minnesota power

AN ALLETE COMPANY

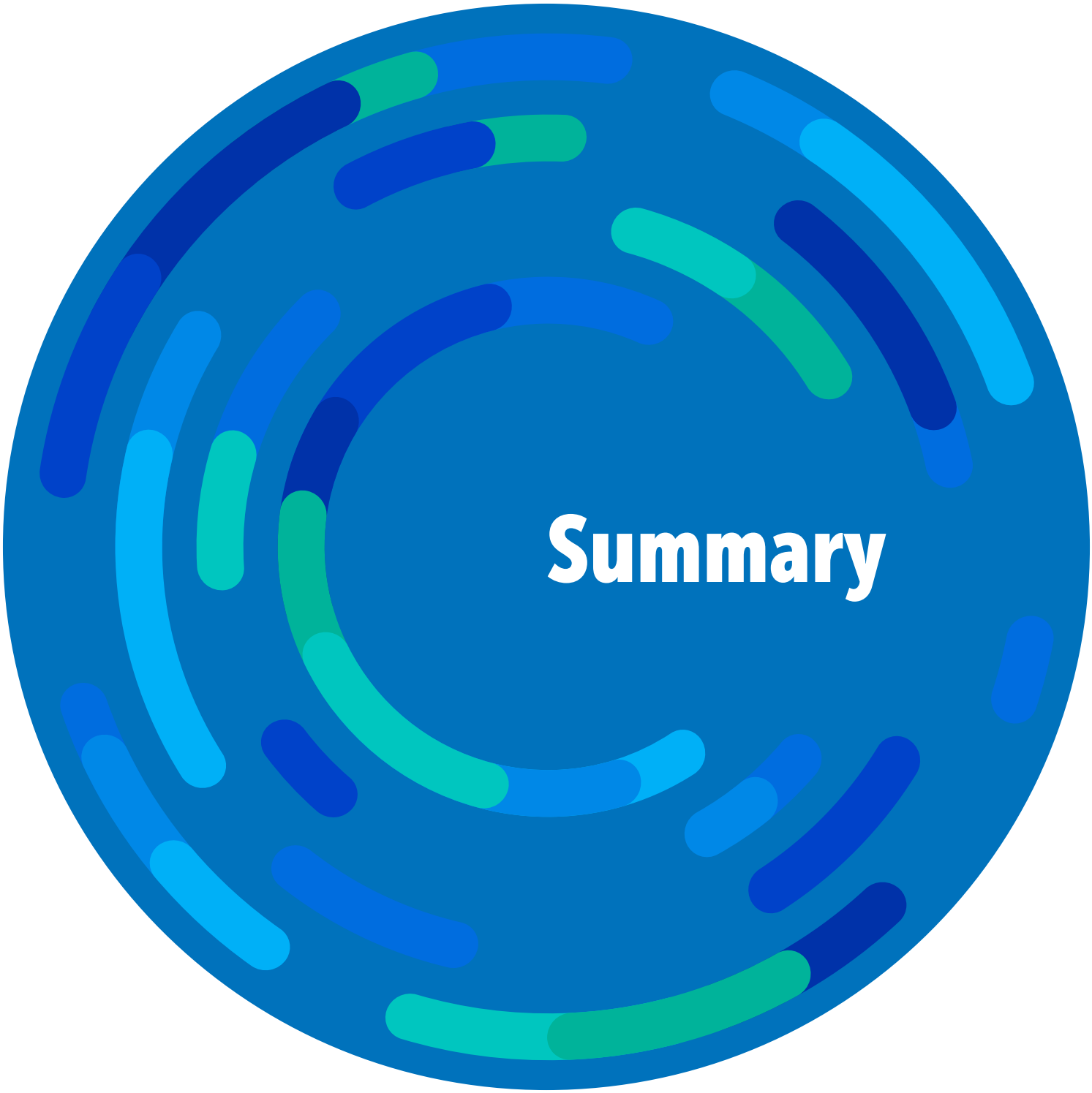
# 2020 Consolidated Filing

## Conservation Improvement Program

Understanding • Tools and Resources • Informed Choices • Right Fit Options


**April 1, 2021**

**Docket No. E015/M-21-199 | E015/CIP-16-117.04**



# Summary

**Minnesota Power**
**2020 Conservation Improvement Program ("CIP") Consolidated Filing**

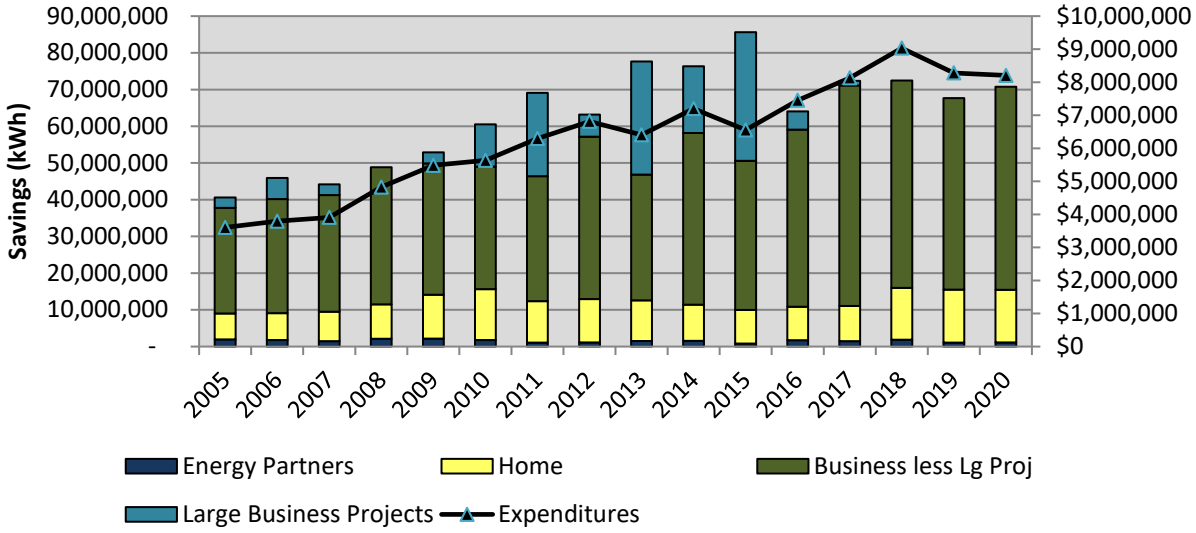
## EXECUTIVE SUMMARY

Minnesota Power (or, "the Company") is pleased to report its 2020 energy conservation program results:

- Minnesota Power achieved energy savings of **2.6%** of retail energy sales,[1] well above the state's 1.5% energy-savings goal established in Minn. Stat. § 216B.241.[2]
- The Company achieved energy savings totaling **70,774,076 kWh**, which is **122%** of the approved energy-savings goal for the year. The Company also achieved demand savings of **6,811 kW**, which is **74%** of the approved demand-savings goal. The proposed energy-savings target for 2020 was well above the state 1.5% energy-savings goal for CIP.
- Expenditures totaled **$8,205,771**, which was **78%** of the approved program budget for 2020.

This is the eleventh year in a row that Minnesota Power has met or exceeded Minnesota's 1.5% energy savings goal since 2010, when the goal went into effect. The figure below illustrates historical and recent kWh energy-savings achievements, along with CIP expenditures. As noted in the chart below, large customer projects (one million kWh or greater) have become a much smaller portion of Minnesota Power's overall CIP energy savings, and in 2018, 2019 and 2020 there were no such projects.

**Minnesota Power's 2005–2020 CIP Achievements**




[1] In accordance with Minnesota Rules part 7690.1200, 2013–2015, weather-normalized average retail energy sales were used to calculate the electric savings goal for Minnesota Power's 2017–2019 Triennial CIP. This equated to 2,939,363,960 kWh, net of CIP exempt customers at the time of the Triennial Filing. Minnesota Power had one newly exempt customer in 2017. Adjusted weather-normalized average retail energy sales excluding this customer is 2,749,752,960 kWh. Savings for 2020 are calculated as a percentage of this adjusted figure.

[2] *In the Matter of Minnesota Power's 2020 Electric CIP Extension Plan*, Docket No. E015/CIP-16-117, November 26, 2019.

**Minnesota Power's 2020 CIP Expenditures and Energy Savings**

| *2020* | *Expenditures* | *Energy Savings (kWh) at busbar* |
|---|---|---|
| **Direct Savings Programs:** | | |
| Energy Partners (Low Income) | $344,822 | 1,118,250 |
| Power of One Home (Residential) | $1,749,973 | 14,344,836 |
| Power of One Business (Business/Commercial/Industrial/Agricultural) | $3,993,144 | 55,310,990 |
| **Indirect Savings Programs:** | | |
| Customer Engagement | $577,235 | |
| Energy Analysis | $725,498 | |
| Research & Development | $167,358 | |
| Evaluation & Program Development | $480,877 | |
| Regulatory Charges | $166,864 | |
| **Total** | **$8,205,771** | **70,774,076** |

**STATE OF MINNESOTA**
**BEFORE THE**
**MINNESOTA PUBLIC UTILITIES COMMISSION**

| | |
|---|---|
| In the Matter of Minnesota Power's 2020 Conservation Improvement Program Consolidated Filing | Reporting on CIP Tracker Account Activity, Financial Incentives Report, Proposed CPA Factors and 2020 Project Evaluations<br><br>Docket No. E-015/M-21-199<br>E-015/CIP-16-117.04 |

## SUMMARY OF FILING

Minnesota Power (or, "the Company") hereby files with the Minnesota Public Utilities Commission ("MPUC or Commission") and the Department of Commerce, Division of Energy Resources ("Department") its annual Conservation Improvement Program ("CIP") Consolidated Filing in compliance with Minn. Stat. § 216B.241. Minnesota Power requests approval of the following:

- Recovery of the 2020 CIP Tracker Account activity year-end balance of ($380,310)
- A revised Conservation Program Adjustment ("CPA"), to be first implemented without proration on July 1, 2021, of $0.002015/kWh
- A variance of Minn. Rules 7820.3500 and 7825.2600 to permit the continued combination of the Conservation Program Adjustment with the Fuel and Purchased Power Clause Adjustment on customer bills

Minnesota Power submits its Conservation Improvement Program Consolidated Filing via eFiling with the Department of Commerce, Division of Energy Resources to comply with annual CIP project evaluation filing requirements.

**STATE OF MINNESOTA**
**BEFORE THE**
**MINNESOTA PUBLIC UTILITIES COMMISSION**

| | |
|---|---|
| In the Matter of Minnesota Power's 2020 Conservation Improvement Program Consolidated Filing | Reporting on CIP Tracker Account Activity, Financial Incentives Report, Proposed CPA Factors and 2020 Project Evaluations |
| | Docket No. E-015/M-21-199<br>E-015/CIP-16-117.04 |

**Minnesota Power's Report**

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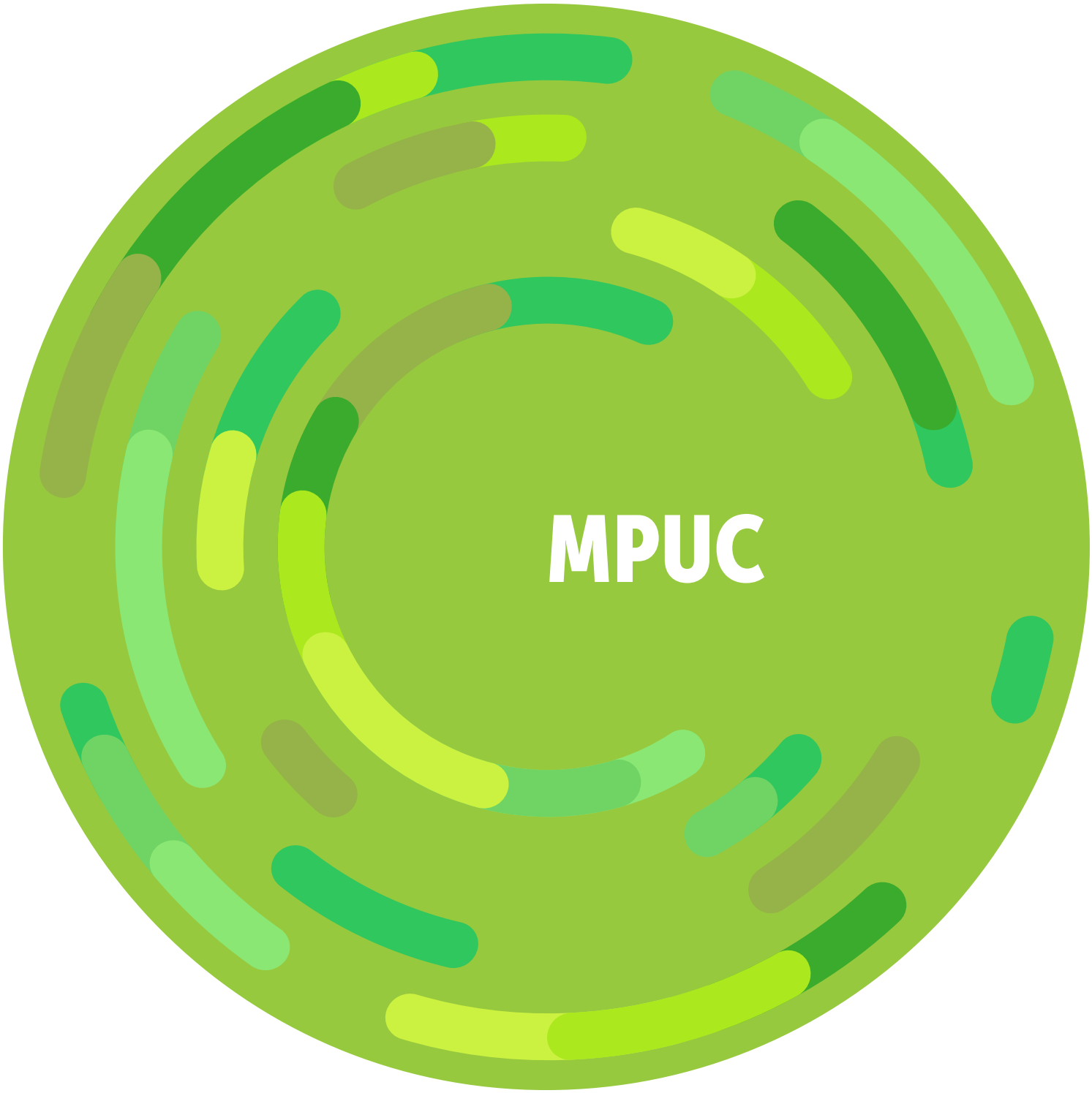

MPUC

# SECTION 1

## INTRODUCTION AND BACKGROUND

In its August 4, 1993 Order in Docket No. E015/M-91-458, the Minnesota Public Utilities Commission combined future CIP tracker reports and Demand Side Management ("DSM") financial incentives reports into a single submittal filed annually. This is the twenty-eighth annual filing by Minnesota Power in compliance with that Order. In addition, when the Commission established the Conservation Program Adjustment ("CPA") in Docket No. E015/M-93-996, it required Minnesota Power to file each April 1 for a revised CPA factor. This submittal includes Minnesota Power's proposed revised CPA factor. The Department requires each utility to annually file an evaluation of its authorized CIP programs. Since each program evaluation is the basis for the financial incentives to which Minnesota Power is authorized, a separate evaluation section of this filing has been included to fulfill those Department filing requirements. Finally, prior orders from the Department have required a response to various issues, and those have been included in this filing. For administrative ease, a separate section has been provided to properly respond to the various requirements established by recent Department orders.

## ORGANIZATION OF FILING

Minnesota Power respectfully submits this report on its electric CIP achievements for 2020. This report is organized into several sections. The sections and information addressed are:

1) **Summary—**Introduction and Background
2) **CIP Tracker Account Activity Report**, including 2020 expenditures and cost recovery by month.
3) **Financial Incentives Report**
4) **2021–2022 Proposed Conservation Program Adjustment**

   This is the calculation of the CPA factor for the period from July 2021 through June 2022 based on estimated expenditures, cost recovery, and financial incentive.

5) **Compliance**

This section provides information to satisfy provisions in Minn. Stat. §§ 216B.2401, 216B.241, 216B.2411 and 216C.412, including spending requirements and caps. This section also includes all other ordered compliance requirements, including those required by the November 3, 2016 Decision for the CIP Triennial Filing. Subsequent to the approval of the CIP Triennial Filing, there was one customer granted exemption status by the Deputy Commissioner effective January 1, 2017. Minnesota Power recalculated its minimum spending requirements and energy-savings goal accordingly and reported it in its Program Modification Request submitted August 9, 2017. This was acknowledged by the Department in its November 16, 2017 Decision. These changes are reflected in this filing.

6) **2020 CIP Status Report**

This section focuses on overall CIP achievements, participation, expenditures, energy conserved and demand reduced by each segment and program. Minn. Rule 7690.0550 states that this information must be included in a utility's annual program status report.

7) **2020 Evaluation & Results**

Minn. Rule 7690.0550 also requires a utility to provide information on the cost-effectiveness of its programs, as calculated from the utility, participant, ratepayer and societal perspectives. This section includes all cost-effectiveness analyses as well as project information sheets.

8) **Research & Development**

9) **Appendix**

Minnesota Power submits the following information:

A. Name, Address and Telephone Number of Utility
(Minn. Rules 7825.3500 (A) and 7829, subp. 3 (A))

Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 722-2641

B. Name, Address and Telephone Number of Utility Attorney
(Minn. Rules 7825.3500 (A) & 7829, subp. 3 (B))

David R. Moeller
Senior Attorney and Director of Regulatory Compliance
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 723-3963
dmoeller@allete.com

C. Date of Filing and Date Proposed Rates Take Effect

This petition is being filed on April 1, 2021. The revised CPA factor is proposed to take effect without proration on July 1, 2021. Until MPUC approval, the existing CPA factor will remain in effect.

D. Statute Controlling Schedule for Processing the Petition

This petition is made pursuant to Minn. Stat. §§ 216B.241, 216B.16, subd. 6c, 216B.2401 and 216B.2411. These statutes do not contain schedules for processing petitions. Minn. Rule 7690.0550 outlines the schedule and information to be included in a utility's annual status report. Minn. Rule 7825.3200 requires that utilities serve notice to the Commission at least 90 days prior to the proposed effective date of modified rates.

Furthermore, Minnesota Power's request for approval of conservation cost recovery, a revised CPA factor and required reports fall within the definition of a "Miscellaneous Tariff Filing" under Minn. Rules 7829.0100, subp. 11 and 7829.1400, subp. 1 and 4 permitting comments in response to a miscellaneous filing to be filed within 30 days, and reply comments to be filed no later than 10 days thereafter.

E. Utility Employee Responsible for Filing

Ana Vang
Public Policy Advisor
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 355-3602
avang@mnpower.com

F. Official Service List

Pursuant to Minn. Rule 7829.0700, Minnesota Power respectfully requests the following persons to be included on the Commission's official service list for this proceeding:

Ana VangPublic Policy Advisor
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 355-3602
avang@mnpower.com

David R. Moeller
Senior Attorney and Director of Regulatory Compliance
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 723-3963
dmoeller@allete.com

G. Service on Other Parties

Minnesota Power is eFiling this report and notifying all persons on Minnesota Power's CIP Service List that this report has been filed through eDockets. A copy of the service list is included with the filing along with a certificate of service.

H. Filing Summary

As required by Minn. Rule 7829.1300, subp. 1, Minnesota Power is including a summary of this filing on a separate page.

## SUMMARY OF FILING REQUESTS

Based on information provided throughout this filing, Minnesota Power requests the following:

***From the MPUC:***

- Approval of the 2020 CIP Tracker activity, resulting in a year-end 2020 balance of (**$380,310)**.
- Approval to book CIP Financial Incentives of **$2,411,672** as per Exhibit 2 of this filing to the CIP Tracker.
- Approval to implement Minnesota Power's proposed revised CPA factor of **$0.002015/kWh** without proration for bills rendered on and after July 1, 2021.
- Approval of a variance of Minn. Rules 7820.3500 and 7825.2600 to permit Minnesota Power to continue combining the Conservation Program Adjustment with the Fuel Clause Adjustment on customer bills.
- Approval to use a Carrying Charge rate of **0.2917%** for the CIP Tracker as per Exhibit 1 of this filing.

***From the Department:***

- Approval of the individual 2020 CIP Project Evaluations.
- Approval of Minnesota Power's response to various Department orders as indicated in the "Compliance" section of this filing.

## PROCEDURE AND AUTHORITY

Minnesota Power is submitting this petition in accordance with Minn. Stat. § 216B.241 and in compliance with MPUC and Department rules and orders relating to annual filings associated with Minnesota Power sponsored energy conservation improvement activities, including Minn. Rule 7690.0550. The financial incentives section of this petition is submitted in accordance with Minn. Stat. § 216B.16, subd. 6c.

This petition constitutes a Miscellaneous Filing as that term is defined in Minn. Rules 7829.0100, subp. 11 and 7829.1300, which identify the time frame and procedures required to process this petition.

All correspondence with respect to this filing should be sent to:

Ana Vang
Public Policy Advisor
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 355-3602
avang@mnpower.com

David R. Moeller
Senior Attorney and Director of Regulatory Compliance
Minnesota Power
30 West Superior Street
Duluth, MN 55802
(218) 723-3963
dmoeller@allete.com

Respectfully submitted,

Date: April 1, 2021

Ana Vang
Public Policy Advisor
Minnesota Power

# SECTION 2

## CIP TRACKER ACCOUNT ACTIVITY REPORT

On May 16, 1991, in Docket No. E015/M-91-90, the Commission ordered Minnesota Power to file an annual CIP Tracker Report by February 15 of each year, which would contain information as shown in Exhibit 1. The annual filing date was changed to April 30 by Commission Order dated August 4, 1993, in Docket No. E015/M-91-458, and later changed to April 1 of each year. This report is in compliance with these orders.

Page 1 of Exhibit 1 summarizes the CIP Tracker Account activity for 2019 and 2020 and presents the tracker balance month-by-month throughout each year. Tracker Account activity for 2020 includes the following:

- **$8,205,771** of CIP Expenditures were charged to Tracker 2
- **$7,359,198** was recovered through Base Rates
- **($852,351)** was booked through the CPA factor
- **($136,551)** in Carrying Charges were booked to Tracker 2
- **$2,353,720** of Financial Incentives were booked to Tracker 2
- **($380,310)** was the resulting CIP Tracker Account balance at the end of 2020

In 1994, Minnesota Power was allowed to implement a conservation cost recovery mechanism known as the CPA. This addition to customers' bills was combined with the existing Fuel and Purchased Power Clause Adjustment and presented as a new billing line item known as the "Resource Adjustment," thereby reflecting both demand-side and supply-side costs. The original CPA factor was implemented in January 1994. Subsequent Commission action has modified the CPA factor yearly.

The following two CPA factors were in effect during this reporting period:

- **($0.000137)/kWh**, effective August 2019, as approved by the MPUC Order dated July 19, 2019, in Docket No. E015/M-19-31 and consistent with the subsequent compliance filing submitted July 29, 2019.
- **($0.000817)/kWh**, effective September 2020, as approved by the MPUC Order dated August 18, 2020, in Docket No. E015/M-20-428 and consistent with the subsequent compliance filing submitted August 25, 2020.

Minnesota Power previously utilized the weighted cost of capital for its Carrying Charge rate as approved in the March 7, 2011 Minnesota Power Retail Rate, Docket No. E015/GR-09-1151. In its Order dated September 16, 2015, in Docket No. E015/M-15-80, the Commission included an order point requiring Minnesota Power to instead calculate the carrying charge on its CIP tracker account using the rate from its multi-year credit facility, effective as of the date of the order. There were two carrying charge rates in effect during the 2020 program year. Page 3 of Exhibit 1 reflects the rate that was effective July 2019 through July 2020. Page 4 of Exhibit 1 reflects the rate that was effective beginning August 2020. As part of this filing, Minnesota Power presents the carrying charge rate proposed to be effective on July 1, 2021, or upon approval by the Commission. The proposed carrying charge rate can be found on page 5 of Exhibit 1.

Since the Commission has previously approved a carrying charge mechanism on the prior month Tracker balance net of deferred tax, Minnesota Power references this adjustment procedure for informational purposes only.

## CIP TRACKER ACCOUNT CHANGES

During the 1999 Legislative Session, a law was enacted allowing certain large electric and gas customers to be excluded from CIP minimum spending requirements. Several of Minnesota Power's Large Power customers petitioned the Department for approval to be excluded from CIP minimum spending. Those petitions requested an effective date of January 1, 2000. As a result, Minnesota Power created a second internal CIP Tracker Account as of January 1, 2000, to segregate cost responsibility. Minnesota Power continued to recover costs from all retail customers through the first CIP Tracker Account balance with the application of CPA and Conservation Cost Recovery Charge ("CCRC") revenues until its balance was zero. While there remained a balance in the first Tracker, a carrying charge was applied. CIP expenditures during 2000 and beyond have been and will continue to be charged to the second CIP Tracker Account (Tracker 2).

Once the first CIP Tracker balance was eliminated, the customers who had successfully petitioned out of minimum spending requirements no longer had the CPA factor applied. The CCRC revenue from those customers was calculated each month and a credit was applied to their bills (CPA2) equal to the CCRC revenue. In this way, the approved exempt customers have not been charged for subsequent conservation costs resulting from Minnesota Power's ongoing CIP efforts. Further, because the credit to the bill is specific to each individual customer, no cross-subsidy or rate design issues are raised. Beginning in November 2009, and in accordance with Minnesota Power's Retail Rate Case, Docket No. E015/GR-08-415, customers who have opted

out of CIP no longer have CCRC revenue included in their base rates. As such, these customers no longer require a credit to their bills (CPA2). Customers remaining within the CIP umbrella will continue to pay for conservation through the CPA and CCRC processes without disruption. For those newly exempt customers as of January 1, 2012, under Docket No. E,G-999/CI-11-1149, a separate CIP Tracker Account was not established. According to the MPUC Order dated March 1, 2012, these newly exempt customers are not responsible for any CIP-related charges and cost recovery through both the CCRC and the CPA ceased effective January 1, 2012, with refunds issued for any amounts collected prior to the Order date.

Effective January 1, 2014, two additional exemption petitions involving three customers were approved by the Department under Docket No. E015/CIP-13-852. Minnesota Power recalculated its minimum spending requirements and energy-savings goal accordingly and reported this in a Budget Modification Request on November 26, 2014. The Department acknowledged the changes in its December 10, 2014 letter. Effective January 1, 2016, one additional exemption petition was approved by the Department under Docket No. E015/CIP-15-889. Minnesota Power recalculated its minimum spending requirements and energy-savings goal accordingly and reported it in an Informational Notice on December 20, 2016.

Effective January 1, 2017, an additional exemption was approved by the Department under Docket No. E015/CIP-16-812. Minnesota Power recalculated its minimum spending requirements and energy-savings goal accordingly and reported it in its Program Modification Request submitted August 9, 2017. This was acknowledged by the Department in its November 16, 2017 Decision. These changes are reflected in this filing.

**MINNESOTA POWER**
**New CIP Tracker #2 Account**
**Activity 2000 - 2020**

| | 2019 | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL YEAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) |
| 20 | BEGINNING OF PERIOD BALANCE | ($1,519,260.37) | ($2,330,813.67) | ($3,016,182.95) | ($5,179,818.07) | ($5,928,992.25) | ($6,429,664.16) | ($7,038,614.73) | ($5,105,651.93) | ($5,530,872.34) | ($5,883,173.80) | ($6,019,833.59) | ($6,058,245.47) | ($1,519,260.37) |
| 21 | LESS: NON-DEDUCTIBLE BALANCE 3/ | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | |
| 22 | PLUS: AMORT OF NON-DEDUCT BALANCE 3/ | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 23 | NET TAX DEDUCTIBLE PERIOD BALANCE | ($1,519,260.37) | ($2,330,813.67) | ($3,016,182.95) | ($5,179,818.07) | ($5,928,992.25) | ($6,429,664.16) | ($7,038,614.73) | ($5,105,651.93) | ($5,530,872.34) | ($5,883,173.80) | ($6,019,833.59) | ($6,058,245.47) | |
| 24 | COMPOSITE TAX RATE | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | |
| 25 | DEFERRED TAXES ON NET BEGIN BAL 1/ | ($436,665.82) | ($669,922.47) | ($866,911.30) | ($1,488,783.31) | ($1,704,110.95) | ($1,848,014.07) | ($2,023,038.65) | ($1,467,466.48) | ($1,589,683.33) | ($1,690,941.81) | ($1,730,220.57) | ($1,741,260.91) | |
| 26 | NET INVESTMENT (L20 - L25) | ($1,082,594.55) | ($1,660,891.20) | ($2,149,271.65) | ($3,691,034.76) | ($4,224,881.30) | ($4,581,650.09) | ($5,015,576.08) | ($3,638,185.45) | ($3,941,189.01) | ($4,192,231.99) | ($4,289,613.02) | ($4,316,984.56) | |
| 27 | MONTHLY CARRYING CHARGE RATE 2/ | 0.4063% | 0.4063% | 0.4063% | 0.4063% | 0.4063% | 0.4063% | 0.4792% | 0.4792% | 0.4792% | 0.4792% | 0.4792% | 0.4792% | |
| 28 | MONTHLY CARRYING CHARGE 0483 (L26 * L27) | ($4,399.00) | ($6,748.00) | ($8,732.00) | ($14,997.00) | ($17,166.00) | ($18,615.00) | ($24,035.00) | ($17,434.00) | ($18,886.00) | ($20,089.00) | ($20,556.00) | ($20,687.00) | ($192,344.00) |
| 29 | CIP PROGRAM CHARGES TO DEFERRED DEBIT | $279,068.71 | $501,471.29 | $490,109.22 | $769,133.87 | $841,255.76 | $713,897.64 | $491,181.12 | $637,552.78 | $485,722.46 | $627,760.36 | $834,383.96 | $1,609,235.38 | $8,280,772.55 |
| 30 | FINANCIAL INCENTIVES 4/ | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $2,780,073.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $2,780,073.00 |
| 31 | Adjust. - Prior Year Rounding correction | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 32 | LESS: CIP CARRYING CHARGES RECOVERED | $13,336.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $13,336.00 |
| 33 | Adjust - | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 34 | LESS: CIP LOST MARGINS RECOVERED | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 35 | LESS: CIP COSTS RECOVERED via CCRC 0482 5/ | ($429,003.89) | ($454,526.94) | ($1,991,635.27) | ($907,181.21) | ($780,377.15) | ($780,080.26) | ($756,248.61) | ($882,962.57) | ($846,749.35) | ($770,861.70) | ($876,634.18) | ($945,457.66) | ($10,421,718.79) |
| 36 | LESS: CIP COSTS RECOVERED via CPA 0481 6/ | ($670,555.12) | ($725,565.63) | ($653,377.07) | ($596,129.84) | ($544,384.52) | ($524,152.95) | ($558,007.71) | ($162,376.62) | $27,611.43 | $26,530.55 | $24,394.34 | $31,091.60 | ($4,324,921.54) |
| 37 | END OF PERIOD BALANCE (L20 + L28 + L29..L36) | ($2,330,813.67) | ($3,016,182.95) | ($5,179,818.07) | ($5,928,992.25) | ($6,429,664.16) | ($7,038,614.73) | ($5,105,651.93) | ($5,530,872.34) | ($5,883,173.80) | ($6,019,833.59) | ($6,058,245.47) | ($5,384,063.15) | ($5,384,063.15) |
| 38 | TOTAL CPA & CCRC REVENUE | $1,086,223.01 | $1,180,092.57 | $2,645,012.34 | $1,503,311.05 | $1,324,761.67 | $1,304,233.21 | $1,314,256.32 | $1,045,339.19 | $819,137.92 | $744,331.15 | $852,239.84 | $914,366.06 | $14,733,304.33 |

| | 2020 | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | YEAR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | BEGINNING OF PERIOD BALANCE | ($5,384,063.15) | ($4,839,286.86) | ($5,503,865.67) | ($5,706,549.63) | ($5,014,147.07) | ($5,167,553.87) | ($4,284,647.63) | ($4,151,774.32) | ($2,215,298.83) | ($1,986,786.87) | ($1,727,960.97) | ($1,329,423.62) | ($5,384,063.15) |
| 21 | LESS: NON-DEDUCTIBLE BALANCE 3/ | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | ($0.00) | |
| 22 | PLUS: AMORT OF NON-DEDUCT BALANCE 3/ | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 23 | NET TAX DEDUCTIBLE PERIOD BALANCE | ($5,384,063.15) | ($4,839,286.86) | ($5,503,865.67) | ($5,706,549.63) | ($5,014,147.07) | ($5,167,553.87) | ($4,284,647.63) | ($4,151,774.32) | ($2,215,298.83) | ($1,986,786.87) | ($1,727,960.97) | ($1,329,423.62) | |
| 24 | COMPOSITE TAX RATE | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | 28.742% | |
| 25 | DEFERRED TAXES ON NET BEGIN BAL 1/ | ($1,547,487.43) | ($1,390,907.83) | ($1,581,921.07) | ($1,640,176.49) | ($1,441,166.15) | ($1,485,258.33) | ($1,231,493.42) | ($1,193,302.98) | ($636,721.19) | ($571,042.28) | ($496,650.54) | ($382,102.94) | |
| 26 | NET INVESTMENT (L20 - L25) | ($3,836,575.72) | ($3,448,379.03) | ($3,921,944.60) | ($4,066,373.14) | ($3,572,980.92) | ($3,682,295.54) | ($3,053,154.21) | ($2,958,471.34) | ($1,578,577.64) | ($1,415,744.59) | ($1,231,310.43) | ($947,320.68) | |
| 27 | MONTHLY CARRYING CHARGE RATE 2/ | 0.4792% | 0.4792% | 0.4792% | 0.4792% | 0.4792% | 0.4792% | 0.4792% | 0.2917% | 0.2917% | 0.2917% | 0.2917% | 0.2917% | |
| 28 | MONTHLY CARRYING CHARGE 0483 (L26 * L27) | ($14,671.00) | ($16,525.00) | ($18,794.00) | ($19,486.00) | ($17,122.00) | ($11,602.00) | ($14,631.00) | ($8,630.00) | ($4,605.00) | ($4,130.00) | ($3,592.00) | ($2,763.00) | ($136,551.00) |
| 29 | CIP PROGRAM CHARGES TO DEFERRED DEBIT | $243,019.60 | $137,988.26 | $542,446.09 | $1,403,869.74 | $457,584.02 | $458,866.24 | $749,008.47 | $326,094.88 | $821,341.58 | $711,660.27 | $900,670.48 | $1,453,221.32 | $8,205,770.95 |
| 30 | FINANCIAL INCENTIVES 4/ | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $2,353,720.00 | $0.00 | $0.00 | $0.00 | $0.00 | $2,353,720.00 |
| 31 | Adjust. - Prior Year Rounding correction | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 32 | LESS: CIP CARRYING CHARGES RECOVERED | $192,344.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $192,344.00 |
| 33 | Adjust. - Exempt CCRC Revenue Correction 7/ | $1,087,660.61 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $1,087,660.61 |
| 34 | LESS: CIP LOST MARGINS RECOVERED | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 35 | LESS: CIP COSTS RECOVERED via CCRC 0482 5/ | ($997,623.60) | ($819,760.04) | ($757,251.23) | ($720,080.63) | ($618,840.73) | $411,014.93 | ($630,057.22) | ($765,002.65) | ($711,747.67) | ($600,742.38) | ($663,507.93) | ($677,943.28) | ($7,551,542.43) |
| 36 | LESS: CIP COSTS RECOVERED via CPA 0481 6/ | $34,046.68 | $33,717.97 | $30,915.18 | $28,099.45 | $24,971.91 | $24,627.07 | $28,553.06 | $30,293.26 | $123,523.05 | $152,038.01 | $164,966.80 | $176,598.99 | $852,351.43 |
| 37 | END OF PERIOD BALANCE (L20 + L28 + L29..L36) | ($4,839,286.86) | ($5,503,865.67) | ($5,706,549.63) | ($5,014,147.07) | ($5,167,553.87) | ($4,284,647.63) | ($4,151,774.32) | ($2,215,298.83) | ($1,986,786.87) | ($1,727,960.97) | ($1,329,423.62) | ($380,309.59) | ($380,309.59) |
| 38 | TOTAL CPA & CCRC REVENUE | ($316,427.69) | $786,042.07 | $726,336.05 | $691,981.18 | $593,868.82 | ($435,642.00) | $601,504.16 | $734,709.39 | $588,224.62 | $448,704.37 | $498,541.13 | $501,344.29 | $5,419,186.39 |

1/ Deferred taxes are determined based on the composite tax rate in effect at the time in question. The effective rate was 41.370% between 1/1/1993 and 12/31/2017. As of 1/1/2018 the effective rate is 28.742%.

2/ Monthly carrying charge rate of 1.0675% is applicable for the period 3/1/94-10/31/2009; 0.9946% is applicable for the period 11/01/2009 - 05/31/2011; 0.9601% is applicable for the period 06/01/2011 - 08/31/2015; 0.2813% is applicable 9/01/2015; 0.3021% is applicable 8/01/2016 - 5/31/2017; 0.3229% is applicable 6/01/2017 through 7/31/2018; 0.4063% effective Sep 2018- June 2019; 0.4792% effective July 2019-July 2020; 0.2917% effective August 2020

3/ The Large Power Incentive Program is deductible for tax purposes over the life of the contract extension by IRS Ruling. Thus, no tax benefit is realized on the LPIP funds except for the amortized amount.

4/ Financial Incentives approved in Docket No. E015/M-18-116 dated 9/4/18 and in Docket No. E015/M-19-31

5/ Rate of $0.001209033/kWh, effective Nov 2009 through May 2011 as approved in Docket No. E-015/GR-08-415, $0.001466772/kWh, effective June 2011 through Nov 2018 as approved in Docket No. E-015/GR-09-1151, $0.003299105/kWh effective Dec 2018 as approved in Docket No. E-015/GR-16-664.

6/ CPA OF 1.08% thru Jul 1996, 1.83% Aug 96, 2.75% Jul 97, 1.62% Jul 01, 1.30% Jul 02, 0.92% Jul 03, 2.02% Jul 04, 0.86% Sep 05, 0.12% Jul 06, 0.36% Dec 07, 1.01% Nov 08, 1.22% Oct 09, $0.001448/kWh Oct 10, $0.003728/kWh Feb 12, $0.004537/kWh Jan 13; $0.004062/kWh Nov 13; $0.003425 Sep 14; $0.000442 Nov 15; $0.002494 Aug 16; $0.005052 Jul 2017; $0.002741 effective Oct 2018; -$0.000137 effective Aug 2019; -$0.000817 effective Sept 2020

7/ Correction to 2019 CCRC revenue which inadvertently included non-CIP revenue from a CIP-exempt customer.

Sources: Hyperion & CIP Tracker

| CHARGE # | DESCRIPTION | TOTAL | JAN | FEB | MAR | APRIL | MAY | JUNE | JULY | AUG | SEPT | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Direct Impact Projects | | | | | | | | | | | | | | |
| | CIP: ENERGY PARTNERS (Low Income) | $344,822.05 | $ 25,197.36 | $ 10,360.42 | $ 51,050.69 | $ 66,365.89 | $ 16,962.93 | $ 1,503.47 | $ 3,841.85 | $ 20,112.63 | $ 6,001.96 | $ 10,252.50 | $ 10,491.47 | $ 122,680.88 |
| | CIP: ONE HOME (Residential) | $1,749,972.99 | $ 54,800.00 | $ 10,524.90 | $ 169,877.95 | $ 169,592.18 | $ 108,613.71 | $ 82,850.74 | $ 140,724.07 | $ 42,201.49 | $ 251,842.14 | $ 221,760.01 | $ 110,246.66 | $ 386,939.14 |
| | CIP: ONE BUSINESS (C/I/Ag) | $3,993,144.30 | $ 81,526.85 | $ 50,903.15 | $ 187,775.99 | $ 758,977.14 | $ 211,236.40 | $ 263,545.76 | $ 422,200.30 | $ 208,483.44 | $ 398,400.11 | $ 342,602.82 | $ 682,281.68 | $ 385,210.66 |
| | Total Direct Impact Projects | $6,087,939.34 | $161,524.21 | $71,788.47 | $408,704.63 | $994,935.21 | $336,813.04 | $347,899.97 | $566,766.22 | $270,797.56 | $656,244.21 | $574,615.33 | $803,019.81 | $894,830.68 |
| Indirect Impact Projects | | | | | | | | | | | | | | |
| | CIP: CUSTOMER ENGAGEMENT | $577,234.62 | $ 19,930.80 | $ 35,453.99 | $ 39,182.03 | $ 148,089.93 | $ 25,534.84 | $ 25,180.74 | $ 35,950.39 | $ 21,104.41 | $ 25,811.70 | $ 39,104.56 | $ 27,665.30 | $ 134,225.93 |
| | CIP: RENEWABLE ENERGY* | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| | CIP: ENERGY ANALYSIS | $725,498.09 | $ 23,046.61 | $ 2,925.00 | $ 15,795.74 | $ 162,167.63 | $ 45,776.42 | $ 325.20 | $ 98,384.05 | $ 1,363.94 | $ 61,537.05 | $ 66,800.90 | $ 52,333.18 | $ 195,042.37 |
| | CIP: EVALUATION & PLANNING | $480,876.87 | $ 38,167.06 | $ 21,050.80 | $ 38,692.35 | $ 83,326.01 | $ 43,763.75 | $ 47,302.21 | $ 42,929.15 | $ 32,635.80 | $ 31,132.07 | $ 27,748.03 | $ 12,626.63 | $ 61,503.01 |
| | CIP: REGULATORY CHARGES | $166,864.05 | $ - | $ - | $ 38,121.34 | $ - | $ - | $ 38,158.12 | $ - | $ - | $ 45,284.51 | $ - | $ - | $ 45,300.08 |
| | CIP: RESEARCH & DEVELOPMENT | $167,357.98 | $ 350.92 | $ 6,770.00 | $ 1,950.00 | $ 15,350.96 | $ 5,695.97 | $ - | $ 4,978.66 | $ 193.17 | $ 1,332.04 | $ 3,391.45 | $ 5,025.56 | $ 122,319.25 |
| | Total Indirect Impact Projects | $2,117,831.61 | $81,495.39 | $66,199.79 | $133,741.46 | $408,934.53 | $120,770.98 | $110,966.27 | $182,242.25 | $55,297.32 | $165,097.37 | $137,044.94 | $97,650.67 | $558,390.64 |
| | Total Project Charges | $8,205,770.95 | $243,019.60 | $137,988.26 | $542,446.09 | $1,403,869.74 | $457,584.02 | $458,866.24 | $749,008.47 | $326,094.88 | $821,341.58 | $711,660.27 | $900,670.48 | $1,453,221.32 |
| Other CIP Tracker Account Charges | | | | | | | | | | | | | | |
| 1864-0484 | CIP: FINANCIAL INCENTIVES - TRACKER 2 | $2,353,720.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $2,353,720.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 1864-0483 | CIP: CARRYING CHARGE - TRACKER 2 | ($136,551.00) | ($14,671.00) | ($16,525.00) | ($18,794.00) | ($19,486.00) | ($17,122.00) | ($11,602.00) | ($14,631.00) | ($8,630.00) | ($4,605.00) | ($4,130.00) | ($3,592.00) | ($2,763.00) |
| | Total Charges to the Deferred Debit | $2,217,169.00 | ($14,671.00) | ($16,525.00) | ($18,794.00) | ($19,486.00) | ($17,122.00) | ($11,602.00) | ($14,631.00) | $2,345,090.00 | ($4,605.00) | ($4,130.00) | ($3,592.00) | ($2,763.00) |
| CIP Tracker Account Recovery | | | | | | | | | | | | | | |
| 1864-0481 | CIP: CPA RECOVERY - TRACKER 2 | $852,351.43 | $34,046.68 | $33,717.97 | $30,915.18 | $28,099.45 | $24,971.91 | $24,627.07 | $28,553.06 | $30,293.26 | $123,523.05 | $152,038.01 | $164,966.80 | $176,598.99 |
| 1864-0482 | CIP: CCRC CLEARANCE - TRACKER 2 | ($7,359,198.43) | ($805,279.60) | ($819,760.04) | ($757,251.23) | ($720,080.63) | ($618,840.73) | $411,014.93 | ($630,057.22) | ($765,002.65) | ($711,747.67) | ($600,742.38) | ($663,507.93) | ($677,943.28) |
| | Adjust. - Exempt CCRC Revenue Correction | $1,087,660.61 | $1,087,660.61 | | | | | | | | | | | |
| | YEAR END CARRYING CHARGE COST RECOVERY | ($192,344.00) | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| 1864-0483 | CIP: CARRYING CHARGE - TRACKER 2 CLOSING | $192,344.00 | $192,344.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| | Total CIP Tracker Account Recovery | ($5,419,186.39) | $508,771.69 | ($786,042.07) | ($726,336.05) | ($691,981.18) | ($593,868.82) | $435,642.00 | ($601,504.16) | ($734,709.39) | ($588,224.62) | ($448,704.37) | ($498,541.13) | ($501,344.29) |

**As a result of the February 10, 2017, MPUC approval of Minnesota Power's SolarSense program (Docket No. E015/M-16-485), the Company filed a Program Modification request on August 9, 2017, to remove the Customer Renewable Energy (RE) program from the 2017–2019 CIP Triennial Plan (Docket No. E015/CIP-16-117). On November 16, 2017, the Deputy Commissioner approved Minnesota Power's petition. Further, due to the enactment of new legislation in 2017 closing the Made in Minnesota (MIM) program, the MIM assessment will remain in CIP under CIP Regulatory Charges for 2017 and then be discontinued thereafter. The Customer Renewable Energy program section has therefore been removed from --Minnesota Power's Consolidated filing.*

Minnesota Power
CIP Tracker Account
Carrying Charge Rate
Effective July 2019 through July 2020

The MPUC's Order to require that Minnesota Power calculate the carrying charge using the rate from its multi-year credit facility—an agreement in place that serves as the Company's vehicle for short-term liquidity.

**Schedule 1 $400 Million Credit Agreement**

| Status | Pricing Level I | Pricing Level II | Pricing Level III | Pricing Level IV | Pricing Level V |
|---|---|---|---|---|---|
| Senior Debt Rating | ≥ A/ A/ A2 | ≥ A-/ A-/A3 | ≥ BBB+/ BBB+/ Baa1 | ≥ BBB/ BBB/ Baa2 | < BBB/ BBB/ Baa2 |
| Applicable for facility fees | 0.100% | 0.125% | 0.175% | 0.225% | 0.275% |
| Applicable Margin for ABR loans | 0% | 0% | 0. 075% | 0. 275% | 0. 475% |

"Alternate Base Rate" means, for any day, a rate per annum equal to the greatest of (a) the Prime Rate in effect on such day, (b) the Federal Funds Effective Rate in effect on such day plus 1/2 of 1%, and (c) the Adjusted LIBO Rate for a one month Interest Period on such day (or if such day is not a Business Day, the immediately preceding Business Day) plus 1% per annum (provided that, for the avoidance of doubt, the Adjusted LIBO Rate for any day shall be based on the rate appearing on the Reuters Screen LIBOR01 Page 1 (or on any successor or substitute page of such service) at approximately 11:00 a.m. London time on such day). Any change in the Alternate Base Rate due to a change in the Prime Rate, the Federal Funds Effective Rate or the Adjusted LIBO Rate shall be effective from and including the effective date of such change in the Prime Rate, the Federal Funds Effective Rate or the Adjusted LIBO Rate, respectively.

*This rate was effective for Minnesota Power from March 26, 2019 to July 31, 2019.

The monthly Carrying Charge equivalent to the alternate base rate loan and facility fees from the multi-year credit facility is **0.4792%.**

= (Prime Rate + Prime Rate Margin + Facility Fees) *(1 Month/12 Months)

= (5.5%+.075%+0.175%)*(1/12)

Minnesota Power
CIP Tracker Account
Carrying Charge Rate
Effective August 1, 2020*

The MPUC's Order to require that Minnesota Power calculate the carrying charge using the rate from its multi-year credit facility—an agreement in place that serves as the Company's vehicle for short-term liquidity.

**Schedule 1 $400 Million Credit Agreement**

| Status | Pricing Level I | Pricing Level II | Pricing Level III | Pricing Level IV | Pricing Level V |
|---|---|---|---|---|---|
| Senior Debt Rating | ≥ A+/ A+/ A1 | ≥ A/ A/ A2 | ≥ A-/ A-/A3 | ≥ BBB+/ BBB+/ Baa1 | < BBB+/ BBB+/ Baa1 |
| Applicable Margin for Eurodollar Rate loans and Letter of Credit participation fees | 0.800% | 0.900% | 1.00% | 1.075% | 1.275% |
| Applicable for facility fees | 0.075% | 0.100% | 0.125% | 0.175% | 0.225% |
| Applicable Margin for ABR loans | 0% | 0% | 0% | 0.075% | 0.275% |

"Alternate Base Rate" means, for any day, a rate per annum equal to the greatest of (a) the Prime Rate in effect on such day, (b) the NYFRB Rate in effect on such day plus ½ of 1% and (c) the Adjusted LIBO Rate for a one month Interest Period on such day (or if such day is not a Business Day, the immediately preceding Business Day) plus 1%; provided that for the purpose of this definition, the Adjusted LIBO Rate for any day shall be based on the LIBO Screen Rate (or if the LIBO Screen Rate is not available for such one month Interest Period, the Interpolated Rate) at approximately 11:00 a.m. London time on such day. Any change in the Alternate Base Rate due to a change in the Prime Rate, the NYFRB Rate or the Adjusted LIBO Rate shall be effective from and including the effective date of such change in the Prime Rate, the NYFRB Rate or the Adjusted LIBO Rate, respectively. If the Alternate Base Rate is being used as an alternate rate of interest pursuant to Section 3.4, then the Alternate Base Rate shall be the greater of clauses (a) and (b) above and shall be determined without reference to clause (c) above. For the avoidance of doubt, if the Alternate Base Rate as determined pursuant to the foregoing would be less than 1.00%, such rate shall be deemed to be 1.00% for purposes of this Agreement.

*This rate was effective for Minnesota Power since March 16, 2020.

The monthly Carrying Charge equivalent to the alternate base rate loan and facility fees from the multi-year credit facility is **0.2917%.**

= (Prime Rate + Prime Rate Margin + Facility Fees) *(1 Month/12 Months)

= (3.25%+.075%+0.175%)*(1/12)

Minnesota Power
CIP Tracker Account
Carrying Charge Rate
Proposed to be effective July 1, 2021*

The MPUC's Order to require that Minnesota Power calculate the carrying charge using the rate from its multi-year credit facility—an agreement in place that serves as the Company's vehicle for short-term liquidity.

**Schedule 1 $400 Million Credit Agreement**

| Status | Pricing Level I | Pricing Level II | Pricing Level III | Pricing Level IV | Pricing Level V |
|---|---|---|---|---|---|
| Senior Debt Rating | ≥ A+/ A+/ A1 | ≥ A/ A/ A2 | ≥ A-/ A-/A3 | ≥ BBB+/ BBB+/ Baa1 | < BBB+/ BBB+/ Baa1 |
| Applicable Margin for Eurodollar Rate loans and Letter of Credit participation fees | 0.800% | 0.900% | 1.00% | 1.075% | 1.275% |
| Applicable for facility fees | 0.075% | 0.100% | 0.125% | 0.175% | 0.225% |
| Applicable Margin for ABR loans | 0% | 0% | 0% | 0.075% | 0.275% |

"Alternate Base Rate" means, for any day, a rate per annum equal to the greatest of (a) the Prime Rate in effect on such day, (b) the NYFRB Rate in effect on such day plus ½ of 1% and (c) the Adjusted LIBO Rate for a one month Interest Period on such day (or if such day is not a Business Day, the immediately preceding Business Day) plus 1%; provided that for the purpose of this definition, the Adjusted LIBO Rate for any day shall be based on the LIBO Screen Rate (or if the LIBO Screen Rate is not available for such one month Interest Period, the Interpolated Rate) at approximately 11:00 a.m. London time on such day. Any change in the Alternate Base Rate due to a change in the Prime Rate, the NYFRB Rate or the Adjusted LIBO Rate shall be effective from and including the effective date of such change in the Prime Rate, the NYFRB Rate or the Adjusted LIBO Rate, respectively. If the Alternate Base Rate is being used as an alternate rate of interest pursuant to Section 3.4, then the Alternate Base Rate shall be the greater of clauses (a) and (b) above and shall be determined without reference to clause (c) above. For the avoidance of doubt, if the Alternate Base Rate as determined pursuant to the foregoing would be less than 1.00%, such rate shall be deemed to be 1.00% for purposes of this Agreement.

*This rate was effective for Minnesota Power since March 16, 2020.

The monthly Carrying Charge equivalent to the alternate base rate loan and facility fees from the multi-year credit facility is **0.2917%.**

= (Prime Rate + Prime Rate Margin + Facility Fees) *(1 Month/12 Months)

= (3.25%+.075%+0.175%)*(1/12)

# SECTION 3

## FINANCIAL INCENTIVES REPORT

As part of the Commission Orders dated August 21, 1992, and August 4, 1993, in Docket No. E015/M-91-458, Minnesota Power was required to file, on or before April 30 of each year, the Financial Incentives Report. In compliance with Docket No. E015/M-95-898, Minnesota Power is now required to file all CIP-related reports/requests in one submittal by April 1 of each year.

In this filing and as shown in Exhibit 2, Minnesota Power has calculated its financial incentives for 2020 performance consistent with the outcome of the procedures as set forth in Docket No. E,G-999/CI-08-133. Adjustments to the average retail energy sales are also reflected in its 2020 financial incentive calculation.

## BACKGROUND

In 1989, the Commission initiated an investigation into methods of encouraging utilities to conduct additional and more effective conservation programs. On February 28, 1991, in Docket No. E999/CI-89-212, the Commission ordered all Minnesota electric utilities to file financial incentive proposals by the end of 1991. Minnesota Power filed its proposal on September 30, 1991, in Docket No. E015/M-91-458, requesting the inclusion of a Double Shared Savings Incentive for large conservation projects, the removal of the lost margin disincentive and the establishment of rates for determining lost margin revenues. The MPUC approved Minnesota Power's proposal, with modifications, on March 12, 1992, and ordered an additional filing to detail Minnesota Power's plan for measuring lost margins and a plan for evaluating the financial incentive. On April 27, 1992, Minnesota Power filed the required plans with the MPUC. An Order approving the Minnesota Power submission, with modifications, was issued on August 21, 1992. The MPUC approved continuation of Minnesota Power's Financial Incentive Pilot Project, minus the Double Shared Savings Incentive, through calendar year 1994 in Docket E015/M-93-1051, and extended its application through 1995 in Docket No. E015/M-94-1165. Finally, the MPUC, after its own review of financial incentives in Minnesota, approved new financial incentives for the electric utilities in the state. Minnesota Power received approval for lost margin recovery in Docket No. E015/M-95-898, dated October 26, 1995.

In 1994, Minnesota Power participated in a statewide workgroup effort to develop recommendations as to what the future of financial incentives in Minnesota should be. Again,

during late 1998 and all of 1999, the Commission reviewed the need for financial incentives and the incentive structure. As a result, financial incentives for conservation efforts were significantly modified by Commission action on January 27, 2000, in Docket No. E015/M-99-538 and E,G-999/CI-98-1759.

On April 7, 2000, in Docket No. E015/M-99-538, the MPUC issued an Order approving a new Shared Savings financial incentive mechanism. The effective date for the new incentive was January 1, 1999. Features of the new incentive included an increasing incentive award when conservation efforts resulted in increasing energy savings. There was a cap on the incentive so as not to become so large as to dwarf the conservation spending. Before any incentive was awarded, however, the utility must have achieved at least 90% of its approved energy-savings goal.

## FINANCIAL INCENTIVES—2010 AND BEYOND

2007 Minnesota Laws Chapter 136, Article 2, (also known as the Next Generation Energy Act) enacted changes to state energy conservation goals and programs, including establishing an annual energy-savings goal for each utility of 1.5% of annual retail energy sales. This law included the following addition to Minn. Stat. § 216B.241:

> Subd. 2c. Performance incentives. By December 31, 2008, the Commission shall review an incentive plan for energy conservation improvement it has approved under section 216B.16, subdivision 6c, and adjust the utility performance incentives to recognize making progress toward and meeting the energy-savings goals established in subdivision 1c.

On October 14, 2008, in Docket No. E,G-999/CI-08-133, the Commission issued a Notice of Comment period soliciting comments on: (1) whether adjustments are needed to existing conservation incentive plans; and (2) if so, what procedures the Commission should use to determine what specific adjustments are needed, including procedures for considering the nature, scope and timing for implementation of those adjustments.

The commenting parties recommended that the Commission: (1) adopt a procedural calendar allowing time for the parties to confer and agree on recommended revisions to the incentive formula; (2) establish stakeholder workgroups to evaluate the current incentives and recommend adjustments; and (3) establish procedural guidelines for the discussion and evaluation of possible revisions in 2009, with implementation of any changes to occur in 2010.

On December 29, 2008, the Commission issued an Order Establishing Procedural Framework for Consideration of Utility Performance Incentives for Energy Conservation. The

Commission required utilities to provide further information on how the current incentive model and any other proposed mechanisms would function under the new savings goal. Pursuant to the Commission's Order, a stakeholder workgroup was established to evaluate the current incentives and recommend adjustments. Members of the workgroup included: the Center for Energy and the Environment; CenterPoint Energy; Greater Minnesota Gas; Great Plains Natural Gas; Interstate Power and Light; Izaak Walton League of America; Minnesota Energy Resource Corporation (PNG and NMU); Minnesota Power; the Department; Otter Tail Power Company; and Xcel Energy. The workgroup participants jointly requested Commission approval of a new Shared Savings DSM financial incentive to be applied voluntarily to all gas and electric utilities that participate in the CIP. The new program was intended to replace the current incentive plans and apply to CIP activities beginning with the 2010 project year. The proposal was the product of a series of workgroup meetings initiated and facilitated by the Department. Based on its review and analysis of the workgroup recommendations and the parties' comments, the Commission concluded in its January 27, 2010 Order in Docket No. E,G-999/CI-08-133 that the proposed New Shared Savings Model, as detailed by the Department and the workgroup, is a reasonable approach to achieve the requirements and purposes of the Next Generation Energy Act (Minn. Stat. § 216B.241), taking into consideration the factors listed in Minn. Stat. § 216B.16, subd. 6c and the Commission's duty under Minn. Stat. § 216B.03 to ensure just and reasonable rates. Also in its January 27, 2010 Order,[3] the Commission required electric and gas utilities to submit yearly incentive proposals on or before February 1 of each year integrating the Commission's decision regarding utility performance incentives for energy conservation. Consistent with the Commission's Order, this new shared savings performance incentive shall be in operation for the length of each utility's current triennial CIP. For Minnesota Power, the approved mechanism applied to 2011–2013 program years.

On December 20, 2012, the Commission approved modifications to the incentive mechanism based on the Department's July 9, 2012 Report on the Impacts of the 2011 New Shared Savings DSM Financial Incentive on Investor-Owned Utility Conservation Achievements and Customer Costs.[4] Modifications included establishment of two caps on the incentive mechanism, one as a percent of net benefits and the other as a continuation of the existing cap of 125 percent

[3] In the Matter of Commission Review of Utility Performance Incentives for Energy Conservation Pursuant to Minn. Stat. § 216B.241, Subd. 2C, Docket No. E,G-999/CI-08-133, January 27, 2010.

[4] Id., December 20, 2012.

of a utility's 1.5 percent calibration level.[5] According to the December 20, 2012 Order, the Commission required all utilities except Otter Tail Power and Minnesota Power to make a compliance filing on or before February 1, 2013, integrating the Commission's decision into their individual incentive proposals. The Commission required Otter Tail Power and Minnesota Power to make their compliance filings on or before February 1, 2014, under the modified incentive mechanism. The modifications applied to the 2014–2016 program years.

On August 5, 2016, the Commission approved modifications based on the Department's January 19 and February 19, 2016 proposal to modify the Shared Savings DSM Financial Incentive mechanism. Additionally, on February 20, 2020 the Commission approved the Shared Savings DSM Financial Incentive mechanism for 2020 with the same parameters as 2019. The approved modifications include the following:

For electric utilities: 1) Authorize financial incentives for a utility that achieves energy savings of at least 1.0 percent of the utility's retail sales; 2) For a utility that achieves energy savings equal to 1.0 percent of retail sales, award the utility a share of the net benefits as set forth in Attachment A (of the Commission's Order). 3) For each additional 0.1 percent of energy savings the utility achieves, increase the net benefits awarded to the utility by an additional 0.75 percent until the utility achieves savings of 1.7 percent of retail sales. 4) For savings levels of 1.7 percent and higher, award the utility a share of the net benefits equal to the Net Benefits Cap.

In addition, for all utilities, set the following Net Benefits Caps: 1) 13.5 percent in 2017, 2) 12.0 percent in 2018,3) 10.0 percent in 2019, and 4) 10.0 percent for 2020. For all utilities, set the following Conservation Improvement Plan ("CIP") Expenditure Caps: 1) 40 percent in 2017, 2) 35 percent in 2018, 3) 30 percent in 2019, and 4) 30 percent in and 2020.

In regard to the February 1 compliance filing, the Commission's decision included direction that "utilities may discontinue the annual February 1 compliance filing because a scale of net benefits will no longer be required since the Department's proposal sets percentages at certain savings thresholds and calibrates the mechanism to dollars per unit of energy."

Additionally, the Commission's December 9, 2020 order in Docket E,G-999/CI-08-133 requested that the Department continue stakeholder processes to evaluate the development of a low-income shared-savings mechanism and to evaluate ways of improving the shared-savings

[5] Per a Commission Order on November 19, 2013, in Docket No. E,G-999/CI-08-133, the incentive cap shall be at 30 percent of net benefits for Minnesota Power.

mechanisms for potential adoption in the 2024–2026 triennial. Minnesota Power looks forward to participating in both of the stakeholder processes.

**2020** **EXHIBIT 2**

UTILITY

**Minnesota Power - 2020 Program Performance**

| **Inputs** | | Location: |
|---|---|---|
| 2013 Weather-Normalized Sales (kWh) | 2,753,584,344 | |
| 2014 Weather-Normalized Sales (kWh) | 2,793,956,879 | |
| 2015 Weather-Normalized Sales (kWh) | 2,701,717,658 | |
| 3-year Weather-Normalized Sales Average (kWh) | 2,749,752,960 | |
| 1.0% Energy Savings | 27,497,530 | |
| Increase Energy Savings per 0.1% Increase in Achievement Level | 2,749,753 | |
| Approved CIP Budget | $10,318,770 | From Commissioner's Order approving 2020 Extension CIP Filing of the 2017-19 Triennial |
| Approved CIP Energy Savings Goal (kWh) | 58,136,306 | |
| Estimated Net Benefits at Energy Savings Goal | $15,512,485 | From Utility 2020 Extension CIP Filing of the 2017-19 Triennial. |
| Energy savings at 1.5% (kWh) | 41,246,294 | |
| | | |
| **Incentive Calibration** | | |
| Max Percent of Net Benefits Awarded | 10.0% | maximum net benefits awarded |
| Max Percent Expenditures Awarded | 30.0% | |
| Earning Threshold | 1.0% | |
| Achievement Level Where Net Benefits Cap Begins | 1.7% | |
| Increase in Net Benefits Awarded Per 0.1% Increase in Achievement Level | 7.5 | % Points |

| **Actual 2020 Achievements** | |
|---|---|
| Expenditures | $8,038,907 |
| Energy Saved (first year kWh saved) | 70,774,076 |
| Net Benefits Achieved | $24,762,646 |
| **Shared Savings Incentive Results** | |
| Achievement Level | 2.57% |
| Percent of Net Benefits Awarded | 10.00% |
| Financial Incentive Award | **$2,411,672** |
| Incentive/First Year kWh Saved $ | $0.0341 |
| Incentive/Net Benefits | 9.74% |
| Incentive/CIP Expenditures | 30.00% |

**Estimated Incentive Levels by Achievement Level**

| Achievement Level (% of sales) | Energy Saved | Percent of Net Benefits Awarded | Estimated Net Benefits Achieved | Incentive Award | Average Incentive per unit Saved | Incremental Incentive Units Saved |
|---|---|---|---|---|---|---|
| 0.0% | 0 | 0.00% | $0 | **$0** | $0.000 | - |
| 0.1% | 2,749,753 | 0.00% | $733,715 | **$0** | $0.000 | $0.000 |
| 0.2% | 5,499,506 | 0.00% | $1,467,431 | **$0** | $0.000 | $0.000 |
| 0.3% | 8,249,259 | 0.00% | $2,201,146 | **$0** | $0.000 | $0.000 |
| 0.4% | 10,999,012 | 0.00% | $2,934,861 | **$0** | $0.000 | $0.000 |
| 0.5% | 13,748,765 | 0.00% | $3,668,577 | **$0** | $0.000 | $0.000 |
| 0.6% | 16,498,518 | 0.00% | $4,402,292 | **$0** | $0.000 | $0.000 |
| 0.7% | 19,248,271 | 0.00% | $5,136,008 | **$0** | $0.000 | $0.000 |
| 0.8% | 21,998,024 | 0.00% | $5,869,723 | **$0** | $0.000 | $0.000 |
| 0.9% | 24,747,777 | 0.00% | $6,603,438 | **$0** | $0.000 | $0.000 |
| 1.0% | 27,497,530 | 4.75% | $7,337,154 | **$348,515** | $0.013 | $0.127 |
| 1.1% | 30,247,283 | 5.50% | $8,070,869 | **$443,898** | $0.015 | $0.035 |
| 1.2% | 32,997,036 | 6.25% | $8,804,584 | **$550,287** | $0.017 | $0.039 |
| 1.3% | 35,746,788 | 7.00% | $9,538,300 | **$667,681** | $0.019 | $0.043 |
| 1.4% | 38,496,541 | 7.75% | $10,272,015 | **$796,081** | $0.021 | $0.047 |
| 1.5% | 41,246,294 | 8.50% | $11,005,731 | **$935,487** | $0.023 | $0.051 |
| 1.6% | 43,996,047 | 9.25% | $11,739,446 | **$1,085,899** | $0.025 | $0.055 |
| 1.7% | 46,745,800 | 10.00% | $12,473,161 | **$1,247,316** | $0.027 | $0.059 |
| 1.8% | 49,495,553 | 10.00% | $13,206,877 | **$1,320,688** | $0.027 | $0.027 |
| 1.9% | 52,245,306 | 10.00% | $13,940,592 | **$1,394,059** | $0.027 | $0.027 |
| 2.0% | 54,995,059 | 10.00% | $14,674,307 | **$1,467,431** | $0.027 | $0.027 |
| 2.1% | 57,744,812 | 10.00% | $15,408,023 | **$1,540,802** | $0.027 | $0.027 |
| 2.2% | 60,494,565 | 10.00% | $16,141,738 | **$1,614,174** | $0.027 | $0.027 |
| 2.3% | 63,244,318 | 10.00% | $16,875,454 | **$1,687,545** | $0.027 | $0.027 |
| 2.4% | 65,994,071 | 10.00% | $17,609,169 | **$1,760,917** | $0.027 | $0.027 |
| 2.5% | 68,743,824 | 10.00% | $18,342,884 | **$1,834,288** | $0.027 | $0.027 |
| 2.6% | 71,493,577 | 10.00% | $19,076,600 | **$1,907,660** | $0.027 | $0.027 |
| 2.7% | 74,243,330 | 10.00% | $19,810,315 | **$1,981,032** | $0.027 | $0.027 |
| 2.8% | 76,993,083 | 10.00% | $20,544,030 | **$2,054,403** | $0.027 | $0.027 |
| 2.9% | 79,742,836 | 10.00% | $21,277,746 | **$2,127,775** | $0.027 | $0.027 |
| 3.0% | 82,492,589 | 10.00% | $22,011,461 | **$2,201,146** | $0.027 | $0.027 |

# SECTION 4

## 2021-2022 PROPOSED CONSERVATION PROGRAM ADJUSTMENT

CIP costs are recovered by utilities through base rates via the Conservation Cost Recovery Charge and through an annual CIP adjustment factor called the Conservation Program Adjustment.[6] Minnesota Power files a recalculation of its CPA each April as part of its CIP Consolidated Filing.[7] Minnesota Power's CPA has previously been calculated by dividing the year-end CIP tracker balance of the previous year by the forecasted sales (kWh) subject to CIP for the current year. In accordance with the Commission Order dated September 16, 2015, Docket No. E015/M-15-80, Minnesota Power adjusted its CPA calculation to use a fiscal year approach[8] and provided calculation of a new CPA in its September 25, 2015, compliance filing.[9] The proposed CPA for the 2021-2022 period follows the new fiscal year approach which is described further in the background section below.

## BACKGROUND

On October 6, 1993, Minnesota Power filed with the Commission its request for a CPA. In its Order in Docket No. E015/M-93-996, the Commission approved Minnesota Power's proposed CIP adjustment. In addition, the Commission ordered Minnesota Power to address the issues surrounding the appropriate basis for calculating conservation costs in its next rate filing. The Company did so in Docket No. E015/GR-94-001. A significant portion of conservation costs are recovered from base rates. However, past expenditures, financial incentives, carrying charges and current expenditures not recovered through base rates remain to be recovered and credit balances remain to be returned to customers through the CPA mechanism. A format for determining a CPA factor was presented in Minnesota Power's October 6, 1993, filing. That general format has been utilized herein.

In response to 1993 changes in Minnesota Statutes, the MPUC initiated a CIP Adjustment Implementation Study Group. That group prepared and filed with the MPUC, on November 8, 1993, its "Report of the CIP Adjustment Implementation Study Group." Among other things, the

[6] Also referred to as CCRA in other utility filings.
[7] On March 20, 2020, in Docket No. CIP-16-117, Deputy Commissioner Sullivan modified the filing date to May 1, 2020, due to the impact of COVID-19.
[8] Non-calendar year of July 1–June 30.
[9] Compliance Filing, Order Approving Tracker Account and Financial Incentive, Setting Rider Adjustment and Reducing Carrying Charges for Minnesota Power's 2014 Consolidated Filing, September 25, 2015, Docket No. E015/M-15-80.

group agreed that electric utilities with CPA factors would file annually on April 1 (modified in Docket CIP-16-117 to May 1 for this year) for modification of their CPA factors. This section of the filing is in compliance with that agreement.

In its July 30, 2009, Comments regarding Minnesota Power's 2008 Conservation Improvement Program Consolidated Filing, the Department requested that Minnesota Power's allocation method for the CPA mechanism be changed from a percentage of revenue to a per-kWh basis, Docket No. E015/M-09-299 and E015/M-09-300. At the urging of the Department, Minnesota Power included a request to change from a percentage of revenue methodology to a per-kWh basis in the context of its general rate case filing, Docket No. E015/GR-09-1151. Subsequently, in Minnesota Power's 2009 Conservation Improvement Program Consolidated Filing, the Department again recommended that Minnesota Power's allocation method for the CPA mechanism be changed from a percentage of revenue to a per-kWh basis, Docket No. E015/M-10-266. In its September 22, 2010 Order, the MPUC approved a change in CPA allocation method to a per-kWh basis. This method has been in effect since October 1, 2010, and Minnesota Power has calculated the CPA mechanism using the per-kWh method in this filing.

On February 22, 2011, the Department requested a comparative analysis of four methods for allocation of conservation costs to customer classes, using 2008, 2009, and 2010 reference years. These methods were described in the context of Otter Tail Power's Annual CIP Adjustment Factor Filing, Docket No. E017/M-10-220, and the Commission ordered the following:

> Required OTP in its next filing to provide a comparative analysis of the four methods for allocating conservation costs to customer classes as discussed in the record of this case, including: (1) the per-kWh energy–only method; (2) the percent-of-bill method, (3) the 50/50-split method and (4) the percent-of-net benefits method. Required OTP to show the percent-of-net-benefits method based on a weighted average of the actual benefits achieved in OTP's 2007, 2008 and 2010 CIP. Required OTP, as part of its comparative analysis, to present a large General Service (LGS) rate design (intra-class allocation) that is consistent with each of the preceding methods.

The MPUC carefully considered the methods, recommendations and arguments pertaining to CIP cost allocation options and, in its January 12, 2012 Order, made the decision not to change

Minnesota Power's current method of CIP cost allocation, thereby maintaining the per-kWh method.[10]

On September 16, 2015, in relation to Minnesota Power's CPA calculation, the MPUC ordered the following:

> Within 10 days of the date of this Order, Minnesota Power shall calculate and file in a compliance filing a CPA rate that uses a fiscal year approach, and recognizes that it has been generating revenue since July 1, 2015, at the higher rate of $0.003425.

On September 25, 2015, Minnesota Power submitted its compliance filing providing the calculation of a new CPA rate using a fiscal year approach, and recognizing that Minnesota Power had been generating revenue since July 1, 2015, at the higher rate.

## 2021-2022 CPA DEVELOPMENT

The CIP Tracker Account balance at year-end 2020 reflects the results of prior activity in Tracker 2, as indicated on page 1 of Exhibit 1. However, for CPA purposes, the 2020 year-end balance requires adjustments to properly calculate the proposed CPA factor. Using the new fiscal year approach, these factors have been expanded to include actual and anticipated expenditures and cost recovery through base rates (CCRC) and the current CPA rate for the remainder of the current CPA period (January 2021–June 2021) as well as anticipated financial incentives, anticipated CIP expenditures and anticipated cost recovery through base rates for the new CPA period (July 2021–June 2022). The fiscal year approach is designed to achieve a zero Tracker balance at the end of the CPA period (fiscal year) rather than at the end of the calendar year. Higher (calendar) year-end Tracker balances should therefore be anticipated going forward which is a deviation from Minnesota Power's history of low year-end Tracker balances. Minnesota Power notes that actual program performance, expenditures and sales will lead to tracker balance fluctuation.

[10] In its Order, the MPUC noted that it "has moved toward uniformity in its selection of the per-kWh allocation method for electric utilities. It did so for sound reasons, which remain valid. Of all the methods under consideration, the per-kWh method is the most straightforward, the easiest for customers to understand, and the most consistent with the statutory goal of reducing individual utilities' overall energy usage by a set percentage—normally 1.5%—on an annual basis. It appears to hold the greatest potential for reducing overall energy usage by sending the clearest price signal. This simplicity was and is its greatest strength." See Docket Nos. E001/M-11-244; E015/M-11-241; and E017/M-11-185.

In accordance with the Commission Order dated September 16, 2015, Docket No. E015/M-15-80, Minnesota Power adjusted its CPA calculation to use a fiscal year approach.[11] Minnesota Power has calculated the CPA factor using a per-kWh methodology, as recommended by the Department and approved by the MPUC in its September 22, 2010, Order, Docket No. E015/M-10-266 and as reaffirmed in its January 12, 2012 Order, Docket No. E015/M-11-241.

Minnesota Power requests Commission approval of a proposed CPA factor of $0.002015 per kWh to be effective without proration with bills rendered on or after July 1, 2021. Minnesota Power is filing for CPA modification on April 1, 2021, making the anticipated effective period for this request July 1, 2021 through June 30, 2022. Until subsequent MPUC approval, the existing CPA factor will remain in effect.

Minnesota Power requests a variance to Minn. Rules 7820.3500 and 7825.2600, which require that the Fuel and Purchased Energy Adjustment ("FPE") be stated as a separate line item on customers' bills. The requested variance would allow Minnesota Power to continue combining the CPA and FPE on one line in customer bills, known as the Resource Adjustment.[12] The Commission has approved this variance several times in the past, most recently in Docket No. E015/M-18-116.

Minnesota Power will include a message referencing the change in the CPA in customers' bills in the month in which the new factor goes into effect. Minnesota Power proposes the following message:

> *Effective <DATE>, the Resource Adjustment charge on your bill has <increased/decreased> due to a change in the Conservation Improvement Program (CIP) billing factor. The CIP portion of the Resource Adjustment is <CPA Factor> per kilowatt-hour (kWh).*

Consistent with prior years, Minnesota Power will work with the Commission's Consumer Affairs Office in advance of implementing this proposed customer message.

[11] Minnesota Power's 2014 Consolidated Filing, Order Approving Tracker Account and Financial Incentive, Setting Rider Adjustment and Reducing Carrying Charges, September 16, 2015, Docket No. E015/M-15-80.
[12] https://www.mnpower.com/Content/Documents/CustomerService/resource-adjustment.pdf

# MINNESOTA POWER
## Conservation Program Adjustment
## Proposed for July 2021 - June 2022

**Conservation Program Adjustment:**

| | | | Jan 2021 - Jun 2021 | Jul 2021 - Jun 2022 |
|---|---|---|---|---|
| 1 | CIP Tracker 2 Account Balance at the end of 2020 | 1/ | $ (380,310) | $ 656,730 |
| 2 | Financial Incentives claimed per Exhibit 2 | 2/ | N/A | 2,411,672 |
| 3 | CIP current year expenditures (actuals) | 3/ | $ 696,698 | N/A |
| | CIP expenditures approved or budgeted | | $ 3,502,008 | $ 10,610,185 |
| 4 | CIP Cost Recovered through Base Rates (actuals) | 4/ | $ (1,576,537) | N/A |
| | CIP Cost Recovered through Base Rates (estimated) | | $ (2,631,129) | $ (8,491,359) |
| 5 | CIP Cost Recovery through current CPA (actuals) | 5/ | $ 396,916 | N/A |
| | CIP Cost Recovery through current CPA (estimated) | | $ 651,580 | N/A |
| 6 | Carrying Charges | 6/ | $ (2,497) | N/A |
| **7** | **Recoverable Tracker Balance** | 7/ | **$ 656,730** | **$ 5,187,228** |

| | | | |
|---|---|---|---|
| 8 | kWh sales subject to CIP | 8/ | **2,573,837,000** |
| | monthly | | 214,486,417 |

| | | | |
|---|---|---|---|
| | CCRC | 9/ | $ 0.003299105 |
| | Current CPA | | $ (0.000817) |

| | |
|---|---|
| **Conservation Program Adjustment (per kWh methodology)** Line 7/Line 8 | **$ 0.002015** |

1/ The prior year-end CIP Tracker Account Balance is per Exhibit 1, Page 1, line 37.

2/ Financial Incentives per Exhibit 2 reflecting the originally approved CIP projects.

3/ Actual CIP expenditures included for Jan-Feb 2021; Estimated expenditures for Mar-Jun 2021 and July 2021-Jun 2022 based on the 2021 and 2022 budget as approved by the Deputy Commissioner on November 24, 2020, in the Company's 2021-2023 Triennial CIP Filing in Docket No. E015/CIP-20-476.

4/ Actual CIP Cost Recovery through Base Rates included for Jan-Feb 2021; Estimates for Mar-Jun 2021 based on the Company's approved conservation cost recovery charge (CCRC) [rate] applied to budgeted Mar-Jun 2021 sales subject to CIP*; Estimates for July 2021- Jun 2022 based on approved CCRC applied to 2021 budgeted sales subject to CIP*.

5/ Actual CIP Cost Recovery through current CPA included for Jan-Feb 2021; Estimates for Mar-Jun 2021 based on the current CPA applied to 2021 budgeted sales subject to CIP*.

6/ Actual Carrying Charges included for Jan-Feb 2021

8/ *Total budget sales less competitive rate, economy, opt-out, community solar & unbilled sales.

9/ New CCRC rate effective December 2018 as approved in Docket No. E015/GR-16-664.


Compliance

# COMPLIANCE REPORTING

Minnesota Rules 7690 contains the requirements and procedures for CIP filings. Minn. Stat. §§ 216B.2401, 216B.241 and 216B.2411 contain provisions the Company must meet in its CIP Compliance points are addressed in this section.

## STATUTORY REQUIREMENTS

### *2020 Minimum Spending Requirement*

Minn. Stat. § 216B.241 requires that 1.5% of Minnesota Power's Retail Revenues (net of exempt customers) be spent on CIP. The following table shows 2020 spending in relation to the approved minimum spending requirement.[13]

| *Minimum Spending Requirement* | *Approved Spending* | *Actual Spending* | *Variance of Actual to Minimum Spending* |
|---|---|---|---|
| $2,438,354 | $10,518,770 *(as modified)* | $8,205,771 | $5,767,417 |

### *2020 Achievements as a Percentage of Sales*

The Next Generation Energy Act of 2007 established an energy-savings goal of 1.5% of Gross Annual Retail Energy Sales (net of exempt customers). The table below shows Minnesota Power's achievements as a percent of 2013–2015 weather-normalized retail sales.

| *Year* | *Energy Savings Achieved (kWh)* | *Total Adjusted Sales (kWh)* | *Savings as % of Retail Sales* |
|---|---|---|---|
| 2020 | 70,774,076 | 2,749,752,960 | 2.57% |

[13] Effective January 1, 2017, one CIP exemption was approved by the Department under Docket No. E015/CIP-16-812. Minnesota Power recalculated its minimum spending requirements and energy-saving goal accordingly and reported it in its Program Modification Request submitted August 9, 2017, and approved by the Deputy Commissioner on November 16, 2017.

### *2020 Low Income Spending Requirement*

Minn. Stat. § 216B.241, subd. 7, requires utilities to spend 0.2% of residential electric Gross Operating Revenue ("GOR") on low income electric programs, unless otherwise approved by the Commissioner. In its 2013 Decision,[14] the Department of Commerce approved Staff's proposal to use a three-year average for electric revenues under the low income requirement on a prospective basis, beginning in 2015 for investor-owned utilities.

| *Minimum Spending Requirement using Three-year Average* | *Approved Spending* | *Actual Spending* | *Variance of Actual to Minimum Spending Requirement using Three-year Average* |
|---|---|---|---|
| $195,929 | $497,030 | $344,822 | $148,893 |

### *2020 Research & Development 10% Maximum Spending*

Minnesota Power complied with Minn. Stat. § 216B.241, subd. 2(c), which limits spending for Research & Development to 10% of the minimum spending requirement.[15]

| *Annual Spending Cap* | *Approved Spending* | *Actual Spending* | *Variance of Actual to Cap* |
|---|---|---|---|
| $243,800 | $243,800 *(as modified)* | $167,358 | ($76,442) |

### *Lighting Use and Recycling Programs*

Minn. Stat. § 216B.241 requires utilities to invest in projects that encourage the use of LED lamps and proper management of spent lamps. Public utilities with 200,000 or fewer customers may establish a collection system as part of conservation improvement activities. Minnesota Power promotes energy-efficient lighting measures to all customer classes. The Company also facilitates proper management of spent lamps by partnering with hardware stores in its service area to provide free CFL ("compact fluorescent light") recycling and discounted fluorescent tube and lamp recycling.

[14] In the Matter of Minnesota Power's 2013 Conservation Improvement Program Status Report, Docket No. E015/CIP-10-526.03, January 9, 2015.

[15] Effective January 1, 2017, one CIP exemption was approved by the Department under Docket No. E015/CIP-16-812. Minnesota Power recalculated its minimum spending requirements and energy-saving goal accordingly and reported it in its Program Modification Request submitted August 9, 2017, and approved by the Deputy Commissioner on November 16, 2017.

## TRIENNIAL DECISION REQUIREMENTS

Minnesota Power has complied with the 2017–2019 Triennial Decision and 2020 Extension[16] requirements as summarized below.

### *Budget Flexibility*

Previously, utilities were required to file a letter with the Department requesting authorization to exceed approved segment budgets by 25% or more. Beginning in 2017, Minnesota Power is required to notify the Department via a courtesy notification of circumstances where the Company expects to exceed a program's approved budget by more than 25% at the segment level. The table below shows the approved budgets for 2020, actual spending and the percentage of approved budgets, as modified where applicable.

| *Program* | *Approved Budget* | *Actual Spending* | *Percentage of Approved Budget* |
|---|---|---|---|
| ***Segment: Low Income*** | | | |
| Energy Partners Low Income | $497,030 | $344,822 | 69% |
| ***Segment: Residential*** | | | |
| Power of One Home | $2,377,252 | $1,749,973 | 74% |
| ***Segment: Commercial/Industrial*** | | | |
| Power of One Business | $4,565,608 | $3,993,144 | 87% |
| ***Segment: General Indirect*** | | | |
| Customer Engagement | $925,025 | $577,235 | 62% |
| Energy Analysis | $963,280 | $725,498 | 75% |
| Research & Development *(1)* | $243,800 | $167,358 | 69% |
| Evaluation & Planning | $746,775 | $480,877 | 64% |
| **Segment TOTAL:** | **$2,878,880** | **$1,950,968** | **68%** |
| ***Segment: Regulatory Charges*** | | | |
| Regulatory Charges | $200,000 | $166,864 | 83% |

*(1) Research and Development budget reduced due to newly approved CIP exemption in 2017, Docket No. E015/CIP-16-812.*

[16] In the Matter of Minnesota Power's 2020 Electric CIP Extension Plan, Docket No. E015/CIP-16-117, November 26, 2019

***2017–2019 CIP Triennial Approval Provisions***

The Deputy Commissioner approved Minnesota Power's 2017–2019 Triennial CIP[17] with the following specific determinations:

1. The Deputy Commissioner finds that MP's proposed 2017-2019 Plan is in compliance with the following statutory requirements:
    a. Minimum 1.5 percent savings goal requirement (§216B.241, subd. 1c).
    b. Minimum spending levels (§216B.241, subd. 1a).
    c. Minimum low-income spending levels (§216B.241, subd. 7).
    d. Cap on research and development spending equal to ten percent of MP's minimum spending requirement (§216B.241, subd. 2(c)).
        i. The Deputy Commissioner directs MP 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. The Deputy Commissioner directs Staff to evaluate reported R&D spending from MP's Analysis, Evaluation and Project Development program to determine compliance with the CIP R&D spending cap.
    e. Cap on distributed and renewable generation spending equal to five percent of MP's minimum spending requirement (§216B.2411, subd. 1), or ten percent with the Deputy Commissioner's permission for qualifying solar energy projects.[18]
    f. Provision requiring programs to promote the use of efficient lighting and support the collection of spent lamps. (§216B.241, subd. 5, §216B.241, subd. 5(b) and (c)).
    g. Provision requiring inclusion of programs that facilitate ENERGY STAR® labeling, LEED certification, or Green Globes certification of commercial buildings (§216B.241, subd. 1f (c)).
    h. Provision requiring utilities to develop CIP projects to support attainment of SB 2030 standards (§216B.241, subd. 9(e)).
2. The Deputy Commissioner approves MP's budgets and goals at the segment-level (*i.e.*, Residential, Low-Income, Commercial/Industrial and Other Projects), requiring MP to be accountable for achieving segment-level goals. The Company must also report energy savings, spending, participation and cost-effectiveness results at the program, segment and portfolio-level in their annual status reports so that overall CIP program performance can be monitored.
3. The Deputy Commissioner approves MP's technical assumptions.

[17] Docket No. E015/CIP-16-117.

[18] As a result of the February 10, 2017, MPUC approval of Minnesota Power's SolarSense program (Docket No. E015/M-16-485), the Company filed a Program Modification request on August 9, 2017, to remove the Customer Renewable Energy program from the 2017–2019 CIP Triennial Plan (Docket No. E015/CIP-16-117). On November 16, 2017, the Deputy Commissioner approved Minnesota Power's petition. Further, due to the enactment of new legislation in 2017 closing the Made in Minnesota program, the MIM assessment will remain in CIP under CIP Regulatory Charges for 2017 and then be discontinued thereafter. The Customer Renewable Energy program section has therefore been removed from Minnesota Power's Consolidated filing.

4. Within 60 days, MP must file an approved version of its Plan that incorporates all changes and corrects all known errors that have been discovered during the regulatory review proceeding.

5. The Deputy Commissioner finds MP's proposed program designs to be generally reasonable, with the following specific exception:

   a. The ChargeUp™ Pilot is not approved for inclusion in the Company's portfolio. The updated approved spending is included in Table 15.

      **Response:**

      In response to the Deputy Commissioner's Decision, Minnesota Power removed $125,000 from its Customer Engagement program budgeted for the proposed ChargeUp™ Pilot in Minnesota Power's 2017–2019 Triennial plan. The Company filed the updated approved spending in its 2017–2019 Triennial Conservation Improvement Program ("CIP") Compliance Filing on January 3, 2017.

6. Budget Flexibility and Plan Modifications

   a. The Deputy Commissioner will allow utilities to exceed annual budget goals for all direct impact segments so long as the additional spending does not result in the segment becoming non-cost effective from the societal perspective. Utilities are required to notify the Department via a courtesy notification of circumstances where the utility expects to exceed any segment budget goals by 25 percent. This budget flexibility provision shall not apply to Alternative CIP Programs.

   b. The Deputy Commissioner approves the discontinuation of the Informal Modification procedure for CIP plan modifications and directs utilities to follow the instructions in Minnesota Rules part 7690.1400 and 7690.1430, as outlined in the CIP Budget Flexibility and Plan Modification Section of this Decision.

   c. The Deputy Commissioner requires utilities to email CIP Staff a Courtesy Notification summarizing any program changes that do not fall under the parameters of the formal plan modification process outlined in Minnesota Rules, and then work with Staff to determine whether it merits a formal modification.

   d. The Deputy Commissioner requires that utilities include in their annual status report 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.

      **Response:**

      As a result of the February 10, 2017, MPUC approval of Minnesota Power's SolarSense program (Docket No. E015/M-16-485), the Company filed a Program Modification request on August 9, 2017, to remove the Customer Renewable Energy ("RE") program from the 2017–2019 CIP Triennial Plan (Docket No. E015/CIP-16-117). On November 16, 2017, the Deputy Commissioner approved Minnesota Power's petition. Further, due to the enactment of new legislation in 2017 closing the Made in Minnesota ("MIM") program, the MIM assessment was to remain in CIP under CIP Regulatory Charges for 2017 and is thereafter discontinued. The Customer Renewable Energy program section has therefore been removed from Minnesota Power's 2020 Consolidated filing.

The following guidance on requests related to Minnesota Power's 2017-2019 Triennial Plan was issued by the Department in response to courtesy notifications submitted by Minnesota Power:

i. Starting in 2017, Minnesota Power is no longer required to use IGSHPA contractors for GSHP installations or a pre-application process, due to the use of the TRM measure.

ii. For projects that were started in 2016 (prior triennial), but not completed until 2017, it is acceptable and appropriate to use the TRM 1.1 instead of TRM 2.0 (current triennial).

iii. Regarding multifamily programs, Minnesota Power explored and evaluated various delivery strategies in an effort to move towards a dedicated multifamily offering. A more in-depth description of these efforts can be found in the Energy Analysis section of this filing.

iv. On December 7, 2017, Minnesota Power submitted through email a courtesy notification providing notice that the Company planned to offer increased rebates in its One Home program for refrigerators, freezers and smart thermostats. The Department acknowledged and accepted this request on January 12, 2018.

v. On December 7, 2017, Minnesota Power submitted through email a courtesy notification of a proposed "Fluorescent Troffer to LED" Smart Measure. The Department acknowledged and accepted this request on March 29, 2018.

vi. On November 21, 2018, Minnesota Power submitted through email a courtesy notification that the Company expected to exceed the Energy Partners Low Income program budget by more than 25% for the 2018 program year. On December 4, 2018, the Department acknowledged and accepted Minnesota Power's Energy Partners Low Income budget modification request.

7. The Deputy Commissioner approves the 2017–2019 budgets, energy savings and participation goals. *(Approved budget listed at the beginning of this section in table format.)*

***2020 Electric CIP Extension Plan***

The Deputy Commissioner approved Minnesota Power's 2020 Triennial CIP Extension.[19]

1. The Deputy Commissioner finds that MP's proposed 2020 Extension is in compliance with the following statutory requirements:

a. Minimum 1.5 percent savings goal requirement (§216B.241, subd. 1c).

b. Minimum spending level (§216B.241, subd. 1a).

c. Minimum low-income spending level (§216B.241, subd. 7).

[19] Docket No. E015/CIP-16-117, November 26, 2019.

d. Cap on research and development spending equal to ten percent of MP's minimum spending requirement (§216B.241, subd. 2(c)).

e. Cap on distributed and renewable generation spending equal to five percent of MP's minimum spending requirement (§216B.2411, subd. 1), or ten percent with the Deputy Commissioner's permission for qualifying solar energy projects.

f. Provision requiring programs to promote the use of efficient lighting and support the collection of spent lamps.

g. Provision requiring inclusion of programs that facilitate ENERGY STAR labeling, LEED certification, or Green Globes certification of commercial buildings (§216B.241, subd. 1f(c)).

h. Provision requiring utilities to develop CIP projects to support attainment of SB 2030 standards (§216B.241, subd. 9(e)).

2. The Deputy Commissioner approves MP's budgets and goals at the segment-level. Utilities must also report energy savings, spending, participation, and cost-effectiveness results at the program, segment, and portfolio-level in their annual status reports so that individual program performance can be monitored.

3. The Deputy Commissioner finds MP's new or substantially modified programs to be generally reasonable.

4. The Deputy Commissioner has the authority to order additional CIP spending under Minnesota Statutes §216B.241, subd. 2(a), §216B.241, subd. 2(b), and §216B.241, subd 1a(d).

5. Utilities are allowed to exceed annual budget, savings, and participation goals for all direct impact segments so long as the additional spending does not result in the segment becoming non-cost effective from the Societal perspective. Utilities are required to notify the Department via a courtesy notification of circumstances where the utility expects to exceed any segment goals by 25 percent.

a. The Deputy Commissioner requires utilities to follow the instructions in Minnesota Rules part 7690.1400 and 7690.1430 for plan modifications.

b. The Deputy Commissioner requires utilities to email CIP Staff a Courtesy Notification summarizing any program changes that do not fall under the parameters of the formal plan modification process outlined in Minnesota Rules, and then work with Staff to determine whether it merits a formal modification.

c. The Deputy Commissioner continues to require that utilities 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.

i. The following guidance on requests related to Minnesota Power's 2020 Triennial Extension was issued by the Department in response to courtesy notifications submitted by Minnesota Power:

Minnesota Power submitted through email a courtesy notification providing notice that the Company planned to complete remote Home Energy Analyses ("HEA") for individuals who requested a HEA as part of the Power of One Home program and Energy partners Low Income program, along with mailing kits for the product portion of the HEA in 2020. In addition, Minnesota Power's Energy Partners low-income program is also currently coordinating with community action agency head start and food delivery programs to include LED bulbs in food deliveries to Minnesota Power customers. The Department approved this request on May 13, 2020.

ii. Minnesota Power submitted a supplemental courtesy notification requesting approval to modify the virtual energy audit process for select audits. The Company requested approval to deliver virtual HEA's with Franklin Energy for residential energy audits in select communities. This approach included a virtual audit through which auditors identified opportunities for direct installation of eligible energy efficient products. The Company created customized kits containing the items identified through the audit process. Additionally, Minnesota Power offered supplemental products to customers who have received a Starter Kit through a remote HEA ("HEA")since May 2020. The department approved this request on September 9, 2020.

iii. In order to engage customers through energy efficiency during the COVID pandemic, Minnesota Power submitted a courtesy notification to increase its distribution of energy saving kits in the Energy Partners program through the end of 2020. As part of the promotion, Minnesota Power had a verification step in which the customer completed a survey indicating that they installed the measures included in the kit. The department approved this courtesy notification on November 10, 2020. As part of the approval, 50% of savings can be claimed if no boxes are checked on the survey or if the survey is not returned, and 100% if the survey is returned with all boxes checked. Additionally, if a couple of boxes are checked, but not all the boxes Minnesota Power is able to assign energy savings for each of the items on the survey and claim the appropriate savings depending on the number of items installed with a sliding scale between 50% and 100%.

d. The Budget Flexibility and Plan Modification provisions are not required 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 CIP accomplishments.

6. The Deputy Commissioner approves the following 2020 budget, energy savings, and participation goals *(Approved budget listed at the beginning of this section in table format.)*

## OTHER REGULATORY REQUIREMENTS

### *2017–2020 Appendix A. Complete List of TRM Deviations and Staff Recommendations*

Staff approved all variations of Power of One Home measures and Power of One Business measures.

### *Measurement and Verification Processes*

In 2020, Minnesota Power had one customer project that involved the Measurement and Verification ("M&V"), and will be finalized in 2021.

### *Electric Utility Infrastructure Projects and Utility Owned Building Improvements*

In 2010, the Department sponsored and participated in the Minnesota Environmental Initiative's 1.5% Energy Efficiency Solutions Project. The workgroup for this project was charged with identifying barriers to achieving the 1.5% statewide energy-efficiency goal, and to identify areas where consensus or majority recommendations could be developed. During the project workgroup sessions, questions were raised regarding whether utilities could only invest in energy efficiency through the Electric Utility Infrastructure Cost ("EUIC") provision or if utilities could also participate in CIP through the programs they offered to customers (i.e., participate in their own program offerings). In keeping with that goal, the Department created an addendum that provided an explanation of their viewpoint on the electric utility infrastructure ("EUI") definition, attribution and to address statutory questions that arose during the course of the project. This addendum is included in the Final Report which was issued in March of 2011.

The Final Report specifically states that:

> "… relying instead on the fact that these projects would meet the definition of an energy conservation improvement because they increase energy efficiency and are not a EUI project that has been approved by the Commission. The OES would consider these projects as counting towards the 1% bucket, eligible for both cost recovery and a financial incentive. This is based both on historical practices, and the fact that utilities can participate in their own customer offerings. However, a utility would not be able to seek cost recovery under both the EUI Cost Recovery Rider and under the utility's conservation improvement program." And that "energy efficiency improvements to a utility's buildings count as part of the utility's regular CIP and count toward the first 1% portion of the energy-savings goal."

In Xcel Energy's Natural Gas CIP Docket,[20] a conflicting position was expressed by the Department regarding the inclusion of these projects within CIP, leaving uncertainty about how utilities should proceed with CIP planning and investment pertaining to their own facilities. On January 4, 2013, the Department filed comments recommending that the Commission adopt ratemaking standards for recovering the costs of energy-efficiency improvements to utility facilities. On July 16, 2013, the Commission issued an Order finding that utilities may participate in CIP projects at the own facilities.[21] Further details regarding Minnesota Power's compliance with this Order can be found in the section titled "2015 Compliance with Department and MPUC

[20] Docket No. G002/M-11-279.

[21] In the Matter of the Minnesota Department of Commerce's Request that the Commission Adopt Ratemaking Standards for Utility-Owned CIP Projects. Docket No. E,G-999/DI-12-1342, July 16, 2013.

Decisions and Orders," which is immediately following this section. Under Minn. Stat. § 216B.1636 there is a EUIC provision with a separate filing process.

In 2016, Minnesota Power's CIP delivery team participated in the Department's Technical Reference Manual ("TRM") measure work focusing on Electric Utility Infrastructure projects. Minnesota Power did not submit any EUI projects in 2016 due to questions related to quantification and qualification of projects but anticipated reviewing ways the EUI TRM might assist in 2017.

On December 11, 2017, the Department filed a Proposal Filing ("Proposal") in order to provide utilities with more formal guidance regarding how EUI provisions can be utilized so that there is consistency and clarity regarding their application in helping utilities continue to meet their energy-savings goals. The Proposal contains the Department's recommended guidance concerning the utility requirements of Minnesota Statutes section 216B.241 subdivision 1c(d) pertaining to the claiming of energy savings for EUI projects. The Proposal also outlines the Department's recommended use and parameters of the carry forward provision contained in Minnesota Statutes section 216B.241 subdivision 1c(b).

The Department's new proposed guidance is based on a plain reading of section 216B.241 subdivision 1c(d) which suggests that the requirements concerning EUI project savings being counted toward energy-savings goals are based on their inclusion in the utility's CIP *plans*, not the actual *results* of those plans. Based on this interpretation, if a utility submits a CIP plan to the Department that is subsequently approved, and the plan includes at least 1% DSM savings with the remainder of a utilities' goal to be met through EUI projects, the actual resulting savings from those EUI projects could then later be counted toward the utility's energy savings results for that particular program year regardless of whether the 1% threshold is actually achieved as part of its CIP results. The Deputy Commissioner approved the new guidance to take effect on February 20, 2018, allowing utilities to apply the new guidance to their 2017 results.

Furthermore, the Deputy Commissioner issued guidance on October 22, 2018 for determining "normal maintenance" activities and the CIP review and approval process for EUI projects.[22]

At this time, Minnesota Power has not requested approval of any EUI projects.

[22] In the Matter of Determining Normal Maintenance Activities and CIP Review Process for Electric Utility Infrastructure Projects. Docket No. E999/CIP-18-543, October 22, 2018

## 2020 COMPLIANCE WITH DEPARTMENT AND MPUC DECISIONS AND ORDERS

**A. In its September 16, 2015, ORDER Approving Tracker Account and Financial Incentive, Setting Rider Adjustment and Reducing Carrying Charges for Minnesota Power's 2014 Consolidated Filing, Docket No. E015/M-15-80, the MPUC issued the following Order points:**

4. Minnesota Power shall calculate the carrying charge on its CIP tracker account using the rate from its multi-year credit facility. The modification shall be effective as of the date of this order.
5. Within 10 days of the date of this Order, Minnesota Power shall calculate and file in a compliance filing a CPA rate that uses a fiscal year approach, and recognizes that it has been generating revenue since July 1, 2015, at the higher rate of $0.003425.
6. This order shall become effective immediately.

**Response:**

4. Effective as of the date of this Order, Minnesota Power modified the CIP tracker account to calculate the carrying charge using the rate from its multi-year credit facility.
5. On September 25, 2015, Minnesota Power submitted a compliance filing in this matter, providing calculation of a new CPA rate of $0.000442, using a fiscal year approach and recognizing that it has been generating revenue since July 1, 2015, at a higher rate of $0.003425.[23]

Minnesota Power continues to use the rate from its multi-year credit facility.

**B. In its July 16, 2013, ORDER in the Matter of the Minnesota Department of Commerce's Request that the Commission Adopt Ratemaking Standards for Utility-Owned CIP Projects, Docket No. E, G-999/DI-12-1342, the MPUC issued the following Order points:**

1. The Commission hereby finds that utilities may participate in CIP projects at their own facilities and that the associated customer and/or vendor incentives, program delivery, evaluation, marketing and administrative costs may be recovered through the CIP ratemaking process if the costs are approved by the Department as part of CIP and provided a utility demonstrates that its participation in CIP does not result in double recovery of ratepayer funds. This finding does not extend to electric utility infrastructure projects governed by Minnesota Statutes section 216B.1636.
2. The Commission further finds that energy savings and net benefits resulting from utility participation in CIP projects at their own facilities shall not count toward the determination of the utility's DSM financial incentive.
3. The Commission requests that the Department work with the utilities to address issues raised by its recommissioning-study proposal, such as
   a. what type of analysis (e.g., recommissioning, energy audits) should be used for different types of energy facilities;
   b. under what conditions a utility will be required to contract with a third-party energy auditor or recommissioning firm to perform the recommissioning studies and audits;

[23] Compliance Filing, Minnesota Power's 2014 Consolidated Filing, Order Approving Tracker Account and Financial Incentive, Setting Rider Adjustment and Reducing Carrying Charges, September 25, 2015, Docket No. E015/M-15-80.

c. the definition of a "facility" and other terms that need clarification;
d. how a utility will demonstrate that it has already gone through a systemic process to identify energy efficiency improvements at its facilities; and
e. the benchmarking analysis that the utility must provide.

The Department shall file a compliance report in this docket by April 15, 2014.

4. By June 15, 2014, each electric and natural gas investor-owned utility subject to CIP shall submit to the Department for its review and analysis a scoping plan for recommissioning studies or audits that may be appropriate. The scoping plan must include at least the following:
   a. a list of the facilities to be studied in Minnesota;
   b. the proposed type of analysis for each facility (e.g., an energy audit or recommissioning study);
   c. the proposed party to conduct the analysis (i.e., utility staff or third party);
   d. for the studies or audits that would be appropriate, a proposed schedule for completing the studies and audits, taking into account the identification of a utility's least efficient facilities, and the time and cost of the studies and audits.
5. This Order shall become effective immediately.

**Response:**

The Department conducted a meeting and a conference call with the impacted utilities to discuss issues that were raised in the Commission's Order. Minnesota Power participated in this process. On April 15, 2014, the Department filed a compliance report through eDockets and amended that report on April 23, 2014. Minnesota Power worked with the Department on the above-referenced process and submitted a scoping plan for its facilities in June 2014. On August 5, 2014, the Department issued a letter indicating it had received scoping plans and determined that they met all requirements outlined in its compliance report. In this letter, the Department approved the scoping plans and indicated intent to work with utilities and interested parties on additional processes. In accordance with Order Points 1 and 2 of the Commission's Order, Minnesota Power did have two projects at its facilities in 2014. These projects were separately tracked. The energy savings and net benefits resulting from participation in CIP projects at Minnesota Power's own facilities have not been counted toward the determination of the DSM financial incentive. This is noted accordingly in calculations and benefit/cost analysis.

**B. In its January 12, 2012, ORDER in the Matter of a Request by Minnesota Power for Approval of its 2010 CIP Tracker Account, DSM Financial Incentive and CIP Adjustment, Docket No. E-015/M-11-241 the MPUC issued the following Order point regarding behavioral savings:**

4. Minnesota Power shall work with the Department to implement a new method for counting the energy savings from behavioral programs that reflects the concerns raised by the Department in this docket. These changes should be applied to the calculation of the Company's 2012 DSM financial incentive. The Commission asks the Department to report back to the Commission on the approach to be taken in the determination of Minnesota Power's 2012 DSM financial incentive.

**Response:**
Minnesota Power actively participated in this dialogue through eDockets via Docket Nos. E,G999/CI-08-133 and E015/CIP-10-526. The Department issued a Proposed Decision on February 1, 2012, followed by Supplemental Comments on February 27, 2012, and an Errata to Supplemental Comments on March 8, 2012. On October 17, 2012, the MPUC issued an Order stating that "beginning with the 2013 incentive, all utilities with approved DSM financial incentives shall use the Average Savings Method ("ASM") for measuring energy savings from CIP behavioral programs in the calculation of their DSM financial incentive." On January 30, 2015, the Department issued a letter proposing to solicit proposals regarding the ASM beginning June 1, 2015 and to defer any changes to the ASM for investor-owned utilities to no sooner than 2017. The Department also cited research that is under way with an independent consultant regarding a behavioral programs study and workshop series with plans for stakeholder forums. Minnesota Power does not currently offer any behavioral savings programs but has participated in Department workshops regarding this topic.

**C. In its August 13, 2010, Comments in the Matter of Minnesota Power's 2009 CIP Consolidated Filing (Docket No. E015/M-10-266), the Department provided guidelines regarding employee expenses in the categories of travel, meals, and entertainment and employee awards. Minnesota Power provides the following summary in response to those guidelines.**

**Response:**
Minnesota Power summarizes the 2020 expenses that fall within the categories outlined by the Department as follows:

| ***Category*** | ***2020 Amount*** | ***Description*** |
|---|---|---|
| Meals | $3,591 | This includes meals for refreshments at CIP-related meetings, working lunches and dinners and meals while traveling for training, conferences, offsite meetings with regulators and/or workgroups and customer site visits. These are an essential part of promoting and delivering CIP. |
| Travel | $7,444 | This includes travel expenses such as mileage, rental vehicles, taxi services, and air travel for offsite meetings, customer site visits, and travel to training/conferences. These are directly related to CIP program design and delivery. |
| Employee Awards | $0 | This includes awards tied to the successful delivery of conservation program energy-savings goals and outreach objectives. |
| TOTAL | $11,035 | This represents 0.13% of the total annual CIP expenditures, with 100% of employees expenses related to meals and travel as part of promoting and delivering CIP. |

Minnesota Power's total employee expenses were significantly less than the Department's recommended guideline of 0.5% of total CIP expenditures. This is largely due to the COVID-19 pandemic that shifted customer site visits, trade ally outreach, community events, stakeholder meetings and other business travel to virtual platforms for the majority of the 2020 program year.


Status
Report

# 2020 CIP STATUS REPORT

## POWER OF ONE CONSERVATION PROGRAM

Minnesota Power's Power of One energy conservation strategy offers a wide variety of program offerings to best serve its diverse customer mix, while continuing to focus on targeted program objectives—quality installations, informed decisions, conservation and safety. The Company exercises a thoughtful, balanced approach in terms of traditional program design versus less established, emerging opportunities, using a combination of "direct savings" and "indirect savings" programs that complement each other and provide for a comprehensive customer experience. Refer to Figures 1 and 2 for a breakdown of spending by direct savings and indirect savings programs.

**Figure 1: 2020 Program Spending By Direct and Indirect Savings Programs**

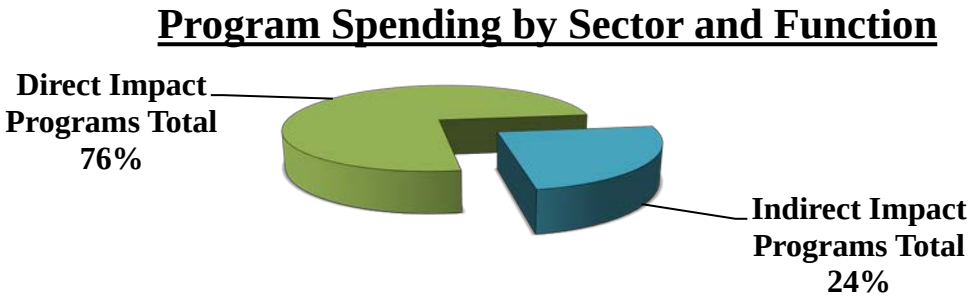
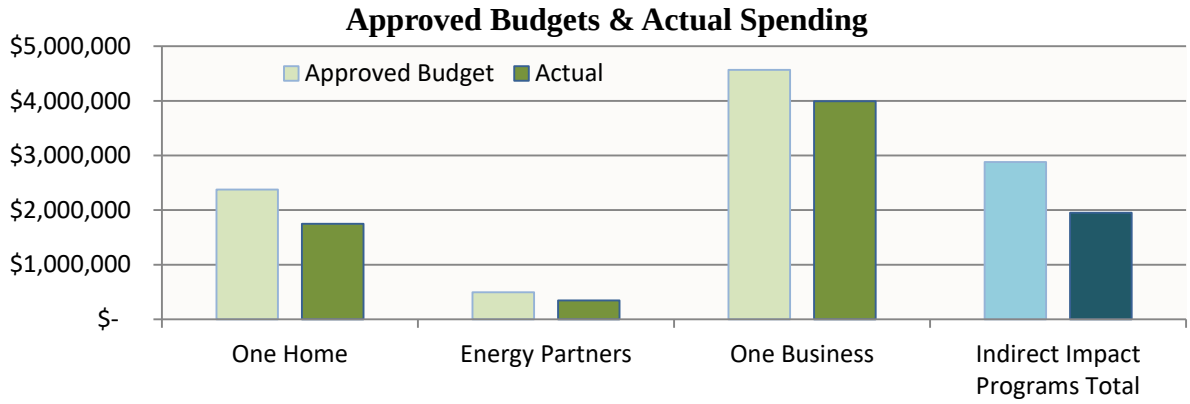



**Figure 2: 2020 Approved Budgets & Actual Spending**




Investing in a range of programs is essential to keep Minnesota Power's program portfolio strong well into the future. See Figures 3 and 4 for a breakdown of spending by program.

**Figure 3: 2020 Direct Savings Program Spending Breakdown**

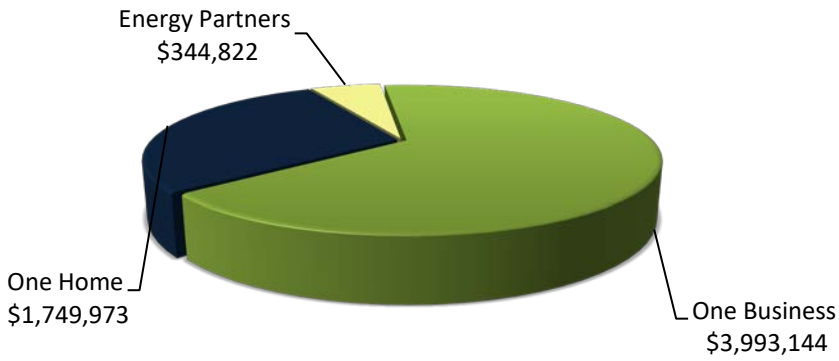
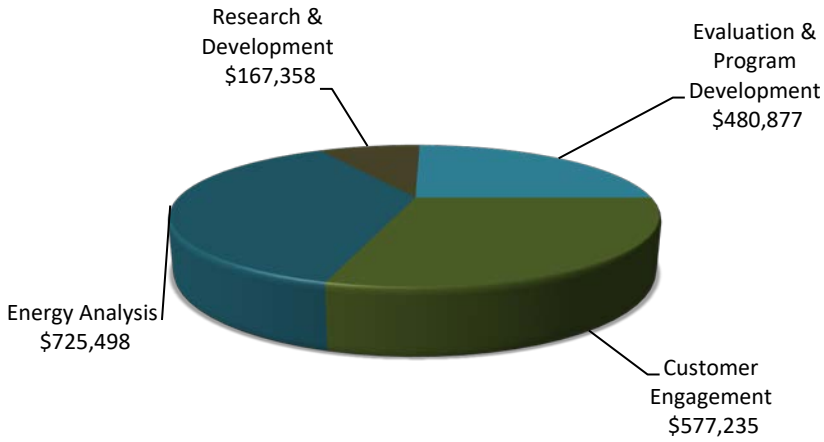
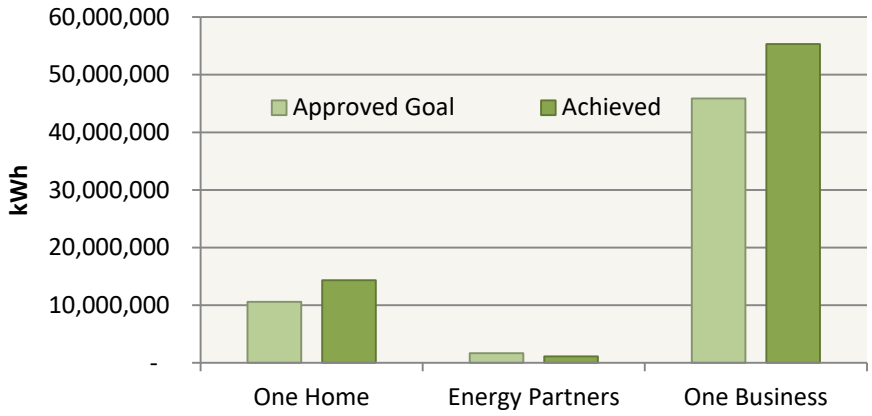



**Figure 4: 2020 Indirect Savings Program Spending Breakdown**




Power of One Home, Power of One Business and Energy Partners remain the foundational programs that consistently deliver energy savings within the Power of One portfolio—typically through established methods like incentives and direct installation of energy efficiency measures. See Figure 5 for a breakdown of approved savings goals vs. achievements by program.

**Figure 5: 2020 Approved Savings Goals & Achievements**




While rebates continue to be a large component of influencing customer choices, the value of Power of One program offerings and resources also comes from including a range of services such as education, training, research, performance studies, energy analysis and overall energy awareness. Minnesota Power provides customers with tools and resources they need to make informed choices, delivered through Minnesota Power's cross-market programs—Customer Engagement, Energy Analysis, Research & Development and Evaluation & Planning. These programs support direct savings programs and serve as a pipeline for projects that ultimately deliver on program objectives.

## LOOKING FORWARD

The COVID-19 pandemic began in early 2020 and had varying impacts on customers across the region. Health concerns, supply chain disruptions and general uncertainty for residential and commercial customers limited Minnesota Power's ability to deliver programs through traditional channels and required the Company to find creative ways to engage and support customers virtually. Minnesota Power halted in-person audits and limited program communications for much of the 2020 program year, which impacted some programs more extensively than others. The Company anticipates that the effects of the COVID-19 pandemic will continue into 2021 and beyond as customer expectations and comfort levels evolve.

The current energy-efficiency environment is rapidly evolving in ways that will continue to present new challenges and opportunities. As a result of the strong focus on virtual program delivery in 2020, Minnesota Power has a backlog of customer site visits that will need to be performed as COVID-related restrictions are lifted and customers become more comfortable with having energy auditors and contractors on site. This will increase the need for Minnesota Power and its delivery partners to be in the field, completing outstanding projects and proactively engaging with customers that have been negatively impacted by the events of the last year. Minnesota Power, together with stakeholders and delivery partners, will need to understand, which programs can be effectively delivered virtually in the future to meet changing customer needs and expectations.

In addition to challenges related to the COVID-19 pandemic, the Company is working to modify its programs to reflect changes in technology, policy priorities, the regulatory framework in Minnesota, and the industry in general. As described in past filings, Minnesota Power has

historically achieved a significant portion of savings from large-scale commercial projects. Projects of this magnitude have become less available, as indicated by the lack of large projects completed in recent years. Additionally, cost-effective savings opportunities continue to decline due to market saturation and changing baselines, requiring the Company to explore new ways to engage customers.

Minnesota Power has taken steps to prepare for these challenges in recent years including an increased focus on new technologies, exploring new delivery strategies and modifying communication efforts to ensure continued effective outreach. The Company will continue to expand on efforts to engage customers in energy efficiency using new and innovative methods to promote underutilized technologies. While these efforts have been successful thus far, as evidenced by increased participation within the newer heat pump technologies in the heating, ventilation and air conditioning ("HVAC") portion of the One Home program, continuing to achieve this higher level of savings through less cost-effective measures is more time and resource intensive.

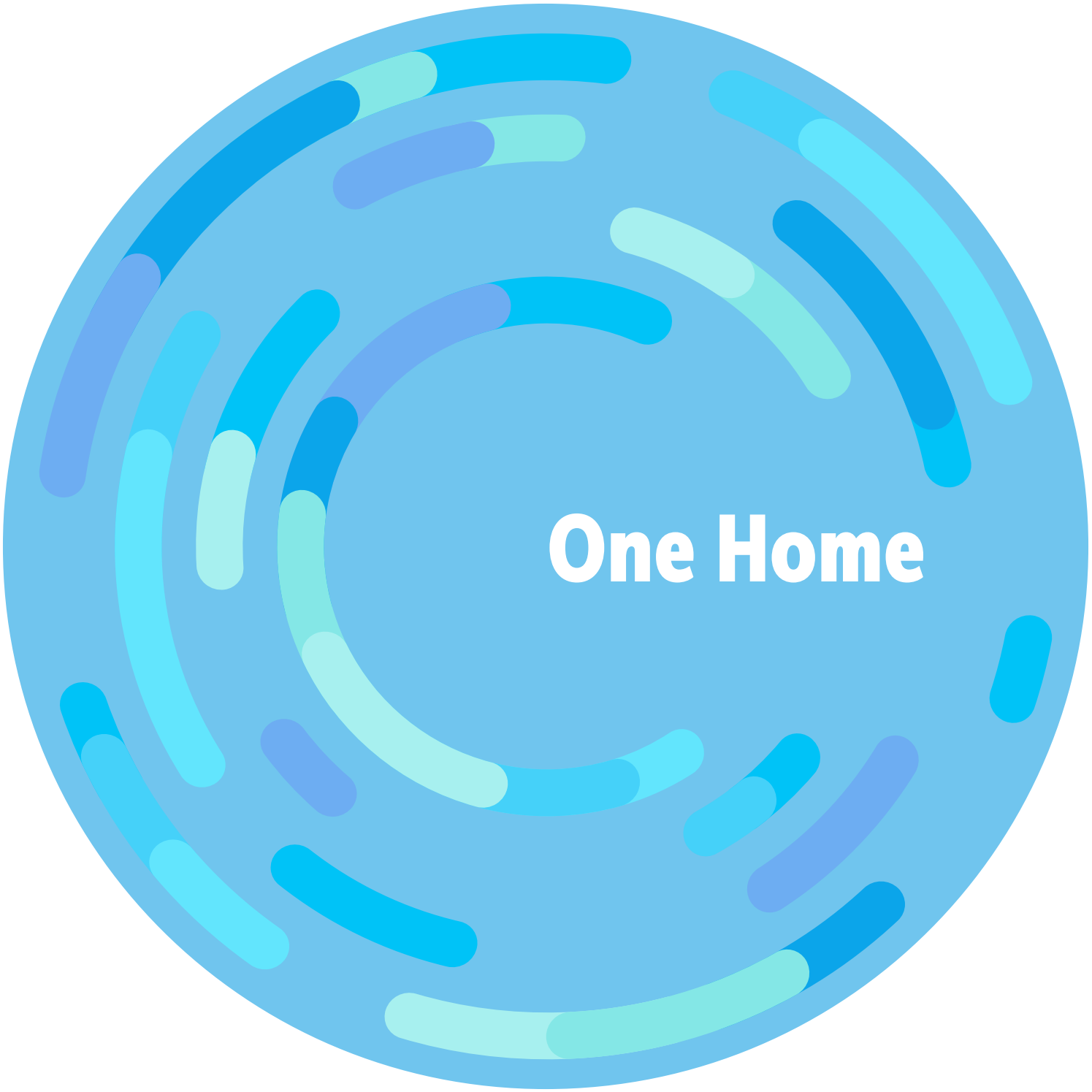
As utilities continue to navigate the changing conservation landscape, regulatory flexibility may be necessary to continue advancing Minnesota's energy policy as well as economic and environmental goals. Minnesota Power will monitor legislative changes, and engage in working groups as discussions around beneficial electrification, fuel switching within CIP, increased focus on equity and engaging underserved communities, and changes to evaluation and performance metrics, among other things, unfold. Minnesota Power remains committed to providing sustainable and cost-effective energy-efficiency programs, with ongoing program development and increased efforts to raise program awareness and participation.

**Minnestota Power's 2020 Cip Expenditures & Achievements**

| *2020* | *Expenditures* | | | | *Energy Savings (kWh @ Busbar)* | | | | *Demand Savings (kW @ Busbar)* | | | | *Participation* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Direct Impact Programs*** | ***Filed Budget*** | ***Approved Budget*** | ***Actual*** | ***Percent of Approved*** | ***Filed Goal*** | ***Approved Goal*** | ***Achieved*** | ***Percent to Goal*** | ***Filed Goal*** | ***Approved Goal*** | ***Achieved*** | ***Percent to Goal*** | ***Filed Goal*** | ***Approved Goal*** | ***Achieved*** | ***Percent to Goal*** |
| One Home | $ 2,377,252 | $ 2,377,252 | $ 1,749,973 | 74% | 10,590,448 | 10,590,448 | 14,344,836.3 | 135% | 1,126 | 1,126 | 1,744.1 | 155% | 122,841 | 122,841 | 217,554 | 177% |
| Energy Partners | $ 497,030 | $ 497,030 | $ 344,822 | 69% | 1,682,164 | 1,682,164 | 1,118,249.8 | 66% | 186 | 186 | 112.5 | 60% | 19,098 | 19,098 | 11,875 | 62% |
| One Business | $ 4,565,608 | $ 4,565,608 | $ 3,993,144 | 87% | 45,863,694 | 45,863,694 | 55,310,989.7 | 121% | 7,881 | 7,881 | 4,954.4 | 63% | 3,366 | 3,366 | 1,485 | 44% |
| **Direct Impact Programs Total** | **$ 7,439,890** | **$ 7,439,890** | **$ 6,087,939** | **82%** | **58,136,306** | **58,136,306** | **70,774,075.8** | **122%** | **9,193** | **9,193** | **6,811.0** | **74%** | **145,305** | **145,305** | **230,914** | **159%** |
| ***Indirect Impact Programs*** | | | | | | | | | | | | | | | | |
| Customer Engagement | $ 925,025 | $ 925,025 | $ 577,235 | 62% | | | | | | | | | 108,000 | 108,000 | 93,200 | 86% |
| Energy Analysis | $ 963,280 | $ 963,280 | $ 725,498 | 75% | | | | | | | | | 5,942 | 5,942 | 4,258 | 72% |
| Renewable Energy (1) | $ - | $ - | $ - | - | | | - | | | | | | | | | |
| Research & Development | $ 243,800 | $ 243,800 | $ 167,358 | 69% | | | | | | | | | | | | |
| Evaluation & Program Development | $ 746,775 | $ 746,775 | $ 480,877 | 64% | | | | | | | | | | | | |
| **Indirect Impact Programs Total** | **$ 2,878,880** | **$ 2,878,880** | **$ 1,950,968** | **68%** | **-** | **-** | **-** | | | | | | **113,942** | **113,942** | **97,458** | **86%** |
| Regulatory Charges | $ 200,000 | $ 200,000 | $ 166,864 | 83% | | | | | | | | | | | | |
| **Total** | **$ 10,518,770** | **$ 10,518,770** | **$ 8,205,771** | **78%** | **58,136,306** | **58,136,306** | **70,774,075.8** | **122%** | **9,192.9** | **9,192.9** | **6,811.0** | **74%** | **259,247** | **259,247** | **328,372** | **127%** |

*(1) As a result of the February 10, 2017, MPUC approval of Minnesota Power's SolarSense program (Docket No. E015/M-16-485), the Company filed a Program Modification request on August 9, 2017, to remove the Customer Renewable Energy (RE) program from the 2017–2019 CIP Triennial Plan (Docket No. E015/CIP-16-117). On November 16, 2017, the Deputy Commissioner approved Minnesota Power's petition. Further, due to the enactment of new legislation in 2017 closing the Made in Minnesota (MIM) program, the MIM assessment will remain in CIP under CIP Regulatory Charges for 2017 and then be discontinued thereafter. The Customer Renewable Energy program section has therefore been removed from --Minnesota Power's Consolidated filing.*

**EXHIBIT 4**




One Home

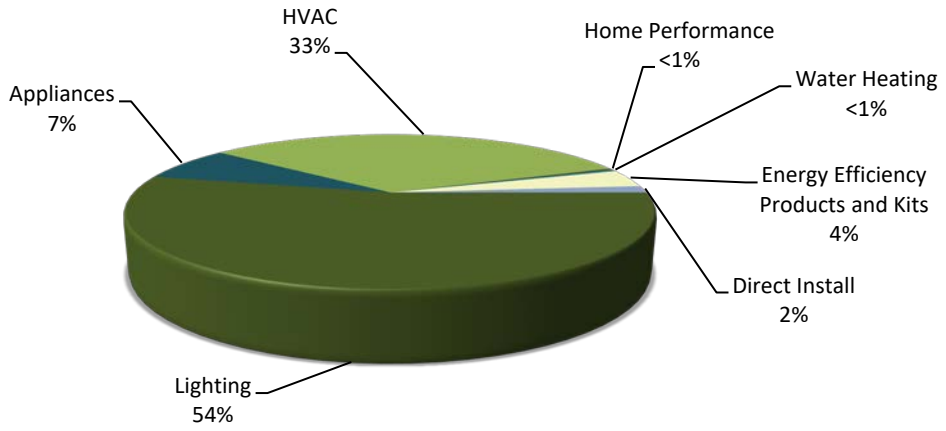
## PROGRAM TITLE: POWER OF ONE HOME

### PROGRAM DESCRIPTION

Power of One Home is Minnesota Power's portfolio-based residential program designed to help customers make informed decisions about how to save energy in their homes. The program includes rebates on energy-efficient lighting, appliances, heating and cooling, water heating and energy-efficient new construction.

While a variety of technologies are promoted through Power of One Home, lighting continues to be a primary driver of success, accounting for over half of reported savings. Heating and cooling measures represent 33% of the savings while appliances represent 7% of savings. Direct installations, home performance and energy-efficient kits represent a combined 6% of reported savings.

**Figure 6: Power of One Home Program – 2020 Savings by Technology (kWh)**




### RESULTS

The table below details the Power of One Home 2020 approved goals versus actual results.

| | ***Approved Goals*** | | ***Actual Results*** | | ***% of Approved Goal*** |
|---|---|---|---|---|---|
| Total Project Expenditures | $2,377,252 | | $1,749,973 | | 74% |
| Total Project Energy Savings (at busbar) | 10,590,448 | kWh | 14,344,836 | kWh | 135% |
| Total Project Demand Savings (at busbar) | 1,125.5 | kW | 1,744.1 | kW | 155% |
| Participation (measures) | 122,841 | | 217,554 | | 177% |

## EVALUATION METHODOLOGY

This program was evaluated based on the following items:

- Participation levels (number of measures implemented)
- Energy savings (kWh)
- Demand savings (kW)
- Net benefit/cost results (see the benefit/cost summary in the Evaluation section)

Minnesota Power strives to influence residential customers to choose energy efficiency, whether through single end-use technologies or bundling a variety of services and technologies together to optimize further energy savings within their home. Helping customers understand how a house functions and uses energy is a critical step in gaining energy savings. Interactive tools such as MyAccount (an online energy tracking and account management tool) offered by Minnesota Power help accomplish this step, along with experienced and well-versed energy auditors who are the boots on the ground educating homeowners on energy efficiency for their specific situation. These offerings are coupled with strong retailer and HVAC contractor networks that provide resources for customers to attain energy-efficient products and services.

In 2020, Minnesota Power continued its successful Power of One Home program, which relies predominantly on a prescriptive strategy. This strategy makes it easy for customers to participate in the program and streamlines the rebate process. The Company offers a more custom approach when projects require more in-depth analysis into the savings garnered from multiple energy-efficient measures bundled together. This happens, for example, when a customer participates in the Triple E New Construction program. Minnesota Power recognizes that each customer's situation may be unique and knows the importance of offering a variety of paths for them to achieve their goals in energy efficiency.

Many individual components make up the full portfolio known as the Power of One Home program. The following sections provide more information about specific aspects of this program for 2020.

**ENERGY STAR® Lighting and Appliances –** The challenges of 2020 affected the level of success normally experienced by the ENERGY STAR® lighting and appliance portion of the One Home portfolio. Lighting still accounted for the largest portion of achieved savings thanks to strong existing retailer and manufacturer relationships and consumer demand for LED lighting, though at a level less than previous years. Minnesota Power continues to leverage relationships that include a broad retailer mix of mass merchants, home improvement, warehouse club, independent hardware and drug and specialty stores throughout the service territory to ensure that Minnesota Power customers have access to a variety of LED technology wherever they choose to shop. The demand for LED lighting is driven by consumer awareness of the benefits of this long-lasting, energy-efficient technology. A large part of that educational messaging comes from Minnesota Power's efforts in social media, online advertising, bill inserts, point-of-purchase materials in the stores, and the Company's own website which includes a section devoted to energy efficiency. A strong emphasis is put on ENERGY STAR® options as the superior energy efficiency solution. With the increasing demand for LEDs, and as product lines expand, so does the need for the Company to ensure more rebates and discounts are available for specialty lighting, which was a focus in 2020. The Company anticipates that the growing number of LED products will continue to lead the program for the near future.

In 2020, Minnesota Power offered rebates on ENERGY STAR® refrigerators, freezers and dehumidifiers. Participation in every category was down in 2020 as compared to 2019 in large part due to the consequences of the ongoing COVID-19 pandemic. Most retailers experienced supply shortages of refrigerators and freezers, with many being out of stock for several months of the year. Foot traffic in stores decreased, meaning there were less people viewing point-of-purchase materials that assist in helping sway people to choose the more energy efficient option. Minnesota Power's refrigerator and freezer recycling offering took 837 inefficient refrigerators and 116 freezers off the secondary market in 2020, which is more than 350 units fewer than the previous year, following the trend of lower participation. These numbers are still impressive, as in-home appliance collection was halted starting in March to limit risk for customers and contractors. A quick change in delivery strategy to no contact pick-ups meant that customers were still able to participate in the offering despite pandemic hurdles. Minnesota Power ran an enhanced incentive promotion during the early stages of the stay-at-home orders in an attempt to reach customers who were spending more time at home than ever before. Almost 300 units were collected during the promotion timeframe alone. Although participation was lower in 2020 than in recent years for the appliance category, it is not reflective of the demand that customers have for programs like this.

The Company utilized a lighting and appliance field representative again in 2020 to visit participating retailers throughout the service territory. The field representative conducted in-store visits for the first part of the year but greatly reduced and ultimately suspended visits due to safety reasons around COVID-19 in the latter part of the year. Check-ins were conducted via phone and email when face-to-face meetings were not possible. These meetings are important to the ENERGY STAR® lighting and appliance portion of the One Home program because they allow continuous development of the relationship that Minnesota Power has with lighting and appliance retailers, whether small, family-owned hardware stores or global, big-box chains. The impact COVID-19 had on field outreach went beyond the routine store visits and also resulted in canceled in-store events for 2020. Minnesota Power will continue to explore opportunities for increased engagement with customers and participating retailers in the coming years as well as creative ways to execute these opportunities.

**Water Heating –** Water heating makes up a significant portion of residential energy use. As such, Minnesota Power offers the following energy-efficient products to help customers reduce electric water heating costs: a water- and energy-saving SmartPak kit, drain water heat recovery ("DWHR") rebates, and heat pump water heater ("HPWH") rebates. DWHR continues to be a part of the overall portfolio but Triple E New Construction presents the best opportunity for this technology as it allows easy access for installation. The demand for this product in Minnesota Power's service territory is minimal, with no participation in 2020. As a result the measure was not included in Minnesota Power's 2021-2023 triennial plan. There was, however, a tenfold increase in heat pump water heater participation over 2019. Minnesota Power continued a promotion started in 2019 that increased the rebate amount to make purchasing a HPWH more appealing based on cost. Additionally, the Company filed a program modification to remove size restrictions that have caused barriers to participation in the past.[24] Opportunities for water heating measures as part of the One Home program are somewhat limited overall, as the main requirement for customers is to use electricity to heat water. The Company is encouraged by the results of 2020 and hopes to see that continue in 2021 and beyond.

[24] Docket No. E015/CIP-16-117, August 20, 2020.

**Triple E New Construction** – Triple E New Construction is Minnesota Power's systematic approach to energy-efficient housing. Triple E stands for Energy Efficiency, Education and Evaluation and consists of a plan review followed by three on-site visits. The plan review ensures that prescriptive insulation values are being met and that energy-efficient lighting and appliances are being installed. This is followed by a framing visit, which is an opportunity to help the builder identify problem areas for air sealing such as can lights, cantilevers and bonus rooms. The second visit is the pre-sheetrock evaluation. This provides an opportunity to confirm that the insulation values are correct, identify any further air sealing opportunities and check the specifications on the mechanicals. Lastly, the final visit to the home consists of a blower door test, appliance check and light count to determine the home's performance level and eligible rebate amounts. Minnesota Power continues to report average actual savings from Triple E new homes based on modeling of appropriate standard conventional new homes.[25] In 2020, the program experienced half the participation compared to 2019, most likely a result of continued low prices of natural gas and delivered fuels such as propane. The Company recognizes this is one of the best opportunities to educate consumers on energy efficiency as it highlights lighting, appliances, HVAC and thermal integrity. The new construction program was revised in Minnesota Power's 2021-2023 triennial plan to simplify requirements and encourage more participation.

**Builders –** The Company works with area builders on both a one-on-one basis and through educational outreach such as the annual Energy Design Conference & Expo. This gives Minnesota Power an opportunity to update builders on the Triple E New Construction program standards and encourage them to meet Triple E standards for new homes they build, in addition to providing a vehicle for achieving continuing education requirements.

**Direct Installations and Targeted Kit Offers –** Direct installation of energy-efficient products during an energy analysis results in meaningful energy savings along with positive customer satisfaction during the time of installation. Minnesota Power offers free direct installation of products to customers participating in the HEA offering in addition to tenants within facilities that participated in the specific multifamily direct installation efforts in 2020. Direct installations were suspended for much of 2020 due to the COVID-19 pandemic. Alternative ways to get energy-efficient products in the hands of eligible Minnesota Power customers were needed and as such, delivery strategies were adjusted through courtesy notifications that were approved by the Department on May 13, 2020 and September 9, 2020. HEA participants were either sent a kit of general energy efficient products or were given a customized bag of products based on the results of an analysis of their home. Tenants in multifamily buildings still received direct installation of needed products, but instead of those being installed by a Minnesota Power contractor, they were installed by the building maintenance staff to reduce the number of third parties present in each unit. The Company will continue to evaluate this offering and work to ensure available products are meeting customer needs into the future.

Energy efficient product kits have been available to Minnesota Power customers for several years. The SmartPak Kit (which includes an energy-saving showerhead, faucet aerators, shower timer and water temperature card) and the Starter Kit (including three LEDs, refrigerator thermometer, shower timer and plug load information) were provided to customers upon request or by participation in various promotions and remote HEA offerings. Minnesota Power claimed full savings for kits delivered through the remote HEA offering, as approved by the Department in the May and September courtesy notifications referenced above. Energy-efficient kits are a good way

[25] Minnesota Power's 2011-2013 Triennial CIP, Docket No. E015/CIP-10-526.

to promote first steps in energy conservation and help generate interest in other program offerings. Minnesota Power promoted SmartPaks and Starter Kits through various methods such as its website, bill inserts and social media. In 2020, the Company recognized October as Energy Awareness Month by promoting the SmartPak to customers with an all-electric rate designation. Postcards sent to targeted customers as well as digital advertising through social media, digital ads and emails resulted in 582 households participating in this promotion. Not only do kits provide the customer with immediate energy savings opportunities with free products, but they are also given additional tools and resources to allow them to continue participating in energy conservation programs for years to come.

**Heating, Cooling and Air Conditioning –** The HVAC component of the Power of One Home program is an integral and growing part of the overall residential portfolio. In 2020, the program saw a 57% increase over 2019 in kWh savings in HVAC measures including air source heat pumps, ground source heat pumps, electronically commutated motors ("ECM") and circulators. Contributing to this success is an increased effort to engage more consistently with participating contractors, local distributers and HVAC manufacturers on a regular basis throughout the program year. The Company held an air source heat pump ("ASHP") training in February that focused on the advancements of this technology and its capabilities. These outreach efforts, combined with a 20% spring promotion on cold climate air source heat pumps, led to a 177% overall increase in the number of total air source heat pump rebates when compared to 2019. Cold climate rated systems were a main driver of increased participation with a total of 187 units (a 179% increase over 2019). The company also filed a program modification to rebate ductless air source heat pumps in non-electrically heated homes in 2020.[26] This was achieved by only rebating and claiming savings on cooling load. This modification enabled the company to rebate 95 systems that would not have been eligible previously. The increase in heat pump rebates demonstrates that the Company's efforts to move the market to more energy-efficient heating and cooling options are making an impact.

**Joint ECM Furnace/Boiler Program with the City of Duluth/ComfortSystems** – Minnesota Power and ComfortSystems (the City of Duluth natural gas utility) continued a partnership to offer a joint rebate program on high efficiency furnaces and boilers with ECMs to Duluth residents in 2020. This is the fifth year of this partnership meant to serve shared customers with natural gas and electric incentives with one joint application. This successful partnership is proof that both customers and contractors appreciate the streamlined process. A partnership with ComfortSystems will continue in 2021 in an effort to continually look for ways to enhance the experience for shared customers in the City of Duluth.

**Contractor Network –**Minnesota Power's contractor network grew by more than 29% as a result of targeted efforts to recruit new contractors. Due to pandemic related policies, in-person visits were limited in 2020. The Company instead leveraged phone calls and email to share information about Minnesota Power's programs in 2020 and will continue to do so in 2021. Minnesota Power conducts a survey of customers who participate in the HVAC program to better understand the customer experience. Gathering feedback on the equipment selection, installation process, equipment performance and overall satisfaction with contractor experience in terms of expertise and quality of service provides valuable insight to Minnesota Power's program offerings. In 2020, Minnesota Power again offered complimentary registration to all participating HVAC contractors to attend the 30th annual Energy Design Conference. This conference offers sessions on a variety of building science and technology topics focused around energy efficiency. The Company feels it is critical to ensure participating contractors are offered continuous education,

[26] Docket No. E015/CIP-16-117, February 7, 2020.

tools and resources on energy efficiency, as they are a trusted resource to customers for information on high efficiency equipment when making energy-related decisions.

**Retailer Engagement Network –** Minnesota Power strives to keep retailers engaged in lighting and appliance promotions through personal store visits, phone calls, emails, direct mailings, featured stories in newsletters and on its website. Minnesota Power encourages retailers to promote energy-efficient products to customers and provides point-of-purchase and informational materials to use for promotional purposes. The Company has participated in specific event and in-store promotions with key retailers in strategic situations. For example, the Company is a long-time exhibitor featured at the Arrowhead Home and Builders Show in Duluth, and has implemented special offers for customers attending that event in the past. While this wasn't a possibility in 2020 due to the COVID-19 pandemic, partnerships like these enhance utility/retailer relationships and the Company looks forward to continuing to strengthen these partnerships in the future. Also, the continuation of a lighting and appliance field representative to visit participating stores will grow relationships with the stores and help increase participation.

**Third-Party Implementation Contractors –** Minnesota Power works with several third-party implementation contractors as a fundamental part of its programs. Through these services, Minnesota Power helps customers understand energy efficiency and deliver savings. By tracking customer participation across these programs, Minnesota Power is able to help customers and the utility reap the program benefits, including cumulative impact, while leveraging the economies of scale these contractors can offer.

**SUMMARY**

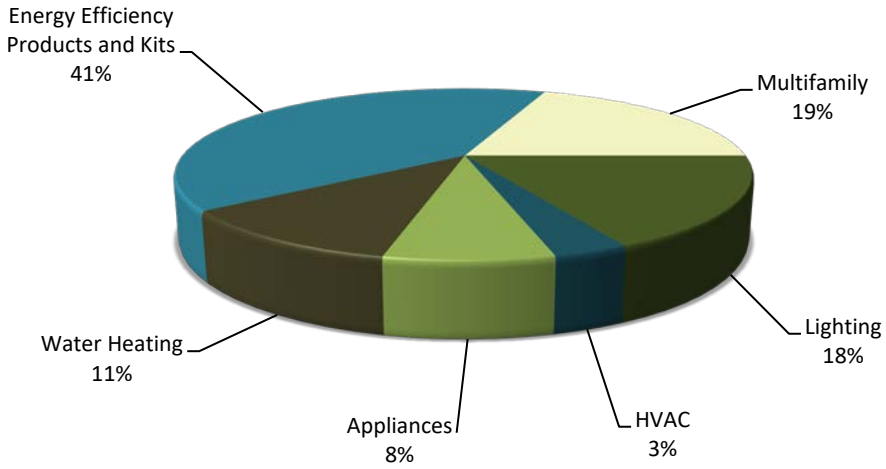
The Power of One Home program had a strong performance in 2020 despite the challenges it faced with the COVID-19 pandemic. The bulk of energy savings was achieved again this year by a successful lighting program, followed closely by a record-breaking year in HVAC savings. This, combined with a balanced portfolio of energy-efficient products and services tailored to customers' specific needs, resulted in a successful program that offers options for customers in different phases of their energy conservation journey. Increased efforts were made to grow the HVAC portion of the residential portfolio in 2020 to accommodate the technology advancements seen in heat pump technologies. Minnesota Power will continue to encourage cost-effective measures like energy-efficient lighting while also continuing to focus on promoting HVAC technologies and redesigning the residential new construction program in 2021.

## PROGRAM TITLE: ENERGY PARTNERS LOW INCOME

### PROGRAM DESCRIPTION

The Energy Partners Low Income program is designed to provide income-eligible customers with educational resources, HEA and direct installation of energy-efficient products and appliances to help them use energy more effectively for the long term. Program delivery is accomplished primarily through local Community Action agencies throughout Minnesota Power's service territory in conjunction with weatherization services, where possible. The Energy Partners program relies heavily on connecting with customers' in-person, either through HEA or events, which was significantly disrupted in 2020 due to the ongoing COVID-19 pandemic. While Minnesota Power took several steps to engage customers virtually, the pandemic impacted the success of the Energy Partners program in 2020 in several ways. These impacts are described in more detail in the following sections.

**Figure 7: Energy Partners Programs – 2020 Savings by Technology (kWh)**



## RESULTS

The following chart summarizes and compares the results of the Energy Partners program with goals established at the time of program approval. As part of the 2020 extension filing[27], Minnesota Power proposed and received approval to increase the energy savings goal by nearly 80% in 2020 compared to the originally filed goal for Energy Partners in the 2017-2019 Triennial Plan. While the Company was able to achieve higher savings in 2020 than in 2019, unforeseen challenges directly related to the pandemic in 2020 prevented Minnesota Power from reaching these significantly increased goals. Additionally, to address the challenges in 2020, the Department approved a Minnesota Power courtesy notification on November 10, 2020 to allow increased distribution of kits.

| | ***Approved Goals*** | ***Actual Results*** | ***% of Approved Goal*** |
|---|---|---|---|
| Total Project Expenditures | $497,030 | $344,822 | 69% |
| Total Project Energy Savings (at busbar) | 1,682,164 kWh | 1,118,250 kWh | 66% |
| Total Project Demand Savings (at busbar) | 186.4 kW | 112.5 kW | 60% |
| Participants (measures) | 19,098 | 11,875 | 62% |
| Energy Analysis - Multifamily Units *(1)* | 185 | 490 | 265% |
| Energy Analysis - Single Family Homes *(1)* | 900 | 390 *(2)* | 43% |

*(1) The Energy Analysis figures reflected here are also included in the Energy Analysis section but are included here to indicate the number of individual households that participated in the Energy Partners program.*

*(2) Of the 390 single family homes that received an audit through the Energy Partners program, less than 5% also received weatherization through the Weatherization Assistance Program.*

Minnesota Power provides the following table to summarize 2020 Energy Partners participation and average rebate costs by measure.

[27] Docket No. E015/CIP-16-117, July 1, 2019.

| Measure Type | Quantity | Average Cost Per Measure |
|---|---|---|
| **Lighting** | **5,168** | **$7.50** |
| LED Bulb | 4,854 | $4.42 |
| LED Torchiere | 314 | $55.20 |
| **HVAC** | **19** | **$2,340.53** |
| Dehumidifier | 10 | $265.00 |
| Furnace - Delivered Fuels | 9 | $4,646.67 |
| **Appliances** | **113** | **$369.16** |
| Refrigerator Replacement | 44 | $779.71 |
| Freezer Replacement | 4 | $328.28 |
| Refrigerator Turn-In | 55 | $90.00 |
| Freezer Turn-In | 5 | $90.00 |
| Microwave Oven | 5 | $139.00 |
| **Water Heating** | **606** | **$8.24** |
| Showerhead | 153 | $21.07 |
| Aerator | 271 | $4.17 |
| Pipe Insulation | 34 | $0.70 |
| Shower Timer | 140 | $3.70 |
| Water Heater Temperature Set-Back | 8 | $12.00 |
| **Energy Efficiency Products and Kits** | **2,164** | **$30.56** |
| Energy Expo Kits | 900 | $33.53 |
| High User Kits | 730 | $42.85 |
| Refrigerator Thermometer | 406 | $3.10 |
| Power Strip - Tier 1 | 128 | $26.71 |
| **Multifamily** | **3,805** | **$7.69** |
| LED Bulb | 2,973 | $5.93 |
| Refrigerator Thermometer | 431 | $4.09 |
| Refrigerator Replacement | 9 | $729.05 |
| Refrigerator Turn-In | 9 | $90.00 |
| Power Strip - Tier 1 | 20 | $26.76 |
| Showerhead | 40 | $17.94 |
| Aerator – Bathroom | 116 | $4.75 |
| Aerator – Kitchen | 50 | $5.43 |
| Pipe Insulation | 86 | $1.50 |
| Shower Timer | 71 | $4.16 |
| **Grand Total** | **11,875** | **$18.98** |

## EVALUATION METHODOLOGY

This program was evaluated based on the following items:

- Participation levels (number of measures implemented)
- Energy savings (kWh)
- Demand savings (kW)
- Net benefit/cost results (see the benefit/cost summary in the Evaluation section)

As a result of strong historical performance in the Energy Partners program, Minnesota Power requested a significant increase to the 2020 Energy Partners savings goal through the CIP Triennial Plan extension filing submitted on July 1, 2019.[28] In this filing, the Company increased its targeted energy analysis of single family homes by more than double from 350 to 900, resulting in an increase to the energy savings goal for the program of nearly 80%. While Minnesota Power continues to have ambitious targets for the Energy Partners program, the unforeseen challenges associated with the COVID-19 pandemic prevented the Company from reaching these goals in 2020.

Minnesota Power halted in-home energy audit programs in March 2020 to protect the health and safety of customers and contractors. While other programs within Minnesota Power's CIP portfolio were able to continue through other channels including retail markdowns and rebates for energy-efficient technologies, the Energy Partners program relies almost solely on energy savings achieved through in-home energy audits. The Company adapted to these unexpected challenges by adding a virtual option to the Energy Partners program in June 2020. However, the interest from customers was minimal. Several customers spoke with one of Minnesota Power's auditors regarding a virtual energy analysis but ultimately the vast majority elected to postpone participation in the program until an in-home option was available.

In-home audits resumed in September 2020 with strict safety protocols and procedures in place. However, the Community Action agencies that deliver the majority of Minnesota Power's Energy Partners program were experiencing significant backlog associated with delivery of the Weatherization Assistance Program. Minnesota Power did recruit an independent auditor, not associated with the Community Action agencies, to assist with delivery of the Energy Partners program in the fall of 2020 and will continue to do so, at least until the pandemic-related backlog subsides. Supply chain interruptions from the COVID-19 pandemic have also impacted the ability for auditors to effectively serve income-qualified customers. Availability of refrigerators and freezers was limited for much of the year in 2020 and retailers that participate in the Energy Partners program have cautioned that delays are expected to continue into 2021. While Minnesota Power was able to replace over 50 refrigerators/freezers through the Energy Partners program in 2020, this is less than half of the refrigerators/freezers replaced in 2019. Additionally, there were over 50 refrigerator/freezer orders from 2020 that Minnesota Power was not able to fulfill during the program year due to inventory issues. Those orders will be fulfilled as appliances become available.

The 17th Annual Energy Awareness Expo was also impacted by the COVID-19 pandemic in 2020. The event, offered in partnership with ComfortSystems and AEOA, typically provides a warm meal for income-qualified customers in the Duluth area, access to information about energy assistance and a free energy-savings kit. Due to the inability to host large gatherings, Minnesota Power elected to host a virtual Energy Awareness Expo in October 2020. A webpage

[28] Docket No. E015/CIP-16-117.

was created with tools and information designed to connect customers to energy affordability resources including the Energy Assistance Program, utility bill information, energy saving tips and information about other available affordability programs. Eligible customers were sent an invitation to attend the virtual event with an offer for a free energy saving kit. Because the event was virtual, Minnesota Power was able to expand the event and include more customers than would typically be invited to the Energy Awareness Expo. Eligible customers in Duluth were sent an energy saving kit with electric and gas measures in partnership with ComfortSystems. Income-qualified customers with high usage (over 1,000 kWh per year) outside of Duluth were sent an energy saving kit with electric measures. In total, 1,630 kits were delivered to income-qualified customers through the event.

Minnesota Power also partnered with the Clean Energy Resource Team ("CERTs") to identify food shelves throughout its service territory to provide information about affordability programs. Customers received a flyer with information about the Energy Partners program, the Customer Affordability of Residential Electricity ("CARE") discount rate, COVID-19 protections and an offer for a free energy saving kit.

Further impacting participation in the Energy Partners program was a general sense of skepticism of free products and services that many customers expressed. The ongoing presidential election resulted in an influx of direct mailings through much of the year and the COVID-19 pandemic created an opportunity for increased scams. While Minnesota Power promoted options to participate remotely in the Energy Partners program including virtual energy audits, energy saving kit promotions and the virtual Energy Awareness Expo, the skepticism from customers paired with a lack of familiarity with technology made it difficult to engage with customers through remote avenues.

Minnesota Power recognizes that many customers need assistance now more than ever and as such, the Company is actively identifying opportunities to overcome the obstacles customers began facing in 2020 and continue to face today. Minnesota Power has contracted with additional vendors to supplement the limited availability of refrigerators and freezers to northern Minnesota and to provide support to Community Action agencies in performing energy audits. Minnesota Power will also continue to cross-promote the Energy Partners program with other available assistance programs, including the CARE discount rate, with a specific focus on customers with high electric usage.

**SUMMARY**

Energy Partners continues to be an important part of Minnesota Power's overall conservation program and is beneficial to the community at large. Despite the hurdles presented by the COVID-19 pandemic, the Company was able to deliver a successful program in 2020, achieving higher energy savings than the previous program year. Although the increased energy savings were not enough to meet the ambitious targets set by the Company prior to the unexpected challenges of 2020, Minnesota Power is confident that the modified delivery strategies implemented in 2020 will ensure a successful program in 2021. By working and collaborating with provider networks and communities, Minnesota Power has delivered an impactful program while connecting people with essential services and resources during a time of significant need. The Company will continue to find opportunities to meet customer needs through this important program.


One
Business

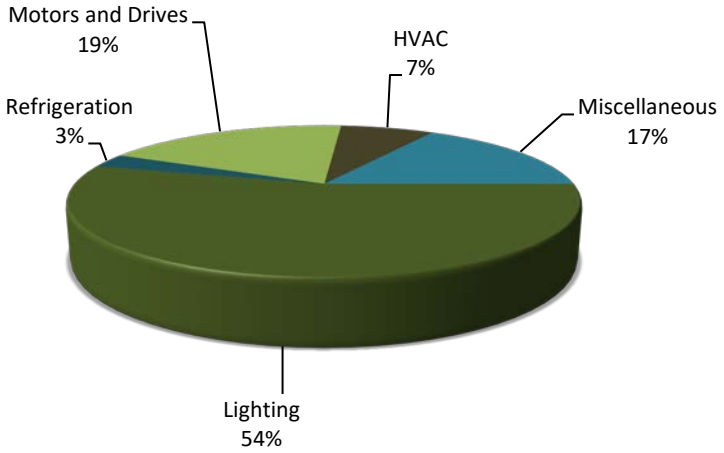
## PROGRAM TITLE: POWER OF ONE BUSINESS

## PROGRAM DESCRIPTION

The Power of One Business program serves as the primary forum for reaching and serving business, industrial, agricultural and public sector customers. Minnesota Power recognizes that customers have different priorities and objectives when it comes to investment decisions and this program provides the flexibility required to serve the unique circumstances of various business types. By utilizing a wide variety of resources, including rebates, incentives, tools, and expertise, Minnesota Power is able to respond to a dynamic mix of priorities, technical opportunities and specific economic factors.

The challenges caused by the COVID-19 pandemic in 2020 temporarily altered how Minnesota Power and its partners delivered the successful Power of One Business program. Minnesota Power halted in-person audits for much of the year to protect the safety of customers, contractors and employees. The Company identified opportunities to work with customers virtually to perform energy analysis, process rebates and provide technical guidance. While Minnesota Power was successful in meeting its energy savings goals in 2020, the virtual delivery channel has impacted the Company's ability to proactively identify projects in the field. In-person work with customers is a critical component to the success of the Power of One Business program and will be necessary to continue meeting aggressive energy-savings goals in the future.

**Figure 8: Power of One Business Program—2020 Savings by Technology (kWh)**



## RESULTS

The table below details Power of One Business 2020 goal accomplishments.

| | *Approved Goals* | *Actual Results* | *% of Approved Goal* |
|---|---|---|---|
| Total Project Expenditures | $4,565,608 | $3,993,144 | 87% |
| Total Project Energy Savings (at busbar) | 45,863,694 kWh | 55,310,990 kWh | 121% |
| Total Project Demand Savings (at busbar) | 7,881.0 kW | 4,954.4 kW | 63% |
| Participation (measures) | 3,366 | 1,485 | 44% |

***2020 Power of One Business Projects Overview by Customer Class***

| | *Total $ Rebated* | *Number of Measures* | *Total Estimated kWh Saved (meter)* |
|---|---|---|---|
| Agricultural | $ 12,413 | 29 | 359,149 |
| Commercial | $1,983,300 | 1,263 | 35,206,751 |
| Industrial | $584,262 | 193 | 14,491,876 |

## EVALUATION METHODOLOGY

Minnesota Power evaluated energy and demand savings based on manufacturer end-use data, proven engineering methods, the Minnesota Technical Reference Manual and/or site-specific engineering studies. A component of all project savings and demand reduction estimates involves end-use calculations. In 2020, Minnesota Power continued its expanded emphasis on pre- and post-project analysis.

When considering energy-savings opportunities, Minnesota Power reviews projects with consideration toward not only energy savings, but also operating costs, effective design and technology utilization, unit output and overall productivity. By following a well-grounded model, energy conservation can become an integral part of sound investment decisions, supporting the customer's overall asset planning and informed resource considerations, and garnering buy-in from operations employees. This model leads to identification of effective short-term projects while also providing a path toward long-term effective use of energy resources by capturing the growing number of customers that have projects spanning across multiple years as opposed to a "one-and-done" approach. Awareness of how systems work together is critical and attention to "systems thinking" with regard to processes pertaining to energy usage is important in providing solutions to customers' energy challenges.

Through this program, both new and established technologies and process improvements are promoted and delivered. Other tools may include cost sharing for design assistance on a proposed new building, a compressed air study at an existing manufacturing facility, and/or monitoring facilities to identify "hot spots" to pinpoint the greatest opportunities for improvement. Power of One Business also reinforces the importance of the commissioning process when projects are implemented, both during initial start-up and during periodic tune-up periods. The Power of One Business delivery strategy is to influence customer choices through relationships and ongoing interactions. Minnesota

Power also works with manufacturers, distributers and contractors to assist in the delivery of conservation technologies. The program offers a wide range of services including education, training, research, performance studies, energy analysis and overall energy awareness, providing customers with tools and resources they need to make informed choices.

The Company's customer-driven marketing strategy ensures that customers' operational needs are addressed while retaining flexibility in program delivery. Customers with less complex projects are better suited to use prescriptive type rebates and delivery methods, while customers with larger or more complex processes are encouraged to potentially reach a greater level of energy savings through in-depth analysis of their facilities. In any case, customers are provided a simple pre-application to get the process started. They are assigned a field representative who can help them tap into the Power of One Business program and identify delivery methods at the appropriate level to fulfill their needs.

**END-USE CATEGORIES & ENGAGEMENT**

**Lighting & Controls** – Lighting continues to be one of the main contributors to the Power of One Business program. As recently as 2017, lighting accounted for 65% of the One Business kWh savings, while in 2020, lighting savings dropped to 54% of the One Business kWh savings. This is primarily due to Minnesota Power's effort to promote other energy savings technologies such as compressed air and process improvement. Minnesota Power continues to offer custom incentives for new and retrofit LED lighting projects. With LED technology, controls are also becoming a much more popular and cost-effective way to implement lighting savings. Although controls represent a smaller portion of the overall CIP savings, they are still an important part of the One Business program results.

**Refrigeration** – Minnesota Power offered incentives for new and retrofit refrigeration projects, which include refrigeration equipment, controls, appliances and evaporative fan motor retrofits.

**Motors/Pumps** – Minnesota Power offered incentives for new or replacement equipment such as premium efficient motors, variable frequency drives ("VFD") and electronically commutated motors ("ECM").

**HVAC & Controls** – Minnesota Power offered incentives for new or replacement commercial and industrial heating, ventilation and cooling equipment including roof top units, chillers, heat pumps and controls.

**Miscellaneous** – Minnesota Power offered incentives for new or retrofit projects with technologies including compressed air upgrades, commissioning, appliances, IT equipment or process improvements.

In 2020, Minnesota Power implemented the following engagement strategies as part of the One Business program.

**Direct Installations –** In 2020, Minnesota Power representatives visited two communities (Pine River/Backus and Park Rapids) and provided on-site analyses at local businesses with the direct installation of energy-saving products. By providing these measures, customers gained an increased awareness of products available, leading to conversations about

future projects. These visits also allowed Minnesota Power to gain valuable information about technologies used, helping the Company to identify additional energy-savings opportunities.

**Multifamily Initiatives –** Minnesota Power continued to work with multifamily facilities as part of the One Business custom commercial program, completing custom projects at 32 multifamily properties in the 2020 program year. Additionally, in 2020 Minnesota Power continued to explore direct installation options not only for in-unit applications but common area applications as well. For more information on Minnesota Power's Multifamily offerings see the Multifamily Summary included after the Energy Analysis program.

**Lighting Enhanced Rebate Offering**– In 2020, Minnesota Power provided an extra incentive for high bay lighting fixtures, exterior lighting fixtures, can light replacements, as well as extra incentives for dimming controls per fixture. These promotions allowed commercial and industrial customers with large indoor space and high ceilings to enter the LED market at a much lower cost. Emphasis was focused on energy savings, quality of light, safety for workers and the public, as well as lower maintenance costs. Personal contacts with businesses were made to assist these customers with understanding of the incentives and help in working through the projects.

**Benchmarking** – Minnesota Power uses benchmarking with facilities to help identify energy-savings opportunities when making facility upgrades and to identify maintenance improvements. In addition, Minnesota Power continues to share information with those responsible for facility management and serve as a resource for information on new technologies and application techniques.

**Bonus Incentives** – To further enhance participation in the Power of One Business program and make energy-saving resources a priority in business planning, Minnesota Power offers a bonus incentive to customers that agree to place the incentives they receive in a revolving account. Customers that agree to the terms of this program receive a 10% premium on top of their standard rebate as a reward to establish and maintain an account designated exclusively toward future energy-savings activities. These accounts have proven useful in funding smaller day-to-day projects as well as providing seed money for taking the next step towards even greater efficiencies.

## ELECTRIC UTILITY INFRASTRUCTURE PROJECTS

In 2020, Minnesota Power did not claim savings from any EUI projects. However, CIP professionals worked closely with Minnesota Power's facility managers to identify energy-savings opportunities within its facilities and is working on a project to be completed in 2021.

## SUMMARY

In 2020, Minnesota Power far exceeded its energy-savings goal for the Power of One Business program, achieving 121%. Though the actual participation numbers (listed as measures) are lower than the approved goals, this is more indicative of the types of projects than it is of actual participation.

The Power of One Business program is designed to empower customers to make informed and effective energy choices by asking the right questions early in projects and reinforcing that energy efficiency is a multi-step process that begins with design and goes well beyond any single isolated project. Through program tools and resources, customers can develop an energy management plan that will add value to their businesses for the long term.


One
Community

## PROGRAM TITLE: CUSTOMER ENGAGEMENT

### PROGRAM DESCRIPTION

The Customer Engagement program is an integral part of raising awareness about Minnesota Power's residential, commercial and community-based energy conservation programs to a wide variety of customers. Through this program, Minnesota Power connects with customers on multiple levels, creating relationships and engaging customers through events, training and education. Educational outreach and collaboration with local energy-conscious organizations continues to be the foundation for delivering Customer Engagement programs. Connecting with these civic organizations, businesses, schools, churches and a variety of community agencies increases awareness about programs and creates a more energy-conscious community. Educational outreach via interactive online tools, specialized trainings, advertising, literature and participation in community events gives customers a trusted ongoing resource for their questions and a sounding board for their ideas.

The COVID-19 pandemic impacted Minnesota Power's Customer Engagement program in several ways in 2020. The majority of planned community outreach events were cancelled and, due to stay at home orders, Minnesota Power was unable to conduct in-store promotions and several other planned outreach activities and special events. Additionally, several direct mail communications and promotions were postponed in order for Minnesota Power to focus on COVID-19-related customer support messaging. Although it was challenging navigating the pandemic, the Customer Engagement program worked to maintain relationships with customers and the community by adapting one of the Company's most impactful community events to a virtual platform and by pivoting to focus on online digital engagement channels whenever possible, ensuring that the programs offered remained meaningful, useful and relevant to evolving customer needs during an unprecedented time.

### RESULTS

The following chart summarizes and compares the results of the 2020 Customer Engagement program with goals established in the Triennial Filing.

| | ***Approved Goals*** | ***Actual Results*** | ***% of Approved Goal*** |
|---|---|---|---|
| Total Project Expenditures | $925,025 | $577,235 | 62% |
| Utilization of the online energy tools and materials (visitors) | 100,000 | 88,256 | 88% |
| Participation in community energy events | 8,000 | 4,944 | 62% |
| Number of seminars, demonstrations and conferences | 35 | 10 | 29% |
| Customer profiles or newsletters completed | 15 | 16 | 107% |

## EVALUATION METHODOLOGY

Minnesota Power tracked the number of visitors (hits) who used online energy tools and program information via the Minnesota Power website, the number of participants at community events, the number of seminars and demonstrations presented or co-sponsored, and the number of customer profiles or newsletters published.

## UNDERSTANDING

### *Collaboration*

Collaboration is a key component in delivering meaningful programs to a wide variety of customers. Minnesota Power collaborates with HVAC contractors, business owners, area utilities, community agencies and energy-conscious organizations to expand outreach and availability of program involvement. The following sections provide examples of how Minnesota Power connected with various stakeholders to promote energy conservation in 2020.

**HVAC Contractor Engagement –** Minnesota Power continued to build on its existing relationships with participating HVAC contractors in 2020, while also encouraging new HVAC contractors to join the program. In addition to regular communications via email blasts distributed to participating contractors, information was provided on program offerings, rebate submittal requirements, special promotions and educational elements. Email blasts were also sent to HVAC contractors in the service territory who were not currently participating in programs to inform them of the benefits to both them and their customers. Minnesota Power's participating contractor list grew by 29% in 2020.

**Lighting and Appliance Retailers –** Minnesota Power works closely with lighting and appliance retailers. In 2020, the Company continued with a lighting and appliance field representative to increase outreach to retailers. The field representative adapted to the pandemic and conducted meetings remotely by phone and email when in-person visits were not possible. Between 40 and 100 contacts were made to ENERGY STAR® retailers each month in 2020. During these check-ins, the representative made sure the retailers had all the appropriate point-of-purchase materials available and gave retailers a chance to share any feedback they had about the program. Minnesota Power also shared resources with participating retailers around COVID relief and emergency loan opportunities available locally.

**Community Action Agencies –** Minnesota Power collaborates with community agencies to deliver the Energy Partners low income program through HEA, the direct installation of energy-saving measures, and the replacement of inefficient appliances. In an effort to keep the communication lines open with agencies, quarterly calls were held to give program updates and collaborate on ways to best reach customers. Minnesota Power continued to host an annual Listening Session with agencies in January 2020 to provide program updates and gather insights for continuing the success of this program. A close relationship with the agencies was even more critical in 2020 as auditors worked to balance safety and the need for assistance in both the Energy Partners and Energy Assistance/Weatherization Assistance programs.

**Building Operator Certification Training –** In 2020, Minnesota Power continued to sponsor and promote Building Operator Certification training by hosting one BOC I class that was held virtually due to the COVID-19 pandemic. This nationally recognized certification program provides education focused on building systems and energy efficiency in facilities. It also presents

an opportunity to tie course learning directly to energy savings by providing tuition reimbursement to attendees for completing the course and identifying a CIP-eligible project.

**Utility Partnerships –** Building relationships with neighboring utilities in an effort to provide the most comprehensive energy conservation services possible to shared customers is an important part of Minnesota Power's energy conservation delivery strategy. A long-standing relationship with Duluth's natural gas utility, ComfortSystems, has resulted in years of collaboration on several different programs including HEA, joint rebates and benchmarking commercial facilities. Minnesota Power partnered with Minnesota Energy Resources Corporation in 2020, to deliver energy analysis and direct installation of energy-efficient technologies to commercial and multifamily buildings as well as virtual home energy analyses. The Company will continue to look for ways to collaborate with other utilities who share the same customer base to streamline the customer experience.

**Stakeholder Partnerships –** Minnesota Power appreciates the integral role stakeholders have in creating successful conservation programs. Minnesota Power has a long-standing history of partnering with local and regional stakeholders to advance energy efficiency for all customer segments. In 2020, these partnerships included work with the Center for Energy and Environment ("CEE") on research specific to air source heat pumps for customers in Minnesota, continuation of the work that was started in previous years with the Minnesota Multifamily Affordable Housing Energy Network ("MMAHEN") on energy efficiency in multifamily facilities, and work with the CERTs on opportunities to engage with income-qualified customers through the Energy Partners program.

**Community Blitz –** Minnesota Power continued delivering community-based energy education in 2020 through a joint small business and residential strategy. In 2020, Minnesota Power representatives visited two communities (Pine River/Backus and Park Rapids) to provide a mix of on-site and virtual analysis along with either direct installation of energy-saving products or delivery of customized energy efficient product kits. Minnesota Power continues to partner with gas utilities to install both electric and gas measures, when applicable. By providing these products, customers gained an increased awareness of available technologies and conversations were spurred regarding future projects. While visiting both market segments, Minnesota Power gained valuable information about technologies used and identified additional energy-savings opportunities unique to these areas.

***Educational Outreach Events***

Through educational outreach events, Minnesota Power is able to expand on its information sharing, raise awareness about program offers, build relationships and seek valuable input from customers, trade allies and community members; however, nearly all of the planned community outreach events were cancelled in 2020 due to the COVID-19 pandemic.

**Energy Design Conference** – Minnesota Power hosted the 30th annual Energy Design Conference & Expo, in person, in February 2020, in Duluth, Minn. This two-day conference focused on energy-efficient building and sustainable design. With nearly 40 educational sessions, an exhibit hall filled with the best in the building business and an abundance of networking activities, this event is a staple in northern Minnesota for those interested in energy efficiency, high performance homes and responsible building choices. The Energy Design Conference was one of the only in-person events held in 2020.

**17th Annual Energy Awareness Expo** – The annual Energy Awareness Expo continues to be a worthwhile and meaningful educational outreach event designed to engage and empower income-qualified customers. The event typically brings together a variety of community outreach organizations, Community Action agencies and energy providers and gives attendees the opportunity to share ideas, learn ways to get the most for their energy dollars and receive energy-saving products. Due to the COVID-19 pandemic, this event was not able to take place in person in 2020, but Minnesota Power staff pivoted to create a virtual Energy Awareness Expo experience for customers, complete with personal invitations and custom online resources. Minnesota Power sent kits including energy saving technologies and resource materials directly to customer homes and, given the virtual nature of the event, the Company was able to include customers outside of the Duluth area for the first time. The virtual kits and remote audits were approved by the Department on May 13, 2020 and an updated courtesy notification that was approved on September 9, 2020.

**Tenant Education Events** – Minnesota Power offered an educational tenant event through its multifamily program again in 2020, with a goal of providing tenants the opportunity to learn about energy efficiency. One tenant event took place before COVID-19 restrictions were put into place with over 20 tenants in attendance. Tenants were provided information about the direct installation measures included in the program and were given an opportunity to ask questions about the technology, program and energy conservation in general. This is a valuable tool and educational opportunity for multifamily tenants and Minnesota Power will continue promoting events like this when in-person gatherings are available.

***Tools and Resources***

**Power of One Internal Communications –** In an ongoing effort to increase internal understanding and awareness of Power of One programs, Minnesota Power uses digital posters throughout company facilities to share current programs. The featured promotions and campaigns are integrated into a loop of company updates on screens throughout Minnesota Power's corporate office building and are also available on the internal company webpage. These efforts spurred additional interest and inquiries about Minnesota Power's conservation programs by employees of the Company. Though with much of Minnesota Power's workforce in a work-from-home circumstance since March, office building promotion decreased for much of 2020.

**Energy-Efficient Kits** – The SmartPak Kit (which includes an energy-saving showerhead, faucet aerators, shower timer and water temperature card) and the Starter Kit (includes three LEDs, refrigerator thermometer, shower timer and plug load information) were provided to customers upon request or by participation in various promotions and offers.

**Power of One Education-Based Literature** – In an ongoing effort to provide up-to-date and relevant information to customers, Minnesota Power developed a variety of literature, brochures and fact sheets focused on energy-efficient technologies and conservation programs. These items were distributed through direct mail, bill inserts, home energy analyses, tenant events and community events. A selection of literature was also provided online for downloading or mail distribution via an online order form.

**The *Duluthian*** – In an effort to raise awareness about the Power of One Business program, particularly for small- to mid-sized businesses, commercial-oriented ads were placed in the bi-monthly Duluth Chamber of Commerce publication, the *Duluthian.* Minnesota Power promoted

the Power of One Business pre-application (available online) and area businesses who have participated in the Power of One Business program and made energy-efficient changes within their businesses and facilities.

**Power of One Section of Minnesota Power's Website** – The Power of One is prominently featured on Minnesota Power's website and is a widely-used destination for energy education and information. Through interactive tools, energy and appliance calculators, rebate and incentive information and up-to-date program information, customers are able to learn how they use energy and develop an action plan based on this knowledge. The website also serves as a valuable resource for Minnesota Power Call Center Representatives and front line employees when answering customer questions about energy conservation programs. MyAccount continues to be a valuable tool in helping customers understand how they use energy and learn ways to take charge of energy costs. This secure online portal shows current and historical energy usage and offers energy markers to track energy-saving purchases, online bill payments, access to bill history and actions that may affect customer usage.

**Promotion** – A multi-faceted approach was taken to promote Minnesota Power's energy conservation programs for residential customers, commercial customers and the community at large. Ads were placed in newspapers, magazines and online to promote energy conservation, the Power of One programs, and community expos and events. Programs were also promoted via social media and through email blasts to opt-in members of the Power of One energy team. Facebook, Twitter and Instagram posts prove to be an effective method of communicating with customers, with a large amount of interaction through Likes, Shares and Comments. For the first time in 2020, Minnesota Power also utilized Google search ads to promote energy conservation programs.

**SUMMARY**

Through active participation within the community, an interactive website, internal and external promotions and specialized trainings, the Customer Engagement program serves as the communications vehicle for all of Minnesota Power's Power of One programs. The Customer Engagement program adapted to the COVID-19 pandemic and, wherever possible, continued to focus on key drivers to empower customers to make effective energy choices. Spending in the Customer Engagement program was under budget in 2020 due to the cancellation of several events and planned promotions as a result of the pandemic. Minnesota Power continues to believe that communication with customers strengthens conservation program offerings and serves as a foundation for an energy-conscious community. Minnesota Power anticipates that the Customer Engagement program will become an even more critical component of program success as savings goals increase.

## PROGRAM TITLE: ENERGY ANALYSIS

### PROGRAM DESCRIPTION

Energy Analysis is a cross-market program that provides a pipeline for energy efficiency projects through direct-savings programs. The goal of the Energy Analysis program is to help residential, commercial/industrial and agricultural customers develop a core understanding of how they use energy. With this knowledge, customers are able to make informed choices about their investment in energy-saving products and services. Energy Analysis focuses on working with customers to develop an action plan that translates recommendations into measurable, achievable steps. Participants are connected with a multitude of program resources such as online calculators, baseline energy consumption data, incentives, product training, technology specifications and online information. Where applicable, direct installation of products may be included during a customer visit.

Energy Analysis for residential customers consists of HEA and/or Home Performance. For commercial customers, it consists of three major categories: informational analysis (Level I), end-use analysis (Level II) and facility analysis (Level III). In addition, Minnesota Power offers design assistance. The focus of Energy Analysis is on identifying, evaluating and delivering the benefits of total energy savings, which includes reduced operating and maintenance costs, increased productivity and comfort and greater control over energy usage. Energy Analysis considers the unique needs of each customer and facility. Ultimately, the customer decides what their energy-savings objectives are and Minnesota Power helps them identify products and services to meet those requirements.

Energy auditors and third-party contractors are an integral part of Minnesota Power's Energy Analysis delivery network. Auditors and/or energy analysts are uniquely qualified and have the proper tools and training to better connect their services with conservation program opportunities and incentives. A major focus in 2020 was ensuring the safety of Minnesota Power's customers, employees and third-party contractors in light of the COVID-19 pandemic. As such, Energy Analysis was delivered virtually where possible.

### EVALUATION METHODOLOGY

Minnesota Power documents the number and type of energy analysis activities delivered.

## RESULTS

The following chart summarizes and compares the results of the Energy Analysis program with goals established at the time of program approval.

| | *Approved Goals* | *Actual Results* | *% of Approved Goal* |
|---|---|---|---|
| Total Project Expenditures | $ 963,280 | $725,498 | 75% |
| HEA *(1)* | 565 | 307 | 54% |
| Home Performance *(2)* | 616 | 259 | 42% |
| Energy Analysis – Low Income Multifamily (renters) | 185 | 490 | 265% |
| Energy Analysis – Low Income Single Family Homes | 900 | 390 | 43% |
| Business Energy Analysis *(3)* | 3,211 | 2620 | 82% |
| Business Facility Performance *(4)* | 465 | 192 | 41% |
| Total Participants | 5,942 | 4,258 | 72% |

*(1) This includes remote and in-person audits*
*(2) This includes proper installation of CAC/ASHP and end-use analyses on ground source heat pumps, Triple E plan reviews and HEA with Building Diagnostics*
*(3) The analysis categories include: Level I; Level II; Level III & agricultural assistance.*
*(4) This includes engineering/design assistance (including plan reviews and lighting design) and benchmarking.*

***HEA –*** Energy Analysis for the residential sector includes HEA, excluding low income (as determined by Low Income Home Energy Assistance Program approval ("LIHEAP")). An HEA can help the customer determine how much energy is being used and what can be done to get the most for their energy dollars. Professional auditors help identify ways to save energy in homes and provide energy-saving direct installation products.

Minnesota Power's HEA offering looked very different in 2020 as compared to previous years. The Company suspended in-person HEAs in March of 2020 to reduce the risk of exposure to COVID-19. Less than two months after, Minnesota Power went live with a brand new remote HEA option, as approved by the Department in a courtesy notification approved by the Department on May 13, 2020 and an updated courtesy notification that was approved on September 9, 2020. The Company began allowing in-person visits in late 2020, but only in special circumstances. Overall, 144 customers participated in the remote HEA option, which encouraged customers to utilize a virtual platform to allow an experienced energy auditor to tour the customer's home, help identify energy-saving opportunities, and leave the customer with recommendations on what steps they can take to save energy and save money. This mimicked the standard in-person HEA in almost all areas except for the free direct installation of energy efficient products. To address this, Minnesota Power provided kits to customers that included general energy conservation products that they could install themselves with virtual assistance from an energy auditor, if needed. Minnesota Power further developed this offering to include customized kits with products hand-picked by the auditor based on the virtual walk-through analysis.

Minnesota Power continued using a targeted community approach in 2020, performing Community Blitzes in Pine River/Backus and Park Rapids. Postcards were sent to residential customers, door hangers were left at homes and phone calls were made to residents in each of these locations to promote the HEA program and to encourage interested customers to sign up. Other promotional efforts such as referral drawings, radio and newspaper advertisements and social media posts were utilized to help market this program, focusing on the new virtual delivery strategy. A

partnership with the gas utility Minnesota Energy Resources Corporation allowed the customer a comprehensive look at both their electric and gas energy usage. These targeted initiatives to promote the HEA program in 2020 increased awareness of the virtual offering to customers.

***Home Performance –*** This category includes those services which take into account system performance along with building science best practices. It includes offerings such as HEA with Building Diagnostics ("HEA w/BD"), Triple E New Construction and Central Air Conditioner ("CAC") and Air Source Heat Pump ("ASHP") Design Assistance.

An HEA w/BD takes a traditional HEA to the next level and includes blower door testing and infrared thermal scanning. This is beneficial for homes that experience cold drafts or sweaty windows in the winter, uneven temperatures between rooms, heating or cooling systems that do not keep the home comfortable, or ice dams. Participation through March of 2020 was tracking steady with historical trends at around 30. Due to the COVID-19 pandemic, HEA w/BD has been suspended since mid-March 2020.

The Triple E program maintained the higher "Level 2" standards from 2012, which included increased values for both prescriptive (i.e., thermal efficiency, moisture control, air quality, heating and domestic hot water) and performance (i.e., heating and air tightness) measures.

CAC and ASHP Design Assistance is a service provided to customers through participating trained HVAC contractors. The contractor focuses on ensuring proper sizing, air flow and refrigerant charge of installed cooling equipment. Minnesota Power continued to promote the importance of these services to its customers.

***Low Income Energy Analysis –*** The Low Income Energy Analysis program consists of single family and multifamily (renters) HEA. This program is delivered through partnerships with local Community Action agencies and various delivery vendors. Active agencies in 2020 included the Arrowhead Economic Opportunity Agency ("AEOA"), Mahube-Otwa Community Action Partnership, Lakes and Pines Community Action Council, KOOTASCA Community Action and Tri-County Community Action Partnership. Minnesota Power also partnered with local energy auditors to supplement the work of the Community Action agencies for both single family and multifamily Energy Analysis in 2020. Minnesota Power was not able to achieve its aggressive goals for single family Energy Analysis in 2020 due to unforeseen challenges of the pandemic. The Company was able to perform Energy Analysis on 390 single family homes as compared to its 2020 goal of 900. While energy analysis in single family homes was heavily impacted by the COVID-19 pandemic and related health concerns, Minnesota Power was able to reach hundreds of residents in multifamily buildings by partnering with property managers to install energy-saving products and limit the risk of exposure. In 2020, 15 low income multifamily properties were analyzed and 490 units were impacted through direct installation of energy efficiency products.

***Business Energy Analysis –*** The Business Energy Analysis program continues to utilize analysis as a tool for educating and encouraging customers to make informed energy decisions. Business Energy Analysis involves preliminary energy use analysis and benchmarking. It includes a high-level business and facility interview, billing analysis, ENERGY STAR® Portfolio Manager analysis and/or Energy Use Index ("EUI"). The levels used are Level I (high-level site visit and walk-through analysis); Level II (energy survey and engineering analysis plus end-use analysis); and Level III (detailed analysis of capital-intensive modifications). For 2020, MP also tracked customer contacts. These were customer interactions that didn't reach Level I Analysis but

involved developing potential energy conservation projects. In 2020, there were 2,250 customer contacts.

In 2020, Minnesota Power collaborated with local gas utilities where shared program delivery resulted in implementing energy conservation into a successful project design. Since a majority of energy savings in new construction and commissioning/recommissioning are thermal, this joint cooperation with the natural gas utility fosters a more uniform approach to delivering energy-saving measures in collaboration.

***Business Facility Performance***

*Design Assistance* – Minnesota Power provides customers the tools needed to evaluate their facilities in order to make informed choices with their energy-savings options. By providing plan reviews for remodel or new construction projects, or a lighting design study when moving to new LED technology, Minnesota Power is able to provide the resources needed for customers to make informed choices. In 2020, Minnesota Power performed 170 design assistance projects.

*Certification Evaluations* – In 2020, Minnesota Power was involved with 22 benchmarking efforts, providing customers with assistance in developing B3, ENERGY STAR® and EUI scores. Through the use of benchmarking scores, customers with multiple facilities are able to target candidates to best utilize limited energy funding in order to make the greatest impact.

**SUMMARY**

Energy Analysis is often the first step in connecting with a customer. The wide range of Energy Analysis activities enables Minnesota Power and its third-party contractors to deliver accurate and timely information for the customer's decision-making process, from awareness to interest and from action to follow-up. It helps Minnesota Power introduce new technologies, increase the saturation of existing energy-efficient products, and build relationships that enhance ongoing dialogue with customers and their provider networks.

While the Energy Analysis program continues to be an important component of Minnesota Power's conservation programs, participation levels have fluctuated over the years for a variety of reasons, with the main driver being resource availability. Minnesota Power continuously explores opportunities to improve program offerings to ensure customers find value in the information being provided. Energy Analysis is one of the most direct ways to encourage customers to take the next step toward energy efficiency, empowering them to make effective energy choices.

## MULTIFAMILY SUMMARY

While Minnesota Power did not have a separately filed program for multifamily initiatives in 2020, the Company incorporated a variety of multifamily specific activities within the other existing programs. The following information is not provided for the purposes of regulatory compliance, but rather the Company wishes to provide a unified and clearer view of these efforts for stakeholders focused on multifamily. Savings, spending and participation related to these activities are officially accounted for in the One Home, Energy Partners, One Business and Energy Analysis program reporting numbers. This section serves to informally summarize and report on all the 2020 multifamily efforts. The activities mentioned here include efforts that Minnesota Power has offered for many years through the custom commercial program, and new offerings that have been developed and piloted over the last several years.

The table below summarizes the multifamily kWh savings that were achieved as part of the One Home, Energy Partners and One Business programs. The Column titled "Program" indicates which program the measures are officially included in for reporting purposes.

| **2020 Multi-family Savings** | | |
|---|---|---|
| | **kWh – Meter** | **Program** |
| **Non Low Income Multifamily** | **14,640** | **One Home** |
| Refrigerator Turn-in(1) | 14,640 | |
| **Low Income Multifamily** | **196,956** | **Energy Partners** |
| LED Bulb | 96,302 | |
| Refrigerator Replacement | 3,298 | |
| Refrigerator Turn-in | 8,235 | |
| Refrigerator Thermometer | 40,945 | |
| Power Strip - Tier 1 | 2,120 | |
| Showerhead | 14,144 | |
| Aerator - Bathroom | 10,208 | |
| Aerator - Kitchen | 4,400 | |
| Pipe Insulation | 3,956 | |
| Shower Timer | 13,348 | |
| **Common Area Direct Install** | **69,471** | **One Business** |
| LED Bulb | 69,471 | |
| **MF Commercial Custom Project** | **1,808,513** | **One Business** |
| HVAC | 373,974 | |
| Lighting | 1,151,399 | |
| Miscellaneous | 151,734 | |
| Motors and Drives | 131,406 | |
| **Grand Total** | **2,089,580** | |

(1) While there were no direct installation projects in market rate multifamily buildings, a property manager requested to participate in refrigerator recycling for multiple units.

The table below summarizes the participation in the various offerings. The "Standard Residential" and "Low Income" sections of the table reflect the number of facilities and individual units that received energy analysis and direct installation measures. The number of units reflects the number of unique customer participants. Additionally, the "Commercial Custom" portion of the table reflects the number of completed One Business projects that were associated with a multifamily facility in 2020.

| | |
|---|---|
| **Non Low Income Multifamily** | |
| # Facilities Received Analysis* | 2 |
| # Facilities Received DI | 0 |
| Number of Units Received DI | 0 |
| | |
| **Low Income Multifamily** | |
| # Facilities Received Analysis* | 15 |
| # Facilities Received DI | 13 |
| Number of Units Received DI | 490 |
| | |
| **MF Commercial Custom Project** | |
| # of Facilities with Completed Projects | 32 |

***Facilities Received Analysis includes facilities that received full building audits and comprehensive recommendation reports but either did not have enough opportunity for direct installation measures or had to postpone multiple times due to the COVID-19 pandemic.*

***Developing Relationships –*** As an additional step towards exploring options in the multifamily sector, Minnesota Power continues to work with Minnesota Multifamily Affordable Housing Energy Network ("MMAHEN") to partner with organizations whose goal is to increase energy efficiency and conservation in multifamily buildings. Minnesota Power has attended in-person meetings and conference calls with like-minded organizations through this network, resulting in creative collaboration opportunities and gaining a wealth of resources for further exploration in this sector.

***Joint Multifamily Direct Installation Program –*** In 2020, Minnesota Power continued to focus on a program that would provide an all-encompassing residential/commercial hybrid approach to multifamily facilities. Minnesota Power collaborated with gas utilities when possible, using a joint implementation contractor to provide full on-site inspections, install energy conservation measures in units, provide educational events for tenants and deliver comprehensive reports inclusive of recommendations for both electric and gas measures to building owners. This gave customers an all-inclusive overview of their building's energy use. Minnesota Power worked with Minnesota Energy Resources Corporation to visit five multifamily customers throughout shared service territories, including income-qualified multifamily buildings. For facilities where gas partnerships were not possible, Minnesota Power provided the same deliverables except for the inclusion of the gas measures. In all, almost 500 apartment units benefited from direct installation of over 3,805 energy conservation measures. Having an approach that addresses the needs of both the facility operators as well as the tenants is critical to the Company's efforts in the multifamily sector. Utility collaboration will continue into 2021 and beyond to provide more all-inclusive multifamily energy audits.

***Multifamily Tenant Events –*** In 2020, Minnesota Power offered educational events as part its multifamily program, providing tenants an opportunity to learn about energy efficiency. One event took place before COVID-19 restrictions were put into place with over 20 tenants attending the event. Tenants were provided information about the direct installation measures included in the program and were given an opportunity to ask questions about the technology, program and energy conservation in general.

***Custom Multifamily Projects –*** Minnesota Power encouraged property owners and managers who were building new multifamily facilities or performing complete remodels in 2020 to make energy-efficient choices in their lighting, appliances and HVAC systems. These projects were followed throughout the planning and design phases, and rebates were processed through Minnesota Power's One Business energy conservation program. Minnesota Power processed over $165,000 in rebates to multifamily facilities and captured over 1.8 million kWh savings (at the meter).


Evaluation
& Planning

## PROGRAM TITLE: CIP EVALUATION AND PLANNING

### PROGRAM DESCRIPTION

The Evaluation and Planning program provides the resources for Minnesota Power to plan and evaluate the Triennial CIP filing, complete the evaluation of current conservation programs, prepare the annual Consolidated Filing including the CIP Tracker and Shared Savings incentive reports, respond to data requests from the Department of Commerce, third-parties and alternative providers, and evaluate the benefit/cost ratio of proposed modifications to existing programs or for the development of new programs. The Evaluation and Planning program is essential to addressing regulatory matters associated with CIP. These can include the following:

- Planning the strategic direction for Minnesota Power's overall Conservation Improvement Program initiative
- Ensuring CIP-related regulatory compliance
- Providing benefit/cost analysis for current and future conservation programs and measures

The focus of this program is on managing all CIP regulatory filings, directing benefit/cost analysis, tracking energy conservation improvements and analyzing and preparing cost recovery reports. This program is used to determine the effectiveness of conservation programs and to provide information on how to continuously improve those programs. This program also includes Minnesota Power's participation in various stakeholder groups as well as development of Integrated Resource Plan scenarios and analysis.

Regulatory requirements mandate the evaluation of all direct-impact projects after the end of each year. The cost of this activity is also captured in this program.

### EVALUATION METHODOLOGY

Because this program involved the evaluation of other projects, no formal evaluation plan was proposed for this project.

### RESULTS

| | ***Approved Goals*** | ***Actual Results*** | ***% of Approved Goal*** |
|---|---|---|---|
| Total Project Expenditures | $746,775 | $480,877 | 64 % |

### SUMMARY

Minnesota Power included in its 2017–2019 triennial plan an increased Evaluation and Planning program budget.[29] In recent years, Minnesota Power has experienced higher levels of required engagement in regulatory activities including various stakeholder working groups and an increasing number of information requests related to the Company's CIP programs. Additionally, as the industry continues to mature and evolve, better and more detailed evaluation and analytics

[29] In the Matter of Minnesota Power's 2020 Electric CIP Extension Plan, Docket No. E015/CIP-16-117, November 26, 2019.

are becoming critical to designing effective conservation programs that will allow for continued success of the CIP portfolio well into the future.

Program spending activities in 2020 entailed reporting results, program development, measuring and evaluating the effectiveness of direct-impact conservation projects, conservation program strategy, technical assumption documentation, participation in various stakeholder groups and a multitude of collaborative efforts. The Company views the 2017–2019 triennial years as a period of transition and continued to focus effort in 2020 on planning and development activities to better position its own CIP programs for future success. These efforts included continuing development of more comprehensive program tracking solutions that will allow for increased insights into customer preferences, program participation trends, effective program strategies, etc., which has been a critical part of triennial planning and continuing to meet customer needs and energy efficiency goals. Although similar to 2019 spending, Evaluation and Planning spending in 2020 was somewhat low compared to budget and compared to 2017 and 2018 program spending. This change was largely driven by fewer costs associated with the development of program tracking solutions, labor changes, as well as adjustments and reductions in consulting services used for planning and evaluation.

Given the importance of evaluation and program design, Minnesota Power believes this program continues to serve a significant role in the ongoing success of its Power of One programs.

## BENEFIT/COST EVALUATIONS

### METHODOLOGY

The 2020 project benefit/cost evaluations were performed using Integral Analytics DSMore. This same software was used to evaluate CIP projects in the 2017–2019 CIP Triennial. The following projects were evaluated:

- Power of One Home
- Energy Partners–Low Income
- Power of One Business

The purpose of these evaluations is to determine the cost-effectiveness of the measures actually installed through CIP under the original assumptions. Thus the starting point is the evaluation performed for the 2017–2019 CIP Triennial, filed in June 2016. [30] The same evaluation assumptions were carried forward into the 2020 plan through the 2020 extension filing.[31] Actual rebate and administrative cost data are used in the present evaluations. In addition, data representative of the actual measures implemented are also used, where available. Such information includes kWh and kW saved, incremental measure cost and measure life. The projects are evaluated over the life of each major end-use group and aggregated into the primary projects listed above. The evaluations are discounted to 2020, the year of plan implementation.

Evaluations of indirect impact project costs are only required for the Utility Test for use in the Shared Savings DSM Financial Incentive calculation. However, the costs associated with indirect impact projects were added to evaluations of the entire plan for the other tests to illustrate the small impact that these costs would have on overall cost-effectiveness. The Regulatory Charges were not included in the indirect impact project costs, as those costs were not under the direct control of Minnesota Power.

### RESULTS

The net benefit and benefit/cost ratios are listed below for the following tests:

- Utility Test
- Societal Test
- Participant Test
- Ratepayer Impact Measure Test ("RIM")

[30] In the Matter of Minnesota Power's 2020 Electric CIP Extension Plan, Docket No. E015/CIP-16-117, November 26, 2019.
[31] Docket No. E015/CIP-16-117

**Results of Project Benefit/Cost Evaluations**

| Project | Utility Test | | Societal Test | | Participant Test | | RIM Test | |
|---|---|---|---|---|---|---|---|---|
| | Net Benefits | B/C Ratio | Net Benefits | B/C Ratio | Net Benefits | B/C Ratio | Net Benefits | B/C Ratio |
| Power of One Home | $6,773,853 | 4.87 | $12,682,981 | 3.83 | $29,957,306 | 8.87 | ($10,453,587) | 0.41 |
| Energy Partners | $162,234 | 1.47 | $697,038 | 3.04 | $1,980,398 | 9.88 | ($879,459) | 0.33 |
| Power of One Business | $19,777,526 | 5.95 | $12,712,751 | 1.61 | $33,000,658 | 2.71 | ($25,509,737) | 0.44 |
| Total Plan (with indirect impact projects) | $24,762,646 | 4.08 | $24,141,802 | 1.88 | $64,938,361 | 3.78 | ($38,504,727) | 0.42 |
| Total Plan (w/o indirect impact projects) | $26,713,613 | 5.39 | $26,092,770 | 2.02 | $64,938,361 | 3.78 | ($36,842,784) | 0.43 |

** In compliance with Order Points 1 & 2 from the July 16, 2013 Order Determining Ratemaking Treatment of Utility CIP Project Costs (Docket No. E,G-999/DI-12-1342), net benefits and energy savings resulting from MP facilities projects are excluded for the purpose of the financial incentive calculation. There were no MP facilities projects in 2020 so no adjustments were needed.*

For the following four benefit cost tests, a project is considered to be cost-effective if the net benefits are positive and the benefit/cost ratio is greater than 1.0.

The Utility Test, or the Revenue Requirements Test, as it is also called, measures the change in the direct costs of the utility. Utility Test net benefits are used in the Shared Savings DSM Financial Incentive calculation. A project with positive net benefits or a benefit/cost ratio greater than 1.0 will tend to lower utility costs over the long term.

The Societal Test is the benchmark for determining project cost effectiveness in Minnesota. This test reflects the cost effectiveness of a project from the viewpoint of society as a whole. For each of the Direct Impact programs, reduced energy usage (energy savings) is the primary contributor to societal benefits. The major cost component in the societal test is the incremental cost of the efficient measures.

The Participant Test is important because typically a project must be cost-effective under this test if a customer is expected to implement it. If the customer does not view the project as cost-effective, the customer is not likely to implement it.

The Ratepayer Impact Measure Test indicates the effect on long-term system rates. A project with negative net benefits or a benefit/cost ratio less than 1.0 will tend to raise long-term rates. A project with positive net benefits or a benefit/cost ratio greater than 1.0 will tend to lower long-term rates. Typically projects are not cost-effective from the ratepayer perspective and these test results should be carefully monitored as the electric marketplace continues to become more competitive.

All three Direct Impact programs (One Home, Energy Partners and One Business) are cost-effective from all perspectives except the ratepayer perspective.

## 2020 Annual Energy Savings Summary

*All values are discounted to 2020*

| | kWh - Meter | kW - Meter | kWh - Generator | kW - Generator |
|---|---|---|---|---|
| **Total Direct Impact Programs** | **64,052,241** | **6,164.2** | **70,774,076** | **6,811.0** |
| Total Power of One Home | 12,982,422 | 1,578.5 | 14,344,836 | 1,744.1 |
| Total Energy Partners | 1,012,043 | 101.8 | 1,118,250 | 112.5 |
| Total Power of One Business | 50,057,776 | 4,483.8 | 55,310,990 | 4,954.4 |
| **Grand Total** | **64,052,241** | **6,164.2** | **70,774,076** | **6,811.0** |

## 2020 Utility Test Summary

*All values are discounted to 2020*

| | Utility Benefits | Utility Costs | Utility Net Benefits | Utility B/C Ratio |
|---|---|---|---|---|
| **Total Direct Impact Programs** | **$32,801,553** | **$6,087,939** | **$26,713,613** | **5.39** |
| Total Power of One Home | $8,523,826 | $1,749,973 | $6,773,853 | 4.87 |
| Total Energy Partners | $507,056 | $344,822 | $162,234 | 1.47 |
| Total Power of One Business | $23,770,671 | $3,993,144 | $19,777,526 | 5.95 |
| **Indirect Program Costs** | **$0** | **$1,950,968** | **-$1,950,968** | **0.00** |
| **Grand Total** | **$32,801,553** | **$8,038,907** | **$24,762,646** | **4.08** |

## 2020 Societal Test Summary

*All values are discounted to 2020*

| | Societal Benefits | Societal Costs | Societal Net Benefits | Societal B/C Ratio |
|---|---|---|---|---|
| **Total Direct Impact Programs** | **$51,629,102** | **$25,536,332** | **$26,092,770** | **2.02** |
| Total Power of One Home | $17,160,852 | $4,477,871 | $12,682,981 | 3.83 |
| Total Energy Partners | $1,039,410 | $342,372 | $697,038 | 3.04 |
| Total Power of One Business | $33,428,840 | $20,716,089 | $12,712,751 | 1.61 |
| **Indirect Program Costs** | **$0** | **$1,950,968** | **-$1,950,968** | **0.00** |
| **Grand Total** | **$51,629,102** | **$27,487,300** | **$24,141,802** | **1.88** |

## 2020 Participant Test Summary

*All values are discounted to 2020*

| | Participant Benefits | Participant Costs | Participant Net Benefits | Participant B/C Ratio |
|---|---|---|---|---|
| **Total Direct Impact Programs** | **$88,272,668** | **$23,334,307** | **$64,938,361** | **3.78** |
| Total Power of One Home | $33,765,797 | $3,808,491 | $29,957,306 | 8.87 |
| Total Energy Partners | $2,203,293 | $222,895 | $1,980,398 | 9.88 |
| Total Power of One Business | $52,303,578 | $19,302,921 | $33,000,658 | 2.71 |
| **Indirect Program Costs** | **$0** | **$0** | **$0** | **0.00** |
| **Grand Total** | **$88,272,668** | **$23,334,307** | **$64,938,361** | **3.78** |

## 2020 Ratepayer Impact Test Summary

*All values are discounted to 2020*

| | Ratepayer Benefits | Ratepayer Costs | Ratepayer Net Benefits | Ratepayer B/C Ratio |
|---|---|---|---|---|
| **Total Direct Impact Programs** | **$27,942,192** | **$64,784,975** | **-$36,842,784** | **0.43** |
| Total Power of One Home | $7,261,070 | $17,714,658 | -$10,453,587 | 0.41 |
| Total Energy Partners | $431,939 | $1,311,397 | -$879,459 | 0.33 |
| Total Power of One Business | $20,249,183 | $45,758,920 | -$25,509,737 | 0.44 |
| **Indirect Program Costs** | **$0** | **$1,661,943** | **-$1,661,943** | **0.00** |
| **Grand Total** | **$27,942,192** | **$66,446,918** | **-$38,504,727** | **0.42** |

## 2020 Power of One Home Annual Energy Savings

*All values are discounted to 2020*

| | kWh - Meter | kW - Meter | kWh - Generator | kW - Generator |
|---|---|---|---|---|
| **Lighting** | **6,969,717** | **798.6** | **7,701,140** | **882.4** |
| LED Bulbs | 6,798,792 | 779.9 | 7,512,278 | 861.7 |
| LED Fixture - Indoor | 161,120 | 18.5 | 178,028 | 20.4 |
| LED Fixture - Outdoor | 7,744 | 0.0 | 8,557 | 0.0 |
| LED Torchieres | 1,441 | 0.2 | 1,592 | 0.2 |
| Energy Star Ceiling Fan | 620 | 0.1 | 685 | 0.1 |
| Bulb Recycling | 0 | 0.0 | 0 | 0.0 |
| **Appliances** | **950,714** | **109.1** | **1,050,485** | **120.5** |
| Refrigerators | 50,435 | 5.8 | 55,728 | 6.4 |
| Freezers | 2,880 | 0.3 | 3,182 | 0.4 |
| Refrigerator Turn-Ins | 765,855 | 87.9 | 846,226 | 97.1 |
| Freezer Turn-Ins | 131,544 | 15.1 | 145,349 | 16.7 |
| **HVAC** | **4,305,776** | **603.8** | **4,757,637** | **667.2** |
| CAC - Proper Installation | 37,060 | 42.1 | 40,949 | 46.5 |
| ASHP - Proper Installation | 10,680 | 0.9 | 11,801 | 1.0 |
| ASHP - Ducted | 133,596 | 11.3 | 147,616 | 12.4 |
| ASHP - Ductless | 3,166,113 | 303.6 | 3,498,374 | 335.4 |
| GSHP - Closed Loop | 240,513 | 20.3 | 265,753 | 22.4 |
| ECM - Circulator Pump | 173,519 | 0.0 | 191,729 | 0.0 |
| ECM - New Furnace | 471,100 | 183.6 | 520,539 | 202.9 |
| ECM - Replacement Motor | 4,900 | 1.9 | 5,414 | 2.1 |
| Dehumidifiers | 32,805 | 37.2 | 36,248 | 41.1 |
| Smart Thermostat | 35,490 | 3.0 | 39,214 | 3.3 |
| **Home Performance** | **37,220** | **1.5** | **41,126** | **1.7** |
| Triple E - Level 2 Projects | 37,220 | 1.5 | 41,126 | 1.7 |
| **Water Heating** | **48,896** | **4.1** | **54,027** | **4.5** |
| Heat Pump Water Heater | 48,896 | 4.1 | 54,027 | 4.5 |
| **Energy Efficiency Products and Kits** | **484,664** | **42.8** | **535,526** | **47.3** |
| SmartPak | 360,899 | 29.9 | 398,773 | 33.1 |
| Starter Kit | 123,765 | 12.9 | 136,753 | 14.3 |
| **Direct Install** | **185,435** | **18.6** | **204,895** | **20.6** |
| LED Bulbs | 66,759 | 7.7 | 73,765 | 8.5 |
| Pipe Insulation | 13,248 | 1.1 | 14,638 | 1.2 |
| Showerheads | 35,155 | 2.9 | 38,844 | 3.2 |
| Thermostatic Restriction Showerheads | 2,856 | 0.2 | 3,156 | 0.3 |
| Aerator | 12,584 | 1.0 | 13,905 | 1.2 |
| Water Heater Temperature Set-backs | 2,040 | 0.2 | 2,254 | 0.2 |
| Shower Timers | 17,108 | 1.4 | 18,903 | 1.6 |
| Refrigerator Thermometers | 21,565 | 2.5 | 23,828 | 2.7 |
| Enable Power Management | 1,400 | 0.2 | 1,547 | 0.2 |
| Power Strips - Tier 1 | 12,720 | 1.5 | 14,055 | 1.6 |
| **Administrative Costs** | **0** | **0.0** | **0** | **0.0** |
| Administrative Costs | 0 | 0.0 | 0 | 0.0 |
| **Grand Total** | **12,982,422** | **1,578.5** | **14,344,836** | **1,744.1** |

## 2020 Power of One Home Utility Test

*All values are discounted to 2020*

| | Utility Benefits | Utility Costs | Utility Net Benefits | Utility B/C Ratio |
|---|---|---|---|---|
| **Lighting** | **$4,746,663** | **$379,442** | **$4,367,221** | **12.51** |
| LED Bulbs | $4,631,655 | $351,712 | $4,279,943 | 13.17 |
| LED Fixture - Indoor | $109,762 | $20,367 | $89,395 | 5.39 |
| LED Fixture - Outdoor | $4,241 | $453 | $3,788 | 9.36 |
| LED Torchieres | $582 | $165 | $417 | 3.53 |
| Energy Star Ceiling Fan | $422 | $50 | $372 | 8.45 |
| Bulb Recycling | $0 | $6,694 | -$6,694 | 0.00 |
| **Appliances** | **$358,707** | **$162,265** | **$196,442** | **2.21** |
| Refrigerators | $28,342 | $11,550 | $16,792 | 2.45 |
| Freezers | $1,358 | $900 | $458 | 1.51 |
| Refrigerator Turn-Ins | $280,780 | $131,649 | $149,131 | 2.13 |
| Freezer Turn-Ins | $48,227 | $18,166 | $30,061 | 2.65 |
| **HVAC** | **$3,128,516** | **$483,020** | **$2,645,496** | **6.48** |
| CAC - Proper Installation | $55,641 | $11,275 | $44,366 | 4.93 |
| ASHP - Proper Installation | $7,325 | $450 | $6,875 | 16.28 |
| ASHP - Ducted | $91,631 | $22,600 | $69,031 | 4.05 |
| ASHP - Ductless | $2,200,013 | $257,500 | $1,942,513 | 8.54 |
| GSHP - Closed Loop | $172,696 | $15,600 | $157,096 | 11.07 |
| ECM - Circulator Pump | $96,610 | $11,800 | $84,810 | 8.19 |
| ECM - New Furnace | $448,094 | $154,550 | $293,544 | 2.90 |
| ECM - Replacement Motor | $2,729 | $700 | $2,029 | 3.90 |
| Dehumidifiers | $37,592 | $4,395 | $33,197 | 8.55 |
| Smart Thermostat | $16,185 | $4,150 | $12,035 | 3.90 |
| **Home Performance** | **$24,921** | **$4,200** | **$20,721** | **5.93** |
| Triple E - Level 2 Projects | $24,921 | $4,200 | $20,721 | 5.93 |
| **Water Heating** | **$24,800** | **$12,800** | **$12,000** | **1.94** |
| Heat Pump Water Heater | $24,800 | $12,800 | $12,000 | 1.94 |
| **Energy Efficiency Products and Kits** | **$156,280** | **$22,843** | **$133,437** | **6.84** |
| SmartPak | $112,654 | $12,536 | $100,118 | 8.99 |
| Starter Kit | $43,626 | $10,307 | $33,319 | 4.23 |
| **Direct Install** | **$83,938** | **$16,023** | **$67,915** | **5.24** |
| LED Bulbs | $45,479 | $9,012 | $36,467 | 5.05 |
| Pipe Insulation | $6,719 | $257 | $6,463 | 26.17 |
| Showerheads | $14,660 | $1,648 | $13,012 | 8.90 |
| Thermostatic Restriction Showerheads | $1,191 | $191 | $1,000 | 6.24 |
| Aerator | $5,248 | $538 | $4,710 | 9.75 |
| Water Heater Temperature Set-backs | $210 | $144 | $66 | 1.46 |
| Shower Timers | $2,560 | $337 | $2,223 | 7.60 |
| Refrigerator Thermometers | $3,393 | $700 | $2,693 | 4.85 |
| Enable Power Management | $202 | $105 | $97 | 1.92 |
| Power Strips - Tier 1 | $4,276 | $3,092 | $1,184 | 1.38 |
| **Administrative Costs** | **$0** | **$669,380** | **-$669,380** | **0.00** |
| Administrative Costs | $0 | $669,380 | -$669,380 | 0.00 |
| **Grand Total** | **$8,523,826** | **$1,749,973** | **$6,773,853** | **4.87** |

## 2020 Power of One Home Societal Test

*All values are discounted to 2020*

| | Societal Benefits | Societal Costs | Societal Net Benefits | Societal B/C Ratio |
|---|---|---|---|---|
| **Lighting** | **$11,387,795** | **$1,880,355** | **$9,507,439** | **6.06** |
| LED Bulbs | $11,118,312 | $1,792,409 | $9,325,903 | 6.20 |
| LED Fixture - Indoor | $258,583 | $84,800 | $173,783 | 3.05 |
| LED Fixture - Outdoor | $9,338 | $2,560 | $6,778 | 3.65 |
| LED Torchieres | $887 | $462 | $425 | 1.92 |
| Energy Star Ceiling Fan | $676 | $125 | $551 | 5.40 |
| Bulb Recycling | $0 | $0 | $0 | 0.00 |
| **Appliances** | **$452,376** | **$111,900** | **$340,476** | **4.04** |
| Refrigerators | $40,601 | $15,400 | $25,201 | 2.64 |
| Freezers | $1,814 | $1,200 | $614 | 1.51 |
| Refrigerator Turn-Ins | $349,867 | $83,700 | $266,167 | 4.18 |
| Freezer Turn-Ins | $60,094 | $11,600 | $48,494 | 5.18 |
| **HVAC** | **$4,893,039** | **$1,726,117** | **$3,166,922** | **2.83** |
| CAC - Proper Installation | $85,676 | $54,500 | $31,176 | 1.57 |
| ASHP - Proper Installation | $11,455 | $1,000 | $10,455 | 11.45 |
| ASHP - Ducted | $143,284 | $35,640 | $107,644 | 4.02 |
| ASHP - Ductless | $3,438,927 | $1,346,700 | $2,092,227 | 2.55 |
| GSHP - Closed Loop | $278,955 | $17,672 | $261,283 | 15.79 |
| ECM - Circulator Pump | $141,755 | $88,500 | $53,255 | 1.60 |
| ECM - New Furnace | $717,984 | $168,250 | $549,734 | 4.27 |
| ECM - Replacement Motor | $3,445 | $1,295 | $2,150 | 2.66 |
| Dehumidifiers | $50,460 | $4,860 | $45,600 | 10.38 |
| Smart Thermostat | $21,098 | $7,700 | $13,398 | 2.74 |
| **Home Performance** | **$40,348** | **$26,164** | **$14,184** | **1.54** |
| Triple E - Level 2 Projects | $40,348 | $26,164 | $14,184 | 1.54 |
| **Water Heating** | **$34,783** | **$25,088** | **$9,695** | **1.39** |
| Heat Pump Water Heater | $34,783 | $25,088 | $9,695 | 1.39 |
| **Energy Efficiency Products and Kits** | **$191,902** | **$22,843** | **$169,059** | **8.40** |
| SmartPak | $137,457 | $12,536 | $124,921 | 10.96 |
| Starter Kit | $54,445 | $10,307 | $44,138 | 5.28 |
| **Direct Install** | **$160,608** | **$16,023** | **$144,585** | **10.02** |
| LED Bulbs | $111,197 | $9,012 | $102,185 | 12.34 |
| Pipe Insulation | $9,424 | $257 | $9,167 | 36.70 |
| Showerheads | $19,171 | $1,648 | $17,524 | 11.64 |
| Thermostatic Restriction Showerheads | $1,557 | $191 | $1,367 | 8.16 |
| Aerator | $6,862 | $538 | $6,324 | 12.75 |
| Water Heater Temperature Set-backs | $227 | $144 | $83 | 1.58 |
| Shower Timers | $2,841 | $337 | $2,504 | 8.44 |
| Refrigerator Thermometers | $3,756 | $700 | $3,056 | 5.36 |
| Enable Power Management | $225 | $105 | $120 | 2.14 |
| Power Strips - Tier 1 | $5,347 | $3,092 | $2,255 | 1.73 |
| **Administrative Costs** | **$0** | **$669,380** | **-$669,380** | **0.00** |
| Administrative Costs | $0 | $669,380 | -$669,380 | 0.00 |
| **Grand Total** | **$17,160,852** | **$4,477,871** | **$12,682,981** | **3.83** |

## 2020 Power of One Home Participant Test

*All values are discounted to 2020*

| | Participant Benefits | Participant Costs | Participant Net Benefits | Participant B/C Ratio |
|---|---|---|---|---|
| **Lighting** | **$21,157,400** | **$1,880,355** | **$19,277,045** | **11.25** |
| LED Bulbs | $20,629,333 | $1,792,409 | $18,836,925 | 11.51 |
| LED Fixture - Indoor | $496,010 | $84,800 | $411,210 | 5.85 |
| LED Fixture - Outdoor | $21,830 | $2,560 | $19,270 | 8.53 |
| LED Torchieres | $1,971 | $462 | $1,509 | 4.27 |
| Energy Star Ceiling Fan | $1,561 | $125 | $1,436 | 12.49 |
| Bulb Recycling | $6,694 | $0 | $6,694 | 0.00 |
| **Appliances** | **$1,176,509** | **$111,900** | **$1,064,609** | **10.51** |
| Refrigerators | $102,035 | $15,400 | $86,635 | 6.63 |
| Freezers | $4,958 | $1,200 | $3,758 | 4.13 |
| Refrigerator Turn-Ins | $916,536 | $83,700 | $832,836 | 10.95 |
| Freezer Turn-Ins | $152,979 | $11,600 | $141,379 | 13.19 |
| **HVAC** | **$10,433,359** | **$1,726,117** | **$8,707,242** | **6.04** |
| CAC - Proper Installation | $96,816 | $54,500 | $42,316 | 1.78 |
| ASHP - Proper Installation | $25,101 | $1,000 | $24,101 | 25.10 |
| ASHP - Ducted | $330,963 | $35,640 | $295,323 | 9.29 |
| ASHP - Ductless | $7,565,440 | $1,346,700 | $6,218,740 | 5.62 |
| GSHP - Closed Loop | $620,151 | $17,672 | $602,479 | 35.09 |
| ECM - Circulator Pump | $345,394 | $88,500 | $256,894 | 3.90 |
| ECM - New Furnace | $1,338,702 | $168,250 | $1,170,452 | 7.96 |
| ECM - Replacement Motor | $6,349 | $1,295 | $5,054 | 4.90 |
| Dehumidifiers | $54,830 | $4,860 | $49,970 | 11.28 |
| Smart Thermostat | $49,613 | $7,700 | $41,913 | 6.44 |
| **Home Performance** | **$97,756** | **$26,164** | **$71,592** | **3.74** |
| Triple E - Level 2 Projects | $97,756 | $26,164 | $71,592 | 3.74 |
| **Water Heating** | **$94,248** | **$25,088** | **$69,160** | **3.76** |
| Heat Pump Water Heater | $94,248 | $25,088 | $69,160 | 3.76 |
| **Energy Efficiency Products and Kits** | **$473,361** | **$22,843** | **$450,518** | **20.72** |
| SmartPak | $336,213 | $12,536 | $323,677 | 26.82 |
| Starter Kit | $137,148 | $10,307 | $126,841 | 13.31 |
| **Direct Install** | **$333,164** | **$16,023** | **$317,141** | **20.79** |
| LED Bulbs | $210,147 | $9,012 | $201,135 | 23.32 |
| Pipe Insulation | $22,324 | $257 | $22,068 | 86.93 |
| Showerheads | $46,682 | $1,648 | $45,034 | 28.33 |
| Thermostatic Restriction Showerheads | $3,849 | $191 | $3,659 | 20.16 |
| Aerator | $16,658 | $538 | $16,120 | 30.96 |
| Water Heater Temperature Set-backs | $676 | $144 | $532 | 4.69 |
| Shower Timers | $6,979 | $337 | $6,642 | 20.73 |
| Refrigerator Thermometers | $9,072 | $700 | $8,372 | 12.96 |
| Enable Power Management | $649 | $105 | $544 | 6.18 |
| Power Strips - Tier 1 | $16,128 | $3,092 | $13,036 | 5.22 |
| **Administrative Costs** | **$0** | **$0** | **$0** | **0.00** |
| Administrative Costs | $0 | $0 | $0 | 0.00 |
| **Grand Total** | **$33,765,797** | **$3,808,491** | **$29,957,306** | **8.87** |

## 2020 Power of One Home Ratepayer Impact Test

*All values are discounted to 2020*

| | Ratepayer Benefits | Ratepayer Costs | Ratepayer Net Benefits | Ratepayer B/C Ratio |
|---|---|---|---|---|
| **Lighting** | **$4,043,472** | **$9,655,032** | **-$5,611,560** | **0.42** |
| LED Bulbs | $3,945,502 | $9,403,313 | -$5,457,811 | 0.42 |
| LED Fixture - Indoor | $93,502 | $233,093 | -$139,591 | 0.40 |
| LED Fixture - Outdoor | $3,613 | $10,755 | -$7,143 | 0.34 |
| LED Torchieres | $495 | $1,295 | -$800 | 0.38 |
| Energy Star Ceiling Fan | $360 | $873 | -$513 | 0.41 |
| Bulb Recycling | $0 | $5,702 | -$5,702 | 0.00 |
| **Appliances** | **$305,567** | **$851,903** | **-$546,336** | **0.36** |
| Refrigerators | $24,143 | $65,597 | -$41,453 | 0.37 |
| Freezers | $1,157 | $3,453 | -$2,296 | 0.34 |
| Refrigerator Turn-Ins | $239,184 | $671,332 | -$432,148 | 0.36 |
| Freezer Turn-Ins | $41,083 | $111,521 | -$70,439 | 0.37 |
| **HVAC** | **$2,665,045** | **$5,991,423** | **-$3,326,379** | **0.44** |
| CAC - Proper Installation | $47,398 | $57,676 | -$10,279 | 0.82 |
| ASHP - Proper Installation | $6,240 | $14,237 | -$7,997 | 0.44 |
| ASHP - Ducted | $78,057 | $192,544 | -$114,487 | 0.41 |
| ASHP - Ductless | $1,874,094 | $4,326,222 | -$2,452,128 | 0.43 |
| GSHP - Closed Loop | $147,112 | $341,035 | -$193,923 | 0.43 |
| ECM - Circulator Pump | $82,298 | $210,867 | -$128,568 | 0.39 |
| ECM - New Furnace | $381,711 | $773,621 | -$391,910 | 0.49 |
| ECM - Replacement Motor | $2,325 | $4,523 | -$2,198 | 0.51 |
| Dehumidifiers | $32,023 | $36,333 | -$4,310 | 0.88 |
| Smart Thermostat | $13,787 | $34,367 | -$20,580 | 0.40 |
| **Home Performance** | **$21,229** | **$54,297** | **-$33,068** | **0.39** |
| Triple E - Level 2 Projects | $21,229 | $54,297 | -$33,068 | 0.39 |
| **Water Heating** | **$21,126** | **$62,291** | **-$41,165** | **0.34** |
| Heat Pump Water Heater | $21,126 | $62,291 | -$41,165 | 0.34 |
| **Energy Efficiency Products and Kits** | **$133,128** | **$346,268** | **-$213,140** | **0.38** |
| SmartPak | $95,965 | $247,121 | -$151,156 | 0.39 |
| Starter Kit | $37,163 | $99,147 | -$61,983 | 0.37 |
| **Direct Install** | **$71,503** | **$183,229** | **-$111,725** | **0.39** |
| LED Bulbs | $38,742 | $97,069 | -$58,327 | 0.40 |
| Pipe Insulation | $5,724 | $14,142 | -$8,418 | 0.40 |
| Showerheads | $12,488 | $31,944 | -$19,456 | 0.39 |
| Thermostatic Restriction Showerheads | $1,015 | $2,644 | -$1,629 | 0.38 |
| Aerator | $4,470 | $11,391 | -$6,920 | 0.39 |
| Water Heater Temperature Set-backs | $179 | $564 | -$385 | 0.32 |
| Shower Timers | $2,181 | $5,658 | -$3,478 | 0.39 |
| Refrigerator Thermometers | $2,890 | $7,367 | -$4,477 | 0.39 |
| Enable Power Management | $172 | $529 | -$357 | 0.33 |
| Power Strips - Tier 1 | $3,642 | $11,921 | -$8,279 | 0.31 |
| **Administrative Costs** | **$0** | **$570,215** | **-$570,215** | **0.00** |
| Administrative Costs | $0 | $570,215 | -$570,215 | 0.00 |
| **Grand Total** | **$7,261,070** | **$17,714,658** | **-$10,453,587** | **0.41** |

## 2020 Energy Partners Annual Energy Savings

*All values are discounted to 2020*

| | kWh - Meter | kW - Meter | kWh - Generator | kW - Generator |
|---|---|---|---|---|
| **Lighting** | **176,883** | **20.3** | **195,446** | **22.4** |
| LED Bulb | 164,323 | 18.8 | 181,568 | 20.8 |
| LED Torchiere | 12,560 | 1.4 | 13,878 | 1.6 |
| **HVAC** | **35,091** | **1.4** | **38,774** | **1.5** |
| Dehumidifier | 1,224 | 1.4 | 1,352 | 1.5 |
| Furnace - Delivered Fuels | 33,867 | 0.0 | 37,421 | 0.0 |
| **Appliances** | **78,333** | **8.8** | **86,554** | **9.7** |
| Refrigerator Replacement | 16,502 | 1.9 | 18,234 | 2.1 |
| Freezer Replacement | 836 | 0.1 | 924 | 0.1 |
| Refrigerator Turn-In | 50,325 | 5.8 | 55,606 | 6.4 |
| Freezer Turn-In | 5,670 | 0.7 | 6,265 | 0.7 |
| Microwave Oven | 5,000 | 0.3 | 5,525 | 0.4 |
| **Water Heating** | **113,527** | **9.4** | **125,441** | **10.4** |
| Showerhead | 60,435 | 5.0 | 66,777 | 5.5 |
| Aerator | 23,848 | 2.0 | 26,351 | 2.2 |
| Pipe Insulation | 1,564 | 0.1 | 1,728 | 0.1 |
| Shower Timer | 26,320 | 2.2 | 29,082 | 2.4 |
| Water Heater Temperature Set-Back | 1,360 | 0.1 | 1,503 | 0.1 |
| **Energy Efficiency Products and Kits** | **411,253** | **40.9** | **454,411** | **45.2** |
| Energy Expo Kits | 199,430 | 19.4 | 220,359 | 21.4 |
| High User Kits | 159,685 | 15.5 | 176,443 | 17.1 |
| Refrigerator Thermometer | 38,570 | 4.4 | 42,618 | 4.9 |
| Power Strip - Tier 1 | 13,568 | 1.5 | 14,992 | 1.7 |
| **Multifamily** | **196,956** | **21.1** | **217,625** | **23.3** |
| LED Bulb | 96,302 | 11.0 | 106,408 | 12.2 |
| Refrigerator Replacement | 3,298 | 0.4 | 3,644 | 0.4 |
| Refrigerator Turn-In | 8,235 | 0.9 | 9,099 | 1.0 |
| Refrigerator Thermometer | 40,945 | 4.7 | 45,242 | 5.2 |
| Power Strip - Tier 1 | 2,120 | 0.2 | 2,342 | 0.3 |
| Showerhead | 14,144 | 1.2 | 15,628 | 1.3 |
| Aerator - Bathroom | 10,208 | 0.8 | 11,279 | 0.9 |
| Aerator - Kitchen | 4,400 | 0.4 | 4,862 | 0.4 |
| Pipe Insulation | 3,956 | 0.3 | 4,371 | 0.4 |
| Shower Timer | 13,348 | 1.1 | 14,749 | 1.2 |
| **Administrative Costs** | **0** | **0.0** | **0** | **0.0** |
| Administrative Costs | 0 | 0.0 | 0 | 0.0 |
| **Grand Total** | **1,012,043** | **101.8** | **1,118,250** | **112.5** |

## 2020 Energy Partners Utility Test

*All values are discounted to 2020*

| | Utility Benefits | Utility Costs | Utility Net Benefits | Utility B/C Ratio |
|---|---|---|---|---|
| **Lighting** | **$120,501** | **$38,782** | **$81,719** | **3.11** |
| LED Bulb | $111,945 | $21,449 | $90,496 | 5.22 |
| LED Torchiere | $8,556 | $17,333 | -$8,776 | 0.49 |
| **HVAC** | **$23,573** | **$44,470** | **-$20,897** | **0.53** |
| Dehumidifier | $1,403 | $2,650 | -$1,247 | 0.53 |
| Furnace - Delivered Fuels | $22,170 | $41,820 | -$19,650 | 0.53 |
| **Appliances** | **$32,627** | **$41,715** | **-$9,089** | **0.78** |
| Refrigerator Replacement | $9,273 | $34,307 | -$25,034 | 0.27 |
| Freezer Replacement | $394 | $1,313 | -$919 | 0.30 |
| Refrigerator Turn-In | $18,450 | $4,950 | $13,500 | 3.73 |
| Freezer Turn-In | $2,079 | $450 | $1,629 | 4.62 |
| Microwave Oven | $2,430 | $695 | $1,735 | 3.50 |
| **Water Heating** | **$40,018** | **$4,991** | **$35,027** | **8.02** |
| Showerhead | $25,202 | $3,224 | $21,978 | 7.82 |
| Aerator | $9,945 | $1,129 | $8,816 | 8.81 |
| Pipe Insulation | $793 | $24 | $769 | 33.33 |
| Shower Timer | $3,938 | $518 | $3,420 | 7.60 |
| Water Heater Temperature Set-Back | $140 | $96 | $44 | 1.46 |
| **Energy Efficiency Products and Kits** | **$196,711** | **$66,135** | **$130,576** | **2.97** |
| Energy Expo Kits | $103,338 | $30,177 | $73,161 | 3.42 |
| High User Kits | $82,744 | $31,281 | $51,463 | 2.65 |
| Refrigerator Thermometer | $6,068 | $1,258 | $4,810 | 4.82 |
| Power Strip - Tier 1 | $4,561 | $3,419 | $1,142 | 1.33 |
| **Multifamily** | **$93,626** | **$29,252** | **$64,374** | **3.20** |
| LED Bulb | $65,605 | $17,619 | $47,986 | 3.72 |
| Refrigerator Replacement | $1,853 | $6,561 | -$4,708 | 0.28 |
| Refrigerator Turn-In | $3,019 | $810 | $2,209 | 3.73 |
| Refrigerator Thermometer | $6,442 | $1,762 | $4,681 | 3.66 |
| Power Strip - Tier 1 | $713 | $535 | $177 | 1.33 |
| Showerhead | $5,898 | $717 | $5,181 | 8.22 |
| Aerator - Bathroom | $4,257 | $551 | $3,706 | 7.73 |
| Aerator - Kitchen | $1,835 | $271 | $1,563 | 6.76 |
| Pipe Insulation | $2,007 | $129 | $1,878 | 15.55 |
| Shower Timer | $1,997 | $295 | $1,702 | 6.76 |
| **Administrative Costs** | **$0** | **$119,477** | **-$119,477** | **0.00** |
| Administrative Costs | $0 | $119,477 | -$119,477 | 0.00 |
| **Grand Total** | **$507,056** | **$344,822** | **$162,234** | **1.47** |

## 2020 Energy Partners Societal Test

*All values are discounted to 2020*

| | Societal Benefits | Societal Costs | Societal Net Benefits | Societal B/C Ratio |
|---|---|---|---|---|
| **Lighting** | **$291,513** | **$38,782** | **$252,731** | **7.52** |
| LED Bulb | $271,320 | $21,449 | $249,871 | 12.65 |
| LED Torchiere | $20,193 | $17,333 | $2,860 | 1.17 |
| **HVAC** | **$37,808** | **$42,020** | **-$4,212** | **0.90** |
| Dehumidifier | $1,883 | $200 | $1,683 | 9.41 |
| Furnace - Delivered Fuels | $35,925 | $41,820 | -$5,895 | 0.86 |
| **Appliances** | **$68,383** | **$41,715** | **$26,668** | **1.64** |
| Refrigerator Replacement | $37,369 | $34,307 | $3,062 | 1.09 |
| Freezer Replacement | $2,272 | $1,313 | $959 | 1.73 |
| Refrigerator Turn-In | $22,990 | $4,950 | $18,040 | 4.64 |
| Freezer Turn-In | $2,590 | $450 | $2,140 | 5.76 |
| Microwave Oven | $3,161 | $695 | $2,466 | 4.55 |
| **Water Heating** | **$51,597** | **$4,991** | **$46,606** | **10.34** |
| Showerhead | $32,957 | $3,224 | $29,733 | 10.22 |
| Aerator | $13,005 | $1,129 | $11,876 | 11.52 |
| Pipe Insulation | $1,113 | $24 | $1,089 | 46.75 |
| Shower Timer | $4,371 | $518 | $3,853 | 8.44 |
| Water Heater Temperature Set-Back | $152 | $96 | $56 | 1.58 |
| **Energy Efficiency Products and Kits** | **$405,408** | **$66,135** | **$339,273** | **6.13** |
| Energy Expo Kits | $217,819 | $30,177 | $187,642 | 7.22 |
| High User Kits | $175,168 | $31,280 | $143,888 | 5.60 |
| Refrigerator Thermometer | $6,718 | $1,258 | $5,459 | 5.34 |
| Power Strip - Tier 1 | $5,703 | $3,419 | $2,284 | 1.67 |
| **Multifamily** | **$184,701** | **$29,252** | **$155,449** | **6.31** |
| LED Bulb | $144,625 | $17,619 | $127,006 | 8.21 |
| Refrigerator Replacement | $7,581 | $6,561 | $1,020 | 1.16 |
| Refrigerator Turn-In | $3,762 | $810 | $2,952 | 4.64 |
| Refrigerator Thermometer | $7,132 | $1,762 | $5,370 | 4.05 |
| Power Strip - Tier 1 | $891 | $535 | $356 | 1.66 |
| Showerhead | $7,713 | $717 | $6,996 | 10.75 |
| Aerator - Bathroom | $5,567 | $551 | $5,016 | 10.11 |
| Aerator - Kitchen | $2,399 | $272 | $2,128 | 8.84 |
| Pipe Insulation | $2,814 | $129 | $2,685 | 21.82 |
| Shower Timer | $2,216 | $295 | $1,921 | 7.50 |
| **Administrative Costs** | **$0** | **$119,477** | **-$119,477** | **0.00** |
| Administrative Costs | $0 | $119,477 | -$119,477 | 0.00 |
| **Grand Total** | **$1,039,410** | **$342,372** | **$697,038** | **3.04** |

## 2020 Energy Partners Participant Test

*All values are discounted to 2020*

| | Participant Benefits | Participant Costs | Participant Net Benefits | Participant B/C Ratio |
|---|---|---|---|---|
| **Lighting** | **$568,591** | **$38,782** | **$529,809** | **14.66** |
| LED Bulb | $514,144 | $21,449 | $492,695 | 23.97 |
| LED Torchiere | $54,447 | $17,333 | $37,114 | 3.14 |
| **HVAC** | **$131,480** | **$42,020** | **$89,460** | **3.13** |
| Dehumidifier | $4,532 | $200 | $4,332 | 22.66 |
| Furnace - Delivered Fuels | $126,948 | $41,820 | $85,128 | 3.04 |
| **Appliances** | **$162,122** | **$41,715** | **$120,407** | **3.89** |
| Refrigerator Replacement | $87,998 | $34,307 | $53,691 | 2.57 |
| Freezer Replacement | $4,237 | $1,313 | $2,924 | 3.23 |
| Refrigerator Turn-In | $56,526 | $4,950 | $51,576 | 11.42 |
| Freezer Turn-In | $6,261 | $450 | $5,811 | 13.91 |
| Microwave Oven | $7,100 | $695 | $6,405 | 10.22 |
| **Water Heating** | **$126,137** | **$4,991** | **$121,146** | **25.27** |
| Showerhead | $80,642 | $3,224 | $77,418 | 25.01 |
| Aerator | $31,679 | $1,129 | $30,550 | 28.05 |
| Pipe Insulation | $2,629 | $24 | $2,605 | 110.46 |
| Shower Timer | $10,736 | $518 | $10,218 | 20.73 |
| Water Heater Temperature Set-Back | $451 | $96 | $355 | 4.69 |
| **Energy Efficiency Products and Kits** | **$825,393** | **$66,135** | **$759,258** | **12.48** |
| Energy Expo Kits | $435,362 | $30,177 | $405,185 | 14.43 |
| High User Kits | $356,475 | $31,280 | $325,194 | 11.40 |
| Refrigerator Thermometer | $16,233 | $1,258 | $14,974 | 12.90 |
| Power Strip - Tier 1 | $17,324 | $3,419 | $13,905 | 5.07 |
| **Multifamily** | **$389,570** | **$29,252** | **$360,318** | **13.32** |
| LED Bulb | $291,982 | $17,619 | $274,363 | 16.57 |
| Refrigerator Replacement | $17,405 | $6,561 | $10,843 | 2.65 |
| Refrigerator Turn-In | $9,250 | $810 | $8,440 | 11.42 |
| Refrigerator Thermometer | $17,658 | $1,762 | $15,896 | 10.02 |
| Power Strip - Tier 1 | $2,708 | $535 | $2,173 | 5.06 |
| Showerhead | $18,836 | $717 | $18,119 | 26.25 |
| Aerator - Bathroom | $13,627 | $551 | $13,077 | 24.74 |
| Aerator - Kitchen | $5,908 | $272 | $5,636 | 21.76 |
| Pipe Insulation | $6,719 | $129 | $6,590 | 52.08 |
| Shower Timer | $5,478 | $295 | $5,182 | 18.54 |
| **Administrative Costs** | **$0** | **$0** | **$0** | **0.00** |
| Administrative Costs | $0 | $0 | $0 | 0.00 |
| **Grand Total** | **$2,203,293** | **$222,895** | **$1,980,398** | **9.88** |

## 2020 Energy Partners Ratepayer Impact Test

*All values are discounted to 2020*

| | Ratepayer Benefits | Ratepayer Costs | Ratepayer Net Benefits | Ratepayer B/C Ratio |
|---|---|---|---|---|
| **Lighting** | **$102,649** | **$269,886** | **-$167,237** | **0.38** |
| LED Bulb | $95,361 | $238,303 | -$142,942 | 0.40 |
| LED Torchiere | $7,289 | $31,583 | -$24,294 | 0.23 |
| **HVAC** | **$20,080** | **$85,248** | **-$65,168** | **0.24** |
| Dehumidifier | $1,195 | $3,473 | -$2,279 | 0.34 |
| Furnace - Delivered Fuels | $18,886 | $81,775 | -$62,889 | 0.23 |
| **Appliances** | **$27,793** | **$99,787** | **-$71,994** | **0.28** |
| Refrigerator Replacement | $7,900 | $47,468 | -$39,569 | 0.17 |
| Freezer Replacement | $336 | $1,898 | -$1,563 | 0.18 |
| Refrigerator Turn-In | $15,717 | $40,961 | -$25,244 | 0.38 |
| Freezer Turn-In | $1,771 | $4,523 | -$2,752 | 0.39 |
| Microwave Oven | $2,070 | $4,936 | -$2,866 | 0.42 |
| **Water Heating** | **$34,090** | **$87,674** | **-$53,584** | **0.39** |
| Showerhead | $21,468 | $55,249 | -$33,780 | 0.39 |
| Aerator | $8,472 | $21,680 | -$13,208 | 0.39 |
| Pipe Insulation | $676 | $1,664 | -$988 | 0.41 |
| Shower Timer | $3,355 | $8,705 | -$5,350 | 0.39 |
| Water Heater Temperature Set-Back | $119 | $376 | -$257 | 0.32 |
| **Energy Efficiency Products and Kits** | **$167,569** | **$455,768** | **-$288,199** | **0.37** |
| Energy Expo Kits | $88,029 | $235,298 | -$147,269 | 0.37 |
| High User Kits | $70,486 | $194,468 | -$123,983 | 0.36 |
| Refrigerator Thermometer | $5,169 | $13,182 | -$8,013 | 0.39 |
| Power Strip - Tier 1 | $3,885 | $12,819 | -$8,934 | 0.30 |
| **Multifamily** | **$79,756** | **$211,257** | **-$131,501** | **0.38** |
| LED Bulb | $55,886 | $143,959 | -$88,073 | 0.39 |
| Refrigerator Replacement | $1,579 | $9,235 | -$7,657 | 0.17 |
| Refrigerator Turn-In | $2,572 | $6,703 | -$4,131 | 0.38 |
| Refrigerator Thermometer | $5,488 | $14,356 | -$8,869 | 0.38 |
| Power Strip - Tier 1 | $607 | $2,004 | -$1,397 | 0.30 |
| Showerhead | $5,024 | $12,899 | -$7,874 | 0.39 |
| Aerator - Bathroom | $3,626 | $9,337 | -$5,711 | 0.39 |
| Aerator - Kitchen | $1,563 | $4,054 | -$2,491 | 0.39 |
| Pipe Insulation | $1,709 | $4,267 | -$2,558 | 0.40 |
| Shower Timer | $1,701 | $4,443 | -$2,741 | 0.38 |
| **Administrative Costs** | **$0** | **$101,777** | **-$101,777** | **0.00** |
| Administrative Costs | $0 | $101,777 | -$101,777 | 0.00 |
| **Grand Total** | **$431,939** | **$1,311,397** | **-$879,459** | **0.33** |

## 2020 Power of One Business Annual Energy Savings

*All values are discounted to 2020*

| | kWh - Meter | kW - Meter | kWh - Generator | kW - Generator |
|---|---|---|---|---|
| **Lighting** | **27,111,343** | **2,820.8** | **29,956,489** | **3,116.8** |
| Lighting - Interior | 18,178,161 | 2,820.8 | 20,085,832 | 3,116.8 |
| Lighting - Exterior | 8,264,015 | 0.0 | 9,131,266 | 0.0 |
| Lighting Controls | 669,167 | 0.0 | 739,391 | 0.0 |
| **Refrigeration** | **1,509,119** | **39.2** | **1,667,490** | **43.3** |
| Refrigeration Improvement | 570,410 | 36.8 | 630,271 | 40.6 |
| Refrigeration Controls | 938,709 | 2.4 | 1,037,220 | 2.7 |
| **Motors and Drives** | **9,584,086** | **173.0** | **10,589,869** | **191.2** |
| Standard to Eff Motor | 1,111,318 | 134.4 | 1,227,943 | 148.5 |
| Standard to VSD Motor | 8,100,675 | 35.9 | 8,950,784 | 39.6 |
| Motor Controls | 372,093 | 2.8 | 411,142 | 3.1 |
| **HVAC** | **3,671,231** | **770.5** | **4,056,501** | **851.3** |
| AC Improvements | 1,099,546 | 383.8 | 1,214,936 | 424.1 |
| Heat Pump - Cooling and Heating | 1,443,667 | 386.5 | 1,595,170 | 427.0 |
| HVAC and EMS Controls | 1,128,018 | 0.2 | 1,246,396 | 0.2 |
| **Miscellaneous** | **8,181,997** | **680.3** | **9,040,641** | **751.7** |
| Compressed Air Upgrades | 2,823,833 | 170.4 | 3,120,175 | 188.2 |
| Process Improvements | 3,667,739 | 298.7 | 4,052,643 | 330.0 |
| Appliances | 738,885 | 132.5 | 816,426 | 146.4 |
| Shell Measures | 234,498 | 0.0 | 259,107 | 0.0 |
| Heat Recovery | 17,624 | 4.0 | 19,474 | 4.4 |
| Miscellaneous Controls | 567,203 | 54.1 | 626,727 | 59.7 |
| IT Equipment | 132,215 | 20.7 | 146,090 | 22.9 |
| **Administrative Costs** | **0** | **0.0** | **0** | **0.0** |
| Administrative Costs | 0 | 0.0 | 0 | 0.0 |
| **Grand Total** | **50,057,776** | **4,483.8** | **55,310,990** | **4,954.4** |

## 2020 Power of One Business Utility Test

*All values are discounted to 2020*

| | Utility Benefits | Utility Costs | Utility Net Benefits | Utility B/C Ratio |
|---|---|---|---|---|
| **Lighting** | **$13,264,114** | **$1,414,588** | **$11,849,526** | **9.38** |
| Lighting - Interior | $9,250,771 | $962,552 | $8,288,219 | 9.61 |
| Lighting - Exterior | $3,788,968 | $412,070 | $3,376,898 | 9.19 |
| Lighting Controls | $224,375 | $39,966 | $184,409 | 5.61 |
| **Refrigeration** | **$630,643** | **$55,645** | **$574,998** | **11.33** |
| Refrigeration Improvement | $265,135 | $21,241 | $243,894 | 12.48 |
| Refrigeration Controls | $365,508 | $34,404 | $331,104 | 10.62 |
| **Motors and Drives** | **$3,928,443** | **$379,522** | **$3,548,921** | **10.35** |
| Standard to Eff Motor | $603,638 | $53,438 | $550,200 | 11.30 |
| Standard to VSD Motor | $3,177,405 | $311,804 | $2,865,601 | 10.19 |
| Motor Controls | $147,400 | $14,281 | $133,120 | 10.32 |
| **HVAC** | **$2,324,267** | **$401,970** | **$1,922,297** | **5.78** |
| AC Improvements | $754,795 | $129,975 | $624,820 | 5.81 |
| Heat Pump - Cooling and Heating | $1,097,590 | $220,394 | $877,196 | 4.98 |
| HVAC and EMS Controls | $471,882 | $51,602 | $420,280 | 9.14 |
| **Miscellaneous** | **$3,623,203** | **$328,250** | **$3,294,953** | **11.04** |
| Compressed Air Upgrades | $1,315,293 | $63,544 | $1,251,749 | 20.70 |
| Process Improvements | $1,365,192 | $173,839 | $1,191,353 | 7.85 |
| Appliances | $468,238 | $53,662 | $414,575 | 8.73 |
| Shell Measures | $98,044 | $8,547 | $89,497 | 11.47 |
| Heat Recovery | $12,300 | $1,547 | $10,752 | 7.95 |
| Miscellaneous Controls | $304,686 | $22,870 | $281,815 | 13.32 |
| IT Equipment | $59,451 | $4,240 | $55,211 | 14.02 |
| **Administrative Costs** | **$0** | **$1,413,169** | **-$1,413,169** | **0.00** |
| Administrative Costs | $0 | $1,413,169 | -$1,413,169 | 0.00 |
| **Grand Total** | **$23,770,671** | **$3,993,144** | **$19,777,526** | **5.95** |

## 2020 Power of One Business Societal Test

*All values are discounted to 2020*

| | Societal Benefits | Societal Costs | Societal Net Benefits | Societal B/C Ratio |
|---|---|---|---|---|
| **Lighting** | **$18,158,219** | **$10,079,448** | **$8,078,771** | **1.80** |
| Lighting - Interior | $12,647,346 | $5,792,050 | $6,855,297 | 2.18 |
| Lighting - Exterior | $5,198,919 | $3,973,239 | $1,225,680 | 1.31 |
| Lighting Controls | $311,953 | $314,160 | -$2,206 | 0.99 |
| **Refrigeration** | **$935,151** | **$632,400** | **$302,751** | **1.48** |
| Refrigeration Improvement | $391,492 | $391,073 | $419 | 1.00 |
| Refrigeration Controls | $543,659 | $241,327 | $302,333 | 2.25 |
| **Motors and Drives** | **$5,830,064** | **$2,093,337** | **$3,736,727** | **2.79** |
| Standard to Eff Motor | $886,447 | $570,080 | $316,367 | 1.55 |
| Standard to VSD Motor | $4,724,540 | $1,434,216 | $3,290,324 | 3.29 |
| Motor Controls | $219,076 | $89,040 | $130,036 | 2.46 |
| **HVAC** | **$3,397,304** | **$2,077,957** | **$1,319,347** | **1.63** |
| AC Improvements | $1,100,881 | $727,796 | $373,085 | 1.51 |
| Heat Pump - Cooling and Heating | $1,596,763 | $865,866 | $730,896 | 1.84 |
| HVAC and EMS Controls | $699,660 | $484,294 | $215,365 | 1.44 |
| **Miscellaneous** | **$5,108,103** | **$4,419,779** | **$688,324** | **1.16** |
| Compressed Air Upgrades | $1,941,974 | $444,522 | $1,497,452 | 4.37 |
| Process Improvements | $1,793,294 | $2,044,154 | -$250,860 | 0.88 |
| Appliances | $684,410 | $448,067 | $236,342 | 1.53 |
| Shell Measures | $145,373 | $738,747 | -$593,374 | 0.20 |
| Heat Recovery | $17,931 | $104,707 | -$86,776 | 0.17 |
| Miscellaneous Controls | $447,583 | $520,581 | -$72,998 | 0.86 |
| IT Equipment | $77,538 | $119,000 | -$41,462 | 0.65 |
| **Administrative Costs** | **$0** | **$1,413,169** | **-$1,413,169** | **0.00** |
| Administrative Costs | $0 | $1,413,169 | -$1,413,169 | 0.00 |
| **Grand Total** | **$33,428,840** | **$20,716,089** | **$12,712,751** | **1.61** |

## 2020 Power of One Business Participant Test

*All values are discounted to 2020*

| | Participant Benefits | Participant Costs | Participant Net Benefits | Participant B/C Ratio |
|---|---|---|---|---|
| **Lighting** | **$27,457,302** | **$10,079,448** | **$17,377,854** | **2.72** |
| Lighting - Interior | $18,420,683 | $5,792,050 | $12,628,634 | 3.18 |
| Lighting - Exterior | $8,413,113 | $3,973,239 | $4,439,875 | 2.12 |
| Lighting Controls | $623,505 | $314,160 | $309,345 | 1.98 |
| **Refrigeration** | **$1,689,428** | **$632,400** | **$1,057,028** | **2.67** |
| Refrigeration Improvement | $669,530 | $391,073 | $278,457 | 1.71 |
| Refrigeration Controls | $1,019,898 | $241,327 | $778,571 | 4.23 |
| **Motors and Drives** | **$10,694,218** | **$2,093,337** | **$8,600,881** | **5.11** |
| Standard to Eff Motor | $1,246,623 | $570,080 | $676,543 | 2.19 |
| Standard to VSD Motor | $9,054,558 | $1,434,216 | $7,620,341 | 6.31 |
| Motor Controls | $393,037 | $89,040 | $303,997 | 4.41 |
| **HVAC** | **$4,729,098** | **$2,077,957** | **$2,651,142** | **2.28** |
| AC Improvements | $1,460,424 | $727,796 | $732,628 | 2.01 |
| Heat Pump - Cooling and Heating | $1,952,698 | $865,866 | $1,086,831 | 2.26 |
| HVAC and EMS Controls | $1,315,977 | $484,294 | $831,682 | 2.72 |
| **Miscellaneous** | **$7,733,533** | **$4,419,779** | **$3,313,754** | **1.75** |
| Compressed Air Upgrades | $2,840,754 | $444,522 | $2,396,232 | 6.39 |
| Process Improvements | $2,987,841 | $2,044,154 | $943,687 | 1.46 |
| Appliances | $878,772 | $448,067 | $430,705 | 1.96 |
| Shell Measures | $253,752 | $738,747 | -$484,995 | 0.34 |
| Heat Recovery | $20,997 | $104,707 | -$83,710 | 0.20 |
| Miscellaneous Controls | $624,294 | $520,581 | $103,713 | 1.20 |
| IT Equipment | $127,123 | $119,000 | $8,122 | 1.07 |
| **Administrative Costs** | **$0** | **$0** | **$0** | **0.00** |
| Administrative Costs | $0 | $0 | $0 | 0.00 |
| **Grand Total** | **$52,303,578** | **$19,302,921** | **$33,000,658** | **2.71** |

## 2020 Power of One Business Ratepayer Impact Test

*All values are discounted to 2020*

| | Ratepayer Benefits | Ratepayer Costs | Ratepayer Net Benefits | Ratepayer B/C Ratio |
|---|---|---|---|---|
| **Lighting** | **$11,299,112** | **$23,389,661** | **-$12,090,548** | **0.48** |
| Lighting - Interior | $7,880,323 | $15,691,765 | -$7,811,443 | 0.50 |
| Lighting - Exterior | $3,227,654 | $7,166,759 | -$3,939,105 | 0.45 |
| Lighting Controls | $191,135 | $531,136 | -$340,001 | 0.36 |
| **Refrigeration** | **$537,217** | **$1,439,149** | **-$901,932** | **0.37** |
| Refrigeration Improvement | $225,857 | $570,343 | -$344,486 | 0.40 |
| Refrigeration Controls | $311,360 | $868,806 | -$557,445 | 0.36 |
| **Motors and Drives** | **$3,346,467** | **$9,109,931** | **-$5,763,464** | **0.37** |
| Standard to Eff Motor | $514,212 | $1,061,943 | -$547,730 | 0.48 |
| Standard to VSD Motor | $2,706,691 | $7,713,177 | -$5,006,486 | 0.35 |
| Motor Controls | $125,564 | $334,811 | -$209,247 | 0.38 |
| **HVAC** | **$1,979,940** | **$4,028,510** | **-$2,048,569** | **0.49** |
| AC Improvements | $642,976 | $1,244,071 | -$601,094 | 0.52 |
| Heat Pump - Cooling and Heating | $934,988 | $1,663,417 | -$728,428 | 0.56 |
| HVAC and EMS Controls | $401,976 | $1,121,022 | -$719,047 | 0.36 |
| **Miscellaneous** | **$3,086,446** | **$6,587,854** | **-$3,501,408** | **0.47** |
| Compressed Air Upgrades | $1,120,440 | $2,419,913 | -$1,299,473 | 0.46 |
| Process Improvements | $1,162,947 | $2,545,210 | -$1,382,263 | 0.46 |
| Appliances | $398,871 | $748,587 | -$349,716 | 0.53 |
| Shell Measures | $83,519 | $216,160 | -$132,641 | 0.39 |
| Heat Recovery | $10,477 | $17,887 | -$7,409 | 0.59 |
| Miscellaneous Controls | $259,548 | $531,808 | -$272,260 | 0.49 |
| IT Equipment | $50,644 | $108,290 | -$57,647 | 0.47 |
| **Administrative Costs** | **$0** | **$1,203,816** | **-$1,203,816** | **0.00** |
| Administrative Costs | $0 | $1,203,816 | -$1,203,816 | 0.00 |
| **Grand Total** | **$20,249,183** | **$45,758,920** | **-$25,509,737** | **0.44** |

# Investor Owned Electric Utility 2017-20 CIP Report
# Overview

**GENERAL UTILITY INFORMATION**

2017-20
Electric

| 1. Utility Information | |
|---|---|
| Utility Name | Minnesota Power |
| Street Address | 30 W Superior Street |
| Street Address | |
| City | Duluth |
| State | MN |
| Zip Code | 55802 |

| 2. Contact Information | |
|---|---|
| Contact Name | Leah Peterson |
| Contact Title | Supervisor - Customer Business Analytics |
| Telephone | (218) 355-3014 |
| Fax | (218) 723-3984 |
| Email Address | lpeterson@mnpower.com |

**3. Utility Type**

Indicate utility type by entering an "X" below.

| | |
|---|---|
| Municipal | |
| Cooperative | |
| Investor Owned | X |

**4. Data Type**

Indicate data type by entering an "X" below.

| | |
|---|---|
| Public Information | X |
| Trade secret | |

**5. Customer Profile** (Reference year 2015)

| Category | # of Customers | kWh Sales |
|---|---|---|
| Residential | 121,515 | 1,026,454,000 |
| Commercial | 22,170 | 1,254,681,000 |
| Industrial | 394 | 6,073,273,000 |
| Farm | incl above | incl above |
| Other | 954 | 70,272,000 |
| Total | 145,033 | 8,424,680,000 |
| *Total Net of Exempt | 145,017 | 2,701,717,658 |

*reflecting newly exempt customers in 2017 & weather normalization

| 6. 2015 Adjusted Gross Operating Revenue (GOR) | |
|---|---|
| Gross Operating Revenue 2015 | $528,805,775 |
| Less Exempt Facility Revenue 2015 | $346,088,050 |
| Adjusted GOR 2015 | $182,717,725 |

| 6b. 2015 Adjusted Gross Operating Revenue (GOR) | |
|---|---|
| Gross Operating Revenue 2015 | $528,805,775 |
| Less Exempt Facility Revenue 2015* | $366,248,874 |
| Adjusted GOR 2015 | $162,556,901 |

*reflecting newly exempt customers in 2017

**CIP SPENDING REPORT**

| 7. Annual CIP Minimum Spending Requirement | |
|---|---|
| 2017 | $2,438,000 |
| 2018 | $2,438,000 |
| 2019 | $2,438,000 |
| 2020 | $2,438,000 |

| 8. 2017 CIP Actual (most recently approved) | |
|---|---|
| Annual Total Expenditures | $8,129,337 |
| Annual Energy Savings - (Gen kWh) | 72,467,019 |
| Annual Demand Savings - (Gen kW) | 8,594.0 |

| 9. 2017 CIP Plan | |
|---|---|
| Annual Total Expenditures | $10,265,125 |
| Annual Energy Savings - (Gen kWh) | 57,390,222 |
| Annual Demand Savings - (Gen kW) | 9,111.6 |

| 10. 2018 CIP Actual | |
|---|---|
| Annual Total Expenditures | $9,031,446 |
| Annual Energy Savings - (Gen kWh) | 72,479,534 |
| Annual Demand Savings - (Gen kW) | 8,095.9 |

| 11. 2018 CIP Plan | |
|---|---|
| Annual Total Expenditures | $10,327,880 |
| Annual Energy Savings - (Gen kWh) | 57,390,222 |
| Annual Demand Savings - (Gen kW) | 9,111.6 |

| 12. 2019 CIP Actual | |
|---|---|
| Annual Total Expenditures | $8,280,773 |
| Annual Energy Savings - (Gen kWh) | 67,669,222 |
| Annual Demand Savings - (Gen kW) | 8,337.9 |

| 13. 2019 CIP Plan | |
|---|---|
| Annual Total Expenditures | $10,518,770 |
| Annual Energy Savings - (Gen kWh) | 57,390,222 |
| Annual Demand Savings - (Gen kW) | 9,111.6 |

| 14. 2020 CIP Actual | |
|---|---|
| Annual Total Expenditures | $8,205,771 |
| Annual Energy Savings - (Gen kWh) | 70,774,076 |
| Annual Demand Savings - (Gen kW) | 6,811.0 |

| 15. 2020 CIP Plan | |
|---|---|
| Annual Total Expenditures | $10,518,770 |
| Annual Energy Savings - (Gen kWh) | 58,136,306 |
| Annual Demand Savings - (Gen kW) | 9,192.9 |

| 16. # of Projects | 8 | | Status (indicate with "X" below) | |
|---|---|---|---|---|
| | Project Name | | New | Existing |
| 1 | Power of One Home - Residential | | | X |
| 2 | Energy Partners - Low Income | | | X |
| 3 | Power of One Business - C/I/Ag | | | X |
| 4 | Renewable Energy | | | |
| 5 | Customer Engagement | | | X |
| 6 | Energy Analysis | | | X |
| 7 | Research & Development | | | X |
| 8 | CIP Evaluation & Planning | | | X |
| 9 | Regulatory Charges | | | X |
| 10 | | | | |

## Electric Conservation Project Information Sheet

2017/2018/2019/2020 Cons1 BudgtSavgs

**Utility Name:** Minnesota Power
**Project Name:** Power of One Home - Residential
**Project Description:** This Project provides a comprehensive package of products and services to residential customers.

**Type** Conservation
**Status:** Existing

| | 2017 Proposed | 2017 Approved | 2017 Actual | 2018 Proposed | 2018 Approved | 2018 Actual | 2019 Proposed | 2019 Approved | 2019 Actual | 2020 Proposed & Approved | 2020 Actual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Type -- Enter "X"** | | | | | | | | | | | |
| **Indirect (No kWh or kW Savings)** | | | | | | | | | | | |
| Audit/Info | | | | | | | | | | | |
| Education | | | | | | | | | | | |
| Classroom Training/Instructional | | | | | | | | | | | |
| R&D | | | | | | | | | | | |
| Renewable | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| **Direct (kWh or kW Savings)** | X | X | X | X | X | X | X | X | X | X | X |
| **Cost Components -- Enter Dollars** | | | | | | | | | | | |
| Project Delivery | 970,000 | 970,000 | 548,712 | 977,650 | 977,650 | 698,579 | 985,530 | 985,530 | 582,761 | 985,530 | 524,500 |
| Utility Administration | 62,500 | 62,500 | 63,685 | 64,375 | 64,375 | 63,338 | 66,310 | 66,310 | 68,715 | 66,310 | 84,138 |
| Evaluation Labor | | | | | | | | | | | |
| Advertising & Promotion | 61,000 | 61,000 | 11,873 | 61,000 | 61,000 | 25,891 | 61,000 | 61,000 | 23,307 | 61,000 | 60,742 |
| Participant Incentives | 1,264,412 | 1,264,412 | 864,111 | 1,264,412 | 1,264,412 | 1,146,141 | 1,264,412 | 1,264,412 | 1,149,559 | 1,264,412 | 1,080,593 |
| R&D | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| **Total Costs** | $2,357,912 | $2,357,912 | $1,488,380 | $2,367,437 | $2,367,437 | $1,933,950 | $2,377,252 | $2,377,252 | $1,824,343 | $2,377,252 | $1,749,973 |
| **Project Participants** | | | | | | | | | | | |
| Total Participants (Measures) | 151,053 | 122,841 | 168,322 | 151,053 | 122,841 | 271,137 | 151,053 | 122,841 | 259,313 | 122,841 | 217,554 |
| **% of Spending by Customer Segment** | | | | | | | | | | | |
| Residential | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Commercial | | | | | | | | | | | |
| Industrial | | | | | | | | | | | |
| Farm | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| **Total % of Spending (must equal 100%)** | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Low-Income & Renter Participation** | | | | | | | | | | | |
| Participants % (% of Row 31) | | | 5% | | | 5% | | | 5% | | 6% |
| Budget % (% of Row 29) | | | 6% | | | 6% | | | 6% | | 4% |
| **End-Use Target -- Enter "X" or %** | | | | | | | | | | | |
| Building Efficiency | X | X | X | X | X | X | X | X | X | X | X |
| Compressed Air | | | | | | | | | | | |
| Energy Star Appliances | X | X | X | X | X | X | X | X | X | X | X |
| Lighting | X | X | X | X | X | X | X | X | X | X | X |
| Motors (including ASD, Fans, Pumps) | X | X | X | X | X | X | X | X | X | X | X |
| Manufacturing Process | | | | | | | | | | | |
| Refrigeration | X | X | X | X | X | X | X | X | X | X | X |
| Space Cooling | X | X | X | X | X | X | X | X | X | X | X |
| Space Heating | X | X | X | X | X | X | X | X | X | X | X |
| Water Heating | X | X | X | X | X | X | X | X | X | X | X |
| Weatherization | X | X | X | X | X | X | X | X | X | X | X |
| General/Other | X | X | X | X | X | X | X | X | X | X | X |
| **Energy and Demand Savings - Generator** | | | | | | | | | | | |
| Average Annual kWh Savings per Participant | 70 | 86 | 57 | 70 | 86 | 52 | 70 | 86 | 56 | 86 | 66 |
| Annual kWh Saved - Generator | 10,590,448 | 10,590,448 | 9,614,443 | 10,590,448 | 10,590,448 | 14,133,230 | 10,590,448 | 10,590,448 | 14,444,512 | 10,590,448 | 14,344,836 |
| Cost per Annual kWh Saved | $0.2226 | $0.2226 | $0.1548 | $0.2235 | $0.2235 | $0.1368 | $0.2245 | $0.2245 | $0.1263 | $0.2245 | $0.1220 |
| Measure Lifetime (Years) | | | | | | | | | | | |
| Lifetime kWh savings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cost per kWh Lifetime | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Average kW Savings per Participant | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Annual kW Savings - Generator | 1,125.5 | 1,125.5 | 1,198.9 | 1,125.5 | 1,125.5 | 1,814.6 | 1,125.5 | 1,125.5 | 1,898.0 | 1,125.5 | 1,744.1 |
| Cost per KW Saved | $2,094.99 | $2,094.99 | $1,241.42 | $2,103.45 | $2,103.45 | $1,065.77 | $2,112.17 | $2,112.17 | $961.19 | $2,112.17 | $1,003.35 |
| **Cost/Benefit Results** | 3 Years | 3 Years | 1 Year | 3 Years | 3 Years | 1 Year | 3 Years | 3 Years | 1 Year | 1 Year | 1 Year |
| **Societal** | | | | | | | | | | | |
| Net present value | 21,545,366 | 21,574,277 | 7,863,477 | 21,545,366 | 21,574,277 | 7,899,225 | 21,545,366 | 21,574,277 | 13,381,575 | 7,223,185 | 12,682,981 |
| B/C ratio | 2.92 | 2.92 | 3.70 | 2.92 | 2.92 | 2.91 | 2.92 | 2.92 | 4.23 | 3.03 | 3.83 |
| **Participant** | | | | | | | | | | | |
| Net present value | 59,223,016 | 59,223,016 | 19,011,847 | 59,223,016 | 59,223,016 | 24,895,322 | 59,223,016 | 59,223,016 | 30,379,318 | 19,506,348 | 29,957,306 |
| B/C ratio | 8.42 | 8.42 | 9.31 | 8.42 | 8.42 | 8.45 | 8.42 | 8.42 | 9.74 | 8.71 | 8.87 |
| **Rate Payer** | | | | | | | | | | | |
| Net present value | (26,765,669) | (26,737,257) | (8,146,357) | (26,765,669) | (26,737,257) | (11,311,475) | (26,765,669) | (26,737,257) | (10,905,268) | (7,778,302) | (10,453,587) |
| B/C ratio | 0.37 | 0.37 | 0.38 | 0.37 | 0.37 | 0.40 | 0.37 | 0.37 | 0.41 | 0.37 | 0.41 |
| **Utility** | | | | | | | | | | | |
| Net present value | 8,858,496 | 8,886,909 | 3,512,405 | 8,858,496 | 8,886,909 | 5,958,147 | 8,858,496 | 8,886,909 | 6,475,883 | 2,774,953 | 6,773,853 |
| B/C ratio | 2.34 | 2.35 | 3.36 | 2.34 | 2.35 | 4.08 | 2.34 | 2.35 | 4.55 | 2.48 | 4.87 |

## Electric Conservation Project Information Sheet

2017/2018/2019/2020 Cons1 BudgtSavgs

**Utility Name:** Minnesota Power
**Project Name:** Energy Partners - Low Income
**Project Description:** This Project provides the products and services that have the greatest impact on saving energy across a broad base of customer and dwelling types. Although the structure is the same as in previous years, measures that meet customer needs will be provided.
**Type** Conservation
**Status:** Existing

| | 2017 Proposed | 2017 Approved | 2017 Actual | 2018 Proposed | 2018 Approved | 2018 Actual | 2019 Proposed | 2019 Approved | 2019 Actual | 2020 Proposed & Approved | 2020 Actual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Type -- Enter "X"** | | | | | | | | | | | |
| **Indirect (No kWh or kW Savings)** | | | | | | | | | | | |
| Audit/Info | | | | | | | | | | | |
| Education | | | | | | | | | | | |
| Classroom Training/Instructional | | | | | | | | | | | |
| R&D | | | | | | | | | | | |
| Renewable | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| **Direct (kWh or kW Savings)** | X | X | X | X | X | X | X | X | X | X | X |
| **Cost Components -- Enter Dollars** | | | | | | | | | | | |
| Project Delivery | 67,030 | 67,030 | 63,560 | 68,245 | 68,245 | 103,703 | 69,495 | 69,495 | 70,806 | 72,133 | 112,025 |
| Utility Administration | 20,430 | 20,430 | 15,676 | 21,045 | 21,045 | 24,251 | 21,675 | 21,675 | 25,180 | 24,251 | 7,452 |
| Evaluation Labor | | | | | | | | | | | |
| Advertising & Promotion | | | | | | | | | | | |
| Participant Incentives | 305,860 | 305,860 | 287,735 | 305,860 | 305,860 | 429,724 | 305,860 | 305,860 | 272,578 | 400,646 | 225,345 |
| R&D | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| **Total Costs** | $393,320 | $393,320 | $366,971 | $395,150 | $395,150 | $557,678 | $397,030 | $397,030 | $368,564 | $497,030 | $344,822 |
| **Project Participants** | | | | | | | | | | | |
| Total Participants (Measures) | 7,229 | 7,229 | 18,137 | 7,229 | 7,229 | 22,765 | 7,229 | 7,229 | 14,632 | 19,098 | 11,875 |
| **% of Spending by Customer Segment** | | | | | | | | | | | |
| Residential | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Commercial | | | | | | | | | | | |
| Industrial | | | | | | | | | | | |
| Farm | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| **Total % of Spending (must equal 100%)** | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Low-Income & Renter Participation** | | | | | | | | | | | |
| Participants % (% of Row 31) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Budget % (% of Row 29) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **End-Use Target -- Enter "X" or %** | | | | | | | | | | | |
| Building Efficiency | X | X | X | X | X | X | X | X | X | X | X |
| Compressed Air | | | | | | | | | | | |
| Energy Star Appliances | X | X | X | X | X | X | X | X | X | X | X |
| Lighting | X | X | X | X | X | X | X | X | X | X | X |
| Motors (including ASD, Fans, Pumps) | | | | | | | | | | | |
| Manufacturing Process | | | | | | | | | | | |
| Refrigeration | X | X | X | X | X | X | X | X | X | X | X |
| Space Cooling | X | X | X | X | X | X | X | X | X | X | X |
| Space Heating | X | X | X | X | X | X | X | X | X | X | X |
| Water Heating | X | X | X | X | X | X | X | X | X | X | X |
| Weatherization | X | X | X | X | X | X | X | X | X | X | X |
| General/Other | X | X | X | X | X | X | X | X | X | X | X |
| **Energy and Demand Savings - Generator** | | | | | | | | | | | |
| Average Annual kWh Savings per Participant | 129 | 129 | 80 | 129 | 129 | 82 | 129 | 129 | 74 | 88 | 94 |
| Annual kWh Saved - Generator | 936,080 | 936,080 | 1,458,538 | 936,080 | 936,080 | 1,863,183 | 936,080 | 936,080 | 1,082,871 | 1,682,164 | 1,118,250 |
| Cost per Annual kWh Saved | $0.4202 | $0.4202 | $0.2516 | $0.4221 | $0.4221 | $0.2993 | $0.4241 | $0.4241 | $0.3404 | $0.2955 | $0.3084 |
| Measure Lifetime (Years) | | | | | | | | | | | |
| Lifetime kWh savings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cost per kWh Lifetime | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Average kW Savings per Participant | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Annual kW Savings - Generator | 105.2 | 105.2 | 156.7 | 105.2 | 105.2 | 202.5 | 105.2 | 105.2 | 115.6 | 186.4 | 112.5 |
| Cost per KW Saved | $3,738.78 | $3,738.78 | $2,342.35 | $3,756.18 | $3,756.18 | $2,753.64 | $3,774.05 | $3,774.05 | $3,187.16 | $2,667.13 | $3,064.06 |
| **Cost/Benefit Results** | 3 Years | 3 Years | 1 Year | 3 Years | 3 Years | 1 Year | 3 Years | 3 Years | 1 Year | 1 Year | 1 Year |
| **Societal** | | | | | | | | | | | |
| Net present value | 823,722 | 829,266 | 667,398 | 823,722 | 829,266 | 542,085 | 823,722 | 829,266 | 641,459 | 903,055 | 697,038 |
| B/C ratio | 1.78 | 1.79 | 2.97 | 1.78 | 1.79 | 2.01 | 1.78 | 1.79 | 2.76 | 3.06 | 3.04 |
| **Participant** | | | | | | | | | | | |
| Net present value | 3,660,482 | 3,660,482 | 1,986,055 | 3,660,482 | 3,660,482 | 2,556,170 | 3,660,482 | 3,660,482 | 1,886,021 | 2,626,496 | 1,980,398 |
| B/C ratio | 5.65 | 5.65 | 8.66 | 5.65 | 5.65 | 7.22 | 5.65 | 5.65 | 8.03 | 8.51 | 9.88 |
| **Rate Payer** | | | | | | | | | | | |
| Net present value | (2,389,981) | (2,384,533) | (1,115,615) | (2,389,981) | (2,384,533) | (1,521,899) | (2,389,981) | (2,384,533) | (901,603) | (1,164,935) | (879,459) |
| B/C ratio | 0.28 | 0.28 | 0.31 | 0.28 | 0.28 | 0.32 | 0.28 | 0.28 | 0.32 | 0.33 | 0.33 |
| **Utility** | | | | | | | | | | | |
| Net present value | (183,583) | (178,135) | 143,700 | (183,583) | (178,135) | 211,259 | (183,583) | (178,135) | 100,738 | 187,919 | 162,234 |
| B/C ratio | 0.83 | 0.84 | 1.39 | 0.83 | 0.84 | 1.38 | 0.83 | 0.84 | 1.27 | 1.48 | 1.47 |

## Electric Conservation Project Information Sheet

2017/2018/2019/2020 Cons1 BudgtSavgs

**Utility Name:** Minnesota Power
**Project Name:** Power of One Business - C/I/Ag
**Project Description:** This Project uses a "Three-Phased Market Strategy" to customize a package of products and services that meets the unique needs of distinct business, industrial, agricultural and public communities.
**Type** Conservation
**Status:** Existing

| | 2017 Proposed | 2017 Approved | 2017 Actual | 2018 Proposed | 2018 Approved | 2018 Actual | 2019 Proposed | 2019 Approved | 2019 Actual | 2020 Proposed & Approved | 2020 Actual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Type -- Enter "X"** | | | | | | | | | | | |
| **Indirect (No kWh or kW Savings)** | | | | | | | | | | | |
| Audit/Info | | | | | | | | | | | |
| Education | | | | | | | | | | | |
| Classroom Training/Instructional | | | | | | | | | | | |
| R&D | | | | | | | | | | | |
| Renewable | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| **Direct (kWh or kW Savings)** | X | X | X | X | X | X | X | X | X | X | X |
| **Cost Components -- Enter Dollars** | | | | | | | | | | | |
| Project Delivery | 1,305,655 | 1,305,655 | 981,371 | 1,360,100 | 1,360,100 | 924,411 | 1,417,055 | 1,417,055 | 1,020,253 | 1,417,055 | 1,017,872 |
| Utility Administration | 100,000 | 100,000 | 100,137 | 103,000 | 103,000 | 121,305 | 106,095 | 106,095 | 72,629 | 106,095 | 146,396 |
| Evaluation Labor | | | | | | | | | | | |
| Advertising & Promotion | 246,170 | 246,170 | 128,802 | 329,965 | 329,965 | 340,360 | 416,090 | 416,090 | 313,109 | 416,090 | 248,901 |
| Participant Incentives | 2,626,368 | 2,626,368 | 2,475,454 | 2,626,368 | 2,626,368 | 2,452,999 | 2,626,368 | 2,626,368 | 2,386,445 | 2,626,368 | 2,579,976 |
| R&D | | | | | | | | | | | |
| Other (Edu) | | | 6,020 | 0 | | 3,724 | 0 | | 507 | | |
| **Total Costs** | $4,278,193 | $4,278,193 | $3,691,784 | $4,419,433 | $4,419,433 | $3,842,799 | $4,565,608 | $4,565,608 | $3,792,943 | $4,565,608 | $3,993,144 |
| **Project Participants** | | | | | | | | | | | |
| Total Participants (Projects) | 3,366 | 3,366 | 905 | 3,366 | 3,366 | 940 | 3,366 | 3,366 | 1,355 | 3,366 | 1,485 |
| **% of Spending by Customer Segment** | | | | | | | | | | | |
| Residential | | | | | | | | | | | |
| Commercial | 100% | 100% | 77% | 100% | 100% | 63% | 100% | 100% | 69% | 100% | 76.9% |
| Industrial | | | 23% | | | 35% | | | 29% | | 22.6% |
| Farm | | | 0% | | | 2% | | | 2% | | 0.5% |
| Other | | | | | | | | | | | |
| **Total % of Spending (must equal 100%)** | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Low-Income & Renter Participation** | | | | | | | | | | | |
| Participants % (% of Row 31) | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Budget % (% of Row 29) | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| **End-Use Target -- Enter "X" or %** | | | | | | | | | | | |
| Building Efficiency | X | X | X | X | X | X | X | X | X | X | X |
| Compressed Air | X | X | X | X | X | X | X | X | X | X | X |
| Energy Star Appliances | X | X | X | X | X | X | X | X | X | X | X |
| Lighting | X | X | X | X | X | X | X | X | X | X | X |
| Motors (including ASD, Fans, Pumps) | X | X | X | X | X | X | X | X | X | X | X |
| Manufacturing Process | X | X | X | X | X | X | X | X | X | X | X |
| Refrigeration | X | X | X | X | X | X | X | X | X | X | X |
| Space Cooling | X | X | X | X | X | X | X | X | X | X | X |
| Space Heating | X | X | X | X | X | X | X | X | X | X | X |
| Water Heating | X | X | X | X | X | X | X | X | X | X | X |
| Weatherization | X | X | X | X | X | X | X | X | X | X | X |
| General/Other | X | X | X | X | X | X | X | X | X | X | X |
| **Energy and Demand Savings - Generator** | | | | | | | | | | | |
| Average Annual kWh Savings per Participant | 13626 | 13626 | 67734 | 13626 | 13626 | 60088 | 13626 | 13626 | 38481 | 13626 | 37246 |
| Annual kWh Saved - Generator | 45,863,694 | 45,863,694 | 61,299,182 | 45,863,694 | 45,863,694 | 56,483,120 | 45,863,694 | 45,863,694 | 52,141,839 | 45,863,694 | 55,310,990 |
| Cost per Annual kWh Saved | $0.0933 | $0.0933 | $0.0602 | $0.0964 | $0.0964 | $0.0680 | $0.0995 | $0.0995 | $0.0727 | $0.0995 | $0.0722 |
| Measure Lifetime (Years) | | | | | | | | | | | |
| Lifetime kWh savings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cost per kWh Lifetime | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Average kW Savings per Participant | 2.34 | 2.34 | 8.00 | 2.34 | 2.34 | 6.47 | 2.34 | 2.34 | 4.67 | 2.34 | 3.34 |
| Annual kW Savings - Generator | 7,881.0 | 7,881.0 | 7,238.4 | 7,881.0 | 7,881.0 | 6,078.8 | 7,881.0 | 7,881.0 | 6,324.3 | 7,881.0 | 4,954.4 |
| Cost per KW Saved | $542.85 | $542.85 | $510.03 | $560.77 | $560.77 | $632.17 | $579.32 | $579.32 | $599.74 | $579.32 | $805.98 |
| **Cost/Benefit Results** | 3 Years | 3 Years | 1 Year | 3 Years | 3 Years | 1 Year | 3 Years | 3 Years | 1 Year | 1 Year | 1 Year |
| **Societal** | | | | | | | | | | | |
| Net present value | 40,115,573 | 40,545,528 | 16,935,451 | 40,115,573 | 40,545,528 | 14,251,660 | 40,115,573 | 40,545,528 | 14,063,825 | 14,426,144 | 12,712,751 |
| B/C ratio | 1.80 | 1.82 | 1.94 | 1.80 | 1.82 | 1.81 | 1.80 | 1.82 | 1.77 | 1.91 | 1.61 |
| **Participant** | | | | | | | | | | | |
| Net present value | 80,548,320 | 80,548,320 | 37,671,716 | 80,548,320 | 80,548,320 | 35,209,139 | 80,548,320 | 80,548,320 | 31,069,079 | 24,413,146 | 33,000,658 |
| B/C ratio | 2.91 | 2.91 | 3.25 | 2.91 | 2.91 | 3.18 | 2.91 | 2.91 | 2.85 | 3.03 | 2.71 |
| **Rate Payer** | | | | | | | | | | | |
| Net present value | (67,298,834) | (66,876,297) | (30,928,024) | (67,298,834) | (66,876,297) | (27,798,063) | (67,298,834) | (66,876,297) | (23,715,411) | (19,515,609) | (25,509,737) |
| B/C ratio | 0.47 | 0.48 | 0.44 | 0.47 | 0.48 | 0.44 | 0.47 | 0.48 | 0.46 | 0.49 | 0.44 |
| **Utility** | | | | | | | | | | | |
| Net present value | 48,170,393 | 48,592,930 | 21,014,762 | 48,170,393 | 48,592,930 | 19,554,779 | 48,170,393 | 48,592,930 | 19,098,359 | 14,823,572 | 19,777,526 |
| B/C ratio | 4.80 | 4.96 | 6.69 | 4.80 | 4.96 | 6.09 | 4.80 | 4.96 | 6.04 | 5.11 | 5.95 |

## Electric Conservation Project Information Sheet

2017/2018/2019/2020 Cons1 BudgtSavgs

**Utility Name:** Minnesota Power
**Project Name:** Customer Engagement
**Project Description:** This Project is focused on educational outreach and communications via multi-modal marketing channels to increase awareness of Power of One® programs.

**Type** Conservation
**Status:** Existing

| | 2017 Proposed | 2017 Approved | 2017 Actual | 2018 Proposed | 2018 Approved | 2018 Actual | 2019 Proposed | 2019 Approved | 2019 Actual | 2020 Proposed & Approved | 2020 Actual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Type -- Enter "X"** | | | | | | | | | | | |
| **Indirect (No kWh or kW Savings)** | | | | | | | | | | | |
| Audit/Info | X | X | X | X | X | X | X | X | X | X | X |
| Education | X | X | X | X | X | X | X | X | X | X | X |
| Classroom Training/Instructional | X | X | X | X | X | X | X | X | X | X | X |
| R&D | | | | | | | | | | | |
| Renewable | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| **Direct (kWh or kW Savings)** | | | | | | | | | | | |
| **Cost Components -- Enter Dollars** | | | | | | | | | | | |
| Project Delivery | 451,250 | 451,250 | 171,942 | 462,840 | 462,840 | 177,353 | 474,775 | 474,775 | 146,983 | 424,775 | 172,002 |
| Utility Administration | 128,750 | 128,750 | 9,916 | 132,615 | 132,615 | 7,364 | 136,595 | 136,595 | 5,959 | 86,595 | 2,486 |
| Evaluation Labor | | | | | | | | | | | |
| Advertising & Promotion | 65,000 | 65,000 | 80,332 | 65,000 | 65,000 | 49,775 | 65,000 | 65,000 | 51,198 | 65,000 | 70,109 |
| Participant Incentives | | | | | | | | | | | |
| R&D | | | | | | | | 20,000 | | | |
| Other (Education) | 470,000 | 345,000 | 274,445 | 471,800 | 346,800 | 441,928 | 473,655 | 328,655 | 333,922 | 348,655 | 332,637 |
| **Total Costs** | $1,115,000 | $990,000 | $536,634 | $1,132,255 | $1,007,255 | $676,420 | $1,150,025 | $1,025,025 | $538,062 | $925,025 | $577,235 |
| **Project Participants** | | | | | | | | | | | |
| Total Participants | 108,000 | 108,000 | 106,128 | 108,000 | 108,000 | 100,256 | 108,000 | 108,000 | 104,640 | 108,000 | 93,200 |
| **% of Spending by Customer Segment** | | | | | | | | | | | |
| Residential | | | | | | | | | | | |
| Commercial | | | | | | | | | | | |
| Industrial | | | | | | | | | | | |
| Farm | | | | | | | | | | | |
| Other | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Total % of Spending (must equal 100%)** | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Low-Income & Renter Participation** | | | | | | | | | | | |
| Participants % (% of Row 31) | | | | | | | | | | | |
| Budget % (% of Row 29) | | | | | | | | | | | |
| **End-Use Target -- Enter "X" or %** | | | | | | | | | | | |
| Building Efficiency | | | | | | | | | | | |
| Compressed Air | | | | | | | | | | | |
| Energy Star Appliances | | | | | | | | | | | |
| Lighting | | | | | | | | | | | |
| Motors (including ASD, Fans, Pumps) | | | | | | | | | | | |
| Manufacturing Process | | | | | | | | | | | |
| Refrigeration | | | | | | | | | | | |
| Space Cooling | | | | | | | | | | | |
| Space Heating | | | | | | | | | | | |
| Water Heating | | | | | | | | | | | |
| Weatherization | | | | | | | | | | | |
| General/Other | | | | | | | | | | | |
| **Energy and Demand Savings - Generator** | | | | | | | | | | | |
| Average Annual kWh Savings per Participant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual kWh Saved - Generator | | | | | | | | | | | |
| Cost per Annual kWh Saved | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Measure Lifetime (Years) | | | | | | | | | | | |
| Lifetime kWh savings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cost per kWh Lifetime | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Average kW Savings per Participant | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual kW Savings - Generator | | | | | | | | | | | |
| Cost per KW Saved | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| **Cost/Benefit Results** | | | | | | | | | | | |
| **Societal** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Participant** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Rate Payer** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Utility** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |

## Electric Conservation Project Information Sheet

2017/2018/2019/2020 Cons1 BudgtSavgs

**Utility Name:** Minnesota Power
**Project Name:** Energy Analysis
**Project Description:** This Project delivers site and technology-specific information needed to help a cross section of customers choose energy-saving products and services for their homes and businesses.
**Type** Conservation
**Status:** Existing

| | 2017 Proposed | 2017 Approved | 2017 Actual | 2018 Proposed | 2018 Approved | 2018 Actual | 2019 Proposed | 2019 Approved | 2019 Actual | 2020 Proposed & Approved | 2020 Actual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Type -- Enter "X"** | | | | | | | | | | | |
| **Indirect (No kWh or kW Savings)** | | | | | | | | | | | |
| Audit/Info | X | X | X | X | X | X | X | X | X | X | X |
| Education | | | | | | | | | | | |
| Classroom Training/Instructional | | | | | | | | | | | |
| R&D | | | | | | | | | | | |
| Renewable | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| **Direct (kWh or kW Savings)** | | | | | | | | | | | |
| **Cost Components -- Enter Dollars** | | | | | | | | | | | |
| Project Delivery | 923,560 | 923,560 | 728,459 | 923,560 | 923,560 | 906,704 | 923,560 | 923,560 | 877,259 | 923,560 | 723,521 |
| Utility Administration | 37,440 | 37,440 | 5,872 | 38,565 | 38,565 | 5,855 | 39,720 | 39,720 | 4,034 | 39,720 | 1,977 |
| Evaluation Labor | | | | | | | | | | | |
| Advertising & Promotion | | | | | | | | | | | |
| Participant Incentives | | | | | | | | | | | |
| R&D | | | | | | | | | | | |
| Other (Education & Training) | | | | | | | | | | | |
| **Total Costs** | $961,000 | $961,000 | $734,331 | $962,125 | $962,125 | $912,559 | $963,280 | $963,280 | $881,293 | $963,280 | $725,498 |
| **Project Participants** | | | | | | | | | | | |
| Total Participants | 5,392 | 5,392 | 5,807 | 5,392 | 5,392 | 7,733 | 5,392 | 5,392 | 5,848 | 5,392 | 4,258 |
| **% of Spending by Customer Segment** | | | | | | | | | | | |
| Residential | 20% | 20% | 18% | 20% | 20% | 21% | 20% | 20% | 23% | 20% | 20% |
| Commercial, Industrial & Ag Combined | 80% | 80% | 82% | 80% | 80% | 79% | 80% | 80% | 77% | 80% | 80% |
| Industrial | | | | | | | | | | | |
| Farm | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| **Total % of Spending (must equal 100%)** | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Low-Income & Renter Participation** | | | | | | | | | | | |
| Participants % (% of Row 32) | 10% | 10% | 19% | 10% | 10% | 18% | 10% | 10% | 19% | 10% | 21% |
| Budget % (% of Row 30) | 2% | 2% | 6% | 2% | 2% | 6% | 2% | 2% | 4% | 2% | 4% |
| **End-Use Target -- Enter "X" or %** | | | | | | | | | | | |
| Building Efficiency | | | | | | | | | | | |
| Compressed Air | | | | | | | | | | | |
| Energy Star Appliances | | | | | | | | | | | |
| Lighting | | | | | | | | | | | |
| Motors (including ASD, Fans, Pumps) | | | | | | | | | | | |
| Manufacturing Process | | | | | | | | | | | |
| Refrigeration | | | | | | | | | | | |
| Space Cooling | | | | | | | | | | | |
| Space Heating | | | | | | | | | | | |
| Water Heating | | | | | | | | | | | |
| Weatherization | | | | | | | | | | | |
| General/Other | | | | | | | | | | | |
| **Energy and Demand Savings - Generator** | | | | | | | | | | | |
| Average Annual kWh Savings per Participant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual kWh Saved - Generator | | | | | | | | | | | |
| Cost per Annual kWh Saved | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Measure Lifetime (Years) | | | | | | | | | | | |
| Lifetime kWh savings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cost per kWh Lifetime | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Average kW Savings per Participant | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual kW Savings - Generator | | | | | | | | | | | |
| Cost per KW Saved | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| **Cost/Benefit Results** | | | | | | | | | | | |
| **Societal** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Participant** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Rate Payer** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Utility** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |

## Electric Conservation Project Information Sheet

2017/2018/2019/2020 Cons1 BudgtSavgs

**Utility Name:** Minnesota Power
**Project Name:** Research & Development
**Project Description:** This Project is designed to take advantage of a broad base of technologies across customer classes - residential and low income, commercial, public and agricultural and industrial (non-opt-out) to ensure that each customer class benefits from participation in technology development, application and market-based research.
**Type** Conservation
**Status:** Existing

| | 2017 Proposed | 2017 Approved | 2017 Actual | 2018 Proposed | 2018 Approved | 2018 Actual | 2019 Proposed | 2019 Approved | 2019 Actual | 2020 Proposed & Approved | 2020 Actual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Type -- Enter "X"** | | | | | | | | | | | |
| **Indirect (No kWh or kW Savings)** | | | | | | | | | | | |
| Audit/Info | | | | | | | | | | | |
| Education | | | | | | | | | | | |
| Classroom Training/Instructional | | | | | | | | | | | |
| R&D | X | X | X | X | X | X | X | X | X | X | X |
| Renewable | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| **Direct (kWh or kW Savings)** | | | | | | | | | | | |
| **Cost Components -- Enter Dollars** | | | | | | | | | | | |
| Project Delivery | 30,000 | 26,680 | 26,257 | 30,000 | 26,680 | 19,842 | 30,000 | 26,680 | 6,370 | 26,680 | 13,535 |
| Utility Administration | 9,360 | 8,330 | 808 | 9,640 | 8,330 | 819 | 9,930 | 8,330 | | 8,330 | |
| Evaluation Labor | | | | | | | | | | | |
| Advertising & Promotion | | | | | | | | | | | |
| Participant Incentives | | | | | | | | | | | |
| R&D | 234,740 | 208,790 | 183,596 | 234,460 | 208,790 | 212,199 | 234,170 | 208,790 | 221,738 | 208,790 | 153,823 |
| Other | | | | | | | | | | | |
| **Total Costs** | $274,100 | $243,800 | $210,660 | $274,100 | $243,800 | $232,861 | $274,100 | $243,800 | $228,108 | $243,800 | $167,358 |
| **Project Participants** | | | | | | | | | | | |
| Total Participants | | | | | | | | | | | |
| **% of Spending by Customer Segment** | | | | | | | | | | | |
| Residential | | | | | | | | | | | |
| Commercial | | | | | | | | | | | |
| Industrial | | | | | | | | | | | |
| Farm | | | | | | | | | | | |
| Other | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Total % of Spending (must equal 100%)** | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Low-Income & Renter Participation** | | | | | | | | | | | |
| Participants % (% of Row 31) | | | | | | | | | | | |
| Budget % (% of Row 29) | | | | | | | | | | | |
| **End-Use Target -- Enter "X" or %** | | | | | | | | | | | |
| Building Efficiency | | | | | | | | | | | |
| Compressed Air | | | | | | | | | | | |
| Energy Star Appliances | | | | | | | | | | | |
| Lighting | | | | | | | | | | | |
| Motors (including ASD, Fans, Pumps) | | | | | | | | | | | |
| Manufacturing Process | | | | | | | | | | | |
| Refrigeration | | | | | | | | | | | |
| Space Cooling | | | | | | | | | | | |
| Space Heating | | | | | | | | | | | |
| Water Heating | | | | | | | | | | | |
| Weatherization | | | | | | | | | | | |
| General/Other | | | | | | | | | | | |
| **Energy and Demand Savings - Generator** | | | | | | | | | | | |
| Average Annual kWh Savings per Participant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual kWh Saved - Generator | | | | | | | | | | | |
| Cost per Annual kWh Saved | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Measure Lifetime (Years) | | | | | | | | | | | |
| Lifetime kWh savings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cost per kWh Lifetime | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Average kW Savings per Participant | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual kW Savings - Generator | | | | | | | | | | | |
| Cost per KW Saved | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| **Cost/Benefit Results** | | | | | | | | | | | |
| **Societal** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Participant** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Rate Payer** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Utility** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |

## Electric Conservation Project Information Sheet

2017/2018/2019/2020 Cons1 BudgtSavgs

**Utility Name:** Minnesota Power
**Project Name:** CIP Evaluation & Planning
**Project Description:** This Project provides the resources for Minnesota Power to plan and evaluate the triennial CIP filing, complete the evaluation of current CIP projects, prepare the CIP tracker and DSM incentive reports for the Annual Consolidated filing, respond to data requests and evaluate the benefit/cost of proposed modifications to existing Projects or for the development of new Projects.

**Type** Conservation
**Status:** Existing

| | 2017 Proposed | 2017 Approved | 2017 Actual | 2018 Proposed | 2018 Approved | 2018 Actual | 2019 Proposed | 2019 Approved | 2019 Actual | 2020 Proposed & Approved | 2020 Actual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Type -- Enter "X"** | | | | | | | | | | | |
| **Indirect (No kWh or kW Savings)** | | | | | | | | | | | |
| Audit/Info | | | | | | | | | | | |
| Education | | | | | | | | | | | |
| Classroom Training/Instructional | | | | | | | | | | | |
| R&D | | | | | | | | | | | |
| Renewable | | | | | | | | | | | |
| Other | X | X | X | X | X | X | X | X | X | X | X |
| **Direct (kWh or kW Savings)** | | | | | | | | | | | |
| **Cost Components -- Enter Dollars** | | | | | | | | | | | |
| Project Delivery | 266,000 | 266,000 | 466,017 | 271,430 | 271,430 | 377,957 | 277,025 | 277,025 | 210,711 | 277,025 | 200,097 |
| Utility Administration | 125,000 | 125,000 | 102,568 | 128,750 | 128,750 | 106,774 | 132,615 | 132,615 | 88,241 | 132,615 | 88,172 |
| Evaluation Labor | 318,000 | 318,000 | 217,037 | 322,500 | 322,500 | 239,158 | 327,135 | 327,135 | 162,455 | 327,135 | 185,244 |
| Advertising & Promotion | | | | | | | | | | | |
| Participant Incentives | | | | | | | | | | | |
| R&D | | | | | | | | | | | |
| Other (Edu) | 10,000 | 10,000 | 11,350 | 10,000 | 10,000 | 11,179 | 10,000 | 10,000 | 28,911 | 10,000 | 7,364 |
| **Total Costs** | $719,000 | $719,000 | $796,973 | $732,680 | $732,680 | $735,068 | $746,775 | $746,775 | $490,318 | $746,775 | $480,877 |
| **Project Participants** | | | | | | | | | | | |
| Total Participants | | | | | | | | | | | |
| **% of Spending by Customer Segment** | | | | | | | | | | | |
| Residential | | | | | | | | | | | |
| Commercial | | | | | | | | | | | |
| Industrial | | | | | | | | | | | |
| Farm | | | | | | | | | | | |
| Other | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Total % of Spending (must equal 100%)** | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Low-Income & Renter Participation** | | | | | | | | | | | |
| Participants % (% of Row 31) | | | | | | | | | | | |
| Budget % (% of Row 29) | | | | | | | | | | | |
| **End-Use Target -- Enter "X" or %** | | | | | | | | | | | |
| Building Efficiency | | | | | | | | | | | |
| Compressed Air | | | | | | | | | | | |
| Energy Star Appliances | | | | | | | | | | | |
| Lighting | | | | | | | | | | | |
| Motors (including ASD, Fans, Pumps) | | | | | | | | | | | |
| Manufacturing Process | | | | | | | | | | | |
| Refrigeration | | | | | | | | | | | |
| Space Cooling | | | | | | | | | | | |
| Space Heating | | | | | | | | | | | |
| Water Heating | | | | | | | | | | | |
| Weatherization | | | | | | | | | | | |
| General/Other | | | | | | | | | | | |
| **Energy and Demand Savings - Generator** | | | | | | | | | | | |
| Average Annual kWh Savings per Participant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual kWh Saved - Generator | | | | | | | | | | | |
| Cost per Annual kWh Saved | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Measure Lifetime (Years) | | | | | | | | | | | |
| Lifetime kWh savings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cost per kWh Lifetime | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Average kW Savings per Participant | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual kW Savings - Generator | | | | | | | | | | | |
| Cost per KW Saved | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| **Cost/Benefit Results** | | | | | | | | | | | |
| **Societal** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Participant** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Rate Payer** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Utility** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |

## Electric Conservation Project Information Sheet

2017/2018/2019/2020 Cons1 BudgtSavgs

**Utility Name:** Minnesota Power
**Project Name:** Regulatory Charges
**Project Description:** This Project recovers charges billed to Minnesota Power by the Department of Commerce regarding CIP, with the exception of the Made in Minnesota assessment for solar.
**Type** Conservation
**Status:** Existing

| | 2017 Proposed | 2017 Approved | 2017 Actual | 2018 Proposed | 2018 Approved | 2018 Actual | 2019 Proposed | 2019 Approved | 2019 Actual | 2020 Proposed & Approved | 2020 Actual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Type -- Enter "X"** | | | | | | | | | | | |
| **Indirect (No kWh or kW Savings)** | | | | | | | | | | | |
| Audit/Info | | | | | | | | | | | |
| Education | | | | | | | | | | | |
| Classroom Training/Instructional | | | | | | | | | | | |
| R&D | | | | | | | | | | | |
| Renewable | | | | | | | | | | | |
| Other | X | X | X | X | X | X | X | X | X | X | X |
| **Direct (kWh or kW Savings)** | | | | | | | | | | | |
| **Cost Components -- Enter Dollars** | | | | | | | | | | | |
| Project Delivery | 200,000 | 321,900 | 303,604 | 200,000 | 200,000 | 140,113 | 200,000 | 200,000 | 157,143 | 200,000 | 166,864 |
| Utility Administration | | | | | | | | | | | |
| Evaluation Labor | | | | | | | | | | | |
| Advertising & Promotion | | | | | | | | | | | |
| Participant Incentives | | | | | | | | | | | |
| R&D | | | | | | | | | | | |
| Other | | | | | | | | | | | |
| **Total Costs** | $200,000 | $321,900 | $303,604 | $200,000 | $200,000 | $140,113 | $200,000 | $200,000 | $157,143 | $200,000 | $166,864 |
| **Project Participants** | | | | | | | | | | | |
| Total Participants | | | | | | | | | | | |
| **% of Spending by Customer Segment** | | | | | | | | | | | |
| Residential | | | | | | | | | | | |
| Commercial | | | | | | | | | | | |
| Industrial | | | | | | | | | | | |
| Farm | | | | | | | | | | | |
| Other | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Total % of Spending (must equal 100%)** | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **Low-Income & Renter Participation** | | | | | | | | | | | |
| Participants % (% of Row 31) | | | | | | | | | | | |
| Budget % (% of Row 29) | | | | | | | | | | | |
| **End-Use Target -- Enter "X" or %** | | | | | | | | | | | |
| Building Efficiency | | | | | | | | | | | |
| Compressed Air | | | | | | | | | | | |
| Energy Star Appliances | | | | | | | | | | | |
| Lighting | | | | | | | | | | | |
| Motors (including ASD, Fans, Pumps) | | | | | | | | | | | |
| Manufacturing Process | | | | | | | | | | | |
| Refrigeration | | | | | | | | | | | |
| Space Cooling | | | | | | | | | | | |
| Space Heating | | | | | | | | | | | |
| Water Heating | | | | | | | | | | | |
| Weatherization | | | | | | | | | | | |
| General/Other | | | | | | | | | | | |
| **Energy and Demand Savings - Generator** | | | | | | | | | | | |
| Average Annual kWh Savings per Participant | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual kWh Saved - Generator | | | | | | | | | | | |
| Cost per Annual kWh Saved | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Measure Lifetime (Years) | | | | | | | | | | | |
| Lifetime kWh savings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cost per kWh Lifetime | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 | $0.0000 |
| Average kW Savings per Participant | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual kW Savings - Generator | | | | | | | | | | | |
| Cost per KW Saved | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| **Cost/Benefit Results** | | | | | | | | | | | |
| **Societal** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Participant** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Rate Payer** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |
| **Utility** | | | | | | | | | | | |
| Net present value | | | | | | | | | | | |
| B/C ratio | | | | | | | | | | | |


Research &
Development

## PROGRAM TITLE: RESEARCH & DEVELOPMENT

### PROGRAM DESCRIPTION

The Research and Development ("R&D") program continues to be a successful proactive program to help identify and implement new markets, products and underutilized energy-saving technologies. As customers determine where to allocate their limited resources, the R&D program helps shoulder the risk of implementing innovative and emerging technologies by identifying solutions that are the right fit for customers. The R&D program provides information on the feasibility, market acceptance and economic justification of new products and energy-saving strategies and helps continue to enhance the CIP program by identifying new initiatives. As with other programs in Minnesota Power's CIP portfolio, the R&D program was impacted by the COVID-19 pandemic as the Company spent less time in the field identifying opportunities for R&D projects.

### EVALUATION METHODOLOGY

Although each project has its own set of deliverables, the overall R&D function should be evaluated in terms of ability to identify new energy-efficient technologies, markets and delivery strategies that enhance existing CIP initiatives in multiple sectors. This helps create dynamic CIP projects that deliver the valued outcomes of energy efficiency—successful customers and communities, sustainable energy savings and long-term market transformation—to benefit communities, the region and Minnesota as a whole.

Potential projects are evaluated through a defined set of criteria that evaluates each of the projects for its potential for overall energy savings, the number of customers that could be impacted by the measure, delivery strategy and the technology type.

### RESULTS

| | ***Approved Goals*** | ***Actual Results*** | ***% of Approved Goal*** |
|---|---|---|---|
| Total Project Expenditures | $243,800 | $167,358 | 69% |

The R&D program is designed to take advantage of a broad base of technologies across customer classes—residential and low income, commercial, public and agricultural and industrial—to ensure that each customer class benefits from participation in technology development, application and market-based research.

The results of 2020 R&D projects are detailed below. Overall R&D spending was less than prior years as a result of the pandemic. Planned projects were canceled or postponed by customers due to financial uncertainty. There were also equipment shortages that affected project timelines.

**COLD CLIMATE HEAT PUMP ($48,521)**

***Project Summaries:***

Ducted Cold Climate Air Source Heat Pump Retrofit Applications – Ducted Air Source Heat Pumps are an important technology for Minnesota Power's conservation program. To date the Company has required fully matched forced air systems (heat pump coil and air handler). This is the only reliable way to verify efficiency specifications via the Air-Conditioning, Heating, and Refrigeration Institute ("AHRI"). Systems that are mismatched are either penalized in their specifications or not listed. Advancements in this technology with proper controls have potentially enabled the installation of ducted heat pumps in existing working furnaces. This presents an economical option for customers to install energy efficient heat pumps without a full replacement of a reliable working air handler.

Minnesota Power partnered with four customers that installed ducted cold climate air source heat pumps. Two of the customers installed Bosch ducted air source heat pumps to existing air handlers while the other two customers installed fully matched systems from Mitsubishi and Daikin. Data loggers were strategically installed in every home to accurately measure performance. Minnesota Power will retrieve the data loggers after a full year. An analysis will be performed comparing the overall performance between fully matched and mismatched systems.

Historical Courthouse Cold Climate Air Source Heat Pump – Minnesota Power was approached by a customer looking for solutions to upgrade their HVAC equipment. An obstacle for the customer in completing this project is the building's status as a historical site and therefore, they cannot make extensive changes to the building's structure and facade. Due to this, Minnesota Power has been working closely with the customer and contractors researching a solution for improvements to the HVAC systems in the building, while keeping the historical site status.

The solution that Minnesota Power and the customer decided to research is a Daikin Sky Air Heat Pump system. The chosen system is a 14 ton cold climate rated outdoor unit that will operate down to -15 degrees Fahrenheit. The indoor units consist of two 1.5 ton ceiling mounted 4-way blower cassettes, one 2 ton ceiling mounted 4-way blower cassette, one 0.5 ton wall mounted unit, one 2.5 ton ceiling mounted 4-way blower cassette and one 1 ton vista 2x2 cassette. Controls were also installed to allow for better heating and cooling load matching the unit demands based on the conditions at a given time.

As the research commences, the expectations is that the new units will keep the space at a more comfortable temperature. Additionally, the new system will cut down on the noise pollution that the window air conditioning units provided, as well as improve the visual appeal of the space. The new system will also eliminate the condensate water that had been dripping onto the floors. Due to the controls in the new units, cooling and heating will also be better regulated, leading to a more efficient use of energy.

Low Income Ductless Cold Climate Air Source Heat Pump Evaluation – Minnesota Power identified an income-qualified customer that would benefit from the installation of an efficient air source heat pump in partnership with the local Community Action agency. The customer heated primarily with baseboard electric resistance heat. An air source heat pump presented an opportunity to decrease the customers total energy usage. The Company wanted to gain an understanding of the process, customer education required, and costs associated with installing these systems in conjunction with affordability programs. Once the project was complete, the

Company determined logistic complexities and overall costs made it less cost effective when compared to other potential measures.

## COMMERCIAL FOOD SERVICES ($13,921)

Minnesota Power identified commercial food service equipment as an area of focus. Emerging technologies has made the prospect of electrifying kitchen equipment and spaces more attractive. The Company will partner with interested customers by providing recommendations, training and equipment samples when appropriate.

***Project Summaries:***

Commercial Food Services Training -The Company is working with a vendor to provide training for Minnesota Power staff and interested customers to better understand high efficient electric technologies in active food service locations. A training will be planned and scheduled when in-person gatherings are permitted.

Details for a multi-day training will be confirmed when the event is scheduled but potential topics include:

- Discussion of potential opportunities in Minnesota Power's service territory
- Overview of industry trends and electric cooking equipment for commercial food service
- One day training for customers and trade allies
- Detailed analysis of three to four commercial customer sites

Electric Kitchen Equipment Samples - Minnesota Power identified and gathered information on electric kitchen equipment. Induction cooktops were acquired and provided through Minnesota Power for trial use. Customer input was recorded along with the sample product model number and information. The Company will continue to identify cost effective products to provide to customers. This will be useful to Minnesota Power and their customers for making informed energy-efficient equipment choices.

## COMPRESSED AIR ($23,855)

***Project Summaries:***

Computer Numerical Control ("CNC") Vacuum Pump Study – Historically vacuum systems have not been deeply studied or completely understood. Most customers use these systems and run them not fully understanding the amount of energy required to operate them. Studying these systems in detail will offer an opportunity to better understand how these systems operate and potentially transfer this knowledge to Minnesota Power customers as well as contractors.

Minnesota Power identified a customer that uses CNC equipment with several vacuum pumps. Components of the CNC machine do not run at the same time so some of the vacuum pumps should be able to be shut off. It should also be possible for a fraction of the pumps to operate pulling the required vacuum for the CNC equipment to operate appropriately.

This project will monitor the vacuum level at CNC machines and the power consumption of individual vacuum pumps. Energy and vacuum data will be captured from a controller and be

viewed from a local interface. A full evaluation of this data will include whether there is a possibility of installing a header on the existing vacuum system and tying all the pumps together which will lead to energy savings.

Compressor Air Controls - Compressed air is an inherently inefficient method of transferring energy, but is necessary in many applications. While most industrial air compressors come equipped with individual controls, they do not always communicate as a system. This can cause inefficient operation where the compressed air load is variable depending on the time of day, type of production happening, and a variety of other factors. By installing a controller that takes in data from not only the system pressure as a whole, but also the energy intensity of each compressor to meet the instantaneous demand, creates the most efficient single compressor or combination of compressor use in any demand situation.

An initial compressed air study was done at a large manufacturing facility in 2020 to gather a baseline on the compressed air systems operation. Data from this study showed that very brief drops in system pressure caused a 50HP secondary compressor to be called on multiple times a day, but then immediately be rolled back into the unloaded state, supplying no air to the system and wasting energy. It also showed rapid short cycling of a 50HP compressor during downtime, never allowing it to operate fully loaded for an extended period of time, or allowing it to shut down completely. The facility has a smaller 25HP compressor, but did not use it as the control scheme would be complex to set up and it would require manual shutdown or start up almost every day.

The new controller was installed late December of 2020. It is connected to the two primary 50HP compressors as well as a new 25HP compressor. It is expected that the controller will recognize the same inefficiencies that were noted in our study, and instantaneously correct them through its control algorithm. As the controller takes time to learn the facility patterns, the new data has not yet been collected. The controller itself will gather and supply data, but the data collection equipment from the baseline study has also been retained to reduce the amount of variables in the data. The next step will be to collect and analyze the data post-controller installation. This will be an ongoing research and development project through 2021.

## HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION ("HVACR") TECHNOLOGIES ($38,703)

***Project Summaries:***

Smart Line Voltage Thermostat – The Company wanted customer feedback on smart line voltage thermostats. Acquiring testimonials on costs savings and comfort will help market Minnesota Power's new line voltage measures approved in the 2021-2023 triennial filing. A customer contacted Minnesota Power about installing multiple smart line voltage thermostats in their home. The Company will work with the customer in the summer 2021 for feedback on comfort, installation process, and overall experience to inform future promotions and customer communication materials.

Convenience Store Permanent-Magnet Synchronous Motor ("PMSM") Evaporator Fans - A small meat market and convenience store reached out to Minnesota Power to help identify ways to reduce their energy consumption. Minnesota Power's territory covers many rural areas that have similar convenience stores, and the owners of these facilities often share similar concerns.

It was determined that the customers refrigeration load should be examined for improvements as it represented a majority of the energy consumption year-round. The first sections of the refrigeration equipment that was examined for improvements was the conditioned spaces, walk-in coolers/freezers (WICF) and display cases. Although the units were outdated, most had been retrofitted with LED lights and night curtains for open-deck cases. The evaporator fans for each section were noted to be outdated technology and an area for improvement.

Evaporator fan technology is rapidly changing. New permanent magnet synchronous motors are now economically viable in smaller sizes, and ECM technology has been adopted by the Department of Energy (DOE) as the standard for all new walk-in evaporators using fans less than 1 HP. Both motor technologies offer improved efficiency over standard motor technologies such as shaded pole (SP), and permanent split capacitor (PSC) motors. PMSM motors can remove the starting controls from the circuit once full speed is reached, eliminating the losses from control components. The permanent magnets allow for less slip and reduced interference from eddy currents while running. While ECMs still use a controller as part of the motor circuitry, it is more efficient and precise than either the PSC or SP motor starting/running methods and allows for speed control if desired. Much of this technology is new and presented an opportunity for the examination and comparison of different fan technologies. New fans were installed with data loggers so the viability of the technology could be examined.

The pre- and post-retrofit data showed an average fan load reduction of 52.3% for the three 5-12W motor replacements, resulting in an estimated savings of 160 kWh and $10 per-year per-fan for the customer. The PMSM retrofit in the WICF resulted in a 40.2% fan load reduction for estimated savings of 320 kWh and $20 per-year per-fan. The dual-speed ECM retrofit in the WICF resulted in a peak fan load reduction of 55.6%, but also allowed the fan speed to be reduced for 67.7% of the hours for enhanced annual per-fan savings of 1,000 kWh and $60. This research has shown that updates to outdated evaporator fan technology will benefit the customer.

## INNOVATIVE LIGHTING ($ 22,640)

Lighting research keeps Minnesota Power current with new and innovative lighting products and technologies and allows customers to make informed decisions in the constantly changing LED market. Lighting samples provided to customers in 2020 included LED tubes, integrated controls, high bay retrofits and exterior and street lighting alternatives. This no-obligation approach allows customers to trial new lighting options in their space to determine if it meets their needs and continues to be a successful part of Minnesota Power's R&D program.

***Project Summary:***

2020 Innovative Lighting Summary – Minnesota Power continued to identify and gather information on new lighting products, controls and technologies on the market. Lighting samples were acquired through local suppliers and provided through Minnesota Power for trial use. Customer input was recorded along with the sample product model number and information. This ongoing research has been useful to Minnesota Power and their customers for making informed energy-efficient product choices.

## RECOMMISSIONING ($6,183)

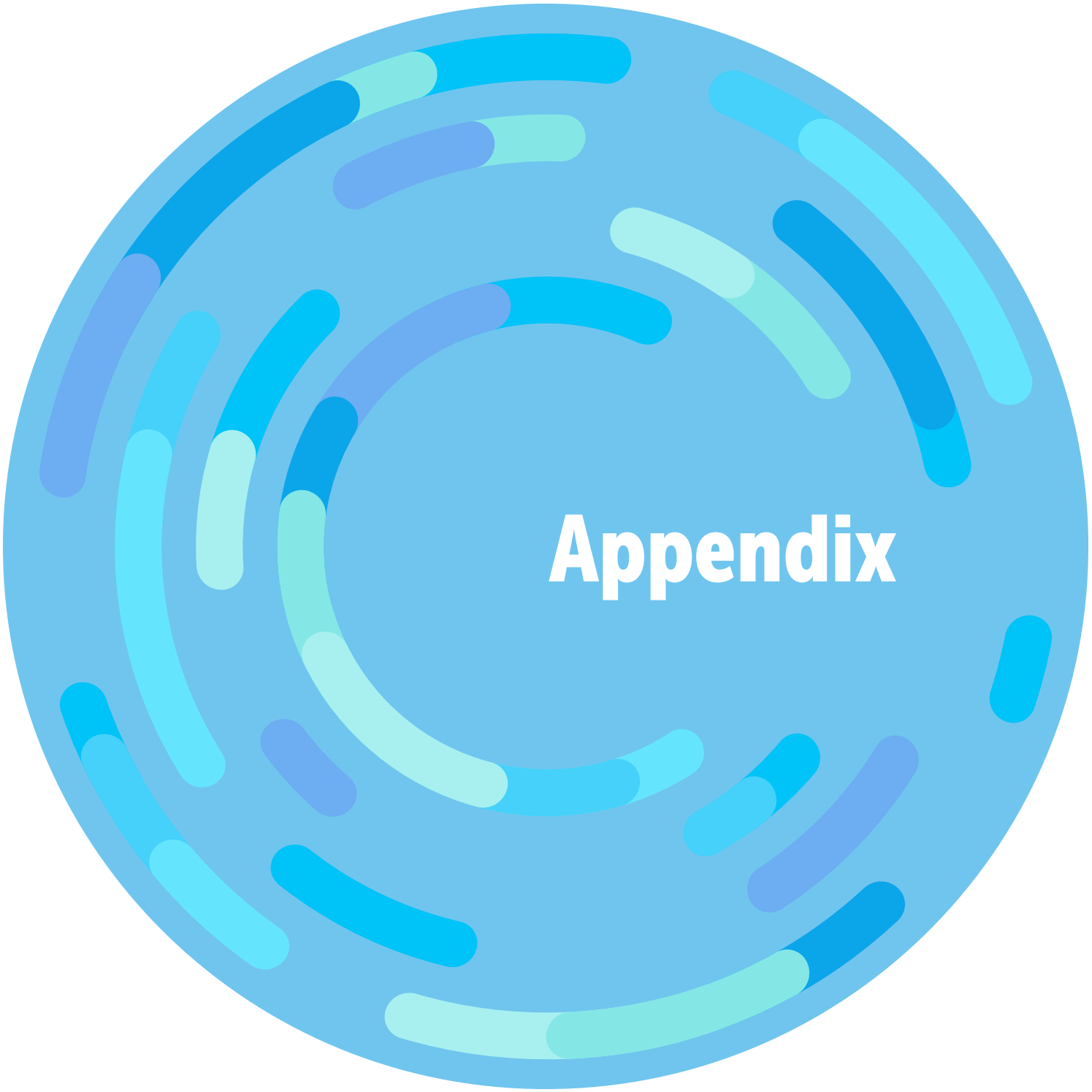
Minnesota Power is researching and implementing the systematic approach of recommissioning facilities to evaluate the energy and cost savings associated with implementing energy design and assistance when updating existing facilities. Incorporating energy-efficient design into any remodel or infrastructure updates is vitally important, as the decisions made during the design phase will impact the operational costs of the facility throughout its remaining life cycle.

***Project Summary:***

Health Care Facility Recommissioning – In 2020, Minnesota Power participated in one recommissioning project of a health care facility. The project reviewed the existing equipment and identified ways to make the building more efficient. Savings are realized through the evaluation of building systems and targeted to improve system operation and in many cases, improve comfort control. Some of the measures that were identified and implemented were, variable frequency drives, improvement in scheduling, setbacks, outside air reduction, lighting controls, economizers and programming.

## SUMMARY

In 2020, Minnesota Power funded R&D projects that involved a cross-section of customer classes and will help guide future conservation program design, outreach and offerings. New technologies, delivery methods and pilot programs are ways Minnesota Power helps strengthen its overall portfolio offering and prepares for the ever-changing CIP landscape. Overall, Minnesota Power finds this research to be valuable and informative to program design and delivery techniques, particularly as it relates to developing effective conservation program market strategies.



# Appendix

minnesota power
AN ALLETE COMPANY

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Duluth, MN 55802-2093
www.mnpower.com

April 1, 2021

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

Ms. Jessica Burdette, Manager
Division of Energy Resources
Minnesota Department of Commerce
85 Seventh Place East, Suite 500
St. Paul, MN 55101-2198

Re: **2020 Conservation Improvement Program Consolidated Filing**
**Docket Nos. E015/M-21-199, E015/CIP-16-117.04**

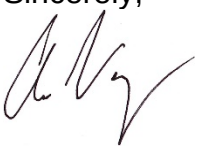
Dear Mr. Seuffert and Ms. Burdette:

Attached please find via eFiling Minnesota Power's 2020 Conservation Improvement Program ("CIP") Consolidated Filing. This submittal includes a CIP Tracker Activity Report, a Financial Incentives Report, a Proposed Conservation Program Adjustment Factor, 2020 CIP Project Evaluations and a compliance with Department of Commerce ("DOC") orders section. Minnesota Power is filing this information pursuant to Minn. Stat. §§ 216B.241, 216B.16, subd, 6c, 216B.2401, and 216B.2411 and in compliance with Minnesota Public Utilities Commission ("MPUC") and DOC rules and orders relating to annual filings associated with Company-sponsored conservation program activities, including Minn. Rule 7690.0550.

Minnesota Power requests that the MPUC review the filed material and approve Minnesota Power's 2020 CIP Tracker Activity, Financial Incentives, proposed Conservation Program Adjustment ("CPA") factor, and a variance of Minn. Rules 7820.3500 and 7825.2600 to permit Minnesota Power to continue to combine the CPA factor with the Fuel Clause Adjustment on customer bills. Further, Minnesota Power requests that the DOC review and approve the evaluations of the various CIP projects included herein and the compliance with prior DOC orders. Minnesota Power has electronically filed this document and copies of this Cover Letter along with the Summary of Filing have been served on the parties on the attached service list.

If you have any questions regarding this filing, please contact me at (218) 355-3602 or avang@mnpower.com.

Sincerely,



Ana Vang
*Public Policy Advisor*

AMV:th
Attach.

**STATE OF MINNESOTA**
**BEFORE THE**
**MINNESOTA PUBLIC UTILITIES COMMISSION**

| | |
|---|---|
| In the Matter of Minnesota Power's 2020 Conservation Improvement Program Consolidated Filing | Reporting on CIP Tracker Account Activity, Financial Incentives Report, Proposed CPA Factors and 2020 Project Evaluations<br><br>Docket No. E-015/M-21-199<br>E-015/CIP-16-117.04 |

## SUMMARY OF FILING

Minnesota Power (or, "the Company") hereby files with the Minnesota Public Utilities Commission ("MPUC or Commission") and the Department of Commerce, Division of Energy Resources ("Department") its annual Conservation Improvement Program ("CIP") Consolidated Filing in compliance with Minn. Stat. § 216B.241. Minnesota Power requests approval of the following:

- Recovery of the 2020 CIP Tracker Account activity year-end balance of ($380,310)
- A revised Conservation Program Adjustment ("CPA"), to be first implemented without proration on July 1, 2021, of $0.002015/kWh
- A variance of Minn. Rules 7820.3500 and 7825.2600 to permit the continued combination of the Conservation Program Adjustment with the Fuel and Purchased Power Clause Adjustment on customer bills

Minnesota Power submits its Conservation Improvement Program Consolidated Filing via eFiling with the Department of Commerce, Division of Energy Resources to comply with annual CIP project evaluation filing requirements.

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|---|---|---|
| STATE OF MINNESOTA | ) | AFFIDAVIT OF SERVICE VIA |
| | ) ss | ELECTRONIC FILING |
| COUNTY OF ST. LOUIS | ) | |

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Tiana Heger of the City of Duluth, County of St. Louis, State of Minnesota, says that on the 1st day of April, 2021, she served Minnesota Power's 2020 Conservation Improvement Program Consolidated Compliance Filing in **Docket Nos. E015/M-21-199 and E015/CIP-16-117.04** on the Minnesota Public Utilities Commission and the Energy Resources Division of the Minnesota Department of Commerce via electronic filing. The persons on E-Docket's Official Service List for this Docket were served as requested.

Tiana Heger

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| Michael | Volker | mvolker@eastriver.coop | East River Electric Power Coop | 211 S. Harth Ave<br><br>Madison,<br>SD<br>57042 | Electronic Service | No | OFF_SL_16-117_E015.CIP-16-117 |
| Sharon N. | Walsh | swalsh@shakopeeutilities.com | Shakopee Public Utilties | 255 Sarazin St<br><br>Shakopee,<br>MN<br>55379 | Electronic Service | No | OFF_SL_16-117_E015.CIP-16-117 |
| Ethan | Warner | ethan.warner@centerpointenergy.com | CenterPoint Energy | 505 Nicollet Mall<br><br>Minneapolis,<br>Minnesota<br>55402 | Electronic Service | No | OFF_SL_16-117_E015.CIP-16-117 |
| Robyn | Woeste | robynwoeste@alliantenergy.com | Interstate Power and Light Company | 200 First St SE<br><br>Cedar Rapids,<br>IA<br>52401 | Electronic Service | No | OFF_SL_16-117_E015.CIP-16-117 |

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
|---|---|---|---|---|---|---|---|
| Tom | Balster | tombalster@alliantenergy.com | Interstate Power & Light Company | PO Box 351<br>200 1st St SE<br>Cedar Rapids,<br>IA<br>524060351 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Lisa | Beckner | lbeckner@mnpower.com | Minnesota Power | 30 W Superior St<br><br>Duluth,<br>MN<br>55802 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Christina | Brusven | cbrusven@fredlaw.com | Fredrikson Byron | 200 S 6th St Ste 4000<br><br>Minneapolis,<br>MN<br>554021425 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Generic Notice | Commerce Attorneys | commerce.attorneys@ag.state.mn.us | Office of the Attorney General-DOC | 445 Minnesota Street Suite 1400<br><br>St. Paul,<br>MN<br>55101 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| George | Crocker | gwillc@nawo.org | North American Water Office | PO Box 174<br><br>Lake Elmo,<br>MN<br>55042 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Steve | Downer | sdowner@mmua.org | MMUA | 3025 Harbor Ln N Ste 400<br><br>Plymouth,<br>MN<br>554475142 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Jim | Erchul | jerchul@dbnhs.org | Daytons Bluff Neighborhood Housing Sv. | 823 E 7th St<br><br>St. Paul,<br>MN<br>55106 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Greg | Ernst | gaernst@q.com | G. A. Ernst & Associates, Inc. | 2377 Union Lake Trl<br><br>Northfield,<br>MN<br>55057 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Melissa S | Feine | melissa.feine@semcac.org | SEMCAC | PO Box 549<br>204 S Elm St<br>Rushford,<br>MN<br>55971 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Sharon | Ferguson | sharon.ferguson@state.mn.us | Department of Commerce | 85 7th Place E Ste 280<br><br>Saint Paul,<br>MN<br>551012198 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
|---|---|---|---|---|---|---|---|
| Karolanne | Foley | Karolanne.foley@dairylandpower.com | Dairyland Power Cooperative | PO Box 817<br>La Crosse,<br>WI<br>54602-0817 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Pat | Green | N/A | N Energy Dev | City Hall<br>401 E 21st St<br>Hibbing,<br>MN<br>55746 | Paper Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Jason | Grenier | jgrenier@otpco.com | Otter Tail Power Company | 215 South Cascade Street<br>Fergus Falls,<br>MN<br>56537 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Jeffrey | Haase | jhaase@grenergy.com | Great River Energy | 12300 Elm Creek Blvd<br>Maple Grove,<br>MN<br>55369 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Tyler | Hamman | tylerh@bepc.com | Basin Electric Power Cooperative | 1717 E Interstate Ave<br>Bismarck,<br>ND<br>58501 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Lori | Hoyum | lhoyum@mnpower.com | Minnesota Power | 30 West Superior Street<br>Duluth,<br>MN<br>55802 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Dave | Johnson | dave.johnson@aeoa.org | Arrowhead Economic Opportunity Agency | 702 3rd Ave S<br>Virginia,<br>MN<br>55792 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Tina | Koecher | tkoecher@mnpower.com | Minnesota Power | 30 W Superior St<br>Duluth,<br>MN<br>558022093 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Kelly | Lady | kellyl@austinutilities.com | Austin Utilities | 400 4th St NE<br>Austin,<br>MN<br>55912 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Martin | Lepak | Martin.Lepak@aeoa.org | Arrowhead Economic Opportunity | 702 S 3rd Ave<br>Virginia,<br>MN<br>55792 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
|---|---|---|---|---|---|---|---|
| Nick | Mark | nick.mark@centerpointenergy.com | CenterPoint Energy | 505 Nicollet Mall<br>Minneapolis,<br>MN<br>55402 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Pam | Marshall | pam@energycents.org | Energy CENTS Coalition | 823 7th St E<br>St. Paul,<br>MN<br>55106 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| John | McWilliams | John.McWilliams@DairylandPower.com | Dairyland Power Cooperative | 3200 East Ave SPO Box 817<br>La Crosse,<br>WI<br>54601-7227 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Brian | Meloy | brian.meloy@stinson.com | STINSON LLP | 50 S 6th St Ste 2600<br>Minneapolis,<br>MN<br>55402 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| David | Moeller | dmoeller@allete.com | Minnesota Power | 30 W Superior St<br>Duluth,<br>MN<br>558022093 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Carl | Nelson | cnelson@mncee.org | Center for Energy and Environment | 212 3rd Ave N Ste 560<br>Minneapolis,<br>MN<br>55401 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Samantha | Norris | samanthanorris@alliantenergy.com | Interstate Power and Light Company | 200 1st Street SE PO Box 351<br>Cedar Rapids,<br>IA<br>524060351 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Joyce | Peppin | joyce@mrea.org | Minnesota Rural Electric Association | 11640 73rd Ave N<br>Maple Grove,<br>MN<br>55369 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Leah | Peterson | lpeterson@mnpower.com | Minnesota Power | 30 West Superior St<br>Duluth,<br>MN<br>55802 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
|---|---|---|---|---|---|---|---|
| Lisa | Pickard | lseverson@minnkota.com | Minnkota Power Cooperative | 5301 32nd Ave S<br>Grand Forks,<br>ND<br>58201 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Dave | Reinke | dreinke@dakotaelectric.com | Dakota Electric Association | 4300 220th St W<br>Farmington,<br>MN<br>55024-9583 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Generic Notice | Residential Utilities Division | residential.utilities@ag.state.mn.us | Office of the Attorney General-RUD | 1400 BRM Tower<br>445 Minnesota St<br>St. Paul,<br>MN<br>551012131 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Susan | Romans | sromans@allete.com | Minnesota Power | 30 West Superior Street<br>Legal Dept<br>Duulth,<br>MN<br>55802 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Christopher | Schoenherr | cp.schoenherr@smmpa.org | SMMPA | 500 First Ave SW<br>Rochester,<br>MN<br>55902-3303 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Will | Seuffert | Will.Seuffert@state.mn.us | Public Utilities Commission | 121 7th Pl E Ste 350<br>Saint Paul,<br>MN<br>55101 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Ken | Smith | ken.smith@districtenergy.com | District Energy St. Paul Inc. | 76 W Kellogg Blvd<br>St. Paul,<br>MN<br>55102 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Lynnette | Sweet | Regulatory.records@xcelenergy.com | Xcel Energy | 414 Nicollet Mall FL 7<br>Minneapolis,<br>MN<br>554011993 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Michael | Volker | mvolker@eastriver.coop | East River Electric Power Coop | 211 S. Harth Ave<br>Madison,<br>SD<br>57042 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |
| Robyn | Woeste | robynwoeste@alliantenergy.com | Interstate Power and Light Company | 200 First St SE<br>Cedar Rapids,<br>IA<br>52401 | Electronic Service | No | GEN_SL_Minnesota Power_MPs CIP Service List |

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
|---|---|---|---|---|---|---|---|
| Tom | Balster | tombalster@alliantenergy.com | Interstate Power & Light Company | PO Box 351<br>200 1st St SE<br>Cedar Rapids,<br>IA<br>524060351 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Lisa | Beckner | lbeckner@mnpower.com | Minnesota Power | 30 W Superior St<br><br>Duluth,<br>MN<br>55802 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Rebekah | Billings | rebekah.billings@centerpointenergy.com | CenterPoint Energy Minnesota Gas | 505 Nicollet Mall<br><br>Minneapolis,<br>MN<br>55402 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| William | Black | bblack@mmua.org | MMUA | Suite 200<br>3131 Fernbrook Lane North<br><br>Plymouth,<br>MN<br>55447 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Christina | Brusven | cbrusven@fredlaw.com | Fredrikson Byron | 200 S 6th St Ste 4000<br><br>Minneapolis,<br>MN<br>554021425 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Charlie | Buck | charlie.buck@oracle.com | Oracle | 760 Market St FL 4<br><br>San Francisco,<br>CA<br>94102 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Ray | Choquette | rchoquette@agp.com | Ag Processing Inc. | 12700 West Dodge Road<br>PO Box 2047<br>Omaha,<br>NE<br>68103-2047 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Generic Notice | Commerce Attorneys | commerce.attorneys@ag.state.mn.us | Office of the Attorney General-DOC | 445 Minnesota Street Suite 1400<br><br>St. Paul,<br>MN<br>55101 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| George | Crocker | gwillc@nawo.org | North American Water Office | PO Box 174<br><br>Lake Elmo,<br>MN<br>55042 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Steve | Downer | sdowner@mmua.org | MMUA | 3025 Harbor Ln N Ste 400<br><br>Plymouth,<br>MN<br>554475142 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
|---|---|---|---|---|---|---|---|
| Charles | Drayton | charles.drayton@enbridge.com | Enbridge Energy Company, Inc. | 7701 France Ave S Ste 600<br>Edina,<br>MN<br>55435 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Jim | Erchul | jerchul@dbnhs.org | Daytons Bluff Neighborhood Housing Sv. | 823 E 7th St<br>St. Paul,<br>MN<br>55106 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Greg | Ernst | gaernst@q.com | G. A. Ernst & Associates, Inc. | 2377 Union Lake Trl<br>Northfield,<br>MN<br>55057 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Melissa S | Feine | melissa.feine@semcac.org | SEMCAC | PO Box 549<br>204 S Elm St<br>Rushford,<br>MN<br>55971 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Sharon | Ferguson | sharon.ferguson@state.mn.us | Department of Commerce | 85 7th Place E Ste 280<br>Saint Paul,<br>MN<br>551012198 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Karolanne | Foley | Karolanne.foley@dairylandpower.com | Dairyland Power Cooperative | PO Box 817<br>La Crosse,<br>WI<br>54602-0817 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Rob | Friend | rfriend@mnchamber.com | Minnesota Chamber of Commerce - MN Waste Wise Foundation | 400 Robert St N Ste 1500<br>Saint Paul,<br>MN<br>55101 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Angela E. | Gordon | agordon@trccompanies.com | Lockheed Martin | 1000 Clark Ave.<br>St. Louis,<br>MO<br>63102 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Pat | Green | N/A | N Energy Dev | City Hall<br>401 E 21st St<br>Hibbing,<br>MN<br>55746 | Paper Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Jason | Grenier | jgrenier@otpco.com | Otter Tail Power Company | 215 South Cascade Street<br>Fergus Falls,<br>MN<br>56537 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
|---|---|---|---|---|---|---|---|
| Jeffrey | Haase | jhaase@grenergy.com | Great River Energy | 12300 Elm Creek Blvd<br>Maple Grove,<br>MN<br>55369 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Tony | Hainault | anthony.hainault@co.hennepin.mn.us | Hennepin County DES | 701 4th Ave S Ste 700<br>Minneapolis,<br>MN<br>55415-1842 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Tyler | Hamman | tylerh@bepc.com | Basin Electric Power Cooperative | 1717 E Interstate Ave<br>Bismarck,<br>ND<br>58501 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Patty | Hanson | phanson@rpu.org | Rochester Public Utilities | 4000 E River Rd NE<br>Rochester,<br>MN<br>55906 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Norm | Harold | N/A | NKS Consulting | 5591 E 180th St<br>Prior Lake,<br>MN<br>55372 | Paper Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Jared | Hendricks | jared.hendricks@owatonnautilities.com | Owatonna Public Utilities | PO Box 800<br>208 S Walnut Ave<br>Owatonna,<br>MN<br>55060-2940 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Dave | Johnson | dave.johnson@aeoa.org | Arrowhead Economic Opportunity Agency | 702 3rd Ave S<br>Virginia,<br>MN<br>55792 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Deborah | Knoll | dknoll@mnpower.com | Minnesota Power | 30 W Superior St<br>Duluth,<br>MN<br>55802 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Tina | Koecher | tkoecher@mnpower.com | Minnesota Power | 30 W Superior St<br>Duluth,<br>MN<br>558022093 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Kelly | Lady | kellyl@austinutilities.com | Austin Utilities | 400 4th St NE<br>Austin,<br>MN<br>55912 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
|---|---|---|---|---|---|---|---|
| Erica | Larson | erica.larson@centerpointenergy.com | CenterPoint Energy | 505 Nicollet Avenue<br>P.O. Box 59038<br>Minneapolis,<br>Minnesota<br>55459-0038 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Martin | Lepak | Martin.Lepak@aeoa.org | Arrowhead Economic Opportunity | 702 S 3rd Ave<br><br>Virginia,<br>MN<br>55792 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Corey | Lubovich | coreyl@hpuc.com | Hibbing Public Utilities Commission | 1902 6th Ave E<br><br>Hibbing,<br>MN<br>55746 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Nick | Mark | nick.mark@centerpointenergy.com | CenterPoint Energy | 505 Nicollet Mall<br><br>Minneapolis,<br>MN<br>55402 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Pam | Marshall | pam@energycents.org | Energy CENTS Coalition | 823 7th St E<br><br>St. Paul,<br>MN<br>55106 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Scot | McClure | scotmcclure@alliantenergy.com | Interstate Power And Light Company | 4902 N Biltmore Ln<br>PO Box 77007<br>Madison,<br>WI<br>537071007 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| John | McWilliams | John.McWilliams@DairylandPower.com | Dairyland Power Cooperative | 3200 East Ave SPO Box 817<br><br>La Crosse,<br>WI<br>54601-7227 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Brian | Meloy | brian.meloy@stinson.com | STINSON LLP | 50 S 6th St Ste 2600<br><br>Minneapolis,<br>MN<br>55402 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| David | Moeller | dmoeller@allete.com | Minnesota Power | 30 W Superior St<br><br>Duluth,<br>MN<br>558022093 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Andrew | Moratzka | andrew.moratzka@stoel.com | Stoel Rives LLP | 33 South Sixth St Ste 4200<br><br>Minneapolis,<br>MN<br>55402 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
|---|---|---|---|---|---|---|---|
| Carl | Nelson | cnelson@mncee.org | Center for Energy and Environment | 212 3rd Ave N Ste 560<br>Minneapolis, MN 55401 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Samantha | Norris | samanthanorris@alliantenergy.com | Interstate Power and Light Company | 200 1st Street SE PO Box 351<br>Cedar Rapids, IA 524060351 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Audrey | Partridge | apartridge@mncee.org | Center for Energy and Environment | 212 3rd Ave. N. Suite 560<br>Minneapolis, Minnesota 55401 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Joyce | Peppin | joyce@mrea.org | Minnesota Rural Electric Association | 11640 73rd Ave N<br>Maple Grove, MN 55369 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Lisa | Pickard | lseverson@minnkota.com | Minnkota Power Cooperative | 5301 32nd Ave S<br>Grand Forks, ND 58201 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Bill | Poppert | info@technologycos.com | Technology North | 2433 Highwood Ave<br>St. Paul, MN 55119 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Kathleen A | Prestidge | Kathy.Prestidge@stoel.com | Stoel Rives LLP | 33 S 6th St Ste 4200<br>Minneapolis, MN 55402 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Dave | Reinke | dreinke@dakotaelectric.com | Dakota Electric Association | 4300 220th St W<br>Farmington, MN 55024-9583 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Generic Notice | Residential Utilities Division | residential.utilities@ag.state.mn.us | Office of the Attorney General-RUD | 1400 BRM Tower<br>445 Minnesota St<br>St. Paul, MN 551012131 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Chris | Rustad | crustad@mnchamber.com | Minnesota Chamber of Commerce | 400 Robert St N Ste 1500<br>Saint Paul, MN 55101 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
|---|---|---|---|---|---|---|---|
| Christopher | Schoenherr | cp.schoenherr@smmpa.org | SMMPA | 500 First Ave SW<br>Rochester, MN 55902-3303 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Will | Seuffert | Will.Seuffert@state.mn.us | Public Utilities Commission | 121 7th Pl E Ste 350<br>Saint Paul, MN 55101 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Ken | Smith | ken.smith@districtenergy.com | District Energy St. Paul Inc. | 76 W Kellogg Blvd<br>St. Paul, MN 55102 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Anna | Sommer | ASommer@energyfuturesgroup.com | Energy Futures Group | PO Box 692<br>Canton, NY 13617 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Russ | Stark | Russ.Stark@ci.stpaul.mn.us | City of St. Paul | 390 City Hall<br>15 West Kellogg Boulevard<br>Saint Paul, MN 55102 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Lynnette | Sweet | Regulatory.records@xcelenergy.com | Xcel Energy | 414 Nicollet Mall FL 7<br>Minneapolis, MN 554011993 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Kodi | Verhalen | kverhalen@taftlaw.com | Taft Stettinius & Hollister LLP | 80 S 8th St Ste 2200<br>Minneapolis, MN 55402 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Michael | Volker | mvolker@eastriver.coop | East River Electric Power Coop | 211 S. Harth Ave<br>Madison, SD 57042 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Sharon N. | Walsh | swalsh@shakopeeutilities.com | Shakopee Public Utilties | 255 Sarazin St<br>Shakopee, MN 55379 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |
| Ethan | Warner | ethan.warner@centerpointenergy.com | CenterPoint Energy | 505 Nicollet Mall<br>Minneapolis, Minnesota 55402 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
|---|---|---|---|---|---|---|---|
| Robyn | Woeste | robynwoeste@alliantenergy.com | Interstate Power and Light Company | 200 First St SE<br><br>Cedar Rapids,<br>IA<br>52401 | Electronic Service | No | SPL_SL__CIP SPECIAL SERVICE LIST |