



414 Nicollet Mall  
Minneapolis, MN 55401

December 12, 2023

—Via Electronic Filing—

Will Seuffert  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
St. Paul, MN 55101

RE: ERRATA  
2023 TRANSPORTATION ELECTRIFICATION PLAN  
DOCKET NO. E002/M-23-452

Dear Mr. Seuffert:

Northern States Power Company, doing business as Xcel Energy (Company), submits to the Minnesota Public Utilities Commission (Commission) this Errata filing with a corrected version of the cost-benefit analysis (CBA) included with the 2023 Transportation Electrification Plan (TEP) filed with our Integrated Distribution Planning filing in the above-referenced docket. The Company recently discovered some errors in the CBA, filed as Appendix H12 in our November 1, 2023 filing, that have an impact on the final results of the CBA.

The errors in the CBA include the following issues:

- The Benefits and Costs total formulas should have included the CapEx Revenue requirements.
- The O&M revenue requirements should have been treated as costs.
- The CapEx Revenue requirements included rebates for Home Wiring and School Bus Electrification, which should have been treated as benefits in the Participant test and the Societal test. The rebates should be treated as a benefit and a cost in the Societal test, as the rebate payments to customers act as a pass through in the Societal test and need to be accounted for in both places.

The updated CBA included with this errata filing reflects these changes. In addition, Table 14 of our TEP included a summary of the CBA results. We provide a corrected version of that table below with changes reflected in redline.

**Table 14 - Errata**  
**Cost-Benefit Analysis Summary**

<b>Year</b>	<b>Participant Test</b>	<b>Rate Impact Test</b>	<b>Societal Test</b>
2024	1.05	1.60 <del>2.59</del>	1.25 <del>1.33</del>
2025	1.05	1.33 <del>2.51</del>	1.22 <del>1.34</del>
2026	1.07	1.99 <del>2.44</del>	1.32 <del>1.36</del>
2027	1.08 <del>1.07</del>	1.98 <del>2.41</del>	1.33 <del>1.36</del>

We apologize for any inconvenience this may have caused.

We have electronically filed this Petition with the Minnesota Public Utilities Commission, and copies have been served on the parties on the attached service list. Please contact Brandon Kirschner at [Brandon.M.Kirschner@xcelenergy.com](mailto:Brandon.M.Kirschner@xcelenergy.com) or Mustafa Adam at [Mustafa.K.Adam@xcelenergy.com](mailto:Mustafa.K.Adam@xcelenergy.com) if you have any questions regarding this filing.

Sincerely,

/s/

HOLLY HINMAN  
DIRECTOR, REGULATORY AND STRATEGIC ANALYSIS

Enclosures  
cc: Service Lists

Electric Vehicles	Transportation Electrification Plan		2024	GOAL
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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)	Societal Test (\$Total)	Minnesota Test (\$Total)
Electric System Impacts					
TEP Program Costs (CapEx Revenue Requirements)	N/A	(9,915,210)	(9,915,210)	(9,915,210)	(9,915,210)
Generation Capacity	N/A	(6,882,979)	(6,882,979)	(7,496,822)	(7,496,822)
Transmission and Distribution Capacity	N/A	(773,476)	(773,476)	(843,419)	(843,419)
Energy Generation	N/A	(17,991,735)	(17,991,735)	(19,702,777)	(19,702,777)
Market Effects and Ancillary Services	N/A	(512,964)	(512,964)	(560,860)	(560,860)
Subtotal	N/A	(36,076,364)	(36,076,364)	(38,519,088)	(38,519,088)

Environmental Externalities and Non-Energy Impacts					
Electric Environmental Externalities	N/A	N/A	N/A	(3,855,316)	(3,855,316)
Gas Environmental Externalities	N/A	N/A	N/A	0	0
Other Fuels Environmental Externalities	N/A	N/A	N/A	29,683,463	29,683,463
Electric Non-Energy Benefits	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	N/A	N/A	N/A	0	0
Other Fuels Benefits	222,623,276	N/A	N/A	222,623,276	222,623,276
Utility Performance Incentives	N/A	0	0	0	0
Utility Non-Energy Benefits	N/A	0	0	0	0
Subtotal	222,623,276	0	0	248,451,423	248,451,423

Participant Impacts					
Electric Bill	(70,162,850)	N/A	63,934,664	N/A	N/A
Gas Bill	0	N/A	N/A	N/A	N/A
Participant Rebates and Incentives	0	N/A	N/A	0	N/A
Incremental Capital	(222,683,000)	N/A	N/A	(222,683,000)	N/A
Incremental O&M	83,544,181	N/A	N/A	83,544,181	N/A
Subtotal	(209,301,669)	N/A	63,934,664	(139,138,819)	N/A

Utility Impacts					
Utility Project Costs					
TEP Program Costs (O&M Revenue Requirements)	N/A	(3,796,708)	(3,796,708)	(3,796,708)	(3,796,708)
Project Administration	N/A	0	0	0	0
Advertising & Promotion	N/A	0	0	0	0
Measurement & Verification	N/A	0	0	0	0
Rebates	457,421	0	0	457,421	0
Other	N/A	0	0	0	0
Subtotal	N/A	(3,796,708)	(3,796,708)	(3,339,287)	(3,796,708)

Benefits	306,624,878	0	63,934,664	336,308,341	252,306,739
Costs	(292,845,850)	(39,873,072)	(39,873,072)	(268,854,112)	(46,171,112)
Net Benefit (Cost)	13,779,028	(39,873,072)	24,061,592	67,454,229	206,135,627
Benefit/Cost Ratio	1.05	0.00	1.60	1.25	5.46

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

Beneficial Electrification Impacts

Lifetime (Weighted on Generator kWh)	10.0 years
T & D Loss Factor (Energy)	8.70%
T & D Loss Factor (Demand)	10.56%
System Coincident kW Saved at Generator	-7733.95 kW
Annual kWh Saved at Customer	-49,800,987 kWh
Annual kWh Saved at Generator	-54,133,673 kWh
Annual Gallons of Gasoline Saved	7,000,479 Gal.
Annual Gallons of Diesel Saved	0 Gal.
Incremental Evs	13,099
Incremental EBuss	0

First year Carbon Emissions Reductions

Electric Electrification	-16,121 tons CO2
Other Fuel Electrification	68,578 tons CO2
TOTAL	52,457 tons CO2

Lifetime Carbon Emissions Reductions

Electric Electrification	-87,917 tons CO2
Other Fuel Electrification	685,784 tons CO2
TOTAL	597,867 tons CO2

Electric Vehicles	Transportation Electrification Plan					2025	GOAL
2025 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)	Societal Test (\$Total)	Minnesota Test (\$Total)		
Electric System Impacts							
TEP Program Costs (CapEx Revenue Requirements)	N/A	(16,078,387)	(16,078,387)	(16,078,387)	(16,078,387)		
Generation Capacity	N/A	(7,643,378)	(7,643,378)	(8,325,036)	(8,325,036)		
Transmission and Distribution Capacity	N/A	(864,920)	(864,920)	(943,132)	(943,132)		
Energy Generation	N/A	(20,361,810)	(20,361,810)	(22,232,106)	(22,232,106)		
Market Effects and Ancillary Services	N/A	(577,402)	(577,402)	(630,005)	(630,005)		
Subtotal	N/A	(45,525,898)	(45,525,898)	(48,208,667)	(48,208,667)		
Environmental Externalities and Non-Energy Impacts							
Electric Environmental Externalities	N/A	N/A	N/A	(3,840,019)	(3,840,019)		
Gas Environmental Externalities	N/A	N/A	N/A	0	0		
Other Fuels Environmental Externalities	N/A	N/A	N/A	33,013,545	33,013,545		
Electric Non-Energy Benefits	N/A	N/A	N/A	0	0		
Gas Non-Energy Benefits	N/A	N/A	N/A	0	0		
Other Fuels Benefits	243,204,755	N/A	N/A	243,204,755	243,204,755		
Utility Performance Incentives	N/A	0	0	0	0		
Utility Non-Energy Benefits	N/A	0	0	0	0		
Subtotal	243,204,755	0	0	272,378,281	272,378,281		
Participant Impacts							
Electric Bill	(75,007,300)	N/A	68,353,778	N/A	N/A		
Gas Bill	0	N/A	N/A	N/A	N/A		
Participant Rebates and Incentives	0	N/A	N/A	0	N/A		
Incremental Capital	(243,270,000)	N/A	N/A	(243,270,000)	N/A		
Incremental O&M	91,267,824	N/A	N/A	91,267,824	N/A		
Subtotal	(227,009,476)	N/A	68,353,778	(152,002,176)	N/A		
Utility Impacts							
Utility Project Costs							
TEP Program Costs (O&M Revenue Requirements)	N/A	(5,681,557)	(5,681,557)	(5,681,557)	(5,681,557)		
Project Administration	N/A	0	0	0	0		
Advertising & Promotion	N/A	0	0	0	0		
Measurement & Verification	N/A	0	0	0	0		
Rebates	831,572	0	0	831,572	0		
Other	N/A	0	0	0	0		
Subtotal	N/A	(5,681,557)	(5,681,557)	(4,849,985)	(5,681,557)		
Benefits	335,304,150	0	68,353,778	368,317,695	276,218,299		
Costs	(318,277,300)	(51,207,454)	(51,207,454)	(301,000,242)	(57,730,242)		
Net Benefit (Cost)	17,026,850	(51,207,454)	17,146,324	67,317,453	218,488,057		
Benefit/Cost Ratio	1.05	0.00	1.33	1.22	4.78		

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	10.0 years
T & D Loss Factor (Energy)	8.70%
T & D Loss Factor (Demand)	10.56%
System Coincident kW Saved at Generator	-8448.95 kW
Annual kWh Saved at Customer	-54,405,078 kWh
Annual kWh Saved at Generator	-59,138,320 kWh
Annual Gallons of Gasoline Saved	7,647,672 Gal.
Annual Gallons of Diesel Saved	0 Gal.
Incremental Evs	14,310
Incremental Ebus	0
First year Carbon Emissions Reductions	
Electric Electrification	-11,612 tons CO2
Other Fuel Electrification	74,918 tons CO2
TOTAL	63,307 tons CO2
Lifetime Carbon Emissions Reductions	
Electric Electrification	-86,392 tons CO2
Other Fuel Electrification	749,185 tons CO2
TOTAL	662,793 tons CO2

Electric Vehicles	Transportation Electrification Plan		2026		GOAL
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2026 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)					
EBus	Electric Rate				
	Participant Test (\$Total)	Utility Test (\$Total)	Impact Test (\$Total)	Societal Test (\$Total)	Minnesota Test (\$Total)
Electric System Impacts					
TEP Program Costs (CapEx Revenue Requirements)	N/A	(3,248,082)	(3,248,082)	(3,248,082)	(3,248,082)
Generation Capacity	N/A	(10,226,817)	(10,226,817)	(11,138,874)	(11,138,874)
Transmission and Distribution Capacity	N/A	(1,165,344)	(1,165,344)	(1,270,722)	(1,270,722)
Energy Generation	N/A	(26,821,479)	(26,821,479)	(29,317,276)	(29,317,276)
Market Effects and Ancillary Services	N/A	(764,273)	(764,273)	(834,537)	(834,537)
Subtotal	N/A	(42,225,994)	(42,225,994)	(45,809,490)	(45,809,490)

Environmental Externalities and Non-Energy Impacts					
Electric Environmental Externalities	N/A	N/A	N/A	(4,981,115)	(4,981,115)
Gas Environmental Externalities	N/A	N/A	N/A	0	0
Other Fuels Environmental Externalities	N/A	N/A	N/A	44,242,093	44,242,093
Electric Non-Energy Benefits	N/A	N/A	N/A	0	0
Gas Non-Energy Benefits	N/A	N/A	N/A	0	0
Other Fuels Benefits	330,909,628	N/A	N/A	330,909,628	330,909,628
Utility Performance Incentives	N/A	0	0	0	0
Utility Non-Energy Benefits	N/A	0	0	0	0
Subtotal	330,909,628	0	0	370,170,606	370,170,606
Participant Impacts					
Electric Bill	(100,251,195)	N/A	91,365,160	N/A	N/A
Gas Bill	0	N/A	N/A	N/A	N/A
Participant Rebates and Incentives	0	N/A	N/A	0	N/A
Incremental Capital	(320,644,000)	N/A	N/A	(320,644,000)	N/A
Incremental O&M	120,206,752	N/A	N/A	120,206,752	N/A
Subtotal	(300,688,443)	N/A	91,365,160	(200,437,248)	N/A

Utility Impacts					
Utility Project Costs					
TEP Program Costs (O&M Revenue Requirements)	N/A	(3,574,045)	(3,574,045)	(3,574,045)	(3,574,045)
Project Administration	N/A	0	0	0	0
Advertising & Promotion	N/A	0	0	0	0
Measurement & Verification	N/A	0	0	0	0
Rebates	1,297,298	0	0	1,297,298	0
Other	N/A	0	0	0	0
Subtotal	N/A	(3,574,045)	(3,574,045)	(2,276,747)	(3,574,045)

Benefits	452,413,678	0	91,365,160	496,655,771	375,151,721
Costs	(420,895,195)	(45,800,039)	(45,800,039)	(375,008,650)	(54,364,650)
Net Benefit (Cost)	31,518,483	(45,800,039)	45,565,121	121,647,121	320,787,071
Benefit/Cost Ratio	1.07	0.00	1.99	1.32	6.90

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

Beneficial Electrification Impacts	
Lifetime (Weighted on Generator kWh)	10.0 years
T & D Loss Factor (Energy)	8.70%
T & D Loss Factor (Demand)	10.56%
System Coincident kW Saved at Generator	-11121.17 kW
Annual kWh Saved at Customer	-71,612,235 kWh
Annual kWh Saved at Generator	-77,842,500 kWh
Annual Gallons of Gasoline Saved	10,064,358 Gal.
Annual Gallons of Diesel Saved	5,000 Gal.
Incremental Evs	18,832
Incremental Ebus	2

First year Carbon Emissions Reductions	
Electric Electrification	-14,661 tons CO2
Other Fuel Electrification	98,649 tons CO2
TOTAL	83,988 tons CO2

Lifetime Carbon Emissions Reductions	
Electric Electrification	-110,426 tons CO2
Other Fuel Electrification	986,491 tons CO2
TOTAL	876,064 tons CO2



Electric Vehicles	Transportation Electrification Plan					2027	GOAL
2027 Net Present Cost Benefit Summary Analysis For All Participants Benefits (Positive Values) Costs (Negative Values)							
EBus			Electric Rate				
		Participant	Utility	Impact	Societal	Minnesota	
		Test	Test	Test	Test	Test	
		(\$Total)	(\$Total)	(\$Total)	(\$Total)	(\$Total)	
Electric System Impacts							
TEP Program Costs (CapEx Revenue Requirements)	N/A	(4,484,372)	(4,484,372)	(4,484,372)	(4,484,372)		
Generation Capacity	N/A	(13,431,288)	(13,431,288)	(14,629,128)	(14,629,128)		
Transmission and Distribution Capacity	N/A	(1,530,493)	(1,530,493)	(1,668,890)	(1,668,890)		
Energy Generation	N/A	(35,225,720)	(35,225,720)	(38,503,550)	(38,503,550)		
Market Effects and Ancillary Services	N/A	(1,003,750)	(1,003,750)	(1,096,031)	(1,096,031)		
Subtotal	N/A	(55,675,623)	(55,675,623)	(60,381,972)	(60,381,972)		
Environmental Externalities and Non-Energy Impacts							
Electric Environmental Externalities	N/A	N/A	N/A	(6,541,897)	(6,541,897)		
Gas Environmental Externalities	N/A	N/A	N/A	0	0		
Other Fuels Environmental Externalities	N/A	N/A	N/A	58,084,028	58,084,028		
Electric Non-Energy Benefits	N/A	N/A	N/A	0	0		
Gas Non-Energy Benefits	N/A	N/A	N/A	0	0		
Other Fuels Benefits	434,421,968	N/A	N/A	434,421,968	434,421,968		
Utility Performance Incentives	N/A	0	0	0	0		
Utility Non-Energy Benefits	N/A	0	0	0	0		
Subtotal	434,421,968	0	0	485,964,099	485,964,099		
Participant Impacts							
Electric Bill	(130,439,697)	N/A	118,877,823	N/A	N/A		
Gas Bill	0	N/A	N/A	N/A	N/A		
Participant Rebates and Incentives	0	N/A	N/A	0	N/A		
Incremental Capital	(420,546,000)	N/A	N/A	(420,546,000)	N/A		
Incremental O&M	157,776,620	N/A	N/A	157,776,620	N/A		
Subtotal	(393,209,078)	N/A	118,877,823	(262,769,380)	N/A		
Utility Impacts							
Utility Project Costs							
TEP Program Costs (O&M Revenue Requirements)	N/A	(4,496,480)	(4,496,480)	(4,496,480)	(4,496,480)		
Project Administration	N/A	0	0	0	0		
Advertising & Promotion	N/A	0	0	0	0		
Measurement & Verification	N/A	0	0	0	0		
Rebates	1,839,235	0	0	1,839,235	0		
Other	N/A	0	0	0	0		
Subtotal	N/A	(4,496,480)	(4,496,480)	(2,657,244)	(4,496,480)		
Benefits	594,037,823	0	118,877,823	652,121,851	492,505,996		
Costs	(550,985,697)	(60,172,102)	(60,172,102)	(491,966,348)	(71,420,348)		
Net Benefit (Cost)	43,052,125	(60,172,102)	58,705,721	160,155,503	421,085,648		
Benefit/Cost Ratio	1.08	0.00	1.98	1.33	6.90		

Beneficial Electrification Impacts		
Lifetime (Weighted on Generator kWh)		10.0 years
T & D Loss Factor (Energy)		8.70%
T & D Loss Factor (Demand)		10.56%
System Coincident kW Saved at Generator		-14605.88 kW
Annual kWh Saved at Customer		-94,051,211 kWh
Annual kWh Saved at Generator		-102,233,666 kWh
Annual Gallons of Gasoline Saved		13,220,693 Gal.
Annual Gallons of Diesel Saved		0 Gal.
Incremental Evs		24,738
Incremental Ebus		0
First year Carbon Emissions Reductions		
Electric Electrification		-19,255 tons CO2
Other Fuel Electrification		129,513 tons CO2
TOTAL		110,259 tons CO2
Lifetime Carbon Emissions Reductions		
Electric Electrification		-145,027 tons CO2
Other Fuel Electrification		1,295,132 tons CO2
TOTAL		1,150,104 tons CO2

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

## **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;

or

xx by electronic filing.

**Docket No. E002/M-23-452**

Dated this 12th day of December 2023

/s/

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Christine Schwartz  
Regulatory Administrator

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400  St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_23-452_M-23-452
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280  Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_23-452_M-23-452
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_23-452_M-23-452
Christine	Schwartz	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7  Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_23-452_M-23-452
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350  Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_23-452_M-23-452