order of the day, and we can help jump-start your energy management. Starting soon, you'll receive energy-saving tips through our Energy Action Days program – an easy way to join your community in saving energy and managing your bill during extreme temperatures.

Saving energy on Energy Action Days is simple. You'll join your community in saving energy, managing your bill and reducing strain on the energy grid – leading to a more sustainable future for everyone. We'll notify you by email when Energy Action Days are approaching so you can take steps to lower your energy use, like adjusting your air conditioning or delaying the use of large appliances until off-peak hours.

For more information about the program, visit Customer Service at **my.xcelenergy.com/customersupport/s** and enter the keywords **Energy Action Days.**

Simple steps to save

1. **Prep**
   Get your home ready
   Take simple steps, like those listed in this email, to prepare your home for Energy Action Days.

2. **Plan**
   Look for Energy Action Days notifications
   We'll notify you by email about upcoming Energy Action Days.

3. **Save**
   Save on energy use
   Lower your energy use on Energy Action Days to contribute to a cleaner environment.

Learn more

Join your community

550,000

Xcel Energy customers were a part of the Energy Action Days program last summer

Prepare your home for savings during Energy Action Days

✓ **Seal air leaks**

If you add up the air leaks in most homes, it's like leaving a window open, which matters year-round. Sealing air leaks can save you up to 10% on your cooling costs. Add weatherstripping to windows and doors, fill cracks with caulk, and check if your insulation is adequate.

✓ **Install a programmable thermostat**

Save up to $180 in annual energy costs by installing a programmable thermostat to easily manage your preferred temperature when you're home and switch to energy-saving mode when you're away. Consider adjusting temperatures 2-4°F when you're asleep or away.

Call the Home Energy Squad

Preparing for Energy Action Days is even easier when you call the Home Energy Squad at **651-328-6220**.

If you schedule a visit from the Home Energy Squad, a two-person team will visit your home and install energy-saving materials such as: LED lightbulbs, door and attic hatch weather stripping, a programmable thermostat, and high-efficiency water fixtures, and assess and adjust water heater temperature.

Xcel Energy
401 Nicollet Mall,
Minneapolis, MN 55401
800-895-4999
For more information about the program, click here and enter the keywords Energy Action Days.

Savings are estimated for typical homes in Minnesota's Xcel Energy service area, and actual savings may vary. By implementing the recommended actions, Xcel Energy cannot guarantee the amount of money or energy saved. Participants of Energy Action Days can opt-out at any time by unsubscribing from Energy Action Days emails.

To opt out of Energy Action Day emails, click here

Copyright Oracle 2024. All rights reserved.

APPENDIX H: BEHAVIORAL DEMAND RESPONSE CUSTOMER MESSAGING

[redacted] [redacted]

Outlook

Energy Action Day: Today, April 25

From Xcel Energy - Energy Action Days <xcelenergy@email.opower.com>
Date Thu 4/25/2024 1:16 PM
To [redacted]

EXTERNAL - STOP & THINK before opening links and attachments.

[?moduleId=0c121014-e186-4137-91bc-026720c28659&communicationId=df5dc148-10db-4277-af5f-5e530885bde5]

[redacted]

Today is an Energy Action Day. Help keep everyone cool when energy demand is highest.

For example, increase your thermostat by 2 - 4 degrees for 3 - 4 hours during:

April 25
3pm – 7pm

What is an Energy Action Day?

During warm days, more people use energy to cool their homes than usual. Energy Actions Days are occasional requests by Xcel Energy to join your neighbors in reducing energy during peak demand by adjusting your energy usage.

Your AC Rewards program is driven by your smart thermostat and shows a notification during AC Rewards events. These two separate programs combine to create savings and reduce everyone's carbon footprint.

Ways to Save

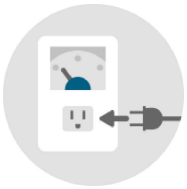
Enjoy unplugged activities during Peak Events

Put off running the dishwasher or doing laundry until after the Peak Event. Instead of watching TV or using electronics that need to be plugged in, read a book, play a board game, or spend quality time with your household.

Turn off lights when they're not in use

Turn off or reduce lighting in areas that aren't occupied. In areas that are occupied during Energy Action Days, try to reduce your lighting and take advantage of natural sunlight or spot lighting instead.

[redacted] [redacted]



Use a plug-in power meter to save

Plug-in power meters show you how much power your electronics and appliances use. Use a power meter to learn which devices use the most electricity and make sure to turn off and unplug those high users during Energy Action Days.

SEE MORE WAYS TO SAVE

Earn rewards every day of the year

It always pays to be energy efficient. But with our My Energy rewards program, it can pay even more, every day of the year. When you enroll, you can earn two points for every kilowatt-hour saved—and redeem your points for gift cards at local retailers. Visit the My Energy portal within My Account to get started or sign up today.

GET STARTED WITH MY ENERGY

[%%unsub_center_url%%]To opt out of Energy Action Day emails, click here.
[?moduleId=c73cb74f-0026-48d3-b8fd-4ad5c7e4ce6d&communicationId=df5dc148-10db-4277-af5f-

[redacted]

[redacted]

5e530885bde5]

401 Nicollet Mall, Minneapolis, MN 55401

Copyright 2022-2024 Oracle. All rights reserved.

APPENDIX I: EFFICIENT FUEL SWITCHING

Table 1: 2024 Efficient Fuel Switching Site-Based Fuel Neutral Energy Analysis - First Year

	Actual impacts					kBTU impacts					Net Impacts		GHGs
Program Name	**Net Gen kWh Savings**	**Dth Savings**	**Gasoline Savings**	**Propane Savings**	**Diesel Savings**	**Net Gen kWh Savings**	**Dth Savings**	**Gasoline Savings**	**Propane Savings**	**Diesel Savings**	**Net Gen kWh Savings**	**Dth Savings**	**GHG Savings**
Residential Heating & Cooling	(9,281,853)	88,853	-	-	-	(34,687,494)	88,853,300	-	-	-	-	54,166	3,585
Whole Home Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential Segment Total	**(9,281,853)**	**88,853**	**-**	**-**	**-**	**(34,687,494)**	**88,853,300**	**-**	**-**	**-**	**-**	**54,166**	**3,585**
Business Energy Assessments	-	-	-	-	-	-	-	-	-	-	-	-	-
Business New Construction	-	-	-	-	-	-	-	-	-	-	-	-	-
Compressed Air Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Custom Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
HVAC+R	-	-	-	-	-	-	-	-	-	-	-	-	-
Process & Commercial Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Home Energy Savings Program	-	-	-	-	-	-	-	-	-	-	-	-	-
Low Income Multi-Family Building Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Income Qualified Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Demand Response Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Outdoor Equipment	(672,989)	-	190,669	-	-	(2,480,958)	-	22,934,859	-	-	5,994,696	-	1,639
Efficient Fuel Switching Total	**(672,989)**	**-**	**190,669**	**-**	**-**	**(2,480,958)**	**-**	**22,934,859**	**-**	**-**	**5,994,696**	**-**	**1,639**
Indirect Products & Services Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Research, Evaluations & Pilots Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Portfolio Total	**(9,954,842)**	**88,853**	**190,669**	**-**	**-**	**(37,168,452)**	**88,853,300**	**22,934,859**	**-**	**-**	**5,994,696**	**54,166**	**5,224**
Assessments Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Alternative Filings Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Portfolio Total w Alternative Filings	**(9,954,842)**	**88,853**	**190,669**	**-**	**-**	**(37,168,452)**	**88,853,300**	**22,934,859**	**-**	**-**	**5,994,696**	**54,166**	**5,224**

Tables are in terms of energy savings. Negative numbers indicate increases in energy consumption.

Table 2: 2024 Efficient Fuel Switching Site-Based Fuel Neutral Energy Analysis - Lifetime

	Actual impacts					kBTU impacts					Net Impacts		GHGs
Program Name	**Net Gen kWh Savings**	**Dth Savings**	**Gasoline Savings**	**Propane Savings**	**Diesel Savings**	**Net Gen kWh Savings**	**Dth Savings**	**Gasoline Savings**	**Propane Savings**	**Diesel Savings**	**Net Gen kWh Savings**	**Dth Savings**	**GHG Savings**
Residential Heating & Cooling	(156,987,808)	1,496,691	-	-	-	(586,683,900)	1,496,691,300	-	-	-	-	910,007	84,210
Whole Home Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential Segment Total	**(156,987,808)**	**1,496,691**	**-**	**-**	**-**	**(586,683,900)**	**1,496,691,300**	**-**	**-**	**-**	**-**	**910,007**	**84,210**
Business Energy Assessments	-	-	-	-	-	-	-	-	-	-	-	-	-
Business New Construction	-	-	-	-	-	-	-	-	-	-	-	-	-
Compressed Air Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Custom Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
HVAC+R	-	-	-	-	-	-	-	-	-	-	-	-	-
Process & Commercial Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Home Energy Savings Program	-	-	-	-	-	-	-	-	-	-	-	-	-
Low Income Multi-Family Building Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Income Qualified Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Demand Response Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Outdoor Equipment	(6,729,774)	-	1,906,352	-	-	(24,809,151)	-	229,307,457	-	-	59,935,025	-	17,348
Efficient Fuel Switching Total	**(6,729,774)**	**-**	**1,906,352**	**-**	**-**	**(24,809,151)**	**-**	**229,307,457**	**-**	**-**	**59,935,025**	**-**	**17,348**
Indirect Products & Services Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Research, Evaluations & Pilots Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Portfolio Total	**(163,717,582)**	**1,496,691**	**1,906,352**	**-**	**-**	**(611,493,051)**	**1,496,691,300**	**229,307,457**	**-**	**-**	**59,935,025**	**910,007**	**101,558**
Assessments Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Alternative Filings Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Portfolio Total w Alternative Filings	**(163,717,582)**	**1,496,691**	**1,906,352**	**-**	**-**	**(611,493,051)**	**1,496,691,300**	**229,307,457**	**-**	**-**	**59,935,025**	**910,007**	**101,558**

Tables are in terms of energy savings. Negative numbers indicate increases in energy consumption.

Table 3: 2024 Efficient Fuel Switching Source-Based Fuel Neutral Energy Analysis - First Year

	Actual impacts					kBTU impacts					Net Impacts		GHGs
Program Name	**Net Gen kWh Savings**	**Dth Savings**	**Gasoline Savings**	**Propane Savings**	**Diesel Savings**	**Net Gen kWh Savings**	**Dth Savings**	**Gasoline Savings**	**Propane Savings**	**Diesel Savings**	**Net Gen kWh Savings**	**Dth Savings**	**GHG Savings**
Residential Heating & Cooling	(10,166,323)	88,853	-	-	-	(50,820,524)	88,853,300	-	-	-	-	38,033	3,585
Whole Home Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential Segment Total	**(10,166,323)**	**88,853**	**-**	**-**	**-**	**(50,820,524)**	**88,853,300**	**-**	**-**	**-**	**-**	**38,033**	**3,585**
Business Energy Assessments	-	-	-	-	-	-	-	-	-	-	-	-	-
Business New Construction	-	-	-	-	-	-	-	-	-	-	-	-	-
Compressed Air Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Custom Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
HVAC+R	-	-	-	-	-	-	-	-	-	-	-	-	-
Process & Commercial Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Home Energy Savings Program	-	-	-	-	-	-	-	-	-	-	-	-	-
Low Income Multi-Family Building Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Income Qualified Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Demand Response Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Outdoor Equipment	(727,127)	-	190,669	-	-	(4,001,505)	-	22,934,859	-	-	5,549,049	-	1,639
Efficient Fuel Switching Total	**(727,127)**	**-**	**190,669**	**-**	**-**	**(4,001,505)**	**-**	**22,934,859**	**-**	**-**	**5,549,049**	**-**	**1,639**
Indirect Products & Services Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Research, Evaluations & Pilots Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Portfolio Total	**(10,893,450)**	**88,853**	**190,669**	**-**	**-**	**(54,822,029)**	**88,853,300**	**22,934,859**	**-**	**-**	**5,549,049**	**38,033**	**5,224**
Assessments Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Alternative Filings Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Portfolio Total w Alternative Filings	**(10,893,450)**	**88,853**	**190,669**	**-**	**-**	**(54,822,029)**	**88,853,300**	**22,934,859**	**-**	**-**	**5,549,049**	**38,033**	**5,224**

Tables are in terms of energy savings. Negative numbers indicate increases in energy consumption.

Table 4: 2024 Efficient Fuel Switching Source-Based Fuel Neutral Energy Analysis - Lifetime

	Actual impacts					kBTU impacts					Net Impacts		GHGs
Program Name	**Net Gen kWh Savings**	**Dth Savings**	**Gasoline Savings**	**Propane Savings**	**Diesel Savings**	**Net Gen kWh Savings**	**Dth Savings**	**Gasoline Savings**	**Propane Savings**	**Diesel Savings**	**Net Gen kWh Savings**	**Dth Savings**	**GHG Savings**
Residential Heating & Cooling	(171,947,216)	1,496,691	-	-	-	(752,367,350)	1,496,691,300	-	-	-	-	744,324	84,210
Whole Home Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential Segment Total	**(171,947,216)**	**1,496,691**	**-**	**-**	**-**	**(752,367,350)**	**1,496,691,300**	**-**	**-**	**-**	**-**	**744,324**	**84,210**
Business Energy Assessments	-	-	-	-	-	-	-	-	-	-	-	-	-
Business New Construction	-	-	-	-	-	-	-	-	-	-	-	-	-
Compressed Air Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Custom Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
HVAC+R	-	-	-	-	-	-	-	-	-	-	-	-	-
Process & Commercial Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Business Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Home Energy Savings Program	-	-	-	-	-	-	-	-	-	-	-	-	-
Low Income Multi-Family Building Efficiency	-	-	-	-	-	-	-	-	-	-	-	-	-
Income Qualified Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Demand Response Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Outdoor Equipment	(7,271,146)	-	1,906,352	-	-	(34,941,476)	-	229,307,457	-	-	56,965,411	-	17,348
Efficient Fuel Switching Total	**(7,271,146)**	**-**	**1,906,352**	**-**	**-**	**(34,941,476)**	**-**	**229,307,457**	**-**	**-**	**56,965,411**	**-**	**17,348**
Indirect Products & Services Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Research, Evaluations & Pilots Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Portfolio Total	**(179,218,362)**	**1,496,691**	**1,906,352**	**-**	**-**	**(787,308,826)**	**1,496,691,300**	**229,307,457**	**-**	**-**	**56,965,411**	**744,324**	**101,558**
Assessments Segment Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Alternative Filings Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Portfolio Total w Alternative Filings	**(179,218,362)**	**1,496,691**	**1,906,352**	**-**	**-**	**(787,308,826)**	**1,496,691,300**	**229,307,457**	**-**	**-**	**56,965,411**	**744,324**	**101,558**

Tables are in terms of energy savings. Negative numbers indicate increases in energy consumption.

xcelenergy.com | © 2025 Xcel Energy Inc. | Xcel Energy is a registered trademark of Xcel Energy Inc. | 25-02-304