
STAFF MEMORANDUM

TO: COMMISSIONERS AND ADVISORS
FROM: BRITTANY MEHLHAFF, AMANDA REISS, AND LOGAN SCHAEFBAUER
RE: EL23-033 - In the Matter of the Petition of Otter Tail Power Company for Approval of the Transmission Cost Recovery Rider Rate
DATE: February 12, 2024

BACKGROUND

On November 1, 2023, the South Dakota Public Utilities Commission (Commission) received a Petition for Approval of the Annual Update to its Transmission Cost Recovery Rider Rate (Petition) from Otter Tail Power Company (Otter Tail or Company) requesting approval of its annual update to its Transmission Cost Recovery Rider (TCR) rates. The proposed revised TCR rates reflect the TCR revenue requirements for March 1, 2023 through February 28, 2024, including the tracker balance estimated for the end of the current period.

SDCL §§ 49-34A-25.1 through 25.4 authorize the Commission to approve a tariff mechanism for the automatic annual adjustment of charges for the jurisdictional costs of new or modified transmission facilities with a design capacity of 34.5 kV or more and which are more than five miles in length.

In Docket EL10-015, the Commission approved the establishment of TCR rates to recover the costs associated with three transmission projects and Midcontinent Independent System Operator (MISO) Schedule 26 expenses. The Commission approved a Settlement Stipulation supporting the “hybrid” or “split method” approach for allocating MISO approved cost-shared projects with company investment. This method was refined in Docket EL12-054 and Otter Tail continues to apply the refined split method for MISO Schedule 26 and 26A expenses today.¹

In subsequent years, the Commission approved recovery of additional projects, which were ultimately rolled into base rates in rate case docket EL18-021.

Most recently, in Docket EL22-031, the Commission approved TCR recovery of the 2023 revenue requirement associated with four previously approved transmission projects (Lake Norden Area Transmission Improvements, Big Stone South to Ellendale, Erie-Frazee, and Grant Country-Norcross), one new transmission project (Oslo to Lake Ardoch), regional transmission expenses and revenues, and updated allocation factor. The 2023 TCR implemented the following rates for each customer class effective March 1, 2023:

¹ See Docket EL16-035 Staff Memorandum, pages 5 and 6 for a synopsis of the refined split methodology.

Class	¢/kWh	\$/kW
Large General Service	0.291	0.906
Controlled Service	0.143	N/A
Lighting	0.850	N/A
All Other Service	0.852	N/A

In this filing, Otter Tail requests to recover a projected March 1, 2024 through February 28, 2025 revenue requirement of \$2,549,017 associated with one new project (Milbank Area Reliability), the five previously approved projects, regional transmission expenses and revenues, and an updated D2 allocation factor. The request includes the Company’s proposal to return to customers an estimated \$300,008 in over-collection of the prior period’s remaining balance. The Company’s proposed March 1, 2024 through February 28, 2025 revenue requirement results in the following rates for the respective customer classes, based on a March 1, 2024, effective date:

Class	¢/kWh	\$/kW
Large General Service	0.273	0.851
Controlled Service	0.075	N/A
Lighting	(0.098)	N/A
All Other Service	0.696	N/A

STAFF’S ANALYSIS

Staff’s recommendation is based on its analysis of Otter Tail’s filing, discovery information, relevant statutes, and previous Commission orders. Staff’s analysis consisted of review of the revenue requirement calculation, class allocation, and rate design. Each of these items are discussed below.

REVENUE REQUIREMENT

Staff reviewed the forecasted March 1, 2024 through February 28, 2025 revenue requirement associated with one new transmission project, five previously approved transmission projects, the transmission adjustment from rate case EL18-021, MISO Schedule 26 and 26A expenses and revenues, Southwest Power Pool (SPP) Schedule 9 and Schedule 11 expenses, MISO Schedule 9 and Multi-Value Project (MVP) Auction Revenue Rights (ARR) revenues, filing fee expense, and the true-up balance associated with the prior collection period. All items are subject to later “true-up” to reflect the actual costs, actual revenues, and actual recoveries.

Otter Tail continues to apply the refined split methodology² approved in Docket EL12-054 for projects cost-shared in MISO. Staff reviewed the calculations of this methodology for accuracy.

² See Docket EL16-035 Staff Memorandum, pages 5 and 6 for a synopsis of the refined split methodology.

Background and Updates

Staff first provides some background and updates on each of the revenue requirement items, including previously approved items and one new transmission project Otter Tail proposes to include in this filing. Attached to this memo are maps of the 5 transmission line projects³, provided to Staff by Otter Tail.

Big Stone South to Ellendale

Otter Tail owns 50 percent of the Big Stone South to Ellendale project, a 345 kV transmission project that extends 163 miles from an expanded Big Stone South 345 kV substation in South Dakota to a new 345 kV substation near Ellendale, North Dakota. This project was developed through the MISO MVP portfolio. Big Stone South to Ellendale was approved for TCR recovery in Docket EL18-048. The project was in-service as of March 2019, as planned.

Lake Norden Area Project

The Lake Norden Area project was approved for TCR recovery in Docket EL18-048. The project includes construction of approximately 47 miles of 115 kV line, along with upgrades to the existing Hetland, Lake Norden, and Toronto substations, to provide an additional 115 kV transmission path to the area. The project increased reliability, decreased line exposure, and added operational flexibility to perform routine maintenance on facilities in the local area without as much risk for service interruption. The project was initially planned to be in-service as of December 2020. The final phase of the project was in-service in August 2021.

Erie-Frazee Project

Otter Tail received approval to include the Erie-Frazee 115 kV project in the TCR in Docket EL20-032. This project was the result of a collaboration between Otter Tail, Missouri River Energy Services (MRES), Great River Energy (GRE), and Minnkota Power Cooperative (MPC). These companies worked together on a planning study for the transmission system in west central Minnesota and identified reliability concerns. The Erie-Frazee project is a joint project with certain portions built and owned by GRE and Otter Tail. The culmination of each component of this project addresses the voltage and loading concerns in the area. The parties agreed Otter Tail would build the new Erie 230/115 kV substation and GRE would expand the existing Frazee 115/41.6 kV substation, adding capacitor banks at Frazee and building 9 miles of new 115 kV line.

Otter Tail's original budget was \$6.0 million (total company amount). In this docket, Otter Tail reports that the budget has increased to \$7.9 million. As explained in Otter Tail's petition, the increased budget is due to:

1. Escalation in materials and contractor pricing due to supply and demand issues and factory production availability.

³ No map is provided for the Erie-Frazee Project, as Otter Tail's portion of the project is a new substation.

2. Ownership change from Xcel to Otter Tail on the first span of transmission lines leaving the substation, which increased project costs.
3. GRE required transmission line relocations at the GRE Frazee substation.
4. Water table and other soil issues, that were not identified in the geotechnical soil exploration report, that required additional services by contractors to properly install foundations.

Staff requested additional information regarding items 2 and 3. Regarding the ownership change on the first span of transmission lines leaving the substation, Otter Tail explained that the Erie 230/115 kV substation is interconnecting to an Xcel owned line. While they initially envisioned Xcel would own and pay for the line and the terminations of the line, this would have required Xcel to have access within the Erie 230/115 kV substation. To control access and security of the substation, the companies agreed that Otter Tail should own and invest in the line terminations and the first span of lines leaving the Erie 230/115 kV substation.

Regarding the transmission line relocation required by GRE, Otter Tail explained that in order to terminate the new Frazee to Erie 115 kV line within the Frazee substation, Otter Tail was required to reroute some of its existing 115 kV and 41.6 kV lines within the corridor near the Frazee substation. The full scope of the additional line work was determined after the initial estimates of the project were established.

Otter Tail's initial projected in-service date for this project was late 2023. Due to some construction delays, it is now estimated to be in-service in June 2024.

Grant County-Norcross Project

The Grant County-Norcross 115 kV project, approved for TCR recovery in Docket EL20-032, also addresses reliability concerns. This is a joint project between Otter Tail and MRES. Otter Tail constructed 7 miles of new 115 kV line from the Grant County Switching Station to a new Norcross 115/41.6 kV substation. MRES expanded the existing Grant County Switching Station in order to accommodate the interconnection of Otter Tail's new 115 kV line. The initial planned in-service date for this project was May 2021. However, the actual in-service date was September 2022.

EL18-021 Transmission Adjustment

In Docket EL18-048, the Commission approved an adjustment to correct an error regarding transmission rate base in the rate case, Docket EL18-021. In the rate case, Otter Tail inadvertently understated Otter Tail's transmission plant in service. Otter Tail and Staff determined the most appropriate way to correct this error was to include an adjustment in the TCR. This adjustment in the TCR will be ongoing until the Company files its next rate case.

Oslo-Lake Ardoch 115 kV Project

In Otter Tail's most recent TCR filing, Docket EL22-031, the Commission approved recovery of the Oslo-Lake Ardoch 115 kV project. Otter Tail and MPC analyzed the reliability of the transmission system in Northwest Minnesota and determined the need to move forward with several projects in this area. The

next steps in the companies' transmission plan includes MPC's construction of the new Lake Ardoch 230/115 kV substation and Otter Tail's construction of the Oslo 115 kV Switching Station and the Lake Ardoch to Oslo 115 kV line. Otter Tail expects this project to be completed in December 2024.

In this docket, Otter Tail provided an update regarding the forecasted project costs. The initial estimated cost for this project was \$6.6 million (total company amount). Otter Tail determined this estimate by comparing similarly completed projects and used a cost per mile estimate with an escalator to account for inflation. However, due to several circumstances, the estimate has increased to \$11.2 million (total company amount). Otter Tail attributes the increased costs to the following:

1. Higher site grading expenses due to:
 - a. The topsoil that needed to be removed was found to be twice the depth than originally estimated.
 - b. Additional fill (7 feet as opposed to 2 feet originally estimated) was required to bring the substation final finish grade above the known floodplain elevation, in accordance with county requirements.
2. Land purchase costs greater than original estimations.
3. Escalation of materials and contractor pricing due to supply and demand issues and factory production availability.
4. Increased easement costs for pole/line placement.
5. Concrete foundations and self-supporting steel structures required due to poor soil conditions that were discovered, as opposed to wood poles originally estimated.

In response to Staff's data request, the Company confirmed even with these cost increases, the project is still the best solution for addressing the reliability issues. The project is part of a coordinated transmission plan developed for the area consisting of several projects that have been/will be completed over several years. This plan allowed for flexibility to address the issues in stages as opposed to other higher cost solutions that did not offer the flexibility of phased implementation. Otter Tail also noted that with material, labor, land values, and easement costs increasing throughout the region, any other project would have likely seen similar cost increases.

Milbank Area Reliability Project

Otter Tail proposes recovery of one new project in this docket, the Milbank Area Reliability Project. A production facility in the Milbank, SD area is expanding and adding significant load to the 41.6 kV transmission system. Otter Tail states that planning studies performed in the area show that due to the increased load and projected future load increases, the existing 41.6 kV system to no longer be capable of maintaining voltage criteria. Additionally, a loss of the Highway 12 115 kV source causes voltages on the 41.6 kV transmission system in the Milbank, SD area to drop below voltage criteria.

Due to these reliability concerns, Otter Tail is constructing a new 115 kV transmission loop from the Big Stone Plant 230/115 kV substation to a new 115/12.5 kV substation in Milbank, SD, and a new 115 kV breaker station to be located on the 115 kV line between the Big Stone 230 kV substation and the

Marietta 115/4.6 kV substation. The project consists of several components, described in more detail in the Company's petition on page 12.

In response to Staff's discovery, Otter Tail further explained that the combination of the need to update the current infrastructure to serve the existing load in the surrounding area and the production facility addition results in the need to upgrade the existing 41.6 kV system to serve all customers safely and reliably. The 115 kV transmission loop will directly serve the town of Milbank, along with the production facility. Absent the expansion of the production facility, the existing 41.6 kV system would still require re-enforcements and upgrades to continue to serve customers reliably and safely.

Otter Tail obtained project approval from the MISO Planning Advisory Committee (PAC). However, as described in Otter Tail's petition, following this approval, the Company encountered challenges with routing the new 115 kV line. In response to Staff's discovery, Otter Tail explained the challenges associated with routing the new 115 kV line was due to landowners in the proposed area being uninterested in having the 115 kV line located on their property. Otter Tail determined the best solution was to leverage the existing 41.6 kV right of way to reroute the new 115 kV line, which will require removing the existing 41.6 kV system and converting the line feeding the town of Milbank to the new 115 kV system. While these requirements do increase the cost of the project, the Company determined it was the best solution given the landowner issues. Due to these modifications, Otter Tail coordinated with MISO through the Expedited Project Review process and received MISO's approval and recommendation to include in Appendix A in the 2023 MISO Transmission Expansion Plan (MTEP) at the October 11, 2023, MISO PAC meeting.

Given the recent cost increases associated with other projects, Staff inquired as to whether Otter Tail had built in a contingency for equipment and material cost increases due to the current supply and demand issues. Otter Tail stated costs have yet to stabilize and they expect these issues to continue into the near future. Therefore, a contingency is included in the estimate for the Milbank Area Reliability Project to account for potential material and labor cost increases.

The total cost of the project is estimated to be \$36.2 million (total Company amount). Otter Tail states construction is underway and forecasts the project to be complete in late 2026.

Regional Transmission Expenses and Revenues

Otter Tail continues to incorporate regional transmission expenses and revenues including MISO Schedule 26 and 26A expenses, MISO Schedule 9, 26, 26A, 37, 38, and MVP ARR revenues, and SPP Schedule 7, 8, 9, and 11 expenses in the TCR revenue requirements.

Pursuant to Docket EL13-029, if the annual updates for MISO Schedule 26 and 26A anticipated to be released in January 2024 are materially different from the forecasts included in Otter Tail's petition, Otter Tail will make a supplemental filing by February 1st to update the TCR rates for the upcoming recovery period. Otter Tail contacted Staff in January 2024 and indicated that the most recent data would result in minimal changes and therefore, the Company would not be submitting a supplemental filing in this docket.

The calculations of the applicable MISO Schedule 26, 26A, 37, and 38 revenues include a revenue credit to account for reimbursements through MISO's tariff for administrative and general operating and maintenance (O&M) expenses. The credit provides reimbursement to customers for any such costs that may already be recovered from customers. Since 2012, Otter Tail has been applying the Annual Allocation Factor for Other O&M costs from MISO Attachment MM as the overhead credit for non-retail share to Schedule 26 and 26A revenues. Otter Tail stated in its petition that it now believes the overhead credit for non-retail share should reflect the percentage of Schedule 26 and 26A revenue associated with the Annual Allocation Factor for Other O&M. This correction results in an increase of the credit from 0.91% to 7.9% for Schedule 26 revenues and 0.91% to 7.28% for Schedule 26A revenues, effective January 1, 2024. This provides an additional credit to customers in the TCR, decreasing the revenue requirement.

On page 18 of its petition, Otter Tail provided a discussion regarding SPP expenses. Otter Tail renewed part of its existing SPP transmission service during 2021 to ensure service was not interrupted at the end of the existing term (2022). However, Otter Tail elected to only extend its existing SPP transmission service for five years to allow for additional time to complete its evaluation and the possibility of potentially building new facilities to bypass the SPP system in the future.

Proration of Federal Accumulated Deferred Income Taxes

In accordance with Internal Revenue Service (IRS) regulations, Otter Tail must preserve the effect of accumulated deferred income tax (ADIT) proration for the true-up period. Since this rider uses a forward looking test year, Otter Tail must calculate the ADIT proration to avoid a normalization violation from the IRS.

Jurisdictional Allocations

The transmission demand D2 allocation factor is used to allocate total revenue requirements to the South Dakota jurisdiction. This allocator is updated based on actuals from the prior year in order to capture the impact of shifting loads between jurisdictions. In Docket EL22-031, Otter Tail forecasted South Dakota D2 allocation factors of 10.66% for 2022 and 10.54% for 2023. In this docket, Otter Tail updated the 2022 allocator based on actuals to 9.73% and forecasts allocators of 10.36%, 10.40%, and 10.54% for 2023, 2024, and 2025, respectively. The forecasted allocators will be updated based on actuals in future TCR filings.

Prior Collection Period Tracker

The TCR approved in Docket EL22-031 was based on the estimated South Dakota revenue requirements for the collection period of March 2023 through February 2024 of \$2,740,368⁴. The Company's tracker⁵ filed in this docket reflects actual costs through August 2023 and forecasted costs through February

⁴ Excluding estimated carrying charge and true-up. Total estimated revenue requirements were \$2,968,043.

⁵ Refer to Attachment 4 to Otter Tail's petition.

2024. This results in an updated South Dakota revenue requirement for March 2023 through February 2024 of \$2,699,676.

The difference between the forecasted revenue requirements in Docket EL22-031 and the updated revenue requirements in this docket are summarized below:

March 2023 – February 2024 Revenue Requirements		
	EL22-031 Approved	EL23-033 Update
Big Stone South to Ellendale	\$6,048	\$6,474
Lake Norden Area Transmission	\$281,871	\$266,210
Erie Project	\$53,606	\$41,970
Norcross Project	\$46,769	\$44,449
EL18-021 Transmission Adjustment	\$341,323	\$341,323
Oslo Lake Ardoch 115 kV	\$4,459	\$19,516
SD Filing Fee	\$4,000	\$4,000
MISO Expenses	\$2,136,163	\$2,194,967
SPP Expenses	\$240,980	\$240,550
MISO Revenues	\$(374,851)	\$(462,585)
Preservation ADIT Proration	\$0	\$2,800
Total	\$2,740,368	\$2,699,676

The rates implemented in Docket EL22-031 were based on the above estimated revenue requirement plus estimated carrying charges/credits and the true-up balance from the prior collection period. Rates were based on a total estimated revenue requirement of \$2,968,043 and forecasted base rate retail sales for March 2023 through February 2024.

Comparing the updated revenue requirements of \$2,699,676 to the revenues received for the same time period results in a difference of \$(277,155). Applying the carrying cost rate results in carrying charges of \$(4,519) and a cumulative true-up balance of \$(300,008) to be carried over into the next collection period tracker. Since Otter Tail allocates the revenue requirement to customer classes and designs rates for each class, the true-up balance is calculated by rate class in order to minimize cross-class subsidization. Refer to Otter Tail’s Attachment 4A for the class-specific true-up calculations.

March 2024 – February 2025 Revenue Requirement

The March 1, 2024, through February 28, 2025, revenue requirement is based on estimated revenue requirements of the Big Stone South to Ellendale, Lake Norden, Erie, Norcross, Oslo Lake Ardoch, and Milbank Area Reliability projects, the EL18-021 transmission adjustment, estimated filing fee, MISO and SPP expenses, MISO revenues, and the true-up balance associated with the prior collection period.

Otter Tail’s Attachments 5 through 21 provide the details regarding the revenue requirement calculations. Attachment 4 provides the Tracker Summary for the current and proposed collection periods, and Attachment 2 summarizes the revenue requirements for the upcoming recovery period.

A summary of the forecasted South Dakota revenue requirements for the March 2024 through February 2025 collection period is below.

March 2024 – February 2025 Revenue Requirements	
Big Stone South to Ellendale	\$6,362
Lake Norden Area Transmission	\$270,596
Erie Project	\$71,251
Norcross Project	\$45,280
EL18-021 Transmission Adjustment	\$341,323
Oslo Lake Ardoch 115 kV	\$80,983
Milbank Area Reliability	\$118,718
SD Filing Fee	\$4,000
MISO Expenses	\$2,301,974
SPP Expenses	\$250,894
MISO Revenues	\$(632,539)
Carrying Cost / (Credit)	\$(9,816)
True-Up	\$(300,008)
Total	\$2,549,017

The forecasted March 2024 – February 2025 revenue requirement represents a decrease of \$419,026 compared to the prior period forecasted revenue requirement approved in Docket EL22-031. The decrease is largely due to the over-collection true-up balance and increased MISO revenues that off-set project costs increases and the addition of the new Milbank Area Reliability project.

CLASS ALLOCATION AND RATE DESIGN

The TCR incorporates the class allocation and rate design methodology approved in rate case EL18-021. The revenue requirement is allocated to four customer classes based on the transmission demand allocation factor, D2. Rates for each customer class are then designed based on forecasted sales for the time period rates will be in effect. Projected sales for each class are created by econometric models using various inputs such as weather data, economic data, customer counts, and historical usage. The large general service class rate design incorporates both a demand charge and an energy charge while the remaining retail rate classes have an energy rate only.

Otter Tail proposes the following rates be effective March 1, 2024:

Class	¢/kWh	\$/kW
Large General Service	0.273	0.851
Controlled Service	0.075	N/A
Lighting	(0.098)	N/A
All Other Service	0.696	N/A

Compared to the rates currently in effect, the proposed rates reflect a decrease for all classes. Otter Tail states the impact of the proposed change in rates for a residential customer using 1,000 kWh per month is a decrease of approximately \$1.56 per month, or a bill decrease of approximately 1.54%.

REASONABLENESS OF OVERALL EARNINGS FROM REGULATED RATES

As established per settlement stipulations in prior TCR dockets, the Company agrees to continue to file, by June 1 of each year, an annual report with the Commission detailing its South Dakota jurisdictional earnings for the preceding calendar year. Staff believes the report is necessary to monitor the Company's earnings and the potential effect of adding the TCR to its South Dakota tariff.

In addition, per the Stipulation on Correcting Electric Plant in Service – Transmission Rate Base Total filed in Dockets EL18-021 and EL18-048, an earning sharing mechanism was established. In the event the Company's weather normalized earnings exceed the Commission authorized ROE, the Company will refund to customers 50 percent of any weather-normalized revenue that corresponds to the earnings in excess of its authorized ROE, up to a maximum of 9.50% earnings for a particular year. The Company will refund 100% of any earnings above 9.50% each year.

RECOMMENDATION

Staff recommends the Commission approve Otter Tail's proposed revenue requirement and rates for the March 1, 2024, through February 28, 2025, recovery period, including recovery of the new Milbank Area Reliability project, and the associated tariff revisions, effective March 1, 2024.