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Xcel Energy

Docket No.: E002/M-17-776

Response To: MN Public Utilities Commission Information Request No. 1

Requestor: Hanna Terwilliger, Michelle Rosier,
Tricia DeBleekere

Date December 21, 2017

SUPPLEMENT

Question:

Provide more detail on the overall cost of grid modernization investments between 2018-2027 for the state of Minnesota in the chart below. If estimates are not final, please give an estimated range. Add more columns and rows, if necessary, to describe where costs will be recovered.

Capital Costs (State of Minnesota)

Grid Mod Program	Total Cost	Amount seeking recovery through TCR Rider	Amount accounted for in multi-year rate case	Amount from other source of recovery	Source of “other” recovery
ADMS					
FAN					
Wi-MAX					
Wi-SUN					
FLISR					
TOU					
AMI					
TOTAL					

O&M Costs (2018-2027, State of Minnesota)

Grid Mod Program	Total Cost	Amount seeking recovery through TCR Rider	Amount accounted for in multi-year rate case	Amount from other source of recovery	Source of “other” recovery
ADMS					
FAN					
Wi-MAX					
Wi-SUN					
FLISR					
TOU					
AMI					
TOTAL					

Response:

By way of background to our response, we believe it is important to distinguish between our Advanced Grid Intelligence and Security (AGIS) initiative and more “business-as-usual” grid investments. Our AGIS initiative is intended to identify significant, strategic projects that advance our distribution system, provide customers with more choices, and enhance the distribution services and functions we provide to our customers.

Generally speaking, the foundational elements of AGIS consist of the Advanced Distribution Management System (ADMS) and the Field Area Network (FAN). These elements provide a solid foundation and important flexibility and scalability to support functionalities such as the Time of Use (TOU) Rate Pilot and the Fault Location, Isolation, and Service Restoration (FLISR) projects, for which we have requested certification. We anticipate the next step with AGIS in Minnesota will involve an Advanced Metering Infrastructure (AMI) proposal, which will also require an expansion of FAN infrastructure to support the significant numbers of advanced meters and volumes of metering data that will result from a broad AMI deployment.

The flexible, open, building block approach we are taking to AGIS affords the opportunity to pause before taking the next step. For example, the level of FAN infrastructure deployment is designed to match the specific functionalities it will support. This balances the level of investment with the benefits the functionalities are expected to deliver to our customers and our operations. This approach also guards against being locked into a path certain with a specific vendor, or building a communications network with significant amounts of unused capacity that may never be used. For example, with respect to our present certification request, the level of proposed FAN investment will support FLISR and the TOU Pilot. Our future AMI proposal will also include a FAN component that scales-up the FAN to support it.

Consistent with the context of this docket, we focus this response on our AGIS initiative. Our AGIS investments can be distinguished from the more typical grid modernization investments that we have been making – and will continue to make – in the normal course of business. As distribution equipment ages or breaks and replacements are needed, we have replaced that equipment with available, compatible and updated technology at the speed of value to our customers. Specific examples of these standard investments that have facilitated incremental change include core network infrastructure upgrades to support the Company’s Wide Area Network (WAN), automated switches and reclosers, and various changes to supporting information systems. Looking forward, we expect this type of investment will continue as part of the normal course of business.

Therefore, in the interest of clarity, we have modified the Tables in the Question to account for the components as we presently anticipate implementing them. For example, as we have discussed, the FAN is scalable to support the number of devices and volume of data involved in deployment of a particular functionality. We have therefore split-out the FAN in the manner we anticipate implementing it. We also added an “AGIS Other” category to the Capital and O&M tables. These Other amounts we have in our five-year forecast for potential future capabilities are placeholders. As we discuss in more detail in our response to MPUC Information Request No. 5, we are purposefully building a flexible foundation and taking a building block approach to future functionalities that will be informed by our initial implementations, learnings from other utilities, and insights gained from pilots, customers, and stakeholders. Thus, while we have budgeted placeholder investments, actual planned investments are likely to change.

Finally, we have denoted To-Be-Determined (TBD) in a number of places in the tables. The path for certain components – like AMI – is still being finalized and scoped. In terms of the intended cost recovery mechanism, we generally expect to seek cost recovery through the TCR Rider (assuming certification), and we have noted such in the TCR Rider column.

Estimated AGIS Capital Costs (2018-2027) – State of Minnesota
(millions)

Note: See Supplement below for explanation of redline updates

AGIS Program	Total Cost*	Amount seeking recovery through TCR Rider	Amount accounted for in multi-year rate case	Amount from other source of recovery	Notes
ADMS	\$43.4 (2016-2022) \$24.5 (2023-2025 Forecast) <u>\$69.1</u>	\$22.6 <u>18.8</u> (costs through 2018; additional TCR recovery may be sought at a later date)	\$2.3 <u>\$6.6</u>	N/A	The Company will seek recovery of remaining costs for ADMS through the TCR Rider or base rates, as appropriate at the given time.
FLISR	\$65.3	Expect to submit request post-certification	\$2.3	N/A	N/A
FLISR - FAN	\$64.1		N/A **	N/A	N/A
TOU Pilot	\$7.6	Expect to submit request post-certification	N/A	N/A	N/A
TOU Pilot – FAN	\$3.0		\$8.9 **	N/A	N/A
AMI	TBD	Expect to submit request post-certification	N/A	N/A	N/A
AMI - FAN	TBD		N/A	N/A	N/A
AGIS - Other	\$20.4 (2018-2022)	Expect to submit request post-certification	\$19.7	N/A	Five-Year Forecast

Note: Costs included in total and rate case columns for ADMS include assumed internal labor expenses; however, TCR rider recoveries exclude internal labor costs in order to follow proper rider recovery requests.

* Amounts include internal labor and therefore may not match cost recovery requests where internal labor is excluded.

** At the time of the Company's MYRP filing, FAN costs were not specifically allocated to FLISR or the TOU Pilot. The allocation between the two initiatives was determined at the time of the Company's grid modernization certification request. Both the TOU Pilot and FLISR will benefit from the FAN WiMAX infrastructure included in the MYRP.

**Estimated AGIS O&M Costs (2018-2027) – State of Minnesota
(millions)**

AGIS Program	Total Cost	Amount seeking recovery through TCR Rider	Amount accounted for in multi-year rate case	Amount from other source of recovery	Notes
ADMS	\$6.0M	\$0.1M	N/A	N/A	The Company will seek recovery of remaining costs for ADMS through the TCR Rider or base rates as appropriate at given time.
FLISR	\$5.4M	Expect to submit request post-certification	N/A	N/A	N/A
FLISR - FAN	\$5.2M		N/A	N/A	N/A
TOU Pilot	\$3.2M	Expect to submit request post-certification	N/A	N/A	N/A
TOU Pilot – FAN	\$0.1M		N/A	N/A	N/A
AMI	TBD	Expect to submit request post-certification	N/A	N/A	N/A
AMI - FAN	TBD		N/A	N/A	N/A
AGIS - Other	\$2.1	Expect to submit request post-certification	N/A	N/A	N/A

Supplement:

While preparing a response to an Information Request in the Company’s 2017 Transmission Cost Recovery Rider docket (Docket No. E002/M-17-797), we discovered an error that affects the estimated ADMS costs reflected in the above Capital Costs chart. Specifically, we found an additional ADMS parent workorder that changes the capital amount accounted for in the MYRP, and the amount for which we are seeking cost recovery through the TCR Rider. We have made these updates in redline in the above Capital Costs chart. In sum, this change reduces the amount we are seeking in the TCR Rider by \$3.8 million.

We also discovered that the total capital cost of the ADMS project we initially reflected in this response did not match our 2017 TCR Rider petition, so we have made that update in redline in the above Capital Costs chart. For clarity, we also provide an updated ADMS Capital Costs chart for ADMS below. This does not impact our requested cost recovery, as this was just an inconsistency between the two sets of numbers; the numbers provided in the TCR Petition were correct.

Estimated AGIS Capital Costs (2018-2027) – State of Minnesota
(millions)
ADMS Corrected

AGIS Program	Total Cost*	Amount seeking recovery through TCR Rider	Amount accounted for in multi-year rate case	Amount from other source of recovery	Notes
ADMS	\$69.1**	\$18.8 (costs through 2018; additional TCR recovery may be sought at a later date)	\$6.6	N/A	The Company will seek recovery of remaining costs for ADMS through the TCR Rider or base rates, as appropriate at the given time.

Note: Costs included in total and rate case columns for ADMS include assumed internal labor expenses; however, TCR rider recoveries exclude internal labor costs in order to follow proper rider recovery requests.
 * Amounts include internal labor and therefore may not match cost recovery requests where internal labor is excluded.
 ** Includes hardware costs.

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