STAFF MEMORANDUM

TO: COMMISSIONERS AND ADVISORS

FROM: ERIC PAULSON, BRITTANY MEHLHAFF, LOGAN SCHAEFBAUER, AND JENNIE FUERST

RE: EL24-038 - In the Matter of Otter Tail Power Company's Petition for Approval of Rate Schedule, Section 13.09, Phase-In Rider

DATE: May 5, 2025

BACKGROUND

On December 20, 2024, the South Dakota Public Utilities Commission (Commission) received a petition from Otter Tail Power Company (Otter Tail or Company) for approval of its annual update to its Phase-In Rider (PIR) rate. The proposed PIR rates reflect the PIR revenue requirements for September 1, 2025, through August 31, 2026.

SDCL §§ 49-34A-73 through 78, inclusive, authorize the Commission to approve a tariff mechanism for the annual adjustment of charges for a phase-in rate plan for rate increases due to plant additions.

On March 6, 2019, the Commission issued an Order Granting Joint Motion for Approval of Settlement Stipulation; Order Approving Settlement Stipulation in Docket EL18-021. This settlement established Otter Tail's phase-in rider, allowing Otter Tail the opportunity to recover the Merricourt Wind Project (Merricourt) and the Astoria Natural Gas Project (Astoria), along with partially offsetting revenue credits for new load growth in the Lake Norden area and net savings associated with Otter Tail's retirement of its Hoot Lake Plant (HLP). As part of this settlement, Otter Tail agreed to not file a rate case until the test year for such filing reflects twelve months in-service for the Merricourt and Astoria projects, with April 1, 2022, being the earliest Otter Tail could file.

Otter Tail's initial filing for approval of the phase-in rider was Docket EL19-025 where the Commission approved recovery of projects consistent with the EL18-021 settlement and Otter Tail's proposed "percent of bill" rate design, resulting in an initial "percent of bill" factor of 3.345 percent effective September 1, 2019. The phase-in rider was subsequently adjusted in Dockets EL20-019, EL21-017, and EL22-013 to reflect additional costs as the projects progressed towards completion. In Docket EL22-013, the Commission approved the Ashtabula III project and new per meter rates associated with Advanced Grid Infrastructure (AGI) projects, effective September 1, 2022. The revenue requirement and rates were updated in Docket EL23-015, effective September 1, 2023.

In Docket EL24-020, the Commission approved a $3,216,072 revenue requirement for the September 1, 2024, through August 31, 2025, plan year. The approval resulted in a 10.502 "percent of bill" phase-in rider factor and revised per meter rates associated with the AGI projects, effective September 1, 2024. This revenue requirement included recovery of four new wind repowering projects.

In this current filing, Otter Tail requested to recover a projected September 1, 2025, through August 31, 2026 revenue requirement of $3,198,356 associated with continued recovery of previously included projects, as well as two new projects: Solway Solar and Abercrombie Solar. The Company's proposed revenue requirement results in a proposed "percent-of-bill" base revenue charge of 9.863 percent and per meter rates to recover the AGI projects, which vary based on customer class.

STAFF'S ANALYSIS AND UPDATES

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 calculations, class allocation, and rate design. Each of these items is discussed below.

REVENUE REQUIREMENT

Staff reviewed the forecasted September 1, 2025, through August 31, 2026 revenue requirement associated with the existing projects as well as two new projects requested for recovery: Solway Solar and Abercrombie Solar. The September 1, 2025, through August 31, 2026 phase-in rates are based on estimated costs of Astoria, Merricourt, Ashtabula III, AGI projects, wind repower projects, and the Solway and Abercrombie Solar projects, estimated Lake Norden load growth revenue credit, estimated HLP retirement savings, and the true-up balance associated with the prior collection period. All projects and credits are subject to a later "true-up" to reflect the actual costs, actual revenues, and actual recoveries.

As further discussed below under the rate design section, Otter Tail continues to propose two different rate structures: per meter rates for the AGI projects and a percent of bill factor for the remaining projects. Thus, the revenue requirements are split into two groups accordingly and discussed separately below.

PERCENT OF BILL REVENUE REQUIREMENTS

The first group of revenue requirement items are those recovered through the percent of bill factor. These include certain projects and other items approved by the Commission in previous dockets and settlement agreements and the two solar projects proposed in this docket.

PERCENT OF BILL PROJECTS BACKGROUND AND UPDATES

Staff first provides some background and updates on each of the previously approved "Percent of Bill" revenue requirement items: Astoria, Merricourt, Ashtabula III, Lake Norden Area load growth credit, HLP retirement savings, and four wind repower projects.

Astoria

Astoria is a 245 MW natural gas-fired simple cycle combustion turbine constructed near Astoria, South Dakota, with an in-service date for accounting purposes of February 2021. The Commission approved Otter Tail's Application for an Energy Conversion Facility Permit in Docket EL17-042. Since Astoria was commercially operational beginning in April 2021, it has been dispatched on a regular basis. The project was completed one month before it was needed as a generation resource and under budget with total capital costs at completion of $15.8 million at the South Dakota level[1].

In addition to the simple cycle combustion turbine, the project includes all associated facilities, including a short natural gas pipeline necessary to interconnect to the Northern Border Pipeline and a generation-tie line necessary to connect to the electric transmission grid. The necessary transmission upgrades benefit both Astoria and the Tatanka Ridge Wind, LLC (Tatanka) project. As the transmission owner of these network upgrades, Otter Tail

[1] $152.2 million total company

receives facility service agreement revenues from Tatanka for approximately 35 percent of the interconnection costs. These revenues are included as a reduction to the revenue requirement.

Otter Tail entered into a Long-Term Service Agreement (LTSA) with Mitsubishi (combustion turbine manufacturer), where the manufacturer maintains a parts pool for its fleet of combustion turbines and takes on the risk of the repair and/or replacement of the combustion components. Otter Tail in turn makes prepayments to the manufacturer for major maintenance based on the hours the unit is operated and/or the number of starts until the major maintenance is complete. The typical annual LTSA fee is estimated at $0.20 million at the South Dakota level[2]. Approximately 8 percent of the LTSA agreement is included as part of operating costs. The remaining costs are included as capital costs. The capital portion of the LTSA prepayments is included in rate base until major maintenance is completed. At that time, the amount of accumulated LTSA prepayments that have been utilized during major maintenance will be included in the plant balance and subject to depreciation.

Merricourt

The Merricourt project consists of 75 V110-2.0 MW Vestas wind turbine generators with an aggregate nameplate capacity of 150 MW. The project is located near Merricourt, North Dakota and was completed in 2020, with all units fully in-service by December 19, 2020.

Otter Tail provided Staff an update on Merricourt's output. In 2021, 2022, 2023, and 2024 the actual output was 500,119 MWh, 576,333 MWh, 595,359 MWh, and 573,477,015 respectively, with achieved capacity factors of 38.1 percent, 43.9 percent, 45.3 percent, and 43.52 percent, respectively.[3]

The output is important given Production Tax Credits (PTCs) are on a per MWh basis. Further, the settlement Staff reached with Otter Tail in Docket EL18-021 included a provision requiring Otter Tail reflect PTCs for the Merricourt project based on a 50.7 percent capacity factor beginning October 1, 2022. This settlement provision protects Otter Tail's customers from the increased revenue requirement impact resulting from lower PTCs as a result of reduced output. The revenue requirement appropriately reflects the settlement provision.

Ashtabula III Wind Farm Purchase

Ashtabula III is a wind facility of 39 wind turbines with a nameplate of 62.4 MW. Otter Tail entered into a purchased power agreement with Ashtabula III, LLC in 2013 with the option to purchase the wind facility assets in 2023. Absent an agreement to purchase the facility, Otter Tail would continue to purchase the energy from the facility and flow those energy costs through the fuel clause as has been done since 2013. As discussed in Docket EL22-013, Otter Tail's analysis indicated that purchasing the facility would benefit customers over the remaining life of the project. Accordingly, Otter Tail entered into a Purchase and Sale Agreement that closed on January 3, 2023.

[2] $2.0 million total company

[3] 2024 output and capacity factor: Otter Tail Response to DR 1-17. 2021, 2022, 2023 output and capacity factors: EL24-020 Staff Memorandum

Lake Norden Area Load Growth Credit

Otter Tail continues to reflect the Lake Norden Area load growth credit in accordance with the EL18-021 settlement, utilizing the methodology as corrected in docket EL24-020[4]. The credit includes the impact of the new load revenues as well as the impact on costs associated with changes in jurisdictional allocation factors.

Hoot Lake Plant Retirement Savings

The settlement in EL18-021 requires Otter Tail include net savings associated with the HLP retirement within the PIR. Otter Tail incurred normal operation costs associated with HLP through May 2021, when operations ceased. Decommissioning of equipment and abatement of hazardous materials was substantially complete in 2021, with demolition of structures and foundations completed in 2022. Otter Tail reports that final site grading commenced in May 2023 and was completed in July 2023. Starting in June 2021, Otter Tail included an adjustment in the PIR to reflect the net savings associated with the HLP retirement. The HLP adjustment compares current HLP revenue requirements with those included in the 2017 test year[5], which are currently being recovered through base rates. The difference results in a credit for customers. Forecasts are updated to actuals and subject to true up in the subsequent year's rider update.

Wind Energy Center Facility Upgrade Projects

In docket EL24-020, the Commission approved cost recovery associated with four wind energy center facility upgrade projects: Langdon, Ashtabula I, Luverne, and Ashtabula III. Langdon was upgraded in 2024 with all turbines commissioned in October and November 2024. The other three wind facilities are being upgraded in 2025. These projects consist of removing and replacing the existing blades, hub, and gearbox with upgraded turbine technology and increased blade rotor diameters but maintain the existing towers and nacelles. Otter Tail expects energy generation at these facilities to increase by more than 20 percent annually. Total capital costs for the projects are estimated to be $230 million (total company) and are projected to achieve approximately $28.0 million (total company) in PTCs annually over the first ten years of production. The estimated net present benefit is approximately $55.2 million[6] (total company). This net present benefit estimate is using the most recent PTC guidance from the Inflation Reduction Act and estimated future fuel clause savings based on historic fuel increases over the last 24 years and does not include any benefits due to assumed externalities.

PERCENT OF BILL NEW PROJECTS

Solway Solar

Solway Solar is a solar project to be constructed and owned by Otter Tail with an operational capacity of 50 MW and a nameplate capacity of 66 MW with a projected in-service date by year end 2026. The project is to be constructed in Beltrami County, Minnesota. Otter Tail will interconnect the project at an existing interconnection point at the Solway Peaking Plant via the MISO surplus interconnection process. Connecting the Solway Solar

[4] Otter Tail revised the methodology in EL24-020 to correct a mismatch between fuel revenues and expenses.

[5] Otter Tail corrected the HLP credit calculation in EL24-020 to include the return on rate base for the retired plant in addition to the expense amounts.

[6] See EL24-020 memo. Total of net present benefits provided for each wind energy center upgrade project.

project to the Point of Interconnection (POI) at this location will require an additional transformer and less than 500 feet of overhead transmission line.

The project will consist of 100,000 solar panels with an annual energy output expected to be approximately 101,616 MWh, at a projected net capacity factor of approximately 23.2 percent. Otter Tail Power plans to size the Solway Solar project at 66 MW to minimize the overall effects of electrical losses and maximize the amount of production delivered to the POI during solar production hours. The as-built nameplate capacity of the project will be determined during final engineering phases, based on the panels selected, to minimize the overall levelized cost of energy to customers.

Table 1 on page 11 of the Petition provides the anticipated project timeline. Otter Tail estimates the total cost of the project will be **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**

Abercrombie Solar

Abercrombie Solar is a solar project to be constructed and owned by Otter Tail with an operational capacity of 295.1 MW and a nameplate capacity between 310-350 MW with a projected in-service date by year end 2028. The project is to be constructed in Richland County, North Dakota. Otter Tail Power intends to construct a 230 kV generation tie (gen-tie) line of approximately 530 feet to facilitate the project's interconnection. The gen-tie line would extend from the project's collector substation and interconnect to Minnkota Power Cooperative's (Minnkota) existing Frontier-Wahpeton 230 kV transmission line via a line tap at a new switching station that will be permitted, constructed, and owned by Minnkota.

The Abercrombie Solar project has been developed to date as the Flickertail Solar Project by Flickertail Solar Project, LLC (Flickertail), a wholly owned subsidiary of Savion, LLC. On October 30, 2024, Otter Tail Power entered into an Asset Purchase Agreement (APA) with Flickertail to purchase the development assets of the project. The development assets to be acquired by Otter Tail Power under the APA include assets necessary or desirable for the development, construction, operation and maintenance of the Abercrombie Solar project, including, but not limited to:

1. Site control & land rights documents
2. Permits and governmental approvals
3. Material contracts rights including the Large Generator Interconnection Agreement
4. Project plans, including conceptual designs and site plans
5. Project reports & surveys

The anticipated closing date of the of the APA is early Q3 2025. Numerous conditions, including necessary regulatory approvals, must be satisfied prior to closing of the asset purchase under the APA. If regulatory approvals are not received, Otter Tail Power has the right to terminate the APA and end its involvement in the project. Should Otter Tail Power terminate the project because the Company is unable to secure all necessary regulatory approvals, **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**

The project will consist of 550,000 solar panels with an annual energy output expected to be approximately 658,419 MWh, at a projected net capacity factor of approximately 25.5 percent. Otter Tail Power plans to size the

Abercrombie at 310-350 MW to minimize the overall effects of electrical losses and maximize the amount of production delivered to the POI during solar production hours. The as-built nameplate capacity of the project will be determined during final engineering phases depending on the power converter system selected.

Table 3 on page 13 of the Petition provides the anticipated project timeline. Otter Tail estimates the total cost of the project will be **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**

New Solar Projects Costs and Benefits

As a result of Otter Tail's 2023 Minnesota IRP, Otter Tail was directed to pursue 200-300 MW of solar generation. The aggregate operational size of the Abercrombie and Solway Projects selected by Otter Tail is 345 MW. In response to DR2-6, Otter Tail states, "[w]hile more than 300 MW, the aggregate size of the Abercombie and Solway Projects is consistent with the Minnesota Public Utilities Commission's IRP Order and is necessary for the Company's future compliance with Minnesota's Carbon Free Standard (CFS)." While these projects are necessary for Otter Tail to comply with the Minnesota CFS, Otter Tail believes these projects provide potential benefits for South Dakota customers as well.

Otter Tail selected the Solway and Abercrombie solar projects through a competitive, flexible acquisition process. Through this process Otter Tail developed a list of eight viable projects to consider. The Company provided a table summarizing the competitive proposals. **[BEGIN CONFIDENTIAL]** [redacted]

[redacted]

[END CONFIDENTIAL]

The Solway and Abercrombie projects are the by far the least cost projects among the proposals. Since Otter Tail will be investing in solar projects, the Solway and Abercrombie projects provide the best value for customers. One reason these projects have lower costs is due to favorable interconnection costs due to Solway Solar utilizing a surplus interconnection at an existing site and Abercrombie Solar also having lower interconnection costs than what other projects may see. Otter Tail also expects fuel savings at the Solway interconnection due to the zero-cost energy produced by the solar farm compared to the natural gas Solway Peaker plant that would otherwise be operating during some hours.

While these projects are least cost compared to other solar resources, Staff requested Otter Tail provide analysis to demonstrate these solar projects provide benefits for customers. The solar resources were not selected for a capacity or energy need[7], so Staff focused its review of the projects as economic energy resources.

Otter Tail provided modeling to show the costs and benefits of the Solway and Abercrombie solar projects, specifically for South Dakota. State specific modeling has become necessary at this point because of differing jurisdictional views on resource planning. Most notably, the North Dakota Public Service Commission (NDPSC) commissioned an Investigation Report that concluded no new renewable resources were necessary to serve North Dakota customers. The NDPSC noted in a December 2024 order that "the Commission does not support the addition of new wind or solar generation or battery storage through 2030 on behalf of North Dakota customers". Therefore, North Dakota will not participate in the Abercrombie and Solway solar projects.[8] The Minnesota Public Utilities Commission directed Otter Tail to stop providing power to its Minnesota customers from Coyote Station as soon as feasible but no later than December 31, 2031.[9] The South Dakota Commission or Legislature, to this point, has not made any such decisions regarding generation assets. These differing viewpoints among jurisdictions will now require Otter Tail to model its resource plans separately for each jurisdiction. Otter Tail's response to Staff's request for analysis showing the costs and benefits of the Solway and Abercrombie solar projects was thus provided at the South Dakota level.

Otter Tail provided the Net Present Value of Revenue Requirements (NPVRR) of a portfolio including the Solway and Abercrombie projects and compared this portfolio to a base case excluding these projects. This analysis shows the projects are expected to provide a net present benefit to South Dakota customers of approximately $5,055,000 through 2050. The savings are due to the solar resources displacing fuel and purchased power as well as market sales. The assumptions used in Otter Tail's modeling appear reasonable. However, Staff notes that forecasts are never 100% accurate and unforeseen changes in variables could impact actual results.

As discussed above, North Dakota will not be allocated any portion of these projects due to the NDPSC's order stating it does not support any wind, solar, or battery resources through 2030. Therefore, Otter Tail proposes to allocate these projects as if the Otter Tail system consists of only Minnesota and South Dakota. This results in an allocation of these projects of 15.997% to South Dakota as opposed to 9.950% if North Dakota was included.

In response to Staff data request, Otter Tail provided what the NPVRR is with the proposed allocation and what the NPVRR would be at the typical South Dakota allocation. Staff also requested Otter Tail provide the benefits for each project individually. The chart showing the savings is as follows:

[7] Staff makes no recommendation in this docket regarding Otter Tail's IRP analysis regarding future capacity and/or energy needs.

[8] Petition, page 14.

[9] MN PUC Docket No. E-017/RP-21-339 Order Modifying Otter Tail Power's 2023-2027 Integrated Resource Plan.

	SD No New Solar		SD - Docket Allocation Abercrombie Solar Only	SD - 10% Allocation Abercrombie Solar Only
NPVRR	$205,149		$199,577	$202,347
	Savings*		$5,572	$2,802

	SD No New Solar		SD - Docket Allocation Solway Solar Only	SD - 10% Allocation Solway Solar Only
NPVRR	$205,149		$204,874	$205,089
	Savings*		$275	$60

	SD No New Solar		SD - Docket Allocation Solway & Abercrombie Solar	SD - 10% Allocation Solway & Abercrombie Solar
NPVRR	$205,149		$200,094	$202,169
	Savings*		$5,055	$2,980

Customers will likely see the most benefits during the first ten years of operations, when PTCs are received. When looking at the net present value from 2025-2050 of approximately $5,055,000 in benefits based on the allocation proposed in this docket, when spread among the total kWhs during that time period, an average residential customer using 1,000 kWh per month would see a savings of $4.27 annually on a net present value basis.

Otter Tail requests a Commission decision regarding the recovery of these solar projects from South Dakota customers through the Phase-In Rider. As discussed above, Otter provided information showing expected benefits for South Dakota customers over the life of the projects. The Abercrombie and Solway solar projects were by far the least cost options among the solar projects considered, largely due to the favorable interconnection costs. Otter Tail has shared with Staff that it is unlikely to be able to procure other solar projects with costs as favorable as these projects in the near future. Staff recognizes that these projects also help Otter Tail fulfill the Minnesota CFS requirements. However, it appears Otter Tail is striving to find solutions that work for multiple jurisdictions when possible. Staff appreciates Otter Tail filing this docket earlier than normal in order to provide Staff and the Commission with adequate time to review the projects.

The Commission has previously allowed recovery of certain wind projects built and repowered for economics. The Commission also considered cost recovery of a solar PPA that was not acquired to satisfy a need. Economic analysis was considered in that docket, but acquiring that solar portfolio did not result in benefits to customers and a proxy price was established[10]. To the best of Staff's knowledge, this is the first time the Commission will have considered recovery of owned solar resources expected to provide economic benefits to customers while also fulfilling a carbon free standard. Given the novelty of this request regarding solar projects expected to provide economic benefits, Staff defers to the Commission on this policy decision regarding the recovery of these solar projects. Staff notes that if the Commission does not approve inclusion of the projects in the PIR, Otter Tail states[11] it will seek to allocate 100% of the projects' costs and output to Minnesota customers and South Dakota customers would not share in the benefits of the projects.

Through discussions with Otter Tail, Staff believes Otter Tail is seeking certainty regarding current and future cost recovery from this Commission. Staff questions whether or not a Commission approval in this docket will provide the certainty Otter Tail is seeking from this Commission or future Commissions. Staff understands Otter Tail's

[10] See docket EL16-037.

[11] Petition, page 15.

desire for certainty, as without "guaranteed" recovery from South Dakota, the Company will seek to allocate 100% of the projects' costs to Minnesota. Otter Tail is a small utility, and having 10% or 16% of project costs with unknown recovery could be a material risk for the Company that could be more easily absorbed by a bigger utility.

From a practical standpoint, if the Commission approves recovery of a generation resource in a phase-in rider, and later on reviews the project again in a future rate case when the project is proposed to be rolled into base rates, the same analysis from the same time frame as originally considered should be reviewed if the Commission is looking at the facts known at the time the decision was made to invest in the generation resource. However, what could change is Commission policy or legislative directives. The Commission must reserve the right for future review.

PERCENT OF BILL PRIOR COLLECTION PERIOD TRACKER

The Percent of Bill portion of the PIR approved in Docket EL24-020 was based on the estimated revenue requirements associated with Astoria, Merricourt, Ashtabula III, Lake Norden Area load growth credit, HLP retirement savings, and the four wind repower projects for the collection period of September 2024 through August 2025 of $2,527,505[12]. The Company's tracker initially filed in this docket includes costs associated with the two proposed solar projects and reflects actual costs through October 2024 and forecasted costs through August 2025. This results in an updated Percent of Bill revenue requirement for September 2024 through August 2025 of $3,058,750.

The difference between the forecasted revenue requirements in Docket EL24-020 and the updated revenue requirements in the filing in this docket is primarily related to the following factors:

- The addition of the two new solar projects.
- Updated operating costs for Merricourt that had been inadvertently hardcoded in the previous filing and therefore not updated as should have been reflected previously, resulting in an increase for the September 2024 – August 2025 time period.
- Updated information regarding the load growth credit, causing a decrease in the credit, increasing the revenue requirement.
- Completion order for the Ashtabula and Luverne repower projects was reversed, causing a net increase in the revenue requirement for the 2025 months.

These differences are summarized below:

[12] Excluding estimated carrying charge and true-up. Total estimated requirements were $2,644,399.

September 2024 – August 2025 Revenue Requirements		
	EL24-020 Approved	**EL24-038 Filing**
Astoria Generation	$1,621,513	$1,641,292
Merricourt Wind	757,240	918,128
Ashtabula III Wind	827,330	813,531
Langdon Wind Repower	(141,542)	(128,353)
Ashtabula I Wind Repower	142,574	253,801
Luverne Wind Repower	344,761	270,180
Ashtabula III Wind Repower	307,776	304,738
Solway Solar	0	52,500
Abercrombie Solar	0	139,858
SD Filing Fee	5,000	5,000
Credit due to Load Growth	(358,887)	(203,120)
HLP Adjustment	(978,261)	(979,812)
Proration of Federal ADIT	0	(28,993)
Total	**$2,527,505**	**$3,058,750**

The rates implemented in Docket EL24-020 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 $2,644,399 and forecasted base rate retail sales for all classes of customers of $25,179,069. This resulted in a percent of bill factor of 10.502%. This docket reflects estimated revenues for the September 2024 through August 2025 collection period of $2,706,507[13].

Comparing the revenue requirements of $3,058,750 to the revenues received for the same time period of $2,706,507, this results in a difference of $352,243. Applying the carrying cost rate month-by-month results in carrying charges of $15,565 and a cumulative true-up balance of $457,480 to be carried over into the next collection period tracker.

PERCENT OF BILL 9/1/25 – 8/31/26 REVENUE REQUIREMENT

The September 1, 2025, through August 31, 2026, Percent of Bill Revenue Requirement is based on estimated revenue requirements of the items discussed above and the true-up balance associated with the prior collection period.

Otter Tail's Attachments 4 through 16 provide the details regarding the Percent of Bill Revenue Requirement calculations. Attachment 3 provides the Percent of Bill Tracker Summary for the current and proposed collection periods, and Attachment 1 summarizes the revenue requirements for the upcoming recovery period.

[13] Consists of actual revenues through October 2024 and projected revenues through August 2025.

A summary of the forecasted Percent of Bill Revenue Requirements for the September 2025 through August 2026 Collection Period as provided in Otter Tail's filing are as follows:

September 2025 – August 2026 Revenue Requirements	
Astoria Generation	$1,588,095
Merricourt Wind	937,469
Ashtabula III Wind	831,826
Langdon Wind Repower	(224,677)
Ashtabula I Wind Repower	(207,334)
Luverne Wind Repower	(158,242)
Ashtabula III Wind Repower	(315,514)
Solway Solar	395,859
Abercrombie Solar	576,859
SD Filing Fee	5,000
Credit due to Load Growth	(209,199)
HLP Adjustment	(991,803)
Carrying Cost / (Credit)	9,863
True-Up	457,480
Total	**$2,695,682**

PER METER REVENUE REQUIREMENTS

In Docket EL22-013, the Commission approved Otter Tail's proposal to include three new AGI projects (Advanced Metering Infrastructure, Outage Management System, and Demand Response System) in the PIR, recovered through a new per meter rate. The current docket reflects the third annual update for these three AGI projects.

PER METER PROJECTS BACKGROUND AND UPDATES

Staff provides a brief description and update of each project below.

Advanced Metering Infrastructure (AMI)

Otter Tail is deploying new AMI meters throughout its service territory to replace the existing meters which are primarily read manually each month. AMI will enable two-way communications between Otter Tail and the meters, reducing expenses and safety risks associated with needing to be physically on the customer's property for these utility functions. Otter Tail states AMI will be a foundation for potential future grid modernization functions and allow future opportunities for the Company to create new rate offerings and additional support for customer located generation. Otter Tail expects to see reductions in operations and maintenance (O&M) expenses because of these new meters and those savings are accounted for in the rider. Measured incremental savings realized from AMI will include avoided contracted meter reading costs and avoided maintenance expenses attributable to hand-held meter reading devices net of new AMI O&M costs incurred.

In Docket EL22-013, the Company estimated average annual O&M savings of approximately $0.61 million (Otter Tail SD)[14] from the beginning of initial deployment in 2022 through 2045. After including annual O&M expenses, depreciation, property tax, and income tax associated with the AMI project, the net savings over the life of the AMI

[14] $6.61 million total company

project are estimated to be, on average, $0.32 million (Otter Tail SD)[15] annually. Otter Tail expects nearly 100 percent of expected savings will begin in 2026. South Dakota customers will receive a credit for O&M savings of meter reading expenses that are included in base rates[16].

The AMI pilot of 500 meters occurred in December 2023, and full deployment began in February 2024. Otter Tail provided Staff with an update, reporting that approximately 98% of the AMI meters have been installed. AMI meters with more complex rates and metering configurations are being installed by Otter Tail employees throughout 2025. Otter Tail expects the project to be completed at a total cost under budget.

Outage Management System (OMS) with Geographic Information System (GIS) enhancements

Otter Tail is implementing an OMS that will offer operational and customer benefits related to outage response as well as a foundation for future grid modernization plans. Otter Tail states that deployment of the OMS will allow Otter Tail to identify outages more rapidly and deploy crews more efficiently to reduce the number and length of outages. The new system will allow for better communication with customers before, during, and after outage events.

As a part of this project, Otter Tail is developing the electrical connectivity model from meter to substation and specific attribution data of Otter Tail's GIS features. Updated data will facilitate better outage prediction and response when outage information is received by the OMS. The attribution data will also be used by engineers to refine underground cable replacement and overhead line replacement projects. The connectivity model will also be utilized by the MDMS for operational and planning tools and will be available for future tools such as Volt/Var optimization, demand response controls, and automated system reconfigurations.

Otter Tail indicates that work force shortages and severe winter weather challenges caused delays in the completion of this project, and the contractor underestimated the time it would take to complete the project. The OMS system modeling improvements, as part of the GIS portion of the project, were completed in May 2024. Otter Tail provided Staff with an update on the progress, reporting that the remaining work on the OMS project was completed in December 2024.

Demand Response (DR) System

Otter Tail has high DR program adoption, allowing Otter Tail to control between 10-15 percent of total winter peak load. Much of the Company's existing DR infrastructure is either approaching end of life or already functionally obsolete. The current DR software is unsupported by the vendor and components of the DR system is either limited in availability or no longer available at all. The Company is replacing the DR system, utilizing a two-way communications network to support the functionality of the DR programs and enable improvement and expansion of such programs in the future. Otter Tail states another benefit of the renewed DR system is the potential to delay the need for new resources as Otter Tail receives capacity accreditation of the amount of DR based interruptible load on its system.

Six responses were received in November 2022 in reply to Otter Tail's request for proposals for the DR replacement system. The Company states that after a rigorous and extensive evaluation, it chose Landis+Gyr and Open Access Technology International as their two strategic partners. Otter Tail also submitted an application for

[15] $3.45 million total company

[16] See Attachment 24 to the Petition.

grant opportunities related to the 2021 Infrastructure Investment and Jobs Act. This funding decision was expected to be announced in late 2024, and any funding received would decrease costs for customers. However, while Otter Tail was selected to begin negotiations with the Department of Energy (DOE) for project funding, due to recent federal administration changes, these negotiations have been placed on pause for the time being while DOE awaits additional implementation guidance. Additionally, Otter Tail recently learned that the meters deployed under the AMI project could be used to facilitate load control for certain rates, such as water heating control, and eliminate the need to replace existing load control devices for that select group of rates. Due to this discovery, the Company now expects a reduced total cost of the DR project. Otter Tail now anticipates installation to begin in the third quarter of 2025 with full implementation being complete in 2028.

In preparation of this filing, Otter Tail realized the CWIP for this project reflected the monthly CWIP instead of the cumulative CWIP amount. This led to the rate base for 2024 and 2025 being calculated incorrectly in docket EL24-020. Otter Tail corrected this calculation in this filing. In addition the forecast for this project was updated for 2025, resulting in a higher projected CWIP from the prior filing.

PER METER PRIOR COLLECTION PERIOD TRACKER

The Per Meter portion of the PIR approved in Docket EL24-020 was based on the estimated revenue requirements associated with the AGI projects for the collection period of September 2024 through August 2025 of $697,164[17]. The Company's tracker filed in this docket reflects actual costs through October 2024 and forecasted costs through August 2025. This results in an updated Per Meter revenue requirement for September 2024 through August 2025 of $590,875. The difference between the forecasted revenue requirements in Docket EL23-020 and the updated revenue requirements in this initial filing in this docket is primarily related to approximately $106,000 in lower spend related to the AMI project.

The September 2024 through August 2025 revenue requirements are summarized below:

September 2024 – August 2025 Revenue Requirements		
	EL24-020 Approved	**EL24-038 Proposed**
Advanced Metering Infrastructure	$944,593	$838,141
Outage Management System	149,282	143,056
Demand Response	3,208	21,420
Proration of Federal ADIT	(811)	(287)
O&M Savings due to AMI Implementation	(399,109)	(411,455)
Total	**$697,164**	**$590,875**

Comparing the updated revenue requirements of $590,875 to the revenues received for the same time period[18] of $546,229 results in a difference of $44,646. Applying the carrying cost rate month-by-month results in carrying charges of $(4,841) and a cumulative true-up balance of $(61,288) to be carried over into the next collection period tracker.

[17] Excluding estimated carrying charge and true-up. Total estimated requirements were $571,673.

[18] Consisting of actual revenues through October 2024 and projected revenues through August 2025.

PER METER REVENUE REQUIREMENT

The September 1, 2025, through August 31, 2026, Per Meter Revenue Requirement is based on estimated revenue requirements of the three AGI projects and the true-up balance associated with the prior collection period.

Otter Tail's Attachments 17 through 26 provide the details regarding the Per Meter Revenue Requirement calculations. Attachment 20 provides the Per Meter Tracker Summary for the current and proposed collection periods, and Attachment 18 summarizes the revenue requirements for the upcoming recovery period.

A summary of the forecasted Per Meter Revenue Requirements for the September 2025 through August 2026 Collection Period as provided in Otter Tail's filing are as follows:

September 2025 – August 2026 Revenue Requirements	
Advanced Metering Infrastructure	$982,243
Outage Management / GIS Updates	142,643
Demand Response	68,049
O&M Savings due to AMI Implementation	(627,171)
Proration of Federal ADIT	0
Carrying Cost / (Credit)	(1,802)
True-Up	(61,288)
Total	**$502,674**

TOTAL REVENUE REQUIREMENT

When the Percent of Bill revenue requirement of $2,695,682 is combined with the Per Meter revenue requirement of $502,674, the total PIR revenue requirement for the September 2025 through August 2026 collection period is $3,198,356.

CLASS ALLOCATION AND RATE DESIGN

Otter Tail continues to utilize the "percent-of-bill" and "per meter" rate designs[19] as approved previously. The revenue requirement for the "percent-of-bill" portion of the phase-in is $2,695,682. The "percent-of-bill" factor is determined by dividing the revenue requirement by the total base rate revenue for the recovery period. This results in a "percent-of-bill" factor of 9.863 percent for the September 2025 through August 2026 collection period.

The revenue requirement for the "per meter" portion of the phase-in is $502,674. To allocate revenue requirement to customer classes, Otter Tail determined the average cost of materials and labor per meter for each customer class. The weighted average cost per customer class is then used to determine the percentage of project costs to be charged to each class. Each class revenue requirement is divided by the number of meters per class to arrive at the monthly per meter charges.

The table below provides the proposed per meter rates proposed to be effective September 1, 2025.

[19] See Petition, Attachments 2 and 19.

Class	Per Meter Charge
Residential	$1.55
Residential RDC	$3.62
Farm	$4.74
Small General Service	$2.50
General Service	$9.83
General Service TOU	$15.93
Large General Service Primary / Transmission	$85.22
Large General Service – Secondary	$15.43
Irrigation Service	$8.36
Outdoor Lighting (Metered)	$1.67
OPA (Metered)	$4.15
Controlled Service Water Heating	$3.62
Controlled Service interruptible - Small Dual Fuel	$3.69
Controlled Service Interruptible - Large Dual Fuel	$16.72
Controlled Service Deferred	$4.68

Otter Tail states the impact of the change in the "percent-of-bill" factor for a residential customer using 1,000 kWh per month is a decrease of approximately $0.46. The impact of the change in the "per meter" rate for a residential customer is a decrease of approximately $0.22 per month, resulting in a total decrease for an average residential customer of approximately $0.68 per month compared to current rates. Overall, a residential customer using 1,000 kWh per month will see a bill decrease of approximately 0.599%.

RECOMMENDATION

Staff recommends the Commission approve the Per Meter revenue requirement of $502,674 the September 1, 2025, through August 31, 2026, plan year and the resulting per meter charges effective September 1, 2025. Regarding the "Percent of Bill" revenue requirement, Staff defers to the Commission on a decision regarding the Abercrombie Solar and Solway Solar projects. If the Commission approves recovery of the Abercrombie Solar and Solway Solar projects, Staff recommends the Commission approve the $2,695,682 percent of bill revenue requirement for the September 1, 2025, through August 31, 2026 plan year, and resulting percent of bill phase-in rider factor of 9.863 percent, effective September 1, 2025. If the Commission choses to deny recovery of the Abercrombie Solar and Solway Solar projects, Staff recommends the Commission approve the percent of bill revenue requirement, excluding the Abercrombie Solar and Solway Solar projects, and the resulting percent of bill phase-in rider factor, to be effective September 1, 2025, and direct Otter Tail to file a compliance filing including revised attachments to support the revenue requirement and factor excluding these projects.[20]

[20] 9/1/25 – 8/31/26 Percent of Bill Revenue Requirement without the solar projects is approximately $1,527,000 with a percent-of-bill factor of 5.587% subject to final review of an Otter Tail compliance filing.