

Staff Briefing Papers

Meeting Date	January 7, 2025	Agenda Item 3*
Company	Otter Tail Power Company	
Docket No.	E-017/M-24-186	
	In the Matter of Otter Tail Power Company’s Petition for Approval of the Annual Update to its Implement Electric Utility Infrastructure Cost Recovery Rider, Rate Schedule 13.11	
Issues	Should the Commission approve Otter Tail Power’s proposal to increase rates in the Company’s Electric Utility Infrastructure Cost Rider to take affect the 1 st day of the month following approval?	
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✓ Relevant Documents	Date
Otter Tail Power – Initial Filing	May 3, 2024
Department of Commerce – Comments	August 2, 2024
Otter Tail Power – Reply Comments	August 23, 2024
Department of Commerce – Response to Reply Comments	September 26, 2024
Otter Tail Power – Response Letter	October 9, 2024

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The attached materials are work papers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.

A. Statement of the Issue

Should the Commission approve Otter Tail Power's proposal to increase rates in the Company's Electric Utility Infrastructure Cost Rider to take effect the 1st day of the month following approval?

B. Background

Minnesota Statute §216B.1636 allows utilities to file for petitions to recover Electric Utility Infrastructure Costs (EUIC) for Electric Utility Infrastructure Projects (EUIP) not included in rate base during most recent general rate case, which replace or modify existing electric utility infrastructure if the replacement or modification is shown to conserve energy or use energy more efficiently, or projects which conserve energy or use energy more efficiently by using waste heat recovery converted into electricity.

If approved, EUIC recovery may include a rate of return, income taxes on that rate of return, incremental property taxes, and incremental depreciation expense. The legislation provides a list of minimum criteria the utility must meet in its filing before approval may be granted.

The Commission's August 4, 2022 Order in Docket No. E-017/M-21-382 (21-382 Order) approved Otter Tail Power Company's EUIC petition. In that Order, the Commission approved a \$55.9 million soft cap on the Advanced Metering Infrastructure (AMI) Project and a \$2 million soft cap on the Outage Management System (OMS) Project, representative of the Minnesota jurisdictional share of the OMS Project's total capital costs. That Order stated Otter Tail may request cost recovery for cost overruns during its next rate case.

The Commission's March 13, 2024, Order in Docket No. E-017/M-23-131, approved Otter Tail Power Company's EUIC petition. The Company's March 20, 2024 compliance filing provided its rates and tariff to be implemented on April 1, 2024 with Otter Tail stating that the rates had been updated to reflect the Commission's approved changes.

C. Otter Tail Power – Petition

Otter Tail's Petition requested the continuation recovery of costs associated with AMI, OMS and Demand Response (DR) through Otter Tail's EUIC Recovery Rider and proposed updated EUIC rider rates become effective on the first day of the month following Commission approval.

The net revenue requirement for January 2025 through December 2025, upon which rates are developed, is \$4.56 million. For residential customers, the requested change would result in a monthly \$1.31 per meter increase, for a total rate of \$2.74 per month. Large General Service (LGS) customers, monthly increase would be \$109.47 per meter, for a total rate of \$150.71.

As directed in the 21-382 Order, Otter Tail provided project updates for proposed metrics for approved AMI and OMS projects.¹ Otter Tail filing includes updated information on approved AMI and OMS projects. The Company proposed recovery associated with the new Demand Response project.

1. Advanced Metering Infrastructure (AMI)

Otter Tail started deployment of AMI in late 2021 with completion in 1Q of 2025 with 91 percent of meter installed by the end of 2024. Actual cost from start through end of 2024 will remain under the soft cap of \$55.9 million and total costs of the project to be estimated at \$56.0 million.

Table 1 compares updated 2024 project savings for AMI to earlier filings. With delayed deployment, O&M savings have also been delayed. The Company estimates that 25% of annual savings will be realized in 2024, 75% in 2025 and full O&M savings will be realized in 2026. Minnesota customers will receive a credit for O&M savings of meter reading expense that are included in base rates.

Table 1 – Initial Filing vs 2024 Updated AMI Project Timeline

	2023	2024	2025
2021 Filing	\$1,744,456	\$5,390,360	\$7,402,761
2023 Update	\$150,102	\$4,540,372	\$7,402,761
2024 Update	\$0	\$1,087,647	\$4,350,588

2. Outage Management System (OMS)

OMS allows Otter Tail to identify outages more rapidly, deploy crews more efficiently and lower the number and length of outages. Also, the August 2023 Customer Experience Portal (CEP) implementation has enhanced customer communication before, during and after outages.

Otter Tail added that, at the time of the filing, the Geographic Information System (GIS) update of OMS project is nearing completion and was expected to be finished by May 2024. An updated Outage Map is on Otter Tail's website and a new Interactive Voice Response (IVR) system went live in December 2022.

Through 2023, Otter Tail OMS with GIS project costs are \$3.1 million. The projected total company-wide spend is \$3.7 million with \$1.8 million in Minnesota. The \$1.8 million is under the \$2.0 million Minnesota-jurisdiction soft cap.

¹ Commission August 4, 2022 Order, Docket No. E-017/M-21-382, ordering point 10.

3. Demand Response System (DR)

One-third of Otter Tail's customers participate in DR programs. For 2022, these customers accounted for \$43.5 million, \$16.8 million Minnesota-Jurisdiction, in energy revenue. High customer participation places Otter Tail's DR portfolio among the largest in the country. Through DR programs, the Company can control 10-15% of its total winter peak load, thereby reducing system capacity needs and lowering customer costs.

Otter Tail's current DR infrastructure was implemented in 2003 and relies on outdated software and hardware components that are no longer supported by vendors. Due to the system's obsolescence, a full system replacement is necessary to ensure continued DR reliability and effectiveness going forward.

The DR modernization project was introduced in Docket No. E-017/M-21-382; however, the Commission deferred a decision on cost recovery until the project was more developed. Otter Tail formed an internal team, retained a consultant, and researched DR system solutions. In 2022, the North Dakota and South Dakota Commissions approved DR system updates.

In the fall of 2022, the Company selected vendors Landis + Gyr (L+G) and Open Access Technology International (OATI). L+G is providing communication framework used for its AMI and Field Area Network (FAN) provides two-way communication. The meters deployed under AMI have potential to replace a number of Load Control Devices (LCDs), which could reduce overall DR project costs. OATI is providing the Demand Response Management System (DRMS) which will interface with organized markets and effectively hedge against high market prices using analytics.

Otter Tail is collaborating with the University of Minnesota at Morris (UMN Morris) on a flow state battery project. OATI is providing system interface with the battery software and is included in their bid.

DR implementation is scheduled to begin in 3Q 2024, with full implementation to be completed in 2027.

4. EUIC Recovery Methodology

To recover AMI, OMS, and DR related costs between rate cases, Otter Tail continued to propose using a per meter charge allocated to all customers based on the weighted average cost of AMI meters per class. The EUIC recovery charge is shown on the Resource Adjustment line of customer bills.

5. Recommendation

Otter Tail requested that the Commission approve recovery of the new DR system project,

the updated costs associated with all projects in the rider, and the EUIC annual rate adjustments as set forth in this update filing be in effect for usage on and after January 1, 2025.

D. Department of Commerce – Comments

To determine if the information provided by Otter Tail was complete and sufficient to justify cost recovery, the Department first reviewed the two projects as updated in the Petition, second, reviewed the additional new DR project presented in Petition and, third, reviewed Otter Tail’s overall proposed cost recovery and rates.

1. AMI

The Department sent Otter Tail an information request (IR) about the deployment schedule delay and if the Company expects any more integration and/or installation issues that will further delay the AMI project. Otter Tail responded with “The project team is working on complex rate testing, which will allow Otter Tail to install the remaining 9 percent of its meter fleet. At this time, Otter Tail does not anticipate any challenges that would cause delays with physical complex meter installations that will be occurring during the first quarter of 2025.”

The Department reviewed projected annual savings based on meter reading amount included in base rates for 2024 and 2025 revenue requirements as the Petition reduced saving from \$7.4 million to \$5.8 million. The Department agreed the updated O&M saving calculations are reasonable.

2. Capital Spend Recovery

a. AMI Capital

Since, as shown in Table 2, 2020-2025’s \$56.0 million in capital additions exceed the \$55.9 million cap, the Department recommended the Commission require Otter Tail to adjust the AMI amount to the \$55.9 million.

Table 2, Otter Tail Proposed AMI Capital Recovery

Year	Meters	FAN	Software	Total
2020	\$103,983	\$0	\$0	\$103,983
2021	\$934,829	\$0	\$0	\$934,829
2022	\$1,777,245	\$174,827	\$2,596,279	\$4,548,351
2023	\$7,959,679	\$2,595,819	\$3,744,616	\$14,300,114
2024	\$30,330,399	(\$277,675)	\$4,282,824	\$34,335,548
2025	\$1,769,532	\$0	\$33,930	\$1,803,462
2020-2025	\$42,875,667	\$2,492,971	\$10,657,649	\$56,026,288

b. OMS Capital

Otter Tail's Petition requested recovery for Minnesota capital spend of \$1.8 million tied to OMS project which is below the cap of \$2 million; therefore, the Department concluded Otter Tail has complied with the cap. Table 3 shows OMS capital spend by year and difference between companywide verse Minnesota jurisdiction.

Table 3, Proposed EUIC OMS Capital Recovery

Year	OTP Total	Minnesota
2020	\$0	\$0
2021	\$383,087	\$187,486
2022	\$2,544,513	\$1,250,688
2023	\$190,944	\$93,853
2024	\$536,698	\$263,800
2025	\$0	\$0
2020-2025	\$3,655,242	\$1,795,827

3. Demand Response (DR)

The Department reviewed DR for business case and cost recovery cap. The Department recommends the Company track saving associated with DR project and explain differences between forecasted and actuals saving. The Department points out from the Company's Petition that they are looking into the possibility of using their AMI meters as a substitute to load control switches which has the possibility of lower the overall costs of DR.² This recommendation would reduce the number of load switches from 40,000 to 26,000.

4. Operating Costs

The Department reviewed Otter Tail's request for operating costs shown in Table 4 and concluded that, under Minn. Stat. 216B.1636, subdivision 1, recovery of operating costs is reasonable and recoverable.

Table 4, Otter Tail Proposed EUIC Operating Costs

² Otter Tail Petition, pp.13-14

Year	Meters	FAN	Software	Total
2023	\$22,688	\$7,441	\$3,400	\$33,529
2024	\$308,626	\$118,476	\$320,421	\$747,523
2025	\$2,769,009	\$234,889	\$523,190	\$3,527,088
Total	\$3,100,323	\$360,806	\$847,011	\$4,308,140

5. Proposed Rates

Otter Tail's proposed rates from its Attachment 12 are summarized in Table 5.

Table 5, Otter Tail's Proposed EUIC Rates

Service Category	Monthly \$ per Meter Charge	
	Existing	Requested
Residential	1.43	2.74
Residential RDC	3.47	6.40
Farm	3.40	8.39
Small General	N/A	4.41
General Service	5.52	17.39
General Service - TOU	11.33	28.17
Large General Service - Primary/Transmission	41.24	150.71
Large General Service - Secondary	13.31	27.29
Irrigation Service	9.31	14.78
Outdoor Lighting (Metered)	3.54	2.95
OPA (Metered)	3.96	7.33
Controlled Service Deferred Load	3.47	6.40
Controlled Service Interruptible – Self-Contained	3.54	6.52
Controlled Service Interruptible – CT Metering	14.24	29.58
Controlled Service Off Peak	4.33	8.28

The Department agreed that Otter Tail's rate proposal results in a zero expected tracker balance at the end of 2025 and Otter Tail's intention to zero-out the tracker balance 12 months following implementation of rates is reasonable.

6. Revenue Requirement

The Department reviewed Otter Tail's gross revenue requirement which, due to increased AMI operating costs and the 2025 DR System implementation, almost doubles from 2024 to 2025 and found the revenue requirement calculations to be reasonable. Table 6 shows Otter Tail's revenue requirements.

Table 6, Otter Tail's Proposed EUIC Minnesota Revenue Requirement³

Item	2023	2024	2025
	Actuals	Actuals (Jan-Jun) + Forecast	Forecast
AMI Revenue	\$416,177	\$2,844,007	\$5,433,069
OMS Revenue	\$161,686	\$361,317	\$416,255
DR Revenue	\$0	\$0	\$750,970
Adit Preservation of Proration	\$0	\$3,237	\$0
Total Revenue Requirement	\$577,863	\$3,208,561	\$6,600,294
O&M Saving Due to AMI	\$0	(\$528,567)	(2,114,267)
Net Revenue Requirement	\$577,853	\$2,679,994	\$4,486,027
EUIC Rider Recoveries	\$811,851	\$2,197,380	\$4,563,521
Tracker Balance	(233,998)	482,614	(\$77,494)
Cumulative Track Balance	(233,998)	(77,454)	\$0

7. Department Recommendation

The Department's preliminary recommendations were:

- Require Otter Tail to track all savings associated with the DR project, ensure they are included in EUIC Rider, and explain any discrepancy between forecasted savings and actual savings.
- Require Otter Tail to adjust its proposed rate recovery to cap OTP total AMI capital spending at \$55.9 million.
- Require Otter Tail, in its next EUIC Rider petition and annually thereafter as the project continues to develop and be implemented, to establish performance metrics to track the performance of the DR System in Attachment 11 with the AMI and OMS projects. Consistent with the March 13, 2024, Order, Otter Tail should also report annually on the metric or explain why reporting for given metric is not possible.

E. Otter Tail Power – Reply Comments

Regarding the Department's request that Otter Tail to track all DR project savings, the Company stated it does not assume there will be any savings as the DR system is being replaced and all realized savings are reflected in base rates through the Fuel Clause Adjustment.

Otter Tail does not oppose AMI Capital spending cap at \$55.9 million, as recommended by the Department and provided Revised Attachment 5 reflecting the change. Any amount for this project incurred but not recovered will be requested as part of Otter Tail's next rate case.

Regarding the Department's recommendation that Otter Tail include performance metric for

³ Otter Tail Petition, Attachment 4.

the DR system to be updated annually, Otter Tail provided the DR metrics shown in Table 7.

Table 7: Proposed Demand Response Metrics⁴

Category	Description
Installation and Deployment	Number of Load Control Devices (LCDs) installed/in inventory/other uses.
Installation and Deployment	Percentage of LCDs deployed compared to planned installation.
Installation and Deployment	Number of calls to Customer Service regarding LCD installation.
Financial	Total DR project capital spend-to-date vs. total DR project capital budget.
Financial	Total annual DR O&M spend to-date vs. projected annual DR O&M.

Otter Tail updated the timing of implementation for DR system as the Company attains final cost recovery. Implementation is estimated to begin in 3rd quarter of 2026 and be completed in 2nd quarter of 2028. Revised Attachment 7 reflects new dates and reduced revenue requirement by \$0.4 million.

F. Department of Commerce – Response to Reply Comments/Letter

The Department recommended that recovery be limited to the approved DR system's soft cap and that Otter Tail, in its next rate case, be allowed to request recovery for cost overruns if it can show by clear and convincing evidence that the costs were reasonable, prudent and beyond control.

The Department recommended approval of Otter Tail's proposed performance metric with the addition of the metrics for DR system as shown in Table 7 above.

The Department recommended that Otter Tail be required to annually track the performance of the DR system in Attachment 11 with the AMI and OMS projects. Consistent with the March 13, 2024, Order, Otter Tail should also report annually on the metrics or explain why reporting for given metrics not possible.

G. Otter Tail Power – Supplemental Filing

Otter Tail did not agree with the Department's recommendation to use lower soft cap for DR system as related to using 14,000 AMI meter to control load instead of the higher soft cap of replacing all 40,000 load switches. Using AMI meters as a substitute for load control switches has not been vetted by the Company or its vendors. If testing and use show that this is not a

⁴ Otter Tail's Reply Comments, pp. 2

viable solution, Otter Tail will move forward with full deployment of all 40,00 load control switches at the higher cost.

H. Decision Options

EUIC Tracker

1. Approve Otter Tail's EUIC Tracker as filed in initial Petition for AMI and OMS. (DOC, OTP)

AND

2. Require Otter Tail to report annually in EUIC petitions on DR all metrics included in its August 23, 2024 reply comments or explain why reporting for a given metric was not possible. (DOC, OTP)

Recovery

3. Approve Otter Tail's proposed EUIC recovery rates as updated in Otter Tail's August 23, 2024 Reply Comments to be effective the first month after the Commission's Order is issued. (DOC, OTP)

Cost Cap

4. Approve Otter Tail's proposed DR system costs with a soft cost cap that reflects the Company being able to use AMI meters for load control and reducing load switches to 26,000. Otter Tail shall not recover DR system costs in excess of this amount unless it shows in its next rate case by clear and convincing evidence that the additional costs were reasonable, prudent, and beyond Otter Tail's control. (DOC)

OR

5. Approve Otter Tail's proposed DR system costs with a soft cost cap that reflects the Company needing the full 40,000 load switches. Otter Tail shall not recover DR system costs in excess of this amount unless it shows in its next rate case by clear and convincing evidence that the additional costs were reasonable, prudent, and beyond Otter Tail's control. (OTP)