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## STAFF MEMORANDUM

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**TO:** COMMISSIONERS AND ADVISORS  
**FROM:** PATRICK STEFFENSEN AND LOGAN SCHAEFBAUER  
**RE:** EL24-020 - In the Matter of Otter Tail Power Company's Petition for Approval of Rate Schedule, Section 13.09, Phase-In Rider  
**DATE:** August 21, 2024

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### BACKGROUND

On June 3, 2024, the South Dakota Public Utilities Commission (Commission) received a petition from Otter Tail Power Company (Otter Tail or Company) for approval of its fifth annual update to its Phase-In Rider (PIR) rate. The proposed PIR rates reflect the PIR revenue requirements for September 1, 2024, through August 31, 2025.

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.

In Docket EL23-015, the Commission approved a \$1,764,229 revenue requirement for the September 1, 2023, through August 31, 2024, plan year. The approval resulted in a 6.498 "percent of bill" phase-in rider factor and revised per meter rates associated with the AGI projects, effective September 1, 2023.

In this current filing, Otter Tail initially requested to recover a projected September 1, 2024, through August 31, 2025 revenue requirement of \$4,531,109 associated with the Merricourt, Astoria, and Ashtabula III projects, the revenue credit due to the new load growth in Lake Norden, the net savings associated with the HLP retirement, the AGI projects, and four new projects with the wind repowering projects at Langdon, Ashtabula I, Luverne, and

Ashtabula III. The Company’s proposed revenue requirement results in a proposed “percent-of-bill” base revenue charge of 14.667 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, 2024, through August 31, 2025 revenue requirement associated with the Merricourt, Astoria, and Ashtabula III projects, Lake Norden load growth credit, HLP retirement savings, AGI projects, and wind repower projects. The September 1, 2024, through August 31, 2025 phase-in rates are based on estimated costs of Astoria, Merricourt, Ashtabula III, AGI projects, and wind repower 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 discussed in more detail below, Otter Tail filed a Supplemental Filing on July 31, 2024. The Supplemental Filing updated the revenue requirement based on items identified during the review process and updated information provided by Otter Tail.

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

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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 wind repower 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, and HLP retirement savings.

#### *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<sup>1</sup>.

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 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<sup>2</sup>. 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, and 2023, the actual output was 500,119 MWh, 576,333 MWh, and 595,359 MWh, respectively, with achieved capacity factors of 38.1 percent, 43.9 percent, and 45.3 percent, respectively.

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. Otter Tail indicated that the initial filing did not appropriately reflect the PTCs based on the agreed upon capacity factor. Therefore, Otter Tail corrected the PTCs per this settlement provision in its Supplemental Filing. The revenue requirement impact of this update is further discussed later in this memo.

#### *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

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<sup>1</sup> \$152.2 million total company

<sup>2</sup> \$2.0 million total company

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.

#### *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 same methodology approved in prior filings, with one proposed revision. In its preparation of this filing, Otter Tail discovered that while fuel revenues were being updated to actual rates, no updates were being made to fuel expenses. This created a mismatch that Otter Tail is proposing to correct in this docket. This revision has been made retroactively in this filing, which decreased the cumulative credit through 2024 by approximately \$56,000. As always, 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, 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. In its preparation of this filing, Otter Tail discovered that while past HLP credits included the expense amounts associated with HLP that were in base rates, it did not include the return on rate base for the retired plant. Otter Tail corrected this mistake retroactively in this filing, which increased the cumulative credit through 2024 by approximately \$318,000.

#### PERCENT OF BILL NEW PROJECTS

#### *Langdon Wind Energy Center Upgrade*

Langdon Wind Energy Center (Langdon) went in-service in December 2007 and was approved for cost recovery by the Commission in docket EL08-030. Otter Tail is proposing to include the revenue requirement associated with Langdon's upgrade project, or repowering project, in the PIR and anticipates an in-service date of November 2024. This project will replace the existing 77-meter blades with 97-meter blades and will replace the existing hubs and gearboxes with upgraded technology and increased blade rotor diameters but will keep the existing towers and nacelles. This will increase the nameplate capacity from 40.5 MW to 43.2 MW and increase the annual capacity factor from approximately 40 percent to approximately 50 percent. Langdon's current cost estimate is approximately \$48.9 million (total company), is projected to achieve approximately \$6.4 million (total company) in year-one PTCs, and has an estimated net present benefit of approximately \$15.3 million (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.

### *Ashtabula I Wind Energy Center Upgrade*

Ashtabula I Wind Energy Center (Ashtabula I) went in-service in November 2008 and was approved for cost recovery by the Commission in docket EL08-030. Otter Tail is proposing to include the revenue requirement associated with Ashtabula I's upgrade project, or repowering project, in the PIR and anticipates an in-service date of July 2025. This project will replace the existing 77-meter blades with 91-meter blades and will replace the existing hubs and gearboxes with upgraded technology and increased blade rotor diameters but will keep the existing towers and nacelles. This will increase the nameplate capacity from 48.0 MW to 51.2 MW and increase the annual capacity factor from approximately 34 percent to approximately 46 percent. Ashtabula I's current cost estimate is approximately \$51.5 million (total company), is projected to achieve approximately \$6.2 million (total company) in year-one PTCs, and has an estimated net present benefit of approximately \$16.4 million (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.

### *Luverne Wind Energy Center Upgrade*

Luverne Wind Energy Center (Luverne) went in-service in September 2009 and was approved for cost recovery by the Commission in docket EL10-011. Otter Tail is proposing to include the revenue requirement associated with Luverne's upgrade project, or repowering project, in the PIR and anticipates an in-service date of September 2025. This project will replace the existing 82.5-meter blades with 97-meter blades and will replace the existing hubs and gearboxes with upgraded technology and increased blade rotor diameters but will keep the existing towers and nacelles. This will increase the nameplate capacity from 49.5 MW to 52.8 MW and increase the annual capacity factor from approximately 40 percent to approximately 47 percent. Luverne's current cost estimate is approximately \$64.8 million (total company), is projected to achieve approximately \$6.9 million (total company) in year-one PTCs, and has an estimated net present benefit of approximately \$1.9 million (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.

### *Ashtabula III Wind Energy Center Upgrade*

Ashtabula III Wind Energy Center (Ashtabula III) went in-service in December 2010, and Otter Tail began purchasing power from the wind farm in 2013 through a power purchase agreement. Otter Tail closed on the purchase of Ashtabula III on January 3, 2023 and the wind farm was approved for cost recovery by the Commission in docket EL22-013. Otter Tail is proposing to include the revenue requirement associated with Ashtabula III's upgrade project, or repowering project, in the PIR and anticipates an in-service date of November 2025. This project will replace the existing 82.5-meter blades with 91-meter blades and will replace the existing hubs and gearboxes with upgraded technology and increased blade rotor diameters but will keep the existing towers and nacelles. This will not increase the nameplate capacity from its current 62.4 MW but will increase the annual capacity factor from approximately 37 percent to approximately 47 percent. Ashtabula III's current cost estimate is approximately \$64.8 million (total company), is projected to achieve approximately \$8.3 million (total company) in year-one PTCs, and has an estimated net present benefit of approximately \$21.6 million (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 PRIOR COLLECTION PERIOD TRACKER

The Percent of Bill portion of the PIR approved in Docket EL23-015 was based on the estimated revenue requirements associated with Astoria, Merricourt, Ashtabula III, Lake Norden Area load growth credit, and HLP retirement savings for the collection period of September 2023 through August 2024 of \$2,102,211<sup>3</sup>. The Company’s tracker initially filed in this docket includes costs associated with the proposed wind repower projects and reflects actual costs through April 2024 and forecasted costs through August 2024. This results in an updated Percent of Bill revenue requirement for September 2023 through August 2024 of \$2,887,070.

The increase between the forecasted revenue requirements in Docket EL23-015 and the updated revenue requirements in the initial filing in this docket is primarily related to the new wind repower projects and an increased Merricourt revenue requirement due to the initial filing not reflecting a 50.7 percent capacity factor.

Otter Tail further updated the September 2023 through August 2024 revenue requirement in its Supplemental Filing on July 31, 2024 to reflect actual costs through May 2024, to make various corrections as explained on pages 2 through 4 of Otter Tail’s Supplemental Filing, and to update the Merricourt project revenue requirement to reflect the 50.7 percent capacity factor beginning October 1, 2022 for purposes of calculating the PTCs. The Merricourt PTC update is responsible for the majority of the difference between the Supplemental Filing and the Initial Filing revenue requirements, as summarized below:

September 2023 – August 2024 Revenue Requirements			
	EL23-015	EL24-020	EL24-020
	Approved	Initial	Supplemental
Astoria Generation	\$1,679,036	\$1,692,454	\$1,691,184
Merricourt Wind	781,344	1,239,222	826,523
Ashtabula III Wind	780,904	839,962	838,999
Langdon Wind Repower	0	159,612	160,398
Ashtabula I Wind Repower	0	56,815	62,584
Luverne Wind Repower	0	81,547	101,743
Ashtabula III Wind Repower	0	74,964	80,103
SD Filing Fee	5,000	5,000	5,000
Credit due to Load Growth	(216,152)	(294,621)	(291,218)
HLP Adjustment	(925,844)	(976,897)	(979,917)
Proration of Federal ADIT	(2,077)	9,013	9,033
<b>Total</b>	<b>\$2,102,211</b>	<b>\$2,887,070</b>	<b>\$2,504,433</b>

The rates implemented in Docket EL23-015 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 \$1,577,517 and forecasted base rate retail sales for all classes of customers of \$24,275,286. This resulted in a percent of bill factor of 6.498%. The initial filing in this docket

<sup>3</sup> Excluding estimated carrying charge and true-up. Total estimated requirements were \$1,577,517.

reflected estimated revenues for the September 2023 through August 2024 collection period of \$1,704,942<sup>4</sup>. Otter Tail's Supplemental Filing updates the estimated revenue received during this collection period to \$1,692,417, updating actual revenues through May 2024.

Comparing the updated revenue requirements of \$2,504,433 to the revenues received for the same time period of \$1,692,417, this results in a difference of \$812,016. Applying the carrying cost rate month-by-month results in carrying charges of \$(25,732) and a cumulative true-up balance of \$112,684 to be carried over into the next collection period tracker.

PERCENT OF BILL 9/1/24 – 8/31/25 REVENUE REQUIREMENT

The September 1, 2024, through August 31, 2025, Percent of Bill Revenue Requirement is based on estimated revenue requirements of Astoria, Merricourt, Ashtabula III, and the wind repower projects, estimated Lake Norden load growth revenue credit, estimated HLP retirement savings, and the true-up balance associated with the prior collection period.

Otter Tail's Attachments 4 through 14 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.

Otter Tail provided updated attachments in its Supplemental Filing to correct the Merricourt project revenue requirement to reflect the 50.7% capacity factor for purposes of calculating the PTCs. This change to appropriately reflect the EL18-021 settlement provision regarding the Merricourt capacity factor accounts for most of the revenue requirement change provided in the Supplemental Filing. Other minor updates and corrections as explained on pages 2 through 4 of the Supplemental Filing were made to other projects as well to reflect the most recently available information.

A summary of the forecasted Percent of Bill Revenue Requirements for the September 2024 through August 2025 Collection Period as provided in Otter Tail's initial filing and Supplemental Filing are as follows:

September 2024 – August 2025 Revenue Requirements		
	Initial	Supplemental
Astoria Generation	\$1,636,342	\$1,621,513
Merricourt Wind	1,155,081	757,240
Ashtabula III Wind	825,656	827,330
Langdon Wind Repower	(114,857)	(141,542)
Ashtabula I Wind Repower	157,891	142,574
Luverne Wind Repower	286,184	344,761
Ashtabula III Wind Repower	329,022	307,776
SD Filing Fee	5,000	5,000
Credit due to Load Growth	(358,887)	(358,887)
HLP Adjustment	(977,043)	(978,261)
Carrying Cost / (Credit)	24,434	4,210
True-Up	724,186	112,684
<b>Total</b>	<b>\$3,693,011</b>	<b>\$2,644,399</b>

<sup>4</sup> Consists of actual revenues through April 2024 and projected revenues through August 2024.

## PER METER REVENUE REQUIREMENTS

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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 second 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 customer 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)<sup>5</sup> 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 project are estimated to be, on average, \$0.32 million (Otter Tail SD)<sup>6</sup> annually.

The AMI pilot of 500 meters occurred in December 2023, and full deployment began in February 2024. Otter Tail expects most AMI meters will be installed by the end of 2024; however, the AMI meters with more complex rates and metering configurations will be installed by Otter Tail employees in the first quarter of 2025.

### *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

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<sup>5</sup> \$6.61 million total company

<sup>6</sup> \$3.45 million total company

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 is currently working with vendors as part of the AMI project to complete the necessary integrations and anticipates completion by late 2024 or early 2025.

#### *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 grant opportunities related to the 2021 Infrastructure Investment and Jobs Act. This funding decision is expected to be announced in late 2024, and any funding received would decrease costs for customers. Otter Tail anticipates installation to begin in third quarter of 2026 with full implementation being complete in second quarter of 2028.

#### PER METER PRIOR COLLECTION PERIOD TRACKER

The Per Meter portion of the PIR approved in Docket EL23-015 was based on the estimated revenue requirements associated with the AGI projects for the collection period of September 2023 through August 2024 of \$499,200<sup>7</sup>. The Company's tracker initially filed in this docket reflects actual costs through March 2024 and forecasted costs through August 2024. This results in an updated Per Meter revenue requirement for September 2023 through August 2024 of \$437,438. The difference between the forecasted revenue requirements in Docket EL23-015 and the updated revenue requirements in this initial filing in this docket is primarily related to project delays.

Otter Tail further updated the September 2023 through August 2024 revenue requirement in its Supplemental Filing on July 31, 2024 to reflect actual costs through June 2024 and to make other various corrections as explained on pages 5 and 6 of the Supplemental Filing. The September 2023 through August 2024 revenue requirements are summarized below:

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<sup>7</sup> Excluding estimated carrying charge and true-up. Total estimated requirements were \$186,712.

September 2023 – August 2024 Revenue Requirements			
	EL23-015 Approved	EL24-020 Initial	EL24-020 Supplemental
Advanced Metering Infrastructure	\$468,659	\$407,711	\$367,608
Outage Management System	158,684	89,121	88,459
Demand Response	37,622	769	416
O&M Savings due to AMI Implementation	(165,765)	(60,163)	(67,735)
<b>Total</b>	<b>\$499,200</b>	<b>\$437,438</b>	<b>\$388,748</b>

Comparing the updated revenue requirements of \$388,748 to the revenues received for the same time period<sup>8</sup> of \$197,085 results in a difference of \$191,663. Applying the carrying cost rate month-by-month results in carrying charges of \$(17,978) and a cumulative true-up balance of \$(120,640) to be carried over into the next collection period tracker.

#### PER METER REVENUE REQUIREMENT

The September 1, 2024, through August 31, 2025, 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 19 through 24 provide the details regarding the Per Meter Revenue Requirement calculations. Attachment 18 provides the Per Meter Tracker Summary for the current and proposed collection periods, and Attachment 16 summarizes the revenue requirements for the upcoming recovery period.

Otter Tail provided updated attachments in its Supplemental Filing to provide actual cost data through June 2024 for all three AGI projects, updated forecasted construction work in progress and O&M costs for all three AGI projects, and updated in-service dates for the AMI and OMS with GIS projects. Otter Tail also makes the various corrections as explained on pages 5 and 6 of the Supplemental Filing.

A summary of the forecasted Per Meter Revenue Requirements for the September 2024 through August 2025 Collection Period as provided in Otter Tail's initial filing and Supplemental Filing are as follows:

September 2024 – August 2025 Revenue Requirements		
	Initial	Supplemental
Advanced Metering Infrastructure	\$1,009,517	\$944,593
Outage Management / GIS Updates	148,501	149,282
Demand Response	68,772	3,208
O&M Savings due to AMI Implementation	(311,314)	(399,109)
Proration of Federal ADIT	(859)	(811)
Carrying Cost / (Credit)	(4,515)	(4,850)
True-Up	(72,004)	(120,640)
<b>Total</b>	<b>\$838,098</b>	<b>\$571,673</b>

<sup>8</sup> Consisting of actual revenues through June 2024 and projected revenues through August 2024.

## TOTAL REVENUE REQUIREMENT

When the Percent of Bill revenue requirement of \$2,644,399 is combined with the Per Meter revenue requirement of \$571,673, the total PIR revenue requirement for the September 2024 through August 2025 collection period is \$3,216,072.

## CLASS ALLOCATION AND RATE DESIGN

Otter Tail continues to utilize the “percent-of-bill” and “per meter” rate designs<sup>9</sup> as approved previously. The revenue requirement for the “percent-of-bill” portion of the phase-in is \$2,644,399, as provided in Otter Tail’s Supplemental Filing. 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 10.502 percent for the September 2024 through August 2025 collection period.

The revenue requirement for the “per meter” portion of the phase-in is \$571,673, as provided in Otter Tail’s Supplemental Filing. 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, 2024.

Class	Per Meter Charge
<b>Residential</b>	\$1.76
<b>Residential RDC</b>	\$4.12
<b>Farm</b>	\$5.39
<b>Small General Service</b>	\$2.84
<b>General Service</b>	\$11.18
<b>General Service TOU</b>	\$18.11
<b>Large General Service Primary / Transmission</b>	\$96.92
<b>Large General Service – Secondary</b>	\$17.55
<b>Irrigation Service</b>	\$9.51
<b>Outdoor Lighting (Metered)</b>	\$1.90
<b>OPA (Metered)</b>	\$4.72
<b>Controlled Service Water Heating</b>	\$4.12
<b>Controlled Service interruptible - Small Dual Fuel</b>	\$4.19
<b>Controlled Service Interruptible - Large Dual Fuel</b>	\$19.02
<b>Controlled Service Deferred</b>	\$5.33

<sup>9</sup> See Petition, Attachments 2 and 17, and Supplemental Filing, Revised Attachments 2 and 17.

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 an increase of approximately \$2.90. The impact of the change in the “per meter” rate for a residential customer is an increase of approximately \$1.24, resulting in a total increase for an average residential customer of approximately \$4.14 per month compared to current rates. Overall, a residential customer using 1,000 kWh per month will see a bill increase of approximately 3.823%.

## RECOMMENDATION

Staff recommends the Commission approve the total \$3,216,072 revenue requirement for the September 1, 2024, through August 31, 2025, plan year, the resulting 10.502 “percent of bill” phase-in rider factor, and the revised per meter charges as provided in Otter Tail’s Supplemental Filing, effective September 1, 2024.