January 11, 2023

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

***Subject:*** ***In the Matter of a Filing by Dakota Electric Association Regarding the Monthly Fixed Charge per Meter for the Advanced Grid Infrastructure (AGi) Rider Docket No. E111/M-23-##***

Dear Mr. Seuffert:

Enclosed is the Dakota Electric Association® (Dakota Electric or Cooperative) filing to update the Monthly Fixed Charge per Meter for the Advanced Grid Infrastructure (AGi) Rider. The AGi Rider, approved by the Minnesota Public Utilities Commission (MPUC or Commission) on May 8, 2018 in Docket No. E111/M-17-821, allows the Cooperative to recover certain net distribution grid modernization and load management investments that occur between Cooperative general rate cases. This filing establishes the 2023 AGi Rider Monthly Fixed Charge per Meter for various rate classes.

If you have any questions about the information in this filing, please call me at (651) 463-6258.

Sincerely,

*/s/ Adam J. Heinen*

Vice President of Regulatory Services
Dakota Electric Association
4300 220th Street West
Farmington, MN 55024

Enclosure

**Certificate of Service**

I, Melissa Cherney, hereby certify that I have this day served copies of the attached document to those on the following service list by e-filing, personal service, or by causing to be placed in the U.S. mail at Farmington, Minnesota.

**Docket No. E111/M-23-##**

Dated this 11th day of January 2023

*/s/ Melissa Cherney*

_____

Melissa Cherney

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

| | |
|---|---|
| Katie Sieben | Chair |
| Valerie Means | Commissioner |
| Matthew Schuerger | Commissioner |
| Joseph Sullivan | Commissioner |
| John Tuma | Commissioner |

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|---|---|
| In the Matter of a Filing by Dakota Electric Association Regarding the Monthly Fixed Charge per Meter for the Advanced Grid Infrastructure (AGi) Rider | E111/M-23-## January 11, 2023 |

## SUMMARY OF FILING

Please take notice that on January 11, 2023, Dakota Electric Association® (Dakota Electric or Cooperative) submitted a filing regarding the Monthly Fixed Charge per Meter for the Advanced Grid Infrastructure (AGi) Rider. The AGi Rider, approved by the Minnesota Public Utilities Commission (MPUC or Commission) on May 8, 2018 in Docket No. E111/M-17-821, allows the Cooperative to recover certain net distribution grid modernization and load management investments that occur between Cooperative general rate cases. **This filing establishes the 2023 AGi Rider Monthly Fixed Charge per Meter for various rate classes.**

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

| | |
|---|---|
| Katie Sieben | Chair |
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| John Tuma | Commissioner |

| | |
|---|---|
| In the Matter of a Filing by Dakota Electric Association Regarding the Monthly Fixed Charge per Meter for the Advanced Grid Infrastructure (AGi) Rider | E111/M-23-## January 11, 2023 |

**PETITION OF**
**DAKOTA ELECTRIC ASSOCIATION**

## Introduction

The Advanced Grid Infrastructure (AGi) Rider, approved by the Minnesota Public Utilities Commission (MPUC or Commission) on May 8, 2018 in Docket No. E111/M-17-821, allows Dakota Electric Association® (Dakota Electric or Cooperative) to recover certain net distribution grid modernization and load management investments that occur between Cooperative general rate cases.

This filing establishes the 2023 AGi Rider Monthly Fixed Charge per Meter for various rate classes.

## Advanced Grid Infrastructure (AGi) Rider

This filing provides the following:

1) an overview of the AGi project implementation;

2) description of specific schedules used to determine/calculate the AGi Rider Monthly Fixed Charges per Meter; and

3) presentation of the "Advanced Meter Recovery" fees associated with the AGi Rider.

Dakota Electric discusses these topics separately below.

AGi Project Implementation Overview

In 2019, Dakota Electric and our contracted vendors initiated several steps in the process of implementing AGi including:

*Vendors*

- Set up and configured software for the AMI, MDM, and Load Management systems. This included Development, Testing, and Production environments for the software.
- Developed and implemented integration between the AGi systems and existing Dakota Electric systems.
- Developed some of the unique advanced functionality.

*Dakota Electric*

- Developed and implemented much of the utility side of the integration between the existing Dakota Electric systems and the new AGi systems.
- Installed an on-premise testing facility where meters and load control receivers are installed and monitored under typical operating conditions using Development and Testing AGi software environments.
- Purchased and installed advanced testing boards for the AGi meters to allow simulated testing of meter functionality.
- Dakota Electric completed the installation of a 5,000 meter and 1,000 load control receiver performance acceptance pilot program on members' homes and business.

In 2020, Dakota Electric completed the performance acceptance program and began widespread meter and load control receiver installations. Installations continued throughout 2022 and Dakota Electric had installed approximately 99% of its meters by the end of January 2022. The installation of the remaining meters has been hampered by supply chain issues. Installation of load control receives continued throughout 2022 and approximately 75% of load control receivers were installed by the end of the year.

The equipment that has been placed into service, and new equipment that will continue to be installed throughout 2023, as identified in this filing for the AGi project, is

owned by the Cooperative. The data collected and administered through the meter data management system will allow Dakota Electric to operate the distribution system more efficiently and size equipment properly, all of which will conserve energy and use energy more efficiently.

Calculation of 2023 Monthly Fixed Charge per Meter

The AGi Rider provides recovery for the net costs associated with installing advanced metering infrastructure, meter data management equipment, and related systems between general rate cases through a separate line item on Dakota Electric bills.

Dakota Electric received Commission approval to recover rate of return, incremental property taxes, and incremental depreciation expense associated with capitalized AGi equipment that will become part of the Cooperative's rate base. The calculation of the AGi recovery fee is filed with the Commission at the beginning of the calendar year, just like we have done for over two decades with the Resource and Tax Adjustment (RTA). The AGi Adjustment is implemented with bills mailed after January 1, 2023 subject to any correction or modification after regulatory review and Commission approval. This is the same annual process that Dakota Electric uses for the RTA. The AGi Rider applies a per meter charge to metered retail rate schedules. This charge appears as a separate line item on bills identified as "Advanced Meter Recovery."

While the Commission has approved recovery of incremental property taxes associated with AGi capitalized investments, Dakota Electric notes that the property tax component requires special consideration. Changes in property taxes (increases and decreases) are already automatically addressed through the property tax component in the Cooperative's Resource and Tax Adjustment (RTA). That is, Dakota Electric's base rates include recovery for property taxes. As relative annual property taxes change due to the addition of new AMI meters and removal of current meters, the property tax component of the RTA will track these changes and adjust revenue accordingly. Accordingly, property taxes are not included in the calculation of the monthly fee

associated with the AGi Rider or the recovery of costs associated with load control receivers.

During its review of Dakota Electric's 2021 AGi filing, the Minnesota Department of Commerce (Department) observed that the Cooperative inadvertently failed to include credits for expected decreases in deprecation expenses and return on rate base in its AGi rate calculations related to Account 37020—Meters Used. Dakota Electric confirmed this omission, and the Department and the Cooperative agreed that given the small amount it was most appropriate to defer incorporating this adjustment until the 2022 AGi filing. The Cooperative incorporates this credit into its 2023 AGi rate calculations.

Related to the above topic is a separate adjustment for Account 37000. In the 2019 general rate case, Dakota Electric agreed to a $73,348 annual adjustment to the annual AGi rider starting in 2022 to account for a reduction in net book value associated with the transition to AGi meters. The Department noted this adjustment in last year's docket and stated that this adjustment will be applicable to the 2021 true up and in each subsequent year until the Cooperative's next rate case. Dakota Electric also agreed with this in its reply comments. The Cooperative includes this adjustment in its 2021 true up calculations, 2022 true up calculations, and 2023 rate calculations.

In terms of the net book value to calculate the annual Account 37000 adjustment, Dakota Electric explained in the 2022 AGI filing that the annual adjustment is based on estimated net book value at the end of 2021 as presented in the rate case. Since we have progressed from the rate case, the Cooperative noted that the Commission may wish to consider whether it is more appropriate to base the meter adjustment on actual net book value multiplied by the rate case rate of return because year-end net book values are now available, and will be available in the future. In its Order in the 2022 AGi filing, the Commission required Dakota Electric to include, in its 2023 AGi Rider filing, a discussion and quantification of the impacts associate with using actual, year-end net book values as compared to the currently estimates. When calculating the Account 37000 adjustment using actual 2021 ending book values, the adjustment resulted in an immaterial (less than $500) difference from the estimated

ending book value. Dakota Electric will continue to monitor this adjustment in future filings.

The calculations for return on rate base and depreciation associated with AGi are shown on the attached spreadsheets. These sheets and calculations are summarized as follows:

- **Schedule G-1** computes the AGi net recovery of $1,621,469 for 2023.

- **Schedule G-2** summarizes AGi capital costs and related depreciation, ROE and annual operational savings. Schedule G-2 includes seven sub-schedules as follows:
  - **Schedule G-2a** includes 2023 per meter charges
  - **Schedule G-2b** includes 2021 actual meter charges
  - **Schedule G-2c** includes 2021 per meter charges based on actuals through November 2021, with December 2021 estimates
  - **Schedule G-2d** includes a comparison of 2021 per meter charges based on actuals through November 2021, with December 2021 estimates, compared to 2021 per meter charges filed in 2021
  - **Schedule G-2e** includes 2022 per meter charges based on actuals through November 2022, with December 2022 estimates
  - **Schedule G-2f** includes 2022 per meter charges filed in the 2022 AGi filing
  - **Schedule G-2g** includes a comparison of 2022 per meter charges based on actuals through November 2022, with December estimates, compared to 2022 per meter charges filed in 2022

  In addition, these schedules show the allocation of AGi costs to the various rate schedules and calculates the per meter per month fee.
- **Schedule G-3** summarizes 2023 forecasted capital components and related depreciation expense for 2023.

2023 "Advanced Meter Recovery" Fee

Attached is a redline version and clean version of Dakota Electric's Advanced Grid Infrastructure Rider (Section V, Sheet 59, Revision 4) indicating the Monthly Fixed Charge per Meter. This fixed charge will appear on member bills on a line item identified as "Advanced Meter Recovery."

**Conclusion**

Based on the information included in this filing, Dakota Electric respectfully requests Commission approval of the 2023 AGi Rider Monthly Fixed Charge per Meter

amounts for various rate classes. If you have any questions about the information in this filing, please call me at (651) 463-6258.

Respectfully submitted,

*/s/ Adam J. Heinen*

Adam J. Heinen
Vice President of Regulatory Services
Dakota Electric Association
4300 220th Street West
Farmington, MN 55024

Enclosures

**Rate Recovery for AGi - Meters & Communication**

| | | Actual 2020 | Actual 2021 | Forecast 2022* | Forecast 2023 | |
|---|---|---|---|---|---|---|
| | | **2020** | **2021** | **2022** | **2023** | **Notes** |
| **Capitalized Costs - Added to Rate Base** | | $ 9,382,044 | $ 19,765,741 | $ 21,388,691 | $ 21,775,412 | ***Capitalized outlay for meters, communication equipment, software and related integrations, project management*** |
| Rate of Return Recovery | 6.47%/5.68% | $ 301,208 | $ 863,474 | $ 1,206,776 | $ 1,229,126 | ***Rate from 2014 Rate Case (Docket No. E-111/GR-14-482) through September 2020, Rate from 2019 Rate Case (Docket No. E-111/GR-19-478) starting in October 2020*** |
| Rate of Return Recovery Adjustment | | $ (703) | $ (703) | $ (703) | $ (703) | ***MPUC Docket No. E-111/GR-19-478/OAH Docket No. 60-2500-36475*** |
| Rate of Return Recovery Adjustment | | $ - | $ (73,348) | $ (73,348) | $ (73,348) | ***MPUC Docket No. E-111/GR-19-478/OAH Docket No. 60-2500-36475*** |
| Income Taxes | N/A | $ - | $ - | $ - | $ - | |
| Incremental Property Taxes | N/A | $ - | $ - | $ - | $ - | ***Captured in RTA property tax filing*** |
| Incremental Depreciation | | $ 441,766 | $ 1,036,695 | $ 1,427,905 | $ 1,527,234 | ***Based on monthly detail*** |
| Depreciation Adjustment | | $ (17,771) | $ (17,771) | $ (17,771) | $ (17,771) | ***MPUC Docket No. E-111/GR-19-478/OAH Docket No. 60-2500-36475*** |
| Subtotal Before Savings | | 724,500 | 1,808,347 | 2,542,859 | 2,664,538 | |
| Operational Savings | | $ (254,857) | $ (517,745) | $ (780,453) | $ (1,043,070) | ***Savings from reduced meter reading costs (3 headcount in 2020, 4 headcount in 2021, 5.5 headcount in 2022, 7 headcount in 2023, elimination of contract meter reading)*** |
| Net to Recover | | 469,643 | 1,290,602 | 1,762,406 | 1,621,469 | |

* includes Jan-Nov 2022 Actuals, Dec 2022 forecast

**AGI Rider**
**2023 AGI Rider Filing**

| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (l) | (m) | (n) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Allocated Capitalized Costs | | | | | | | 2021 True-up Credit | 2022 True-up Credit | 2023 Final |
| *Schedule* | *Meters* | *MWh Sales* | *Meters* | *Comm & MDM* | *Proj Mgmt* | *Sum* | *Annual Costs* | *Operational Savings* | *Net Recovery* | *Per Meter Per Mo.* | *Per Meter Per Mo.* | *Per Meter Per Mo.* | *Per Meter Per Mo.* |
| Residential | 107,784 | 952,990 | $ 15,526,576 | $ 1,750,613 | $ 640,557 | $ 17,917,746 | $ 2,192,497 | $ (858,283) | $ 1,334,214 | $ 1.03 | $ (0.11) | $ (0.11) | $ 0.81 |
| Irrigation | 394 | 9,552 | $ 153,037 | $ 17,547 | $ 6,324 | $ 176,908 | $ 21,647 | $ (8,474) | $ 13,173 | $ 2.79 | $ 0.27 | $ (1.05) | $ 2.01 |
| Lighting | - | - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Small General | 4,764 | 42,100 | $ 686,267 | $ 77,336 | $ 28,311 | $ 791,914 | $ 96,902 | $ (37,934) | $ 58,969 | $ 1.03 | $ (0.11) | $ (0.12) | $ 0.80 |
| General | 2,849 | 501,956 | $ 1,106,604 | $ 922,078 | $ 75,214 | $ 2,103,896 | $ 257,442 | $ (100,779) | $ 156,663 | $ 4.58 | $ 0.05 | $ (0.95) | $ 3.68 |
| C&I Interruptible | 263 | 356,420 | $ 102,154 | $ 654,733 | $ 28,062 | $ 784,948 | $ 96,050 | $ (37,600) | $ 58,450 | $ 18.52 | $ (0.90) | $ 0.67 | $ 18.29 |
| | 116,054 | 1,863,018 | $ 17,574,638 | $ 3,422,307 | $ 778,468 | $ 21,775,412 | $ 2,664,538 | $ (1,043,070) | $ 1,621,469 | | | | |

*Capitalized Costs*

| | |
|---|---|
| $ 16,212,843 | Meters (Residential and Single Phase) |
| $ 1,361,795 | Meters (Irrigation, General, C&I Interruptible) |
| $ 3,422,307 | Communication, MDM & Software |
| $ 778,468 | Project Management |
| $ 21,775,412 | |

| | |
|---|---|
| $ 2,664,538 | Annual ROE, Depreciation |
| $ (1,043,070) | Annual Operational Savings |

**NOTES:**

| | |
|---|---|
| Column a | Dakota Electric rate classes. |
| Columns b and c | Calendar year 2023 forecasted meter and energy consumption data. |
| Column d | Relative applicable rate class meter costs. |
| Column e | Relative applicable rate class communication, MDM, and software costs. |
| Column f | Project management costs allocated based on proportion of costs from Columns d and e. |
| Column g | Sum of Columns d + e + f. |
| Column h | Estimated annual ROE, and Depreciation divided by relative allocated capital costs. |
| Column i | Estimated annual Operational Savings allocated based on allocated costs in Column h. |
| Column j | Sum of Columns h + i. |
| Column k | Column j divided by Column b divided by 12 months. |
| Column l | Estimated credit from 2020 over-recovery. |
| Column m | Estimated credit from 2021 over-recovery. |
| Column n | Sum of Columns k + l + m. |

**AGI Rider**
**2021 Actual**

| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Allocated Capitalized Costs | | | *Annual* | *Operational* | *Net* | *Per Meter* |
| *Schedule* | *Meters* | *MWh Sales* | *Meters* | *Comm & MDM* | *Proj Mgmt* | *Sum* | *Costs* | *Savings* | *Recovery* | *Per Mo.* |
| Residential | 104,315 | 956,115 | $ 14,450,308 | $ 1,243,115 | $ 643,422 | $ 16,336,845 | $ 1,494,641 | $ (427,928) | $ 1,066,712 | $ 0.85 |
| Irrigation | 396 | 16,880 | $ 172,020 | $ 21,948 | $ 7,953 | $ 201,921 | $ 18,473 | $ (5,289) | $ 13,184 | $ 2.77 |
| Lighting | - | - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Small General | 4,670 | 40,421 | $ 646,915 | $ 52,554 | $ 28,678 | $ 728,147 | $ 66,617 | $ (19,073) | $ 47,544 | $ 0.85 |
| General | 2,807 | 463,868 | $ 1,219,347 | $ 603,108 | $ 74,720 | $ 1,897,175 | $ 173,571 | $ (49,695) | $ 123,876 | $ 3.68 |
| C&I Interruptible | 260 | 357,657 | $ 112,943 | $ 465,016 | $ 23,696 | $ 601,654 | $ 55,045 | $ (15,760) | $ 39,285 | $ 12.59 |
| | 112,448 | 1,834,940 | $ 16,601,533 | $ 2,385,740 | $ 778,468 | $ 19,765,741 | $ 1,808,347 | $ (517,745) | $ 1,290,602 | |

| | |
|---|---|
| | *Capitalized Costs* |
| $ 15,097,223 | Meters (Residential and Single Phase) |
| $ 1,504,310 | Meters (Irrigation, General, C&I Interruptible) |
| $ 2,385,740 | Communication, MDM & Software |
| $ 778,468 | Project Management |
| $ 19,765,741 | |
| | |
| $ 1,808,347 | Annual ROE, Depreciation |
| $ (517,745) | Annual Operational Savings |

**NOTES:**

| | |
|---|---|
| Column a | Dakota Electric rate classes. |
| Columns b and c | Calendar year 2021 actual meter and energy consumption data. |
| Column d | Relative applicable rate class meter costs. |
| Column e | Relative applicable rate class communication, MDM, and software costs. |
| Column f | Project management costs allocated based on proportion of costs from Columns d and e. |
| Column g | Sum of Columns d + e + f. |
| Column h | Estimated annual ROE, and Depreciation divided by relative allocated capital costs. |
| Column i | Estimated annual Operational Savings allocated based on allocated costs in Column h. |
| Column j | Sum of Columns h + i. |
| Column k | Column j divided by Column b divided by 12 months. |

**AGI Rider**
***2021 Forecast**

| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Allocated Capitalized Costs | | | *Annual* | *Operational* | *Net* | *Per Meter* |
| *Schedule* | *Meters* | *MWh Sales* | *Meters* | *Comm & MDM* | *Proj Mgmt* | *Sum* | *Costs* | *Savings* | *Recovery* | *Per Mo.* |
| Residential | 103,974 | 953,894 | $ 14,526,495 | $ 1,195,311 | $ 653,569 | $ 16,375,375 | $ 1,629,980 | $ (435,731) | $ 1,194,250 | $ 0.96 |
| Irrigation | 394 | 9,682 | $ 143,864 | $ 12,133 | $ 6,485 | $ 162,482 | $ 16,173 | $ (4,323) | $ 11,850 | $ 2.51 |
| Lighting | - | - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Small General | 4,621 | 41,161 | $ 645,613 | $ 51,578 | $ 28,983 | $ 726,173 | $ 72,282 | $ (19,323) | $ 52,960 | $ 0.96 |
| General | 2,788 | 463,831 | $ 1,018,005 | $ 581,220 | $ 66,481 | $ 1,665,706 | $ 165,802 | $ (44,323) | $ 121,479 | $ 3.63 |
| C&I Interruptible | 259 | 365,089 | $ 94,571 | $ 457,487 | $ 22,950 | $ 575,008 | $ 57,235 | $ (15,300) | $ 41,935 | $ 13.49 |
| | 112,036 | 1,833,657 | $ 16,428,548 | $ 2,297,729 | $ 778,468 | $ 19,504,744 | $ 1,941,473 | $ (519,000) | $ 1,422,473 | |

| | | |
|---|---|---|
| | | *Capitalized Costs* |
| $ | 15,172,108 | Meters (Residential and Single Phase) |
| $ | 1,256,440 | Meters (Irrigation, General, C&I Interruptible) |
| $ | 2,297,729 | Communication, MDM & Software |
| $ | 778,468 | Project Management |
| $ | 19,504,744 | |
| | | |
| $ | 1,941,473 | Annual ROE, Depreciation |
| $ | (519,000) | Annual Operational Savings |

**NOTES:**

| | |
|---|---|
| Column a | Dakota Electric rate classes. |
| Columns b and c | Calendar year 2021 forecasted meter and energy consumption data. |
| Column d | Relative applicable rate class meter costs. |
| Column e | Relative applicable rate class communication, MDM, and software costs. |
| Column f | Project management costs allocated based on proportion of costs from Columns d and e. |
| Column g | Sum of Columns d + e + f. |
| Column h | Estimated annual ROE, and Depreciation divided by relative allocated capital costs. |
| Column i | Estimated annual Operational Savings allocated based on allocated costs in Column h. |
| Column j | Sum of Columns h + i. |
| Column k | Column j divided by Column b divided by 12 months. |

* includes Jan-Nov 2021 Actuals, Dec 2021 forecast

**AGI Rider**
**2021 Actual vs. *2021 Forecast (difference)**

| (a) | (b) | (c) | | (d) | (e) | (f) | (g) | | (h) | (i) | (j) | (k) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Allocated Capitalized Costs | | | | *Annual* | *Operational* | *Net* | *Per Meter* |
| *Schedule* | *Meters* | *MWh Sales* | | *Meters* | *Comm & MDM* | *Proj Mgmt* | *Sum* | | *Costs* | *Savings* | *Recovery* | *Per Mo.* |
| Residential | 341 | 2,221 | 0 | $ (76,187) | $ 47,804 | $ (10,148) | $ (38,530) | 0 | $ (135,340) | $ 7,803 | $ (127,537) | $ (0.11) |
| Irrigation | 2 | 7,198 | 0 | $ 28,156 | $ 9,815 | $ 1,468 | $ 39,439 | 0 | $ 2,300 | $ (966) | $ 1,335 | $ 0.27 |
| Lighting | - | - | 0 | $ - | $ - | $ - | $ - | 0 | $ - | $ - | $ - | $ - |
| Small General | 49 | (740) | 0 | $ 1,302 | $ 976 | $ (305) | $ 1,973 | 0 | $ (5,665) | $ 250 | $ (5,415) | $ (0.11) |
| General | 19 | 36 | 0 | $ 201,342 | $ 21,888 | $ 8,238 | $ 231,469 | 0 | $ 7,769 | $ (5,372) | $ 2,397 | $ 0.05 |
| C&I Interruptible | 1 | (7,432) | 0 | $ 18,372 | $ 7,528 | $ 746 | $ 26,647 | 0 | $ (2,191) | $ (459) | $ (2,650) | $ (0.90) |
| | 412 | 1,283 | | $ 172,985 | $ 88,012 | $ (0) | $ 260,997 | | $ (133,127) | $ 1,255 | $ (131,871) | |

| | | *Capitalized Costs* |
|---|---|---|
| $ | (74,885) | Meters (Residential and Single Phase) |
| $ | 247,870 | Meters (Irrigation, General, C&I Interruptible) |
| $ | 88,012 | Communication, MDM & Software |
| $ | - | Project Management |
| $ | 260,997 | |

| | | |
|---|---|---|
| $ | (133,127) | Annual ROE, Depreciation |
| $ | 1,255 | Annual Operational Savings |

**NOTES:**

| | |
|---|---|
| Column a | Dakota Electric rate classes. |
| Columns b and c | Calendar year 2021 difference in meter and energy consumption data. |
| Column d | Relative applicable rate class meter costs. |
| Column e | Relative applicable rate class communication, MDM, and software costs. |
| Column f | Project management costs allocated based on proportion of costs from Columns d and e. |
| Column g | Sum of Columns d + e + f. |
| Column h | Estimated annual ROE, and Depreciation divided by relative allocated capital costs. |
| Column i | Estimated annual Operational Savings allocated based on allocated costs in Column h. |
| Column j | Sum of Columns h + i. |
| Column k | Column j divided by Column b divided by 12 months. |

* includes Jan-Nov 2021 Actuals, Dec 2021 forecast

**AGI Rider**
****2022 Forecast**

| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Allocated Capitalized Costs | | | *Annual* | *Operational* | *Net* | *Per Meter* |
| *Schedule* | *Meters* | *MWh Sales* | *Meters* | *Comm & MDM* | *Proj Mgmt* | *Sum* | *Costs* | *Savings* | *Recovery* | *Per Mo.* |
| Residential | 106,192 | 939,575 | $ 15,399,983 | $ 1,736,489 | $ 647,261 | $ 17,783,733 | $ 2,114,272 | $ (648,912) | $ 1,465,361 | $ 1.15 |
| Irrigation | 394 | 14,213 | $ 126,806 | $ 26,267 | $ 5,782 | $ 158,855 | $ 18,886 | $ (5,796) | $ 13,089 | $ 2.77 |
| Lighting | - | - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Small General | 4,717 | 40,958 | $ 684,060 | $ 75,697 | $ 28,697 | $ 788,454 | $ 93,738 | $ (28,770) | $ 64,968 | $ 1.15 |
| General | 2,835 | 486,128 | $ 912,423 | $ 898,444 | $ 68,398 | $ 1,879,265 | $ 223,422 | $ (68,573) | $ 154,849 | $ 4.55 |
| C&I Interruptible | 263 | 360,038 | $ 84,644 | $ 665,409 | $ 28,330 | $ 778,384 | $ 92,541 | $ (28,402) | $ 64,138 | $ 20.32 |
| | 114,401 | 1,840,911 | $ 17,207,916 | $ 3,402,307 | $ 778,468 | $ 21,388,691 | $ 2,542,859 | $ (780,453) | $ 1,762,406 | |

| | | *Capitalized Costs* |
|---|---|---|
| $ | 16,084,043 | Meters (Residential and Single Phase) |
| $ | 1,123,873 | Meters (Irrigation, General, C&I Interruptible) |
| $ | 3,402,307 | Communication, MDM & Software |
| $ | 778,468 | Project Management |
| $ | 21,388,691 | |

| | | |
|---|---|---|
| $ | 2,542,859 | Annual ROE, Depreciation |
| $ | (780,453) | Annual Operational Savings |

**NOTES:**

| | |
|---|---|
| Column a | Dakota Electric rate classes. |
| Columns b and c | Calendar year 2022 forecasted meter and energy consumption data. |
| Column d | Relative applicable rate class meter costs. |
| Column e | Relative applicable rate class communication, MDM, and software costs. |
| Column f | Project management costs allocated based on proportion of costs from Columns d and e. |
| Column g | Sum of Columns d + e + f. |
| Column h | Estimated annual ROE, and Depreciation divided by relative allocated capital costs. |
| Column i | Estimated annual Operational Savings allocated based on allocated costs in Column h. |
| Column j | Sum of Columns h + i. |
| Column k | Column j divided by Column b divided by 12 months. |

** includes Jan-Nov 2022 Actuals, Dec 2022 forecast

**AGI Rider**
**Per 2022 Filing**

| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Allocated Capitalized Costs | | | *Annual* | *Operational* | *Net* | *Per Meter* |
| *Schedule* | *Meters* | *MWh Sales* | *Meters* | *Comm & MDM* | *Proj Mgmt* | *Sum* | *Costs* | *Savings* | *Recovery* | *Per Mo.* |
| Residential | 105,533 | 925,264 | $ 14,727,863 | $ 1,163,644 | $ 643,080 | $ 16,534,588 | $ 2,171,674 | $ (573,716) | $ 1,597,958 | $ 1.26 |
| Irrigation | 394 | 7,699 | $ 169,736 | $ 9,683 | $ 7,261 | $ 186,679 | $ 24,519 | $ (6,477) | $ 18,041 | $ 3.82 |
| Lighting | - | - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Small General | 4,667 | 44,582 | $ 651,312 | $ 56,068 | $ 28,625 | $ 736,006 | $ 96,668 | $ (25,538) | $ 71,130 | $ 1.27 |
| General | 2,816 | 505,700 | $ 1,213,140 | $ 635,986 | $ 74,828 | $ 1,923,954 | $ 252,695 | $ (66,757) | $ 185,937 | $ 5.50 |
| C&I Interruptible | 260 | 395,742 | $ 112,009 | $ 497,699 | $ 24,673 | $ 634,380 | $ 83,320 | $ (22,012) | $ 61,309 | $ 19.65 |
| | 113,670 | 1,878,987 | $ 16,874,060 | $ 2,363,079 | $ 778,468 | $ 20,015,606 | $ 2,628,876 | $ (694,500) | $ 1,934,376 | |

| | |
|---|---|
| | *Capitalized Costs* |
| $ 15,379,176 | Meters (Residential and Single Phase) |
| $ 1,494,884 | Meters (Irrigation, General, C&I Interruptible) |
| $ 2,363,079 | Communication, MDM & Software |
| $ 778,468 | Project Management |
| $ 20,015,606 | |
| | |
| $ 2,628,876 | Annual ROE, Depreciation |
| $ (694,500) | Annual Operational Savings |

**NOTES:**

| | |
|---|---|
| Column a | Dakota Electric rate classes. |
| Columns b and c | Calendar year 2022 forecasted meter and energy consumption data. |
| Column d | Relative applicable rate class meter costs. |
| Column e | Relative applicable rate class communication, MDM, and software costs. |
| Column f | Project management costs allocated based on proportion of costs from Columns d and e. |
| Column g | Sum of Columns d + e + f. |
| Column h | Estimated annual ROE, and Depreciation divided by relative allocated capital costs. |
| Column i | Estimated annual Operational Savings allocated based on allocated costs in Column h. |
| Column j | Sum of Columns h + i. |
| Column k | Column j divided by Column b divided by 12 months. |

**AGI Rider**
****2022 Forecast vs. 2022 Filing (difference)**

| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Allocated Capitalized Costs | | | *Annual* | *Operational* | *Net* | *Per Meter* |
| *Schedule* | *Meters* | *MWh Sales* | *Meters* | *Comm & MDM* | *Proj Mgmt* | *Sum* | *Costs* | *Savings* | *Recovery* | *Per Mo.* |
| Residential | 659 | 14,311 | $ 672,119 | $ 572,846 | $ 4,181 | $ 1,249,146 | $ (57,402) | $ (75,196) | $ (132,598) | $ (0.11) |
| Irrigation | - | 6,514 | $ (42,930) | $ 16,585 | $ (1,479) | $ (27,824) | $ (5,633) | $ 681 | $ (4,952) | $ (1.05) |
| Lighting | - | - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Small General | 50 | (3,624) | $ 32,748 | $ 19,629 | $ 71 | $ 52,448 | $ (2,930) | $ (3,232) | $ (6,162) | $ (0.12) |
| General | 19 | (19,572) | $ (300,717) | $ 262,458 | $ (6,430) | $ (44,689) | $ (29,273) | $ (1,815) | $ (31,088) | $ (0.95) |
| C&I Interruptible | 3 | (35,704) | $ (27,364) | $ 167,711 | $ 3,657 | $ 144,004 | $ 9,220 | $ (6,391) | $ 2,829 | $ 0.67 |
| | 731 | (38,076) | $ 333,856 | $ 1,039,228 | $ 0 | $ 1,373,084 | $ (86,017) | $ (85,953) | $ (171,970) | |

| | | *Capitalized Costs* |
|---|---|---|
| $ | 704,867 | Meters (Residential and Single Phase) |
| $ | (371,011) | Meters (Irrigation, General, C&I Interruptible) |
| $ | 1,039,228 | Communication, MDM & Software |
| $ | - | Project Management |
| $ | 1,373,084 | |

| | | |
|---|---|---|
| $ | (86,017) | Annual ROE, Depreciation |
| $ | (85,953) | Annual Operational Savings |

**NOTES:**

| | |
|---|---|
| Column a | Dakota Electric rate classes. |
| Columns b and c | Calendar year 2022 difference in meter and energy consumption data. |
| Column d | Relative applicable rate class meter costs. |
| Column e | Relative applicable rate class communication, MDM, and software costs. |
| Column f | Project management costs allocated based on proportion of costs from Columns d and e. |
| Column g | Sum of Columns d + e + f. |
| Column h | Estimated annual ROE, and Depreciation divided by relative allocated capital costs. |
| Column i | Estimated annual Operational Savings allocated based on allocated costs in Column h. |
| Column j | Sum of Columns h + i. |
| Column k | Column j divided by Column b divided by 12 months. |

** includes Jan-Nov 2022 Actuals, Dec 2022 forecast

**AGi Project Cost Detail**
**2023 Forecast**

| Description | Capital Costs | Depreciation Expense | Notes |
|---|---|---|---|
| Meters | $ 17,574,638 | $ 1,167,525 | *Includes all meter costs* |
| Radio Frequency Network Infrastructure | 1,177,450 | 90,167 | *Access points, repeaters, and related network equipment* |
| IT Network Security | 29,684 | 5,937 | *Security software and hardware* |
| Testing Facility | 404,227 | 27,312 | |
| Software | 514,683 | 94,827 | *Software to operate the AGi system* |
| System Integration | 1,296,263 | 87,655 | *Software integration between AGi system and other DEA systems* |
| Administration | 724,027 | 50,767 | *Project management and consulting expenses* |
| Warehouse Forklift | 54,441 | 3,043 | *Material handling for remote warehouse location* |
| **Total** | **$ 21,775,412** | **$ 1,527,234** | |

| **Operational Savings** | |
|---|---|
| Meter Reading Savings | $ (798,000) |
| Contract Meter Reading and DEA Overtime | (245,070) |
| **Net Benefit** | **$ (1,043,070)** |

# ADVANCED GRID INFRASTRUCTURE RIDER

## Application

Applicable to bills for electric service provided under the Association's metered retail rate schedules.

## Rider

There shall be included on each member's monthly bill an Advanced Grid Infrastructure (AGi) Rider adjustment. The AGi Adjustment shall be applied on a per-meter basis before any city surcharge and sales tax.

## Determination of AGi Adjustment

The AGi Adjustment shall be the quotient obtained by dividing the forecasted balance of the AGi Tracker Account for each member class by the applicable meters in each member class. The AGi Adjustment may be changed annually upon a filing with the Minnesota Public Utilities Commission (Commission). The AGi Adjustment shall apply to bills rendered on and after January 1st of the year.

The AGi Adjustment for each metered retail rate schedule is:

| Member Class | Monthly Fixed Charge per Meter |
|---|---|
| Residential (Schedules 31, 32, 53, 56) | $0.9681 |
| Irrigation (Schedule 36) | $2.6001 |
| Small General (Schedule 41) | $0.9680 |
| General (Schedules 46, 54) | $3.7468 |
| C&I Interruptible (Schedules 70, 71) | $11.8018.29 |

*Recoverable AGi Costs* shall be the annual revenue requirements associated with AGi capital costs (a) not recovered through base rates, (b) recorded in the AGi Tracker Account for the designated period, and (c) determined by the Commission to be eligible for recovery under this Rider. A standard model will be used to calculate the total forecasted revenue requirements for eligible projects for the designated period. All costs appropriately charged to the AGi Tracker Account shall be eligible for recovery through this Rider, and all revenues recovered from the AGi Adjustment shall be credited to the AGi Tracker Account.

## True-Up

For each 12-month period ending December 31, a true-up adjustment to the AGi Tracker Account will be calculated reflecting the difference between the AGi Adjustment recoveries and the revenue requirements for such period. The true-up adjustment shall be calculated and included in the AGi recovery filing submitted to the Commission for the following calendar year. No carrying cost shall be applied to the AGi Tracker.

# ADVANCED GRID INFRASTRUCTURE RIDER

## Application

Applicable to bills for electric service provided under the Association's metered retail rate schedules.

## Rider

There shall be included on each member's monthly bill an Advanced Grid Infrastructure (AGi) Rider adjustment. The AGi Adjustment shall be applied on a per-meter basis before any city surcharge and sales tax.

## Determination of AGi Adjustment

The AGi Adjustment shall be the quotient obtained by dividing the forecasted balance of the AGi Tracker Account for each member class by the applicable meters in each member class. The AGi Adjustment may be changed annually upon a filing with the Minnesota Public Utilities Commission (Commission). The AGi Adjustment shall apply to bills rendered on and after January 1st of the year.

The AGi Adjustment for each metered retail rate schedule is:

| Member Class | Monthly Fixed Charge per Meter |
|---|---|
| Residential (Schedules 31, 32, 53, 56) | $0.81 |
| Irrigation (Schedule 36) | $2.01 |
| Small General (Schedule 41) | $0.80 |
| General (Schedules 46, 54) | $3.68 |
| C&I Interruptible (Schedules 70, 71) | $18.29 |

*Recoverable AGi Costs* shall be the annual revenue requirements associated with AGi capital costs (a) not recovered through base rates, (b) recorded in the AGi Tracker Account for the designated period, and (c) determined by the Commission to be eligible for recovery under this Rider. A standard model will be used to calculate the total forecasted revenue requirements for eligible projects for the designated period. All costs appropriately charged to the AGi Tracker Account shall be eligible for recovery through this Rider, and all revenues recovered from the AGi Adjustment shall be credited to the AGi Tracker Account.

## True-Up

For each 12-month period ending December 31, a true-up adjustment to the AGi Tracker Account will be calculated reflecting the difference between the AGi Adjustment recoveries and the revenue requirements for such period. The true-up adjustment shall be calculated and included in the AGi recovery filing submitted to the Commission for the following calendar year. No carrying cost shall be applied to the AGi Tracker.

| First Name | Last Name | Email | Company Name | Address | Delivery Method | View Trade Secret | Service List Name |
|---|---|---|---|---|---|---|---|
| Generic Notice | Commerce Attorneys | commerce.attorneys@ag.state.mn.us | Office of the Attorney General-DOC | 445 Minnesota Street Suite 1400<br>St. Paul,<br>MN<br>55101 | Electronic Service | Yes | OFF_SL_21-45_M-21-45 |
| Eric | Fehlhaber | efehlhaber@dakotaelectric.com | Dakota Electric Association | 4300 220th St W<br>Farmington,<br>MN<br>55024 | Electronic Service | No | OFF_SL_21-45_M-21-45 |
| 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 | OFF_SL_21-45_M-21-45 |
| Adam | Heinen | aheinen@dakotaelectric.com | Dakota Electric Association | 4300 220th St W<br>Farmington,<br>MN<br>55024 | Electronic Service | Yes | OFF_SL_21-45_M-21-45 |
| Corey | Hintz | chintz@dakotaelectric.com | Dakota Electric Association | 4300 220th Street<br>Farmington,<br>MN<br>550249583 | Electronic Service | No | OFF_SL_21-45_M-21-45 |
| Pam | Marshall | pam@energycents.org | Energy CENTS Coalition | 823 7th St E<br>St. Paul,<br>MN<br>55106 | Electronic Service | No | OFF_SL_21-45_M-21-45 |
| David | Moeller | dmoeller@allete.com | Minnesota Power | 30 W Superior St<br>Duluth,<br>MN<br>558022093 | Electronic Service | No | OFF_SL_21-45_M-21-45 |
| 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 | Yes | OFF_SL_21-45_M-21-45 |
| 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 | Yes | OFF_SL_21-45_M-21-45 |
| Eric | Swanson | eswanson@winthrop.com | Winthrop & Weinstine | 225 S 6th St Ste 3500<br>Capella Tower<br>Minneapolis,<br>MN<br>554024629 | Electronic Service | No | OFF_SL_21-45_M-21-45 |