COMMERCE DEPARTMENT

March 22, 2022 **PUBLIC DOCUMENT**

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

RE: **PUBLIC Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E017/M-21-612

Dear Mr. Seuffert:

Attached are the **PUBLIC** comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) in the following matter:

Otter Tail Power Company's 2021 Integrated Distribution Plan

In the attached comments the Department provides its response to the Minnesota Public Utilities Commission's (Commission) November 15, 2021 *Notice of Comment Period In the Matter of Distribution System Planning for Otter Tail Power Company.*

The Department requests additional information from Otter Tail Power Company and will provide final recommendations in Party Reply comments.

The Department is available to respond to any questions the Commission may have on this matter.

Sincerely,

/s/ MATTHEW LANDI
Rates Analyst

/s/ CHRISTOPHER WATKINS
Rates Analyst

ML/CW/ar
Attachment

Before the Minnesota Public Utilities Commission

PUBLIC Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. E017/M-21-612

I. INTRODUCTION AND BACKGROUND

A. OVERVIEW

On November 1, 2021, Otter Tail Power Company (OTP, or the Company) filed its 2021 Integrated Distribution Plan (2021 IDP)[1] as required by the Minnesota Public Utilities Commission (Commission) in its November 2, 2020 Order in Docket No. E017/M-19-693 (the 2020 Order).[2]

On November 15, 2021, the Commission issued a *Notice of Comment Period In the Matter of Distribution System Planning for Otter Tail Power Company* (Notice). The Commission's Notice seeks comments on the issue of whether the Commission should accept or reject Otter Tail Power Company's 2021 Integrated Distribution Plan (IDP).

The Commission's Notice also identifies five topics open for comment, which are as follows:

1. Should the Commission accept or reject Otter Tail Power's Integrated Distribution Plan (IDP)?
2. Does the IDP filed by Otter Tail Power achieve the planning objectives outlined in the filing requirements as amended by the Commission's November 2, 2020 Order? [footnote omitted]
3. What IDP filing requirements provide the most value to the process, and why?
4. Are there filing requirements that are not information and/or should be deleted or modified, and why?
5. Are there other issues or concerns related to this matter?

[1] Otter Tail Power Company 2021 IDP Report, Docket No. E017/M-21-612. November 1, 2021. Accessed at (PUBLIC): https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={D0F0DC7C-0000-C23D-BA48-B6CEBE6E360D}&documentTitle=202111-179391-02.

[2] *In the Matter of Otter Tail Power's 2019 Integrated Distribution System Plan,* Docket No. E017/M-19-693 (2019 IDP). ORDER ACCEPTING INTEGRATED DISTRIBUTION PLAN AND MODIFYING FILING REQUIREMENTS. September 9, 2020. Accessed at: https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={00927374-0000-C61B-8B4C-13612EB4F4A7}&documentTitle=20209-166480-01.

B. OTTER TAIL POWER'S 2021 IDP

Otter Tail Power's IDP is required to be filed biennially and to be responsive to the Commission's IDP Planning Objectives, consisting of information required by the Commission's IDP Filing Requirements.[3] The IDP is intended to build upon Commission, stakeholder, and customer understanding of the Company's distribution system planning in two key areas: (1) development of a framework for ongoing distribution system planning and related analyses (such as DER forecasts); and (2) grid modernization implementation plans and analyses. At a high level, OTP's 2021 IDP provides an overview of its distribution system management strategies and how the Company plans the system to be responsive to state energy policies while meeting customers' current and future needs.

The Commission's IDP Filing Requirements require utilities to provide information and analyses related to internal distribution system planning processes, historical actual and budgeted capital expenditures, present and forecasted levels of distributed energy resources (DER), forecasted levels of energy demand, hosting capacity data, and non-wires alternatives (NWA) analysis. Utilities are also required to discuss how their IDPs fulfill the Commission's IDP Planning Objectives. OTP provided a Checklist of Requirements at the end of its 2021 IDP which indicates where in the IDP the Company addressed each of the Commission's ordered Filing Requirements.[4]

OTP's 2019 IDP projected total distribution spending of approximately $93.90 million between 2019 and 2023. OTP's 2021 IDP increased that projection to $115.98 million between 2021 and 2025.

The table below provides a high-level overview of the projected spending levels OTP provided in its 2019 and 2021 IDPs, organized by the IDP Budget Categories required by IDP Filing Requirement 3.A.29. IDP Filing Requirement 3.A.29 requires OTP to provide information on "[p]lanned distribution capital projects, including drivers for the project, timeline for improvement, summary of anticipated changes in historic spending"[5] and contains eight IDP Budget Categories, which are listed in the table below.

[3] The Department's review of each utility's 2019 IDP proceedings found that the only comprehensive list of IDP filing requirements that reflect modifications made by the Commission's Orders related to utilities' 2019 IDPs is found in the Commission's December 4, 2020 *Notice of Stakeholder Meeting,* which was filed in each utility's 2019 IDP proceeding. See Attachment 4 of the December 4, 2020 *Notice of Stakeholder Meeting* for red-line version of Otter Tail Power's IDP Filing Requirements (IDP Filing Requirements). Accessed at: https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={50352E76-0000-C27D-8DB5-05C019CDB398}&documentTitle=202012-168786-04.

[4] 2021 IDP, at 46. Accessed at (PUBLIC): https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={D0F0DC7C-0000-C23D-BA48-B6CEBE6E360D}&documentTitle=202111-179391-02.

[5] IDP Filing Requirement 3.A.29.

Table 1. Comparison of OTP Distribution System Spending Projections: 2019 and 2021 IDP

IDP Budget Category	2019 IDP (2019 - 2023) Spending (Millions)	2021 IDP (2021 - 2025) Spending (Millions)	Δ (Millions)
Age-Related Replacement and Asset Renewal	$ 30.98	$ 41.49	$ 10.52
System Expansion or Upgrades for Capacity	$ 1.74	$ 2.53	$ 0.79
System Expansion or Upgrades for Reliability and Power Quality	$ 2.07	$ 1.63	$ (0.44)
New Customer Projects and New Revenue	$ 32.53	$ 24.58	$ (7.95)
Grid Modernization and Pilot Programs	$ 22.58	$ 40.72	$ 18.14
Projects related to Local (or other) Government Requirements	$ 1.00	$ 0.73	$ (0.26)
Metering	$ 3.01	$ 1.34	$ (1.67)
Other	$ -	$ 2.96	$ 2.96
Total Spending	**$ 93.90**	**$ 115.98**	**$ 22.09**

For each IDP Budget Category and overall, this table calculates the difference in projected spending between the 2019 IDP and the 2021 IDP.

These filings were made two years apart from one another (on November 1, 2019 and November 1, 2021), and overall distribution system spending projections increased from approximately $93.90 million to $115.98 million over that time period.

It is important to note that this isn't an apples-to-apples comparison given the periods analyzed in each filing (e.g., the 2019 IDP period covers years 2019 through 2023, whereas the 2021 IDP period covers years 2021 through 2025).

To obtain a better apples-to-apples comparison between each filing, the Department reviewed the annual spending projections provided in each filing and was able to compare projected spending between the 2021 through 2023 period. Table 2 below provides such a comparison.

Table 2. Comparison of OTP's Distribution System Spending Projections for the 2021 – 2023 Period: 2019 and 2021 IDP

IDP Budget Category	2019 IDP (2021 - 2023) Spending (Millions)	2021 IDP (2021 - 2023) Spending (Millions)	Δ (Millions)
Age-Related Replacement and Asset Renewal	$ 23.18	$ 21.74	$ (1.44)
System Expansion or Upgrades for Capacity	$ 0.88	$ 1.90	$ 1.02
System Expansion or Upgrades for Reliability and Power Quality	$ 1.30	$ 0.95	$ (0.35)
New Customer Projects and New Revenue	$ 21.00	$ 14.15	$ (6.85)
Grid Modernization and Pilot Programs	$ 21.35	$ 30.48	$ 9.13
Projects related to Local (or other) Government Requirements	$ 0.43	$ 0.43	$ -
Metering	$ 1.87	$ 1.34	$ (0.53)
Other	$ -	$ 0.56	$ 0.56
Total Spending	**$ 70.01**	**$ 71.54**	**$ 1.53**

This table calculates the difference in spending reported in the 2021 IDP for each IDP Budget Category and overall as compared to the 2019 IDP for the 2021 through 2023 period. OTP's total planned distribution system spending over these three years increased by $1.53 million. While proposed total spending for this three year period is relatively similar in both IDPs, there is a large shift in allocation of funding from New Customer Projects and New Revenue to Grid Modernization and Pilot Programs in the 2021 IDP (-$6.85 million and +$9.13 million, respectively).

Finally, the Department reviewed the 2021 IDP's provision of information related to OTP's historical actual distribution system spending from the 2016 to 2020 period and compared that spending to OTP's projected distribution system spending from the 2021 to 2025 period. This high-level overview of financial data in OTP's 2021 IDP is summarized in the table below.

Table 3. Comparison of Distribution System Spending Reported in OTP's 2021 IDP, Historical Actual (2016 – 2020) vs. Budgeted (2021 – 2025)

	Historical Actual (2016 - 2020)		Budgeted (2021 - 2025)		Δ	
IDP Budget Category	*Spending (Millions)*	*% of Total Spend*	*Spending (Millions)*	*% of Total Spend*	*(Millions)*	*%*
Age-Related Replacement and Asset Renewal	$ 21.18	33.84%	$ 41.49	35.78%	$ 20.32	95.95%
System Expansion or Upgrades for Capacity	$ 2.77	4.42%	$ 2.53	2.18%	$ (0.24)	-8.60%
System Expansion or Upgrades for Reliability and Power Quality	$ 4.63	7.40%	$ 1.63	1.41%	$ (3.00)	-64.78%
New Customer Projects and New Revenue	$ 25.30	40.43%	$ 24.58	21.19%	$ (0.72)	-2.86%
Grid Modernization and Pilot Programs	$ 3.39	5.42%	$ 40.72	35.11%	$ 37.33	1100.39%
Projects related to Local (or other) Government Requirements	$ 1.69	2.69%	$ 0.73	0.63%	$ (0.95)	-56.50%
Metering	$ 3.17	5.07%	$ 1.34	1.15%	$ (1.84)	-57.92%
Other	$ 0.46	0.73%	$ 2.96	2.56%	$ 2.51	546.98%
Total Spending	**$ 62.58**		**$ 115.98**		**$ 53.40**	**85.33%**

OTP's total budgeted distribution system spending is projected to be $115.98 million for the 2021 through 2025 period compared to the historical actual distribution system spending of $62.58 million for the 2016 through 2020 period. OTP has budgeted decreases in every IDP Budget Category except Age-Related Replacement and Asset Renewal and Grid Modernization and Pilot Programs, both of which are projected to have significant increases in investment relative to historical spending patterns. Together these two categories account for 70.9% of total planned distribution investment over the coming five years which is a significant re-alignment of priorities from recent spending patterns towards the Company's Innovation 2030 (I2030) grid modernization initiative, discussed more in section II.C.2 below. The Other IDP Budget Category is also expected to increase over the five-year planning horizon, although this is largely attributable to a one-time, $2.15 million investment for telecommunications upgrades in 2025.

C. THE GUIDANCE DOCUMENT FROM SYNAPSE ENERGY ECONOMICS, INC.

As explained in the Department's February 9, 2022 Letter,[6] the Department retained Synapse Energy Economics, Inc. (Synapse) in response to the Commission's September 27, 2019 Order in Docket No. E002/M-17-797 requesting that the Department secure specialized technical professional investigative services to investigate the potential costs and benefits of proposed grid modernization investments. Synapse provided analysis specific to projects proposed by Xcel in its next rate case or Transmission Cost Recovery filings, and provided a methodology to be used by the Department in making recommendations to the Commission regarding any such future proposed investments by Xcel or other regulated public utilities.

Through this engagement and in service of the Commission's request, Synapse developed a document, attached to the Department's Letter, titled *Review and Assessment of Grid Modernization Plans: Guidance for Regulatory, Utilities, and Other Stakeholders* (Guidance Document). The Guidance Document was developed to support the analysis of grid modernization investments in Minnesota, and the Department intends to use its methodology in assessing proposals from all utilities submitting IDPs.

II. DEPARTMENT ANALYSIS

The Department's analysis responds to the IDP-related topics of the Commission's Notice. First, the Department provides additional insight regarding the Guidance Document and the Department's analytical framework and methodology that will be applied to utility IDPs and grid modernization plans and proposed investments.

A. THE DEPARTMENT'S ANALYTICAL FRAMEWORK AND METHODOLOGY

The Department aims to apply a consistent and methodical approach to analyzing biennial IDPs from Otter Tail Power (and other regulated utilities) with the goal of providing timely and useful advice to the Commission to ensure a) completeness of submitted IDPs in meeting IDP Filing Requirements and Commission-ordered modifications, b) consistency in planning scenarios and horizons, economic evaluation techniques, and forecasting methodology across system resource and transmission planning dockets, and c) utility IDPs continue to provide the conceptual foundation and context for short- and long-term grid modernization investment while eliminating information asymmetries between utilities and regulators.

[6] Minnesota Department of Commerce. Letter of the Minnesota Department of Commerce, Division of Energy Resources Introducing Synapse Energy Economics' Review and Assessment of Grid Modernization Plans. Report for Minnesota Department of Commerce. Filed in Docket No. E002/M-19-666, E999/DI-20-627, E002/M-20-680, E002/M-21-694, E002/M-21-814, E017/M-21-612, E015/M-21-390, and E111/M-21-728. February 9, 2022. Accessed at: https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={E09BE07E-0000-CB2C-85E2-91C3122300BD}&documentTitle=20222-182633-05.

As noted in the Guidance Document, the emergence of new technologies on the distribution grid has introduced new complexities and opportunities in how utilities plan and operate the electricity grid across multiple scales. Increased interoperability between technologies and applications requires that regulators understand the implications of the incremental investments by utilities in the distribution system across the scale of the grid as a whole. This necessitates the provision of a detailed and consistently applied benefit-cost analysis (BCA) framework to ensure that any and all distribution and grid modernization investments are responsive to state policy and customer needs and can be clearly justified as responding to these first principles. If these conceptual linkages throughout a project's development are not first clearly defined in proposals, the Commission runs the risk of approving superfluous or wasteful spending or allowing for cost recovery that does not accurately capture the true range of benefits and costs to ratepayers.

The Guidance Document is intended to help the Commission, stakeholders, and utilities thoughtfully and comprehensively approach investments made to modernize utility distribution systems so that the true range of benefits and costs to ratepayers associated with such investments are sufficiently understood and evaluated. Section 3 of the Guidance Document details Initial Filing Requirements that are intended for all Minnesota utilities that submit proposals for grid modernization investment plans. These requirements address the information that should be provided with these plans, including necessary detail on economic evaluation methods and results to support proposed investments.

The Department will evaluate utility grid modernization proposals using the initial filing requirements detailed in Section 3 of the Guidance Document.

An important aspect of the Guidance Document is Section 4, which details Ongoing Reporting Requirements. As explained in the Department's Letter, the Guidance Document is intended in part to complement and incorporate the recommendations of the Department's report called *Methods for Performance Evaluations, Metrics, and Consumer Protections for AMI and FAN* (December 2020 Report), filed in Docket Nos. E002/M-19-666 and E999/DI-20-627.[7]

Section 4 of the Guidance Document is the manifestation of this intent, as the Department's December 2020 Report is intended to prescribe methods for evaluating performance of a grid modernization investment, establish metrics that can be used in cost recovery assessments, and establish consumer protection at the outset of a utility grid modernization proposal. Similarly, Section 4 of the Guidance Document is intended to hold utilities accountable to the costs they anticipate incurring in pursuing a grid modernization proposal, as well as the realization of the benefits that a utility claims a grid modernization proposal will provide over the life of the grid modernization project.

[7] Minnesota Department of Commerce. Methods for Performance Evaluations, Metrics, and Consumer Protections for AMI and FAN. Department of Commerce Report to the Public Utilities Commission. Filed in Minnesota Public Utilities Commission. Docket. No. E-002/M-19-666 and E-999/DI-20-627. December 1, 2020. Accessed at: https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={40E01F76-0000-C232-AC19-D0DBF3B76F62}&documentTitle=202012-168688-02.

The Department is appreciative of the hard work and dedication shown by OTP in maintaining and improving the reliability, resiliency, and safety of their distribution grid in Minnesota. The requisite investments made by the Company to maintain this system have historically been approved and made under an implicit trust that that this spending was the most efficient and appropriate use of ratepayer funds. In calling for increased scrutiny into distribution system spending the Department is not implying that this trust has been misplaced or abused, but rather the increasing complexity and interoperability of components in the modern distribution system requires coincident increased scrutiny and detail of analysis to ensure efficient resource allocation and ratepayer protection.

Therefore, the Department affirms the following from the February 9, 2022 Letter:[8]

> It is the Department's intention to evaluate utility grid modernization proposals based on the prescriptions of the Guidance Document and will do so absent Commission action.
>
> Nevertheless, **the Department recommends that the Commission require utility grid modernization proposals to adhere to the filing requirements, methods of evaluation, and ratepayer protections detailed in the Guidance Document.**

B. IDP NOTICE TOPIC #1: SHOULD THE COMMISSION ACCEPT OR REJECT OTTER TAIL POWER ASSOCIATION'S INTEGRATED DISTRIBUTION PLAN (IDP)?

The Department's review of OTP's IDP begins at a threshold question: did the Company provide information and analyses required by the Commission's IDP Filing Requirements and previous Commission Orders?

As a preliminary matter, the Department notes that Otter Tail Power provided a Checklist of Requirements which showed where in the IDP the Company provided information addressing each of the filing requirements from the Commission's February 20, 2019 Order (2019 Order) in Docket No. E017/CI-18-253. The Department has reviewed the filing in its entirety and concludes that OTP has sufficiently addressed each of the IDP Filing Requirements and Commission Orders.

However, the Department will provide a final recommendation regarding whether the Commission should accept OTP's 2021 IDP in Party Reply comments once the Department reviews additional information from OTP and has an opportunity to review valuable stakeholder input.

[8] Department Letter, at 10.

C. IDP NOTICE TOPIC #2: DOES THE IDP FILED BY OTTER TAIL POWER COMPANY ACHIEVE THE PLANNING OBJECTIVES OUTLINED IN THE FILING REQUIREMENTS AS AMENDED BY THE COMMISSION'S FEBRUARY 20, 2019 ORDER?

The Commission's February 20, 2019 Order (2019 Order) in Docket No. E017/CI-18-253 provided the Commission's Planning Objectives:[9]

> The Commission is facilitating comprehensive, coordinated, transparent, integrated distribution plans to:
> - Maintain and enhance the safety, security, reliability, and resilience of the electricity grid, at fair and reasonable costs, consistent with the state's energy policies;
> - Enable greater customer engagement, empowerment, and options for energy services;
> - Move toward the creation of efficient, cost-effective, accessible grid platforms for new products, new services, and opportunities for adoption of new distributed technologies; and,
> - Ensure optimized utilization of electricity grid assets and resources to minimize total system costs.
> - Provide the Commission with the information necessary to understand Xcel's short-erm and long-term distribution system plans, the costs and benefits of specific investments, and a comprehensive analysis of ratepayer cost and value.

The Commission's 2020 Order requires OTP to do the following:[10]

> Otter Tail Power shall discuss in future filings how the IDP meets the Commission's Planning Objectives, including:
> A. An analysis of how the information presented in the IDP related to each Planning Objective;
> B. The location in the IDP;
> C. Analysis of efforts taken by the Company to improve upon the fulfillment of the Planning Objectives; and
> D. Suggestions as to any refinements to the IDP filing requirements that would enhance Otter Tail Power's ability to meet the Planning Objectives.

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[9] *In the Matter of Distribution System Planning for Otter Tail Power Company,* Docket No. E017/M-18-253. ORDER ADOPTING INTEGRATED DISTRIBUTION PLAN FILING REQUIREMENTS. February 20, 2019. Accessed at: https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={A0DA0B69-0000-C13C-8023-6B0911F35D22}&documentTitle=20192-150449-02.

[10] *In the Matter of Otter Tail Power's 2019 Integrated Distribution Plan,* Docket No. E017/M-19-693. ORDER ACCEPTING INTEGRATED DISTRIBUTION PLAN AND MODIFYING FILING REQUIREMENTS. Order Point No. 2. September 9, 2020. Accessed at: https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={00927374-0000-C61B-8B4C-13612EB4F4A7}&documentTitle=20209-166480-01.

Section 3 of OTP's 2021 IDP provides a high-level overview of how the IDP meets the Commission's Planning Objectives, briefly summarizing how each of the following sections of the IDP relate to each of the Commission's Planning Objectives in the 2019 Order.[11] The Department first reviewed this section and individually analyzed whether OTP's 2021 IDP was responsive to the Commission's Planning Objectives.

1. *Planning Objective #1- Maintain and enhance the safety, security, reliability, and resilience of the electricity grid, at fair and reasonable costs, consistent with the state's energy policies*

OTP briefly addressed the how each of the following sections of the IDP are responsive to the Commission's first Planning Objective by providing justification for investments in proposed initiatives by tying them to the purported shared goals of the Commission IDP principles and the Company's mission statement of "produc[ing] and deliver[ing] electricity as reliably, economically, and environmentally responsibly as possible."[12] The Department understands that the proposed projects and initiatives are themselves presented by the Company as efforts taken to improve upon the fulfillment of the Planning Objectives, and as such OTP has satisfied the Commission's 2020 Order. OTP did not provide recommendations for refinements to the IDP filing requirements to enhance OTP's ability to meet the Planning Objectives.

a. Safety

In OTP's 2021 IDP safety is mentioned primarily as it relates to overall distribution grid reliability and the condition and age of equipment in the field. There are no sections of the IDP that discuss how safety standards inform planning processes or risk management, nor any mentions of how safety metrics are defined and tracked in the Company's operations. OTP noted that risk management and mitigation decisions are under the purview of the asset management department that works closely with the customer service department to evaluate capacity concerns, compliance, and safety issues arising from aging and failing facilities.[13] OTP explained how safety considerations are included in modeling inputs that inform the Construction Standard Designs and Material Standards used by the company to procure, install, and maintain the equipment needed to ensure efficient, consistent, and readily trainable installation and maintenance of its distribution system. The Company touted its System Infrastructure and Reliability Improvement (SIRI) initiative – initially unveiled in the 2019 IDP and discussed in more detail in Section II.C.3 below – as an effort by the company to leverage existing and future data sets to increase system safety and reliability by more efficiently addressing aging equipment and preparing for future system needs.

[11] 2021 IDP, at 2 – 6.
[12] *Id.,* at 3.
[13] *Id.,* at 11.

b. Security

OTP discussed the cyber-security implications and risks resulting from the outdated software and hardware platforms used by the Company to operate their Load Management System (LMS) and telecommunications backbone across their territory. Section 9.C of the IDP detailed OTP's plans to replace its antiquated LMS workstation-based master control system that interfaces with approximately 50,000 field-based LMS receivers. The master control system is no longer supported by the vendor and the Company is concerned about the lack of future security patches for the system in the future. In Section 9.D OTP presents its telecommunications strategy, an integral part of its Advanced Metering Infrastructure (AMI) Project , to replace a communications backbone that currently consists of non-redundant microwave systems and 60-70% leased circuits. The existing system is at capacity in certain locations and the hardware platforms are at end of life, causing availability, reliability, and safety concerns. OTP's proposed solution is to establish a backbone fiber communications infrastructure to leverage existing fiber investments from CapX 2020 projects and is currently still being fully developed. The Company did not provide any discussion of physical security considerations in the context of their distribution system planning and operation.

c. Reliability and Resilience of the Electricity Grid

Reliability and resilience are referenced by OTP throughout its 2021 IDP as an important expectation of its members and core objective of its business operations. Specific proposed projects and investments highlighted by OTP that address reliability and resiliency are the SIRI and Advanced Meter Infrastructure (AMI) initiatives, increased spending in asset health and replacement or renewal programs over the five-year planning horizon, and a new Outage Management System (OMS) Project discussed in Section 9.B of the IDP and analyzed in more detail by the Department in Section II.C.3 below.

OTP provided a graph of historic reliability indices for the company over the past ten years taken from their most recent Safety, Reliability, and Service Quality Report (SRSQ) and reproduced below.

Graph 1. Historic Reliability Indices for Otter Tail Power[14]

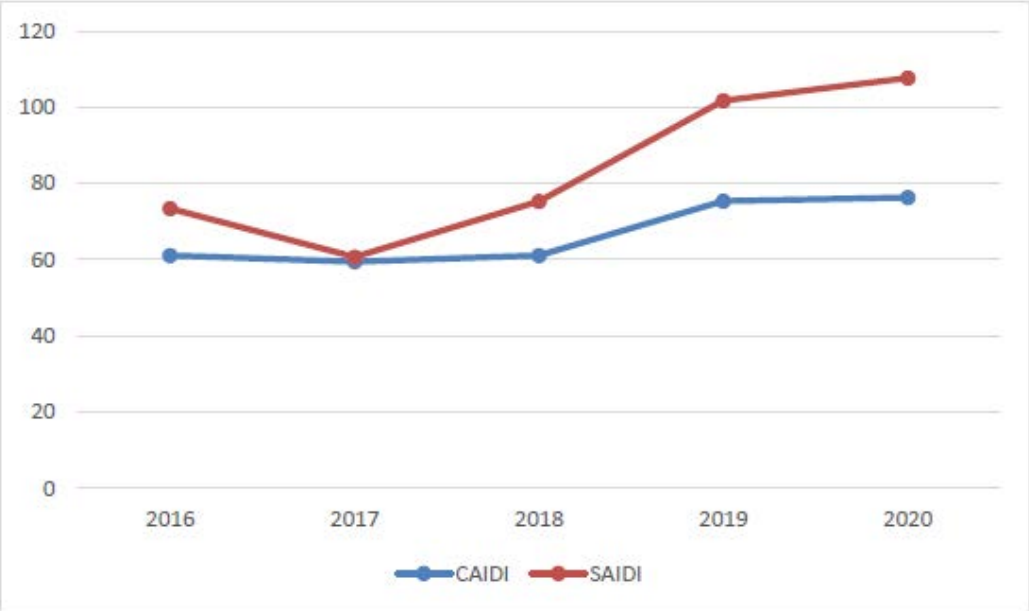

Table 4. 2020 Distribution System Reliability Indices[15] for Otter Tail Power Company, Minnesota Utilities average[16], and United States Utilities average[17]

Reliability Performance Metric	2020 OTP	2020 MN Average	2020 US Average
SAIDI	107.7	84.7	116.0
SAIFI	1.40	0.90	1.013
CAIDI	76.7	94.6	114.5

[14] 2021 IDP, at 20. See also *Otter Tail Power Company's 2020 Annual Safety, Reliability and Service Quality Report and Proposed SAIFI, SAIDI and CAIDI Reliability Standards for 2021.* Docket No. E017/M-21-225. April 1, 2021. Accessed at: https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={E0D48D78-0000-C319-8FD2-D0D533459A81}&documentTitle=20214-172454-01.

[15] SAIDI: System Average Interruption Duration Index, system wide average outage duration for an average customer. SAIFI: System Average Interruption Frequency Index, system wide average number of interruptions for an average customer per year. CAIDI: Customer Average Interruption Duration Index, average outage duration any given customer would experience per year.

[16] U.S. Energy Information Administration. Reliability Metrics Using IEEE of U.S. Distribution System by State, 2020 and 2019. Accessed at https://www.eia.gov/electricity/annual/html/epa_11_02.html.

[17] *Id.*

The Department analyzed OTP's 2020 SRSQ report and offered the following observations in its Initial Comments to the Commission:

> "OTP has had trouble meeting the majority of its goals since 2010. While the Company was more successful in meeting its goals in 2012 over the previous two years, that limited success was not maintained in 2013. In 2015, OTP accomplished 61 percent of its CSC goals, the most successful performance since 2009. However, the last five years have seen the Company perform poorly in achieving its goals as it has not been above a 50 percent success rate since 2015. OTP has seen some success in achieving its SAIDI and SAIFI goals at the statewide level. However, since 2018 the Company failed to achieve all three of its SAIDI, SAIFI, and CAIDI goals. The Company's retrogression in its SAIDI and SAIFI performance in 2016, 2018, 2019, and 2020 have reversed the overall trend of the past nine years that had been moving in an improving direction, as shown in Figures 7, 8, and 9 below. Generally, OTP's performance is relatively flat over the last 9 years."[18]

The Department notes that the mentioned retrogression in SAIDI and SAIFI performance in the years after 2016 corresponds to decreasing investment in the System Expansion or Upgrades for Reliability and Power Quality IDP Budget Categories, as provided in the 2021 IDP. Annual investment in this category decreased from $1.25M in 2016 to $810,697 in 2020, with a total investment of $4.63M between the years 2016 and 2020. OTP's five-year budget presented in the 2021 IDP calls for further reductions in spending in this category, decreasing total investment over the 2021 - 2025 period by $3M or 64.8% relative to 2016 – 2020.

The Department requests that OTP provide a narrative explanation of how the Company plans investments to address the reliability needs of its system. Given the decrease in spending in the 'System Expansion or Upgrades for Reliability and Power Quality' IDP Budget Category and a decrease in the SAIDI and SAIFI performance, are the Company's plans for spending in other IDP Budget Categories intended to address the reliability needs of its system?

d. Fair and Reasonable Costs

The Department is developing the knowledge base to better evaluate whether investments made or costs incurred by OTP in the maintenance and operation of the distribution system are fair and reasonable. However, this does not imply that there is any reason to assume that they are unreasonable. At this time the Department has limited information with which to quantitatively assess the reasonableness of specific investment strategies made by OTP in managing the distribution system.

[18] Comments of the Minnesota Department of Commerce, Division of Energy Resources. *In the Matter of Otter Tail Power Company's Annual Safety, Reliability and Service Quality Report and Proposed SAIFI, SAIDI, and CAIDI Reliability Standards for 2021.* Docket no. E017/M-21-225. August 16, 2021. Accessed at https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={90BC507B-0000-C117-8EEE-67E64793E59C}&documentTitle=20218-177165-01

To accurately ascertain the most fair and reasonable costs to be recovered from ratepayers, the Department would need to see reference and investment scenarios and BCA results that were studied by OTP, consistent with the Guidance Document's prescriptions. This will involve additional transparency on the Company's part regarding certain types of distribution system investments. The Department addresses this in Section II.C.4 below in the analysis of the fourth Planning Objective.

e. Consistent with State Energy Policies

OTP noted their past successes in using their Conservation Improvement Program (CIP) and Demand Response (DR) products and services to address Minnesota energy policies while keeping customers' costs low and improving local reliability. These specific programs, and their applicability to Minnesota's Next Generation Energy Act, are discussed in Section 9.F of the IDP. Other than these two examples, the Company did not provide a discussion of how state energy policy influences distribution system planning or budgeting allocations writ large. There is no clear line of sight from specific technology investment decisions back to guiding Commission objectives or legislative principles. The Department expects OTP and other utilities to illuminate that connection, and notes that such connections are likely to help establish the bona fides of proposed initiatives.

The Department is considering a recommendation to create such a link: a requirement that utilities discuss how each technology or program offering proposed is influenced by IDP Planning Objectives and state energy policies (as well as local government mandates and/or policy goals), including how the metrics chosen to evaluate the performance of those technologies or program offerings in meeting those objectives were selected. The Department invites OTP and other stakeholders to provide feedback on whether this topical area needs further elucidation.

2. Planning Objective #2 - Enable greater customer engagement, empowerment, and options for energy services.

In addition to CIP and DR projects mentioned above OTP mentioned additional projects - all of which fall under the Company's Innovation 2030 (I2030) initiative - that they claim will provide greater opportunities for greater customer engagement, empowerment, and options for energy products and services. The I2030 initiative itself is not mentioned by name in the 2021 IDP but can be found in numerous other dockets before the Commission, and its stated objectives (as presented in OTP's Petition to Implement Electric Utility Infrastructure Cost Recovery Rider in Docket No. E017/M-21-382) are to (1) improve reliability and safety of the Otter Tail system, (2) improve customer engagement, and (3) improve business processes.[19] Projects included in the overall I2030 initiative include: (1) Advanced Metering Infrastructure (AMI); (2) Demand Response (DR) System replacement (3) Telecommunications Infrastructure; (4) Outage Management System (OMS) with required Geographic

[19] Otter Tail Power Company Petition. *In the Matter of Otter Tail Power Company's Petition to Implement Tracker Recovery for Advanced Metering Infrastructure / Outage Management System / Demand Response System.* Docket No. E017/M-21-382. June 7, 2021, at 4. Accessed at https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={603CE879-0000-CB17-BCC0-F256CF1C134F}&documentTitle=20216-174849-01.

Information System (GIS) enhancements; (5) Transmission and Distribution replacement programs as well as grid technologies; and (6) a Work Asset Management System (WAMS).[20]

Additionally, OTP has also recently informed the Commission that it has initiated planning for an Advanced Distribution Management System (ADMS) platform that includes the OMS mentioned above, as well as "other modules that Otter Tail plans to pursue in some future timeframe, such as volt-var optimization, load management controls, and automated system reconfiguration."[21]

While the Company provides explanations of the potential of different grid modernization investments to increase customer engagement and satisfaction in the instant and other dockets, there is a lack of quantitative data provided to prove the business case for selecting these specific technologies over alternatives.

The Department understands that the merits and reasonableness of the investments and their ultimate utility to ratepayers are being decided in the contexts of other dockets, but here suggests that IDP proceedings provide the ideal venue for the Company to provide a cohesive narrative that allows the Commission to evaluate proposals for distribution system investments in keeping with the recommendations found in the Guidance Document mentioned in Section II.A.

The Department requests that in future filings regarding customer-facing utility offerings and programs that may be enabled by new investments in grid modernization technologies such as the OMS, LMS or potential future ADMS projects, Otter Tail Power provides the following information:

- **Internal benefit-cost analyses for reference and investment case scenarios, including reasonably known and analyzed alternatives;**
- **Assumptions and data supporting the projected customer participation rates;**
- **Sensitivity analysis for varying rates of adoption of proposed programs; and**
- **Discussion of how the proposed customer-facing utility offerings and programs may interact with existing or proposed Conservation Improvement Plan or Next Generation Energy Act programs.**

This information is required for an independent verification of the reasonableness of the proposed incurred costs related to new customer-facing utility offerings and programs. The Department also encourages the continued discussion of how proposed business cases for new technology or service offerings not only address customer expectations but are responsive to - and enabling of – state policy goals and objectives that can serve as a proxy for understanding what society deems to be valuable and will lead to more efficient allocation of ratepayer funds to provide this value.[22]

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[20] *Id.*

[21] Otter Tail Power Company Initial Comments. *In the Matter of an Inquiry into Utility Investments that May Assist in Minnesota's Economic Recovery from the COVID-19 Pandemic.* Docket No. EG999/CI-20-492. June 17, 2020, at 7. Accessed at https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={F019C472-0000-C111-B10C-04FB79342FE4}&documentTitle=20206-164074-01.

[22] U.S. Department of Energy. *Modern Distribution Grid (DSPx). Volume 1: Objective Driven Functionality, Ver. 2.0.* (November 2019), at 16.

3. *Planning Objective #3 - Move toward the creation of efficient, cost-effective, accessible grid platforms for new products, new services, and opportunities for adoption of new distributed technologies.*

In addition to the observations above, the Department finds it instructive to evaluate OTP's response to the third Planning Objective by analyzing the differences in distribution system spending over the time periods 2016 – 2020 and 2021 – 2025. Table 3 above provides a breakdown of OTP's historic and projected distribution system expenditures. The Department provides it here again for convenience.

Table 3. Comparison of Distribution System Spending Reported in OTP's 2021 IDP, Historical Actual (2016 – 2020) vs. Budgeted (2021 – 2025)

	Historical Actual (2016 - 2020)		Budgeted (2021 - 2025)		Δ	
IDP Budget Category	Spending (Millions)	% of Total Spend	Spending (Millions)	% of Total Spend	(Millions)	%
Age-Related Replacement and Asset Renewal	$ 21.18	33.84%	$ 41.49	35.78%	$ 20.32	95.95%
System Expansion or Upgrades for Capacity	$ 2.77	4.42%	$ 2.53	2.18%	$ (0.24)	-8.60%
System Expansion or Upgrades for Reliability and Power Quality	$ 4.63	7.40%	$ 1.63	1.41%	$ (3.00)	-64.78%
New Customer Projects and New Revenue	$ 25.30	40.43%	$ 24.58	21.19%	$ (0.72)	-2.86%
Grid Modernization and Pilot Programs	$ 3.39	5.42%	$ 40.72	35.11%	$ 37.33	1100.39%
Projects related to Local (or other) Government Requirements	$ 1.69	2.69%	$ 0.73	0.63%	$ (0.95)	-56.50%
Metering	$ 3.17	5.07%	$ 1.34	1.15%	$ (1.84)	-57.92%
Other	$ 0.46	0.73%	$ 2.96	2.56%	$ 2.51	546.98%
Total Spending	$ 62.58		$ 115.98		$ 53.40	85.33%

OTP is proposing to nearly double its Age-Related Replacement and Asset Renewal budget compared to observed actual spending from 2016 to 2020. OTP noted that this increase in spending in this category is a continuing response to the Company's 2019 SIRI initiative that focuses on addressing aging infrastructure plans and prepare for future system needs and technology on the transmission and distribution systems. The Company's 2019 IDP described SIRI as an effort to "improve the process of identifying the highest value projects to meet the initiative's goals of improving reliability, safety, efficiency and customer engagement… [and] to better understand the overall health of our existing assets and the current replacement programs in place for those assets."[23]

[23] Otter Tail Power Company's 2019 Integrated Distribution Plan. *In the Matter of the Distribution System Planning for Otter Tail Power Company.* Docket no. E017/CI-18-253. November 1, 2019, at 37. Accessed at https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={80C6286E-0000-CC18-82E1-A1E9A41EEBBF}&documentTitle=201911-157180-01

In the 2021 IDP Otter Tail described the drivers of increased need to replace fielded equipment to include the replacement of overhead and underground cable with a large vintage reaching end-of-life, the replacement of Carte transformers that have been failing prematurely, and the installation of new trip saves, electronic reclosers, and line sensors to monitor and operate the distribution system safely.[24] The 2021 – 2025 project list provided by the Company reflects these priorities, and also includes approximately $6 million over that time for a project titled "SIRI – Innovation 2030." At this time, it is unclear to the Department what projects or system improvements are included in this SIRI project within the Age-Related Replacement and Asset Renewal IDP Budget Category and would appreciate OTP's explanation in Reply Comments.

Another IDP Budget Category that is proposed to see a large increase in spending over the next five years is that of Grid Modernization and Pilot Programs. The Company's 2021 – 2025 project list includes the following initiatives and proposed investment amounts under the IDP Budget Category of Grid Modernization:

Grid Modernization Project Name	Total Investment 2021 – 2025 (millions)
AMI – Innovation 2030	$28.89
GIS/OMS – Innovation 2030	$1.95
I2030 Load Management Replacement	$7.5
LED Street & Area Light Conversion	$2.05
SIRI – Innovation 2030	$0.329

The Department requests that OTP provide clarification regarding what specific programs or equipment included under the project name of "SIRI – Innovation 2030" is attributed to each of the IDP Budget Categories of Age-Related Replacement and Asset Renewal and Grid Modernization and Pilot Programs in Utility Reply Comments.

The Department notes that Otter Tail contracted Power System Engineering, Inc. (PSE) to review the Company's business processes, systems, and technology in 2016 to provide a Strategic Technology Plan report (PSE Report). The Department was able to obtain a copy of this report by issuing an Information Request (IR MN-DOC-001) in Otter Tail's Electric Utility Infrastructure Cost (EUIC) Rider petition in Docket No. E017/M-21-382[25] and attaches the report to these Initial Comments as Attachment 1 (TRADE SECRET).

[24] 2021 IDP, at 43.

[25] TRADE SECRET Comments of the Minnesota Department of Commerce, Division of Energy Resources. *In the Matter of Otter Tail Power Company's Petition to Implement Electric Utility Infrastructure Cost Recovery Rider for Advanced Metering Infrastructure / Outage Management System / Demand Response System, Rate Schedule 13.11.* Docket No. E017/M-21-382. December 8, 2021, Attachment 1. Accessed at https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId=%7B70169C7D-0000-C31F-9C8C-FEDE73EEC456%7D&documentTitle=202112-180529-01

Otter Tail's EUIC Rider petition is a request for cost recovery of the following grid modernization projects: the AMI Project, the OMS Project, and a DR System. These projects are discussed in the Company's IDP in various places, namely in Section 9, but the Company omits the role that the PSE Report played in their inception. It appears that these projects were informed or otherwise conceived in part by the PSE Report, and the Company's 2021 IDP does not include any mention of the PSE Report despite its seminal role in the Company's grid modernization plans.

[TRADE SECRET DATA HAS BEEN EXCISED].

The Department finds that would be instructive for OTP to discuss how the information in the PSE Report has been used by the Company to select technologies and processes for inclusion in the long-term distribution system investment plan required by IDP Filing Requirement Section 3.D and discussed in Section 9 of the Company's 2021 IDP. The Department is interested in understanding how the Company has been revising and updating the projects articulated in the PSE Report over the past five years to account for changing cost estimates, new technology developments, and whether the Company has been evaluating performance of projects against assumptions to the extent that any of the projects identified by the PSE Report have been implemented by the Company.

The Department finds that the PSE Report played an important role in the Company's plans for its grid modernization initiatives, such as the AMI Project, OMS Project, and the DR System that Otter Tail proposed in its EUIC Rider proceeding, and notes that the Company's 2021 IDP does not discuss the PSE Report in any significant detail. The Department is interested in learning more about how the PSE Report informed the Company's distribution system planning and investments, particularly in relation to IDP Filing Requirement 3.D.

The Department requests that OTP provide a detailed narrative of whether and how the Company's use of the 2016 PSE Report informed their short- and long-term distribution system planning and investments in Utility Reply Comments. OTP could provide an explanation of how the quantitative data and analysis provided in the PSE Report was incorporated into internal distribution system planning and studies and how it was and/or can be used to verify performance of the grid modernization initiatives discussed by OTP in this 2021 IDP and proposed for cost recovery in the recent EUIC Rider.

Separately, while the analysis of relative investments across standardized categories is a useful tool, there is limited information provided that allows for a rigorous assessment of the investment decisions being made *within* each category. The Department addresses this in further detail in Section II.C.4 below.

The Department is building the capacity to make assessments regarding the efficiency or cost-effectiveness of grid investments within each IDP Budget Category, and in order to alleviate this asymmetry, the Department is considering a recommendation for future IDPs to include some illustrative examples of detailed and complete BCAs for proposed projects within each of the IDP Budget Categories. This analysis would include, at a minimum, a description of the methodology

employed to prevent double counting of benefits or costs across programs or enabling technologies, a clear conceptual line of sight between the project selected and the Commission's Planning Objectives, and metrics to evaluate the project's performance with respect to the benefits identified and in relation to the Commission's Planning Objectives.

Such illustrations seem reasonably likely to help the Department, the Commission, and stakeholders develop a deeper understanding of how OTP plans for and spends ratepayer funds on these myriad grid investments.

The Department invites OTP and other stakeholders to provide feedback on this potential recommendation.

4. *Planning Objective #4 - Ensure optimized utilization of electricity grid assets and resources to minimize total system costs*

The fourth Planning Objective is designed to ensure optimized utilization of electricity grid assets and resources to minimize total system costs. The Department is building its knowledge base of issues related to this planning objective and expects to be better positioned to evaluate this Planning Objective over time as more experience is gained with utility distribution systems. One way to better discern whether Otter Tail Power is optimally utilizing electricity grid assets and minimizing total system costs is to evaluate how OTP's forecasting and planning process informs spending on its distribution.

Otter Tail engages in planning and documenting a five-year budget for the distribution system on an annual basis. OTP provided a description of this process and the assumptions used from forecasted scenarios in Section 3 of the IDP. Five senior area engineers dispersed throughout the Company's service territory are responsible for identifying high value projects in their respective areas. Projects are selected for inclusion in the five-year budget if they are able to most cost-effectively improve reliability and reduce risks associated with capacity concerns, compliance, and safety.

To assess system needs the engineering department works closely with the asset management and customer service departments to receive the most up-to-date information regarding equipment conditions in the field. Additionally, Area Engineers review distribution studies, metering reports, and reliability reports to scope and estimate projects. Once all the information is compiled it is used by the Company's System Infrastructure and Reliability and GIS departments to create a distribution model capable of performing load flow and system performance analysis. These models have typically been used to look at near-term requirements prompted by the addition of a new customer or expansion of service to existing customers, however OTP noted that they are moving forward with more proactive studies on a selective basis for those communities with higher-than-average load increases and/or limited substation capacity.
OTP provided results of the recent modeling in the IDP, noting that the general system assumption of no or minor load growth system wide is also the baseline scenario in OTP's latest IRP, a trend that has been observable on OTP's system for the past five to seven years.[26] In the winter months (OTP's

[26] 2021 IDP, at 8.

current system peak) less than 20% of substations in the Minnesota distribution system are currently growing in demand and are above 75% of their existing capacity, this number decreases from 20% to 10% in the summer months.

As noted above, OTP's SIRI initiative has placed a renewed emphasis on reliability and data analytics within the planning process employed by the Company to building and maintain its distribution system. The Department assumes that the development of SIRI, as a component of OTP's larger I2030 grid modernization effort, was informed by the 2016 PSE Report introduced in the 2019 IDP and discussed immediately above. To best understand exactly how SIRI has improved upon OTP's processes for ensuring reliability and efficiency in the distribution system planning process the Department here reiterates its request that the Company provide a detailed narrative of how the findings of the PSE Report and Strategic Technology Plan were implemented into business case scenarios, how these scenarios were then comparatively analyzed and ranked, as well as how the final projects or technologies were selected for investment and how their performance is evaluated against projections.

The Department understands that distribution system spending can fluctuate over the course of a year due to acute distribution system needs and the need for operational flexibility. It follows that projected spending levels would fluctuate and be inconsistent year-to-year as reported by OTP in their 2019 and 2021 IDPs, as the Department summarized above in Section I.B of these comments.

Thus far in the IDP proceedings the Department has been able to compare the budgeted and actual distribution system spending for two years, 2019 and 2020, by comparing the 5-year investment plan from OTP's 2019 IDP with the historical distribution system spending as reported in Section A.26 of the 2021 IDP.[27]

[27] *Id.,* at 55.

Table 5. 2019 and 2020 Distribution System Investments, as Budgeted in 2019 IDP and Actual Reported Expenditures from 2021 IDP

	2019		Δ	2020		Δ
IDP Budget Category	Budgeted (Millions)	Actual (Millions)	(Millions)	Budgeted (Millions)	Actual (Millions)	(Millions)
Age-Related Replacement and Asset Renewal	$ 3.85	$ 4.12	$ 0.27	$ 3.95	$ 5.42	$ 1.47
System Expansion or Upgrades for Capacity	$ 0.36	$ 1.02	$ 0.67	$ 0.50	$ 0.42	$ (0.08)
System Expansion or Upgrades for Reliability and Power Quality	$ 0.30	$ 0.89	$ 0.59	$ 0.47	$ 0.81	$ 0.34
New Customer Projects and New Revenue	$ 5.74	$ 5.49	$ (0.25)	$ 5.78	$ 5.42	$ (0.36)
Grid Modernization and Pilot Programs	$ 0.65	$ 0.75	$ 0.10	$ 0.58	$ 1.78	$ 1.20
Projects related to Local (or other) Government Requirements	$ 0.26	$ 0.22	$ (0.04)	$ 0.31	$ 0.49	$ 0.18
Metering	$ 0.55	$ 1.00	$ 0.45	$ 0.59	$ 0.54	$ (0.05)
Other	$ -	$ 0.01	$ 0.01	$ -	$ 0.26	$ 0.26
Total Spending	**$ 11.71**	**$ 13.49**	$ 1.78	**$ 12.18**	**$ 15.15**	$ 2.97

The Department notes that generally OTP has kept actual expenditures close to budgeted estimates for each category. The two largest deviations from projected investment are in the categories of Age-Related Replacement and Asset Renewal and Grid Modernization and Pilot Programs, with both categories receiving additional investments in 2020 of $1.47 million and $1.20 million, respectively. This is in keeping with the overall increase in investment within these two categories presented in the 2021 IDP, reflecting the Company's implementation of the SIRI initiative to find and invest in the highest value projects to meet goals of improving reliability, safety, efficiency, and customer engagement.

While this explanation is helpful in a broader sense, and in view of OTP's approach to setting and executing a capital construction budget, there is an important element of transparency missing from OTP's distribution system spending. Without access to information detailing the scope and detail of the scenario analysis performed that resulted in the selection of specific projects for the I2030 or SIRI initiatives the Department is unable to ascertain whether the proposed investments are indeed the optimal response to distribution system needs.

The Department suggests that one approach to helping stakeholders understand spending on non-capacity related projects is to provide information that indicates that OTP is "right-sizing" its system by demonstrating projects are designed to solve the problem that is identified, and in so doing, that OTP is minimizing the amount of money being spent and can show that its spending is concomitant to the level of need.

In the 2021 IDP OTP makes the following observation about their implementation of material and design standards in building out the distribution system:

> It should be noted that design standards create system capacity "step changes." For example, underground feeder design standards are rated at either 200 or 600 ampacity, or substation transformer sizing which is standardized to future purchases of 1 MW of 2.5 MWs. The helps maintain efficient installation as well as replacement of assets. In doing so, building of the distribution system can appear "overbuilt" in terms of capacity. However, the system was not overbuilt at all but rather efficiently designed and constructed.[28]

Applying the "right-sizing" concept to the Age-Related Replacement and Asset Renewal IDP Budget Category, OTP could provide stakeholders with information proving that OTP's spending on capacity- or reliability-related projects is the "right size" for the problem identified. The Department asks the general question: is OTP's spending on specific components of the distribution system appropriate given the issue that the Company is trying to address or prevent?

The Department proposes "right-size analysis" as a way to help answer this question, defined as: the process of matching utility investments to the need identified by the engineering analysis of the distribution system so performance and reliability of the distribution system is achieved at the lowest possible cost. This also includes the process of looking at deployed equipment and identifying opportunities to eliminate redundancies, downsize components that may be no longer needed, repurpose and redeploy equipment, and/or incorporate NWA or DER to decrease loading thereby reducing thermal stress on components and extending the life of deployed assets, all without compromising performance or reliability with the express goal of reducing total system costs.

The Department's experience in the distribution system, however, is limited, and invites Otter Tail Power and other stakeholders to comment generally on this proposed analytical method. The preliminary theoretical approach articulated above can and should be scrutinized: is it the appropriate way to think about these issues and evaluate the general question articulated above?

The Department welcomes feedback and information on how to best approach answering this question.

[28] 2021 IDP, at 12.

5. *Planning Objective #5 - Provide the Commission with the information necessary to understand the utility's short-term and long-term distribution system plans, the costs and benefits of specific investments, and a comprehensive analysis of ratepayer cost and value*

The fifth Planning Objective relates to whether the IDP provides the Commission with information necessary to understand OTP's short-term and long-term distribution system plans, the costs and benefits of specific alternatives to any proposed or anticipated investments, and a comprehensive analysis of ratepayer cost and value.

This planning objective articulates the expectation that utilities should prepare complete evaluations of planned investments, and particularly investments in grid modernization, to ensure that the Commission and stakeholders are provided with the necessary information to evaluate the reasonableness of these plans.

The Department emphasizes that information related to IDP Filing Requirement 3.D. is vital to understanding OTP's distribution system plans, specifically with regards to investments in technologies that the Company asserts is necessary to modernize its distribution system. There should be a clear connection between the information and analyses provided in response to IDP Filing Requirement 3.D. and specific grid modernization proposals, such as those proposed in Otter Tail's recent EUIC Rider petition in Docket No. E017/M-21-382 (the AMI Project, OMS Project, and DR System). The Department further addresses the value of IDP Filing Requirement 3.D., especially in the context of the Guidance Document's prescriptions for filing requirements related to a utility's grid modernization plans, in the Notice topics that follow.

The Department contends that certain elements of OTP's IDP can be improved upon to assist with the evaluation of whether the IDP fulfills the Commission's Planning Objectives, particularly if the Department's and Synapse's recommendations for additional information and transparency are heeded. The Department is broadly concerned that the Company's IDP does not contain important information that led to or otherwise played an important role in the Company selecting the projects the Company is seeking cost recovery for in its EUIC Rider. The Department notes that the PSE Report was furnished to the Company in 2016 and could have been discussed as early as the Company's first IDP in 2019. Providing such information can help the Company demonstrate the bona fides of the proposals, better connect the information in its IDP to actual proposed investments, and generally help stakeholders understand the Company's distribution system and grid modernization plans.

Overall, the Department emphasizes the need for additional information and transparency in some aspects of the IDP.

D. IDP NOTICE TOPIC #3: WHAT IDP FILING REQUIREMENTS PROVIDE THE MOST VALUE TO THE PROCESS, AND WHY?

1. Overview

In general, the Department reiterates its focus on three overarching themes regarding distribution system planning: (1) distribution system planning should itself be cost-effective and lead to outcomes that are also cost-effective; (2) distribution system planning reporting should correct a historic, long-term information asymmetry between regulators and utilities; and (3) IDP requirements between utilities should be consistent to the greatest extent practicable. IDPs should provide stakeholders with enough information to enable the evaluation of a utility's approach to distribution system planning.

The Department builds upon these three themes by articulating a fourth, which was also evinced in Xcel's most recent Integrated Resource Plan proceeding in stakeholder comments and summarized in Staff Briefing Papers and is applicable to all utilities filing IDPs: utilities should undertake efforts to align the planning processes of integrated distribution system planning and integrated resource planning to the extent that such processes rely on tools, methods, data, and information (notably, forecasting of DERs) that can be shared in ways that lead to mutually beneficial outcomes for both processes and the consistent use of data and information in each process.[29]

2. IDP filing requiremeny 3.C: Distributed energy resource scenario analysis

This filing requirement generally requires utilities to prepare for various scenarios of DER deployment and proactively identify and plan for mitigations or investments to facilitate increased DER adoption. OTP noted that historically the penetration of DER on their system has been low and the base case demand scenario used in both the IRP and IDP processes nets the effect of DER systems along with demand response and CIP programs into the load from a system perspective. The Company believes that this practice will continue to be sufficient for planning purposes as relative penetration of DERs across their territory remains low.

OTP plans to complete a study between now and the 2023 IDP with varying DER and EV adoption scenarios to understand the impacts to the distribution system at a more granular level. The Company intends to complete this study in the rea surrounding the city of Morris which has been experiencing the largest DER deployments to date. The Department anticipates this will be a valuable resource for the Company to better inform the creation and evaluation of DER scenarios specific to their unique system in rural Minnesota.

[29] *In the Matter of Xcel Energy's 2020 – 2034 Integrated Resource Plan (IRP),* Docket No. E002/RP-19-368. Staff Briefing Papers, at 115, 125 – 126, and 181 – 184. January 18, 2022. Commission Order forthcoming.

3. IDP Filing requirement 3.A.26 and 3.E

The Department continues to support and encourage further development of those sections of OTP's IDP that elucidate the guiding philosophies and prioritization of variables in the creation of scenarios for analysis and ultimate selection of a final investment strategy.

Sections 8 of OTP's 2021 IDP provided a description of the levels of investment included in the Company's last approved budget forecast for 2021 – 2025, providing examples of projects that are included in each IDP Budget Category to compliment the discussion of how these projects are first identified in Section 4. Section 9 provided further insight into the Company's grid modernization and infrastructure action plans and this information, coupled with the historical and forecasted financial information, allowed the Department to assess the Company's prioritization of effort in establishing the requisite Operational and Information Technology backbones to enable further grid modernization and process improvements in the future. OTP noted that they have updated their Business Processes for implementation of their new Customer Information System (CIS) and are using these updated practices to establish the scope for the AMI project and intend to develop a prioritized list of desired improvements enabled by AMI deployment. This high-level overview of how the Company views the benefits and efficiencies gained by deployment of new metering, load control, and outage management systems provides valuable insight into the Company's plan for the future of their distribution management and control systems.

In this and the 2019 IDP, Otter Tail Power has indicated that while the Company did not have any distribution projects in the forecasted five-year budget that exceed a cost of two million dollars that trigger the requirement for evaluation of a non-wires alternative. OTP noted the effectiveness of management of controllable load in their territory to address transmission system constraints, and references demand response and CIP programs as valuable non-wires solutions to distribution system capacity or reliability issues. OTP also mentioned a project in partnership with the University of Minnesota and Open Access Systems International to investigate how a utility scale battery can provide distribution grid benefits and gain a better understanding of the technology.

The Department reiterates the earlier discussion in Section 3.C.3 above regarding a potential recommendation for future IDPs to include some illustrative examples of detailed and complete BCAs for proposed projects within each of the IDP Budget Categories. While not necessarily related to grid modernization, such information would nevertheless be consistent with the Guidance Document's prescriptions regarding the provision of additional information regarding the evaluation of utility investments.

4. IDP Filing requirement 3.D

Regarding the Guidance Document: one of the Department's goals is to create a framework for grid modernization in Minnesota. Utility IDPs can serve as the planning forum for any such proposed investments, similar to the planning function that integrated resource plans (IRPs) in Minnesota serve.

Section 3.D of utility IDP Filing Requirements require utilities to provide a 5-year Action Plan as part of a 10-year long term plan for distribution system developments and investments in grid modernization, with sub-requirements for utilities to discuss topics and provide information that have parallels to the information that utilities are required to provide in utility IRPs, specifically related to requirements that a utility must identify resource options available to meet the service needs of its customers over the forecast period and supporting information that utilities are required to provide to support the selection of its proposed resource plan.[30]

Once the Commission approves the resource plan that identifies generic resources that it needs to acquire over the forecast period, a utility then initiated a Certificate of Need (CN) proceeding in which it proposes to acquire specific resources based on the resource plan. The CN proceeding has its own extensive set of filing requirements and evaluation criteria upon which a decision to grant a CN must be made, all of which generally require a utility to demonstrate that it is making a reasonable, prudent decision in the public interest.[31]

The Department contends that a meaningful connection between a utility's IDP and specific grid modernization proposals can and should be made in the same spirit of the IRP-CN connection. Section 3.D of the IDP Filing Requirements serves a similar planning function to the IRP process for grid modernization initiatives, and the Guidance Document serves a similar prudency determination and ratepayer protection function to the evaluation applied to utility proposals in a CN proceeding.

The forum for the CN-like proceeding depends on the utility's circumstances and preferences for seeking approval of its grid modernization investments. As the Department's February 9, 2022 Letter indicates, there are three pathways available to utilities in Minnesota to propose grid modernization investments: the Certification Request Process (Path 1); a general rate case (Path 2); and the Electric Utility Infrastructure Cost (EUIC) Rider pursuant to Minn. Stat. §216B.1636 (Grid Modernization Path 3). The Certification Request Process (Path 1) is foreclosed to utilities not operating under a multi-year rate plan: because Otter Tail is not operating under a multi-year rate plan, it is not eligible to request certification of grid modernization investments nor request cost recovery through a Transmission Cost Recovery Rider (TCR) proceeding pursuant to Minn. Stat. §216B.16, subd. 7b(b)(5).

The Department views Otter Tail's EUIC Rider petition as a CN-like proceeding, where Otter Tail's plans for grid modernization articulated in its IDP are actualized in specific investment proposals and requests for cost recovery. Otter Tail's IDP should serve as an IRP-like forum for Otter Tail to provide information related to its plans for grid modernization, identifying investments that it plans to make and provides information regarding why those investments are needed, alternatives, considered, etc. (consistent with Section 3.D. of utility IDP Filing Requirements). The EUIC Rider proceeding is where the Guidance Document's prescriptions for evaluating grid modernization proposals are applied.

[30] See generally Minn. R. 7843, accessed at: https://www.revisor.mn.gov/rules/7843/full.
[31] See generally Minn. R. 7849, accessed at: https://www.revisor.mn.gov/rules/7849/full.

Recently, as discussed previously, Otter Tail proposed grid modernization investments in its EUIC Rider petition in Docket No. E017/M-21-382. Specifically, Otter Tail proposed investments in its AMI Project, OMS Project, and DR System. To illustrate at a high-level how this IDP-Grid Modernization connection should work: Otter Tail would articulate the plans for these three projects in its IDP consistent with Section 3.D of the IDP Filing Requirements, and Otter Tail would provide information about these three projects consistent with the Guidance Document's Filing Requirements so that stakeholders and the Commission can evaluate whether they are in the public interest, consistent with the statutory criteria of Minn. Stat. §216B.1636. The Department expects future IDPs to contain information regarding Otter Tail's plans for grid modernization consistent with Section 3.D. of the IDP Filing Requirements, and further expects that future EUIC Rider petitions to contain information consistent with the Guidance Document.

It is in that spirit that the Department offers the Guidance Document for consideration and why the Department will evaluate grid modernization proposals based on the prescriptions of the Guidance Document.

E. IDP TOPIC #4: ARE THERE FILING REQUIREMENTS THAT ARE NOT INFORMATIVE AND/OR SHOULD BE DELETED OR MODIFIED, AND WHY?

1. The Definition of "Non-Traditional" Distribution Projects

The Department recommends that the Commission further clarify its intent in Filing Requirement 3.A.28 which requires the utility to provide "[p]rojected distribution system spending for 5-years into the future for the categories listed above, itemizing any *non-traditional* distribution projects (emphasis added)."[32]

Upon review of the utilities' response to this filing requirement it appears to the Department as if respondents are choosing to define this somewhat ambiguous term as being synonymous with Non-Wires Alternatives and are thus only presenting itemized cost data for those projects meeting NWA thresholds for consideration. This has greatly limited the amount of detailed financial information provided to the Commission for review and frustrates Department efforts to confirm that projected investments in OTP's 5-year plan are indeed timed and sized appropriately to meet or otherwise respond to short-term distribution system needs.

As a starting point for consideration, the Department invites feedback on a potential recommendation regarding the definition of "non-traditional" in the context of distribution system planning: should it be centered around the ability of a proposed project or technology to enable two-way information or power flows on the distribution system?

[32] Commission's 2019 Order.

Such a definition would potentially capture the majority of technologies currently proposed as grid modernization projects that not only meet the Planning Objectives of enabling further customer engagement and options, but also enable the incremental deployment of additional technologies that each have their own unique set of costs and benefits that must be included in the immediate analysis of the proposal in front of the Commission.[33]

2. Benefit-cost Analysis

Benefit-cost analyses (BCAs) are fundamentally necessary in order to better understand why OTP is proposing or planning to propose specific investments and determine whether the proposed investment is the most reasonable choice. This is especially true for grid modernization investments.

The Guidance Document affirms this view in Section 2.3:

> BCA is a systematic approach for assessing the cost-effectiveness of investments by comparing benefits and costs of alternative options. The analysis entails identifying all the relevant benefits and costs of a project and determining whether the benefits exceed the costs over the lifetime of the expected program or project.
> …
> BCAs place the onus on the utility to demonstrate that an investment should be made, rather than starting from the assumption that it is necessary. By presenting and comparing the full range of costs and benefits to make the case for the utility investment in question, BCAs facilitate complete assessment of how a proposed investment will affect utility customers. BCAs…should be the primary means of evaluating grid modernization plans—even in instances where investments are claimed to be necessary.

The Guidance Document details how BCAs should be conducted by utilities so that the Commission and stakeholders can evaluate the reasonableness of the utility's proposed investment.

Modifications of IDP Filing Requirements may be necessary if utilities are not furnishing appropriate levels of detail regarding their BCAs for proposed investments. However, at this time, the Department is not recommending any modifications of IDP Filing Requirements related to the provision of BCA information but will monitor future IDPs to ensure that Otter Tail Power and utilities are providing BCA information consistent with the Guidance Document's prescriptions.

[33] As an example, the Department notes that the ADMS (and associated customer- and grid-facing capabilities) currently under consideration by OTP for deployment is enabled by OTP's AGi AMI meters and load controllers.

F. IDP TOPIC #5: ARE THERE OTHER ISSUES OR CONCERNED RELATED TO THIS MATTER?

As the Department explained in footnote 3, it was difficult to find a current version of utility IDP Filing Requirements. The Department suggests that IDP Filing Requirements should be published with each Commission Order that reflects any modifications so that stakeholders and utilities have an updated version of IDP Filing Requirements.

The Department recommends that the Commission include OTP's IDP Filing Requirements in its Order in this and subsequent IDP proceedings, including a red-line version if modifications are made to OTP's IDP Filing Requirements.

IV. DEPARTMENT RECOMMENDATIONS

The Department appreciates the opportunity to comment on Otter Tail Power Association's 2021 IDP and looks forward to the review of other stakeholder comments. The Department commends OTP for the quality of its IDP and requests that OTP provide the following information in Utility Reply comments:

- **The Department requests that OTP provide a narrative explanation of how the Company plans investments to address the reliability needs of its system. Given the decrease in spending in the 'System Expansion or Upgrades for Reliability and Power Quality' IDP Budget Category and a decrease in the SAIDI and SAIFI performance, are the Company's plans for spending in other IDP Budget Categories intended to address the reliability needs of its system?**

- **The Department requests that OTP provide clarification regarding what specific programs or equipment included under the project name of "SIRI – Innovation 2030" is attributed to each of the IDP Budget Categories of Age-Related Replacement and Asset Renewal and Grid Modernization and Pilot Programs.**

- **The Department requests that OTP provide a detailed narrative of whether and how the Company's use of the 2016 PSE Report informed their short- and long-term distribution system planning and investments in Utility Reply Comments. OTP could provide an explanation of how the quantitative data and analysis provided in the PSE Report was incorporated into internal distribution system planning and studies and how it was and/or can be used to verify performance of the grid modernization initiatives discussed by OTP in this 2021 IDP and proposed for cost recovery in the recent EUIC Rider.**

The Department makes the following, initial recommendations:

- **The Department recommends that the Commission require utility grid modernization proposals to adhere to the filing requirements, methods of evaluation, and ratepayer protections detailed in the Guidance Document.**

- **The Department requests that in future filings regarding customer-facing utility offerings and programs that may be enabled by new investments in grid modernization technologies such as the OMS, LMS or potential future ADMS projects, Otter Tail Power provides the following information:**
    - **Internal benefit-cost analyses for reference and investment case scenarios, including reasonably known and analyzed alternatives;**
    - **Assumptions and data supporting the projected customer participation rates;**
    - **Sensitivity analysis for varying rates of adoption of proposed programs; and**
    - **Discussion of how the proposed customer-facing utility offerings and programs may interact with existing or proposed Conservation Improvement Plan or Next Generation Energy Act programs.**

- **The Department recommends that the Commission include OTP's IDP Filing Requirements in its Order in this and future IDP proceedings, including a red-line version if modifications are made to OTP's IDP Filing Requirements.**

/ar

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Response to Information Request MN-DOC-001
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OTTER TAIL POWER COMPANY
Docket No: E017/M-21-382

Response to: MN Department of Commerce
Analyst: Matthew Landi and Nancy Campbell
Date Received: October 15, 2021
Date Due: October 25, 2021
Date of Response: October 29, 2021
Responding Witness: Stuart Tommerdahl, Manager, Regulatory Administration, 218 739-8279

Information Request:

Topic: Business Case Development and Documentation

Reference(s): Petition, Sections IV.C and IV.D

(a) Please provide all reports, documents, and analyses Otter Tail Power (OTP) and/or OTP's consultants relied upon in the development of the business case for the Advanced Metering Infrastructure (AMI), Outage Management System (OMS), and Demand Response (DR) System projects. (b) Please provide all spreadsheets used for the information in the Petition and used to support the development of the business case for the AMI, OMS, and the DR System projects.

Attachments: 8
Attachment 1 to IR MN-DOC-001 PUBLIC.pdf
Attachment 2 to IR MN-DOC-001 PUBLIC.xlsx
Attachment 3 to IR MN-DOC-001 PUBLIC.pdf
Attachment 4 to IR MN-DOC-001 PUBLIC.pdf
Attachment 5 to IR MN-DOC-001 PUBLIC.pdf
Attachment 6 to IR MN-DOC-001 PUBLIC.pdf
Attachment 7 to IR MN-DOC-001 PUBLIC.pdf
Attachment 8 to IR MN-DOC-001 PUBLIC.pdf

Response:

Attachments 1-8 to IR MN-DOC-001 include live spreadsheet versions of Otter Tail's financial analyses for the projects, an external report, and internal Power Point presentations given to Otter Tail executives and/or board members, which derive independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use. These attachments are (1) "trade secret information", as defined in Minn. Stat. § 13.37, subd. 1(b); (2) is classified as nonpublic data pursuant to Minn. Stat. § 13.37, subd. 2; (3) is also not public data, as defined in Minn. Stat. § 13.02, subd. 8a; and (4) is protected data under Minn. R. 7829.0100, subp. 19a(A). Regarding the Model identified as Attachment 2, Otter Tail is not requesting that the data used in the Model be treated as "trade secret information" or protected data. Instead,

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Otter Tail is requesting that the live version of the Model be treated as trade secret information and protected data.

Otter Tail has been actively involved in researching and evaluating various technology and business process upgrades for many years. The Company provides Attachment 1 to IR MN-DOC-001, which is a Strategic Technology Plan report that was prepared for Otter Tail in 2016 by Power System Engineering, Inc. (PSE). PSE reviewed Otter Tail's business processes as well as systems and technology. From their assessment, PSE provided initial guidance and business cases for the Company related to technology-based solutions that would improve company operations and customer service. AMI is discussed in summary on pages 22-24 and the full narrative can be found on pages 37-48. The OMS summary can be found on pages 17-19 with the larger discussion included in the Distribution section beginning on page 70. The GIS update summary is on pages 15-17, and the full discussion beginning on page 81. It should be noted the Strategic Technology Plan is now over 5 years old and the cost estimates, value drivers, and timing of the solutions have continued to be refined.

Advanced Metering Infrastructure
Otter Tail provides Attachment 2 to IR MN-DOC-001, which is the live version of the financial analysis for the AMI project estimates and is protected in its entirety. This analysis is the information that Otter Tail and its consultants relied upon to support the decision to proceed with the AMI project.

	Attachment 2 Tab Name	Information Included
1	EUIC Figure 2	Estimated Capital Costs of AMI Project
2	EUIC Figures 3 and 4	AMI Estimated Annual Expenses, Estimated Annual Revenue Requirements
3	EUIC Figure 5	AMI Annual Revenue Requirement - Monthly Cost/Benefit Per Meter
4	Summary Rev Req	Total of meters, software and hardware
5	Meters	Plant in service, accumulated depreciation, ADIT, depreciation expense, property tax, income tax
6	Software	Plant in service, accumulated depreciation, ADIT, depreciation expense, property tax, income tax
7	Hardware	Plant in service, accumulated depreciation, ADIT, depreciation expense, property tax, income tax
8	Project Sponsor Template	Cash flows, AMI O&M Expense, O&M Reductions due to AMI implementation
9	Inputs	General info from other tabs - Cash flows, Financing costs, Depreciation by property type, etc.
10	Depreciation Rate	Depreciation rates used in rider tabs
11	Property Tax	Average property tax rate used in rider tabs
12	Property Lives	Property lives used in rider tabs
13	MACRS	MACRS depreciation rates used in rider tabs

The first three tabs of Attachment 2 to IR MN-DOC-001 show Figures 2-5 from the referenced section IV. D of the EUIC Petition.

The revenue requirement tabs (lines 4-7) show the projected CWIP, plant in service, accumulated depreciation, ADIT calculations, depreciation expense, property tax expense, and income tax expense. These tabs are used to calculate the estimated revenue requirements for each portion of the AMI project and the estimated credits that will be owed to customers while collection occurs through a rider mechanism. Savings are calculated through 2045 to show the full benefit of the AMI project.

The project sponsor template tab lists the estimated O&M costs the Company expects to incur due to the AMI implementation and the estimated savings the Company anticipates due to the elimination of manual meter reading and other associated activities.

The remaining tabs in Attachment 2 to IR MN-DOC-001 provide the depreciation and tax information used throughout the rest of the file.

Outage Management System (OMS) with Geographic Information System (GIS)
As discussed throughout the initial filing, during an outage, customers simply want lights back on and to be informed about the progress of the restoration efforts. The OMS project will directly improve both of these requests from customers. For more than 20 years outage management systems have been deployed by utilities to keep customers informed and to improve restoration efforts, and they have become a mainstay in utility operations. Otter Tail first identified this need through strategic planning exercises. Through the RFI and RFP phases of the project, the Company was able to identify the best solutions in terms of functionality and cost.

GIS
In 2018, Otter Tail submitted an RFI to two vendors to estimate the total cost for the GIS collection effort within the OMS project. This was used to determine initial budgets and to develop the business case for internal approval. The business case was summarized in a power point (Attachment 3 to IR MN-DOC-001) which highlighted the main value drivers and the estimated cost of the project. Much of the value of the GIS effort is driven by the supporting role it plays in other initiatives and projects. For example, GIS will identify accurate asset information for the SIRI initiative[1] and provides the full connectivity model for the OMS and other future grid modernization applications. Put another way, these other projects are only as good as the data they rely on from GIS. Below is a short summary of the benefits of the GIS portion of the OMS project:

- Field Awareness
- More efficient capital spend
- Potential tax savings
- Distribution electrical model creation
- Improved Asset Management queries
- Additional benefits related to having an accurate connectivity model and network phasing include:
    - OMS input
    - Future reduced network losses
    - Future Conservation Voltage Reduction

None of the benefits listed above result in any hard savings. The financial analysis for GIS can be found in Attachment 5 to IR MN-DOC-001.

[1] In the Matter of the Application of Otter Tail Power Company for Authority to Increase Rates for Electric Service in Minnesota Docket No. E017/GR-20-719

The GIS business case was approved by the Otter Tail Executives in October 2020. Otter Tail began the full RFP process in early 2021 and released the RFP to three large, experienced vendors who were identified through outreach to peers in groups such as the North Central Electric Association. After receiving the bids, Otter Tail chose a finalist by utilizing a weighted scoring method based on experience, capability, safety, pricing, commercial terms, and project management skills. During the RFP process, Otter Tail found additional value-add options that were approved to be included in the project. The management presentation for approval of the additional options is included as Attachment 4 to IR MN-DOC-001. These additional options increased the overall bid and are as follows:

- Underground device inspections
- Feeder Phasing
- Opening of pad mount cabinets.

The recommended vendor selection was approved on March 31, 2021.

OMS

A similar process was used in budgeting for and securing an OMS vendor. Otter Tail's initial inquiries occurred in 2019 and included visits to other neighboring utilities who have had OMS deployments for over 15 years. These visits were valuable in understanding how the systems work and the business processes surrounding the systems. One of the main takeaways was the standard use of a 24/7 dispatch group to manage the OMS. In addition, Otter Tail started developing cost estimates for an OMS through discussions with OMS vendors as well as neighboring peers through groups such as NCEA.

These estimates and takeaways were then used to develop an OMS RFP process, which started in the summer of 2021. Otter Tail has chosen one vendor finalist and secured approval from Otter Tail executives to engage that vendor on Monday October 25, 2021, which will allow the Company to commence contract negotiations with the vendor. The presentation given for the final approval on October 25, 2021 is provided as Attachment 6 to IR MN-DOC-001.

The evaluation process for selection of an OMS took over five months and included the actual RFP document, discovery sessions with each bidder, demo sessions with four finalists, reference checks, additional demos and discovery, and finally a request for a best and final offer. The bids were evaluated on over 200+ questions that related to OMS functionality, integrations, Interactive Voice Response (IVR), mobile platform offering, security, and vendor support. The approved vendor aligns very well with Otter Tail's initial estimates within the EUIC filing.

OMS systems are a mainstay across utilities because of the value they offer within the restoration efforts in both operational improvements (reliability) and customer engagement improvements. From an operational standpoint, all outage related information is much more organized with an OMS, which leads to restorations that are quicker and safer. For customers, this means improved reliably and shorter power outages. In addition, the information captured by the OMS (cause codes, time of restoration, etc) leads to better long term asset planning, which in turn leads to better reliability. With the much-improved organization from an OMS, customer communications can be drastically improved. On the front end of an outage, customers will be able to report their outage more smoothly. Reporting is currently a bottleneck in larger events for

Otter Tail. With the OMS, customers will have the option to report an outage via IVR, text, live agent call, or webforms. Lastly, Otter Tail will be able to provide estimated times of restoration and restoration progress updates if a customer chooses to participate in these offerings.

Not only will the OMS project drastically improve operations at Otter Tail and provide a foundation for future grid modernization opportunities, the level of service in response times that Otter Tail will be able to provide customers will be greatly improved as it relates to outages.

Demand Response (DR) System

As noted in our Initial Filing, much of the Company's existing DR infrastructure is either approaching end of life or already functionally obsolete, threatening the Company's ability to continue to offer DR options in the future. The two-way communications network installed as part of AMI will be utilized to support the continued long-term functionality of the Company's DR programs and enable their improvement and expansion.

The Company has been aware of the upcoming need for replacement of the existing DR infrastructure for some time. An extension to the life of the system was completed in 2015. The need for replacement was further supported in a strategic technology plan developed by Power System Engineering and reported to the Company in 2016 (Attachment 1 to IR MN-DOC-001). At that time the cost of replacement was estimated to be $13 million solely based on the capital costs. Current cost estimates can be found in Attachment 8 to IR MN-DOC-001.

As of October 2021, the Company has secured professional consulting services for development of the DR business and technology plan and strategic vision. The development of this plan will continue into 2022 when meetings with potential vendors will occur. Requests for proposals, which will better outline the estimates of cost, are expected to be issued in the second quarter of 2022.

CERTIFICATE OF SERVICE

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

Minnesota Department of Commerce
Public Comments

Docket No. E017/M-21-612

Dated this **22nd** day of **March 2022**

/s/Sharon Ferguson

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