PUBLIC – TRADE SECRET DATA HAS BEEN EXCISED

STATE OF SOUTH DAKOTA
BEFORE THE
SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

In the Matter of Otter Tail Power Company's Petition for Approval of Rate Schedule, Section 13.09, Phase-In Rider	**Docket No. EL24-** **PETITION**

I. PETITION SUMMARY

A. This filing for Otter Tail Power Company's (Otter Tail Power or the Company) Phase-In Rate Plan Rider (Rider) includes annual updated actual and forecasted costs and collections associated with the following:

1. Astoria Station Natural Gas Plant Project (Astoria Station).
2. Merricourt Wind Project (Merricourt Project).
3. The Ashtabula III Wind Farm Purchase.
4. Wind Energy Facility Equipment Upgrades (Upgrade Project) to repower the following four wind facilities:
    a. Langdon,
    b. Ashtabula I,
    c. Luverne, and
    d. Ashtabula III.
5. Forecasted net benefits associated with additional load in the Lake Norden area.
6. Net savings associated with Otter Tail Power's retirement of its Hoot Lake Plant (HLP).
7. Advanced Metering Infrastructure (AMI).
8. An Outage Management System (OMS).
9. Demand Response (DR) system replacement.

Also included in this filing is a request for approval of the addition of two new solar facilities:

1. Solway Solar
2. Abercrombie Solar

B. Otter Tail Power continues to propose a per meter rate structure for the Advanced Grid Infrastructure (AGI) projects and a percent of bill rate structure for all other projects and adjustments in this rider. The petition is broken into two sections, which describe how the different types of rates are established.

C. The rate of return (ROR) included in this filing is based on Otter Tail Power's actual capital structure as of December 31 of the preceding year using the return on equity (ROE) approved by the Commission in the most recent general rate case in Docket No. EL18-021 (Rate Case).

D. The proposed revenue requirement for the recovery period of September 1, 2025, through August 31, 2026, is $3,198,356.
   1. Attachment 1 provides the proposed revenue of $2,695,682 to be collected by the percent of bill portion of the Rider.
   2. Attachment 18 provides the proposed revenue of $502,674 to be collected by the per meter charge portion of the Rider.

E. A residential customer with one meter and using 1,000 kWh per month will experience a bill decrease of $0.68 per month. A Large General Service (LGS) customer with one meter and using 486 kW and 222,350 kWh per month will see a bill decrease of $81.40 per month.

II. INTRODUCTION

Otter Tail Power Company hereby petitions the South Dakota Public Utilities Commission for approval of its sixth annual update to its Phase-In Rate Plan Rider. This filing is made in compliance with the South Dakota Public Utilities Commission's (Commission) Order in Otter Tail Power's 2019 Rider Filing (2019 Filing) and under the Commission's authority granted in South Dakota Codified Laws 49-34A-73 through 49-34A-78 under Otter Tail Power's Rider, Electric Rate Schedule Section 13.09.[1] This Rider is described in the Settlement Stipulation (Settlement) and approved by the Commission's Order (Order) in Otter Tail Power's last Rate Case.[2] This filing includes the components described in the Settlement.

[1] Commission's August 26, 2019, Order in the Matter of Otter Tail Power Company's Petition for Approval of Rate Schedule, Section 13.09, Phase-In Rider in Docket No. EL19-025.
[2] Commission's March 6, 2019, Order Granting Joint Motion for Approval of Settlement Stipulation; Order Approving Settlement Stipulation in the Matter of the Application of Otter Tail Power Company for Authority to increase its Electric Rates in Docket No. EL18-021.

III. GENERAL FILING INFORMATION

A. Name, address, and telephone number of the utility making the filing

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D. Otter Tail Power also requests that the following contact(s) be placed on the Commission's official service list for this matter:

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E. The date of filing and the date changes will take effect

The date of this filing is December 20, 2024. Otter Tail Power proposes the update to the Rider factor to go into effect for usage on and after September 1, 2025.

F. Statutes controlling schedule for processing the filing

Otter Tail Power files this Rider for Commission approval under the authority of South Dakota Codified Laws 49-34A-73 through 49-34A-78. The Administrative Rules of South Dakota (ARSD) SD Part 20:10:13:15 require a 30-day notice to the Commission of a proposed change in a utility's tariff schedule. Attachment 28 of this Petition is the proposed customer notice required by ARSD 20:10:13:19, which will be sent to customers with the first bill rendered once the rate is implemented. Otter Tail Power includes Attachment 29 to comply with ARSD 20:10:13:26, which requires a Utility to report all rate schedule changes and customer impacts. Otter Tail Power will provide notice of this proceeding to its customers pursuant to South Dakota Codified Laws Chapter 49-34A-12 in June 2025 billing statements.

IV. PHASE-IN COST RECOVERY BACKGROUND

On April 20, 2018, Otter Tail Power filed a Rate Case Application with the Commission requesting approval to increase electric service rates for customers in its

South Dakota service territory.[3] Otter Tail Power's application included a proposed step increase, to be effective January 1, 2020, to facilitate recovery of the Merricourt and Astoria Projects. Commission Staff and Otter Tail Power (together the Parties) filed a Joint Settlement addressing the recovery of the Merricourt and Astoria Projects. The Stipulation was later approved by the Final Decision and Order on May 30, 2019.[4]

Section 3, Part 2 of the Settlement contemplates the Merricourt and Astoria Projects as part of a Phase-In Rate Plan for recovery of capital projects as well as additional components. The Phase-In description of the Settlement Agreement reads as follows:

> *The Parties agree that OTP may file for the establishment of a phase-in rate plan under SDCL 49-34A-73 through 78, seeking recovery of Merricourt and Astoria construction work in progress and continuing once the projects are in-service and until the time the Company files its next rate case. This approach provides OTP the opportunity to recover costs associated with the two capital projects while avoiding multiple rate cases…*
>
> *The phase-in rate plan will also include an adjustment reflecting the net benefit of the additional load in the Lake Norden area, including corresponding updates to jurisdictional allocation factors resulting from the increased load to South Dakota…*
>
> *The phase-in plan will also include an adjustment to reflect the net savings associated with the Hoot Lake plant retirement, which is scheduled for retirement in May of 2021.*
>
> *The Parties agree OTP will submit an annual Phase-In Rider filing on a going forward basis to be received by the PUC by June 1 of each year. Based on this annual report, OTP will adjust the Phase-In rate each year based on actual costs and collections.*

In compliance with the above referenced statutes, the approved Settlement, and other previous Phase-In Commission Orders, this Petition provides updates on the Merricourt and Astoria projects, the Ashtabula III purchase, the Wind Facility Upgrade

[3] In the Matter of the Application of Otter Tail Power Company for Authority to increase its Electric Rates in Docket No. EL18-021.
[4] February 21, 2019, Staff Memorandum Supporting Settlement Stipulation, beginning on page 14.

Projects, and the proposed new solar projects. Also included in this update is information associated with the Lake Norden area load growth, the retirement of Hoot Lake Plant, and updates regarding Advanced Metering Infrastructure, the Outage Management System, and the Demand Response system, as well as Otter Tail Power's calculations for its Phase-In Rider rate.

Otter Tail Power provides an updated tariff rate schedule, Section 13.09, as Attachment 27 to this filing. The updated tariff contains adjusted rates used for Phase-In cost recovery. The percent of bill rate is calculated in Attachments 1 through 16, and the per meter rates are calculated in Attachments 17 through 26. The projects being recovered in the Phase-In Rider under each of these charges are discussed in separate sections of this filing.

V. PERCENT OF BILL PROJECTS

A. Astoria Station – Attachment 4

Otter Tail Power owns a 245 MW natural gas-fired, simple cycle combustion turbine near Astoria, South Dakota. Otter Tail Power's Energy Conversion Facility Permit Application for Astoria Station (Permit Application) provides a complete description of the project and analysis used to determine the appropriateness of the project.[5]

Astoria Station was deemed "in-service" on an accounting basis as of February 2021. The financial tracker attachments included in this filing reflect a February 2021 in-service date for the main Astoria Station project. Formal performance testing was conducted the week of April 5, 2021. Astoria Station was declared commercially operational and first offered into the Midcontinent Independent System Operator (MISO) market in late April 2021. Astoria has been dispatched on a regular basis since the commercial operation date. The project was completed under budget and one month before Astoria Station was needed as a generation resource. As shown in Attachment 4, the total cost at completion was $152.2 million (OTP Total)/$15.8 million (OTP SD).

The Astoria Station Project includes transmission network upgrades required to accommodate the interconnection of these facilities into the integrated transmission system. Transmission network upgrades of approximately $8.7 million (OTP Total) were included in the total cost estimate of the project. Per prior

[5] In the Matter of the Application of Otter Tail Power Company for an Energy Conversion Facility Permit for the Construction of a Combustion Turbine Generator and Associated Infrastructure Including a Natural Gas Pipeline and Electric Transmission line near Astoria, South Dakota in Docket No. EL17-042.

Federal Energy Regulatory Commission (FERC) Orders, transmission owners may elect to self-fund the transmission network upgrades.[6,7] The transmission owner will pay for and build the necessary transmission network upgrades that are needed by the interconnection customer(s). The interconnection customer(s) will then pay the transmission owner for the cost of the network upgrade through facility service agreement (FSA) revenues over a 20-year term.

In the case of the transmission upgrades necessary to interconnect the Astoria Station Project, Otter Tail Power is the owner of those transmission facilities. In addition, MISO determined that the costs of those transmission upgrades benefitted two interconnection customers; therefore, the costs are being shared between Astoria Station and the Tatanka Ridge Wind, LLC project. MISO determined Astoria Station is responsible for 65.48 percent of the interconnection costs, while Tatanka Ridge Wind, LLC is responsible for 34.52 percent of the interconnection costs. As Otter Tail Power owns the transmission facilities and is the owner of Astoria Station, the network upgrades are included as part of the overall capital spend of the project along with the associated FSA revenues received and paid for from Tatanka Ridge Wind, LLC. Attachment 4, Line 23 identifies forecasted Net FSA Revenues for the Astoria Station interconnection of approximately $304,000 (OTP Total) / $30,900 (OTP SD) to be paid to Otter Tail Power during the September 2025 through August 2026 recovery period. This revenue stream represents the FSA revenues to be received from Tatanka Ridge Wind, LLC to pay for their share of the interconnection upgrades. No revenue stream exists related to Otter Tail Power's ownership of both Astoria and the Transmission facilities under the FSA.

Otter Tail Power entered into a Long-Term Service Agreement (LTSA) with Mitsubishi, the combustion turbine supplier. The arrangement of an LTSA is one 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. The owner makes prepayments to the manufacturer for major maintenance based on the hours and/or starts the unit is operated up until the major maintenance is complete. There are many benefits to an LTSA, which

[6] See FERC Order dated August 31, 2018, in FERC Docket No. ER18-2513 and FERC Orders on Remand dated August 31, 2018, under FERC Docket Nos. EL15-36, EL15-68, ER16-696, ER18-1964 and EL18-1965. See Remand Order at PP 28-88; see also Ameren Srvs. Co. v. FERC, 880 F.3d 571, 581 (D.C. Cir. 2018). FERC further denied requests for rehearing of the Commission's August 31, 2018, order on remand in a December 20, 2019, order under Docket No. ER18-2513, Midcontinent Independent System Operator, Inc., 164 FERC ¶ 61,158 (2018).

[7] See FERC Order dated December 20, 2019, under FERC Docket No. ER18-2513. (169 FERC ¶ 61,233).

include: predictable major maintenance costs paid over a period of time, predictable planned outage lengths, long-term parts warranties, coverage for damage caused by failed parts, and remote monitoring of the combustion turbine by the manufacturer. The annual LTSA fee is estimated to be $2.0 million (OTP Total) / $0.20 million (OTP SD) during a typical year Astoria Station is in service. Attachment 4, Line No. 11 includes approximately 92 percent of the LTSA agreement as capital costs, as estimated by Mitsubishi. The remaining 8 percent is included as part of operating costs for Astoria Station on Attachment 4, Line No. 22. The capital portion of the LTSA Prepayments is included in rate base until major maintenance is completed. At that point, the amount of accumulated LTSA Prepayments that have been utilized during major maintenance will be included in Plant Balance and subject to depreciation.

B. Merricourt Project – Attachment 5

In 2020, Otter Tail Power completed the construction of the Merricourt Project located near the town of Merricourt, North Dakota, approximately 15 miles south of Edgeley in McIntosh and Dickey Counties. The Merricourt Facility consists of 75 V110-2.0 MW Vestas wind turbine generators with an aggregate nameplate capacity of 150 MW. It includes real property interests, tower foundations, operational equipment, electric collection circuit lines, a collector system with an on-site collector substation, and additional infrastructure such as communications systems, meteorological towers, operations and maintenance building, monitoring, safety, lighting, and measuring systems.

Commissioning of turbines began in October of 2020, with all 75 units fully in service by December 19, 2020. The Merricourt Facility's zero fuel cost energy generation contributes to a reduction in the cost of energy paid through the Energy Adjustment Rider in tariff rate schedule, 13.01.

C. Ashtabula III Wind Farm- Attachment 6

Otter Tail Power entered into a Power Purchase Agreement (PPA) with Ashtabula III, LLC in 2013, which included an option for Otter Tail Power to purchase the wind facility assets in 2023. If the Company did not exercise this option, the PPA would continue through 2037. Consistent with the option to purchase in the PPA, in July 2021, Otter Tail Power entered into a Purchase and Sale Agreement (PSA), subject to regulatory approvals, for the purchase of the

wind facility assets. The acquisition was completed on January 3, 2023.[8] The PSA for Ashtabula III facility assets include 39 wind generators with an aggregate nameplate of 62.4 MW that were placed into service in 2010, real estate interests, substation assets, and licenses and permits necessary to own and operate the wind facility.

D. Wind Energy Center Facility Upgrade Projects – Attachments 7-10

Otter Tail Power has four facilities that qualify for Production Tax Credits (PTCs) through the Inflation Reduction Act (IRA). The Langdon Energy Facility was upgraded in 2024 with all turbines commissioned in October and November 2024. Otter Tail Power will upgrade the Luverne, Ashtabula I, and Ashtabula III Wind Energy Facilities in 2025. The Upgrade Projects consist of removing and replacing the existing General Electric (GE) blades, hub, and gearbox with upgraded turbine technology and increased blade rotor diameters. The existing 80-meter structural towers and existing nacelles will be unchanged. Otter Tail Power will use the existing turbine foundations (with foundation reinforcement at the Luverne Energy Facility completed in November 2024), collection and communication systems, and permanent access roads. Installation of the upgraded equipment is expected to increase energy generation at the facilities by more than 20 percent annually, contributing to a reduction in the cost of energy paid through the Energy Adjustment Rider in tariff rate schedule 13.01. Total capital costs for the projects are estimated to be $230 million (OTP Total) / $22.8 million (OTP SD). Otter Tail Power expects that these projects will generate $28.0 million[9] (OTP Total) / $2.8 million (OTP SD) in PTCs annually over the first ten years of production. The Commission approved the original projects for recovery in Docket No. EL08-030 (Langdon), Docket No. EL08-030 (Ashtabula I), Docket No. EL10-011 (Luverne), and Docket No. EL22-013 (Ashtabula III).

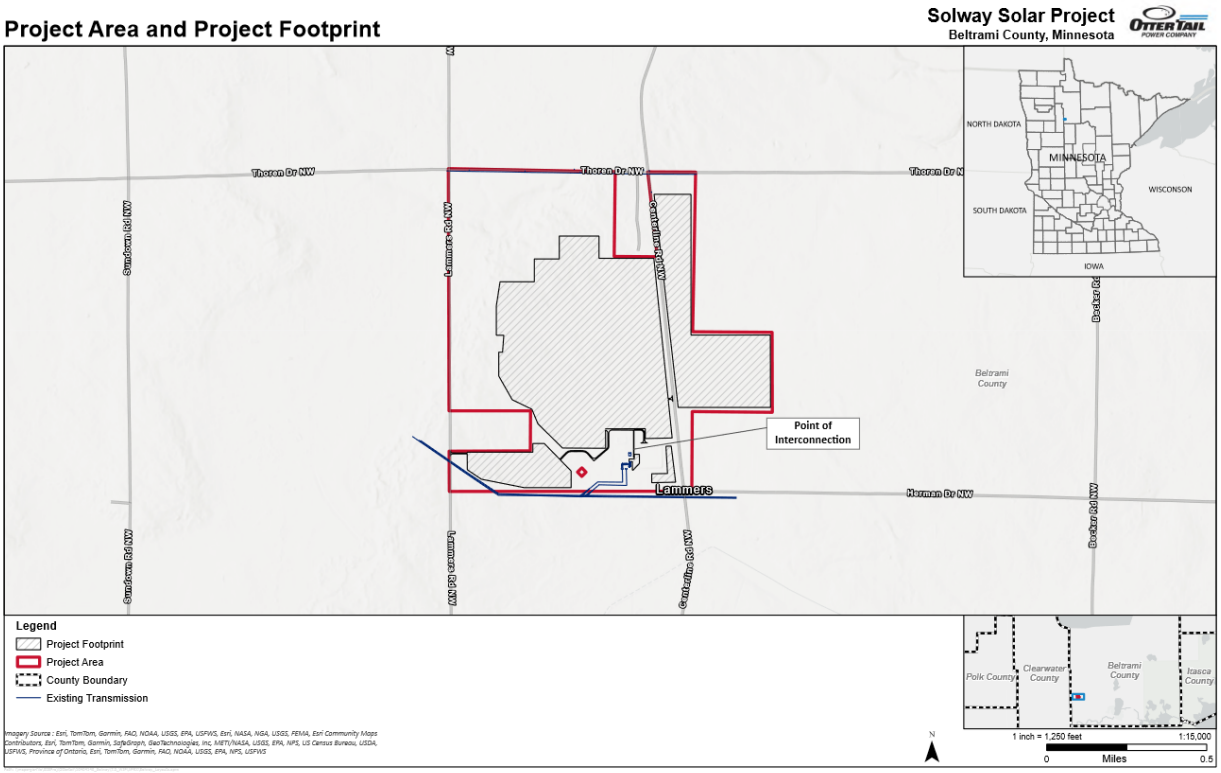
E. Solway Solar Project – Attachment 11

Otter Tail Power plans to construct, own, and operate the Solway Solar project, a solar energy conversion facility with an operational capacity of 50 MW, and a nameplate capacity of 66 MW, in Lammers Township in Beltrami County, Minnesota. Otter Tail Power will interconnect the Solway Solar project using

[8] The Commission issued an order on March 30, 2022, approving Otter Tail Power's application for a certificate of public convenience and necessity to acquire, own and operate Ashtabula III in Case No. PU 22-27. The Minnesota Public Utilities Commission approved Otter Tail Power's petition to purchase the assets of the Ashtabula III wind facility on October 6, 2022. *In the Matter of the Petition of Otter Tail Power Company for Approval of a Transfer of Property,* Docket No. E017/PA-21-793.
[9] 654,000 MWh x $33/MWh PTC rate + 177,000 MWh x $36/MWh PTC rate = $27,954,000.

existing interconnection rights at the Solway Peaking Plant via the MISO surplus interconnection process. Connecting the Solway Solar project to the Point of Interconnection (POI) at this location will require an additional transformer and less than 500 feet of overhead transmission line.

Figure 1
Solway Solar Project Map



The project will consist of 100,000 solar panels and will provide enough electricity to power approximately 9,000 homes annually, 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.

Solway Solar is estimated to be commercially operational by year-end 2026. Otter Tail Power's Site Permit application for the Solway Solar project is pending before the Minnesota Public Utilities Commission (MPUC) in

Docket No. E017/GS-24-309. The following schedule is the anticipated timeline for the various phases of development.

Table 1
Solway Solar Project Anticipated Project Schedule

Activity	Description	Timeline
Land Acquisition	Secure land rights necessary for development of the project.	Complete
Interconnection Application	Approval from MISO to connect the project to the grid and signed interconnection Agreement.	Submitted July 8, 2024
Site Permit	Site permit issuance for the project.	October 2025
Other Permits	Obtain all federal, state, local, and tribal government permits and approvals necessary for construction and operation of the project.	Prior to construction
Equipment Procurement and Contractor Selection	Procurement of project equipment. Final contractor selections will be made contingent on the Site Permit Application being approved by the Commission.	April through September 2025
Construction	Construction of the project.	October 1, 2025 - September 30, 2026
Testing and Comissioning	Testing and commissioning of project related equipment.	October 1, 2026
Operation	Commercial operation of the project following construction, testing, and commissioning activities.	December 31, 2026

Otter Tail Power estimates the total capital cost of the Solway Solar project will be approximately **[PROTECTED DATA BEGINS…**

…PROTECTED DATA ENDS].
The projected levelized cost of energy (LCOE) for the project is **[PROTECTED DATA BEGINS… …PROTECTED DATA ENDS]**.

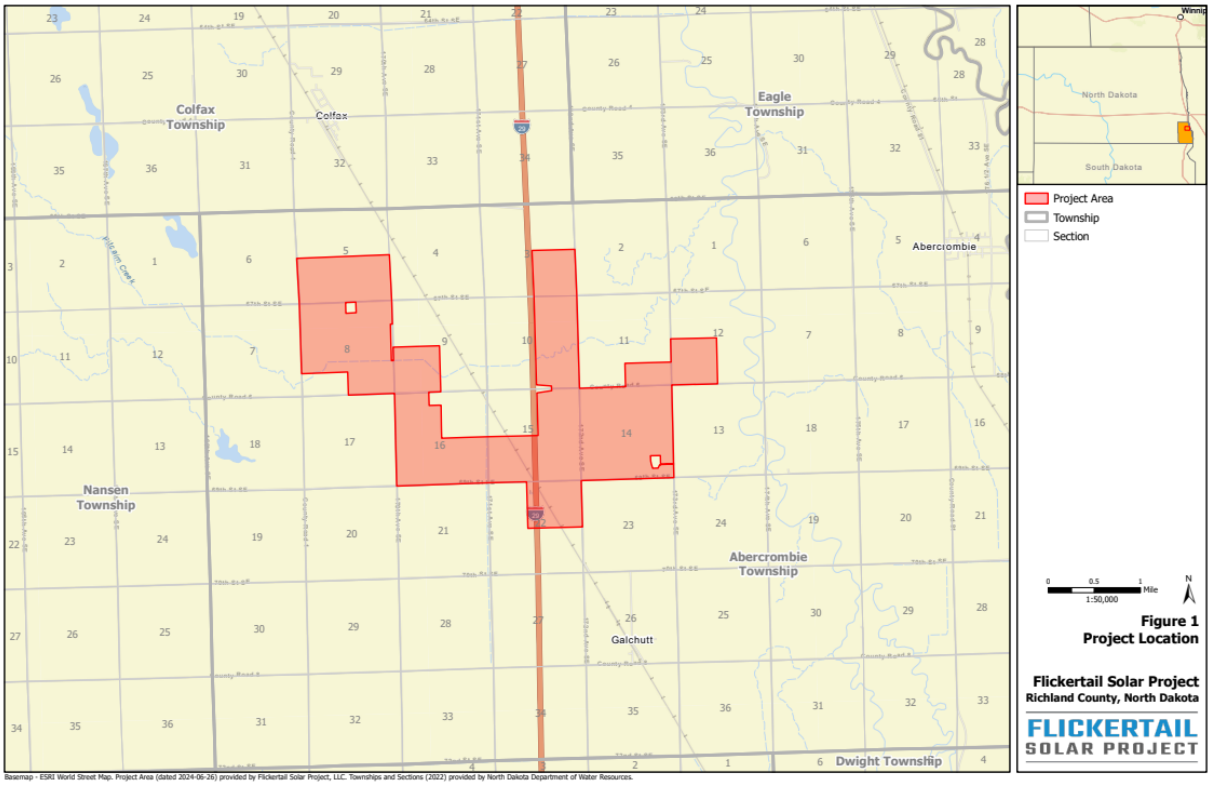
F. Abercrombie Solar Project – Attachment 12

Otter Tail Power plans to construct, own, and operate the Abercrombie Solar project, which will consist of approximately 550,000 solar panels with a 295.1 MW solar energy conversion facility and associated facilities. The Abercrombie Solar project will be located on approximately 3,464 acres of privately-owned land under agreement with Otter Tail Power in Abercrombie Township, Richland

County, North Dakota. This project has the potential to power up to 59,000 homes annually.

The Abercrombie Solar project's initial annual energy output is expected to be approximately 658,419 MWh, at a projected net capacity factor of approximately 25.5 percent. 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 gen-tie line has been permitted through Abercrombie Township.

Figure 2
Abercrombie Solar Project Map



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. The APA calls for payments to Flickertail LLC upon closing of approximately **[PROTECTED DATA BEGINS… …PROTECTED DATA ENDS]**. 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, **[PROTECTED DATA BEGINS…**

…PROTECTED DATA ENDS].

The following schedule is the anticipated timeline for the various phases of development.

Table 3
Abercrombie Solar Project Anticipated Project Schedule

Activity	**Description**	**Timeline**
Land Acquisition	Secured voluntary lease agreements, easement agreements, or purchase options for the project with landowners.	Complete
Abercrombie Township CUP	Application for Conditional Use Permit.	Received November 20, 2023
Obtaining the Certificate of Site Compatibility	Site Permit issuance for the project.	Expected to be issued in the Second quarter of 2025
Other Permits	Obtain all permits and approvals necessary for construction and opertion of the project.	Prior to construction
Construction	Construction of the project.	First quarter of 2026 - Fourth quarter of 2028
Testing and Comissioning	Will be completed prior to the commercial operation date (COD) and typically takes three to six months.	Between the First and Fourth quarter of 2028
Commencing Commercial Operation	Commercial operation of the project following construction, testing, and commissioning activities.	December 31, 2028

Otter Tail Power estimates the total capital cost of the Abercrombie Solar project will be approximately **[PROTECTED DATA BEGINS…**

…PROTECTED DATA ENDS]. The projected LCOE for the project is **[PROTECTED DATA BEGINS…**

…PROTECTED DATA ENDS]. Otter Tail Power is currently in the procurement process for materials and installation services for the balance of both the Solway and Abercrombie projects.

G. Additional Information for the Solway and Abercrombie Solar Projects

1. Jurisdictional Allocation

Otter Tail Power intends to construct, own, and operate the Solway and Abercrombie Solar projects for the benefit of the Company's South Dakota and Minnesota customers. North Dakota will not participate in the projects, as recently confirmed by the North Dakota Public Service Commission.[10] If the Commission approves recovery of the projects, the costs and output of the projects would be allocated between South Dakota and Minnesota as shared resources, with adjustments made over time. Current allocations would result in approximately 16 percent of the projects' costs and output being allocated to South Dakota customers and 84 percent of the projects' costs and output

[10] In the Company's North Dakota Integrated Resource Plan (NDPSC Case No. PU-21-380) 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 has confirmed that this approach is consistent with North Dakota energy policy, and that it applies to new renewable resources sited in North Dakota, where such facilities enjoy a rebuttable presumption of prudence under N.D.C.C. 49-05-16. The NDPSC reiterated this point in an order dated December 4, 2024, wherein it noted 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 regardless of where they may be sited, including the potential North Dakota solar project OTP disclosed to the Commission during the October 18, 2024 Informal Hearing." Order and Guidance on Integrated Resource Plan, December 4, 2024, p. 2.

being allocated to Otter Tail Power's Minnesota customers. If the Commission does not approve inclusion of the projects' costs in the Phase-In Rider, Otter Tail Power will then seek to allocate 100 percent of the projects' cost and output to Minnesota customers, where the projects are necessary to comply with Minnesota statutory standards for renewable and carbon free energy.

2. Project Selection

Otter Tail Power identified and selected the Solway and Abercrombie Solar projects through the Company's competitive, flexible acquisition process; a process where Otter Tail Power's Development, Engineering & Construction (DEC) staff have on-going, iterative discussions with developers and suppliers for projects in MISO Zone 1 that align with Otter Tail Power's resource needs. The on-going, iterative communications with developers and suppliers are part of a winnowing and narrowing process designed to identify viable, competitively priced projects that correspond to Otter Tail Power's resource needs. This process allows Otter Tail Power to identify projects that warrant further discussion and evaluation. Competitive, viable projects where the developer has provided written indicative pricing and supporting information are compiled on a "green sheet", which is continuously updated as some projects drop out, and others are added. Through this process Otter Tail Power developed a final list of eight competitive, viable projects which were evaluated on the following criteria:

a. levelized cost of energy to Otter Tail Power customers;
b. indication of site commitment;
c. status of generation interconnection;
d. location of interconnection and impact of delivery to Otter Tail Power customers including potential project curtailment;
e. project permitting status;
f. anticipated commercial operation date to ensure utilization of the tax incentives and be consistent with the resource plan;
g. evidence of resource (resource assessment of wind/solar);
h. developer's experience in developing energy facilities; and
i. other public interest benefits/considerations.

The following table provides a summary of the competitive proposals evaluated by Otter Tail Power. **[PROTECTED DATA BEGINS**…

…PROTECETD DATA ENDS.]

The Solway and Abercrombie projects were selected primarily because their LCOE were by far the lowest among the proposals evaluated. In addition to having the lowest LCOE, neither project raised concerns on factors 2-9 of the Company's evaluation criteria. The favorable LCOE for these projects is based in part on the flexibility of Otter Tail Power's procurement process, which allows Otter Tail Power to adapt to market conditions in component procurement (such as modules, inverters, racking, etc.) and other project inputs. Favorable interconnection costs also drive down the projects' LCOE. Solway Solar utilizes a surplus interconnection at an existing site, thus limiting the interconnection costs to the substation expansion required alongside the existing site. The Abercrombie Solar project, although not a surplus interconnection, also has relatively low interconnection costs. Only minimal transmission upgrades are necessary to bring this project online.

Another factor in the projects' favorable LCOE is the manner in which Otter Tail Power engineers, procures, and constructs these projects. Otter Tail Power will not utilize a full engineering, procurement, and construction (EPC) firm to execute the projects' ultimate completion. Within a full EPC "wrap" there are generally cascading margins throughout the projects' life cycle. Instead, Otter Tail Power will limit margins by directly securing major component purchases and directly contracting with installers. Finally, the last driver for the low-cost project at Solway is land acquisition. Otter Tail Power has acquired the land necessary to build the Solway Solar project, eliminating operational lease payments over the life of the project.

3. Project Benefits

Otter Tail Power anticipates the projects' favorable LCOE will provide South Dakota customers low-cost energy for decades. As noted above, the projects are significantly more competitive than the next most competitive options. This low-cost energy will protect South Dakota customers from fluctuations in energy market prices. The projects will be on-peak resources, achieving maximum output during the peak hours of the day and months of the year. By generating during these expensive periods, the projects will offset some of the most expensive market purchases and save customers money. For nearly all hours that the solar farm is producing, the zero-cost energy of the solar farm will be preferred over the gas-fired CT. As a result, there will be fuel savings and emissions reductions at the Solway interconnection.

The projects also support South Dakota's goal that ten percent of all electricity sold at retail be obtained from renewable, recycled, or conserved energy resources,[11] and they will significantly reduce carbon emissions. Otter Tail Power estimates that the sum of annual generation from the projects will equal approximately 760,035 MWh. Assuming these projects displace area fossil fuel generation, which has an overall carbon intensity of 2,010.74 pounds of CO2/MWh, the projects will offset approximately 764,116 tons of CO2 annually.

4. Additional Considerations

The Solway Solar Project will account for the Project's impact on the Solway Peaker, an Otter Tail Power peaking plant, the cost and benefits of which are allocated among all of Otter Tail Power Company's jurisdictions. The Solway Solar project makes use of a surplus interconnection with the Solway Peaker being the incumbent generator. As is the case in any surplus interconnection, the non-incumbent generator must account for the impact its generation has on the incumbent generator. During some hours of operation, Solway Solar, which has no fuel costs, is anticipated to displace generation that would have otherwise been provided by the Solway Peaker. This anticipated displacement has revenue impacts that flow through fuel clauses in all jurisdictions served by the Solway Peaker. Because North Dakota will not be participating in the Solway Solar project, but is allocated costs and benefits of the Solway Peaker, the impact of reduced peaking plant

[11] SDCL 49-34A-101.

revenues caused by displacement from solar generation will be accounted for through reconciliation of MISO settlements. In broad terms, for the hours in which reduced peaking plant revenues occur, the potential profit margin of the peaking plant will be analyzed, and a dollar figure will be calculated and divided based on jurisdiction allocations, ensuring that our (1) North Dakota customers suffer no harm and (2) that our Minnesota and (potentially) South Dakota customers receive the full benefit and cost of the Solway Solar Project.

5. Project Risks

The Abercrombie and Solway Solar projects present unique risk and insurance issues which can be managed but not fully mitigated. These issues are not unique to these projects; they are issues faced by all developers and utilities engaged in developing and operating large-scale solar projects. As noted below, the most acute risks are driven by the potential damage from severe convective storms with hail, and the cost and availability of insurance products addressing such risks. While some risks can be mitigated, there is likely a gap created by current insurance market trends that allow for only partial coverage for catastrophic events. In the Company's assessment, the Solway and Abercrombie projects are prudent investments notwithstanding these risks because of the projects' highly favorable LCOE, and the fact that the most likely risks can largely be mitigated as noted below. To be clear, however, the projects' significant benefits come with risks for our customers. In the event of a catastrophic weather event causing significant losses that could not be reasonably insured, Otter Tail Power would seek recovery for the losses from rate payers.

Otter Tail Power has assessed the risks of the Abercrombie site and the solar projects in general. As noted earlier, the most probable significant risk is hail and wind associated with severe convective storms. To better understand this risk, Otter Tail Power commissioned VDE Americas, Inc. (VDE) to conduct a catastrophic risk assessment focused on severe convective storms. This assessment considered risks of severe hail for the Abercrombie site and the nature of damage and financial losses the project could suffer under different scenarios, including a 500-year severe hail event. This assessment, a Probable Maximum Loss (PML) analysis, compared the Abercrombie Solar project in the context of other solar project locations, specifically a higher hail risk area in Texas and a lower hail risk area in California. The assessment also considered how risks were mitigated by

project design variables, including the thickness of solar panel glass and the ability of the panels to rotate and tilt in response to severe storm threats.

The VDE assessment demonstrates that the risk of severe hail and wind damage can be largely mitigated by design features that allow the solar panels to (1) rotate so that the panels are facing away from the wind and (2) tilt up to a 75-degree angle. The following table provided in the VDE assessment assumes two-sided panels with a glass thickness of 2.0 millimeters. As shown in Table 6, the PML for the Abercrombie Solar project (referenced as the Flickertail project) ranges from nearly $100 million to $0 depending on whether the panels can rotate away from the wind and tilt to a stored position at an angle of 75 degrees.

Table 6
Abercrombie Solar PML Analysis

Table A1. P90 500-Year Severe Hail Event PML Values

	PV Module Tilt Angle								
	Facing into Wind					Facing Away from Wind			
Site Location	0° (Flat)	50°	60°	65°	75°	50°	60°	65°	75°
California Reference	$86.07M	$78.66M	$58.33M	$47.12M	$21.44M	$0.67M	$0.00M	$0.00M	$0.00M
Flickertail Solar Project	$97.82M	$97.82M	$97.82M	$97.82M	$69.70M	$34.88M	$3.28M	$0.39M	$0.00M
Texas Reference	$97.82M	$97.82M	$97.82M	$97.82M	$94.94M	$43.18M	$3.07M	$0.32M	$0.00M

The data provided by VDE also demonstrates that panel thickness is a variable in reducing risk of loss. In general terms, the thicker the panel glass the less damage the panel is likely to suffer in a severe hail and wind event. VDE has assessed 2.0- and 3.2-millimeter glass panels. Otter Tail Power is also reviewing the possibility of installing 4.0-millimeter glass panels, which are not readily available at this time but are expected on the market soon.

Based on the PML assessments done by VDE, Otter Tail Power plans to design the Abercrombie Solar project to permit the solar panels to rotate away from the wind in convective storms, and to be stowed in a 75-degree tilted position facing away from the wind. The rotation and tilting features will be part of an automated system that will be triggered by warnings and data issued by the National Weather Service. These design features are accounted for in the project's cost. Otter Tail Power intends to issue an RFP in the near term for solar panels, where it will seek the best value in terms of pricing, panel glass thickness, and durability. Otter Tail Power will utilize the same design strategy for the Solway project.

Otter Tail Power has been evaluating insurance products for Abercrombie and Solway, and a common issue is that utility-scale solar projects typically are subject to a severe convective storm sublimit of insurance coverage ranging from $25 million to $50 million. This appears to be the case regardless of the project site or size of the project. Insurance coverage exceeding this range is not available at commercially feasible costs. Otter Tail Power has confirmed these points with insurance brokers, solar developers, and other utilities. Otter Tail Power has no reason to think this situation will improve in the near or medium term.

In terms of insurance coverage, Otter Tail Power has included $2.5 million for projected insurance premiums in the annual operation and maintenance budget for the Abercrombie project which is factored into the LCOE. Because solar facilities are subject to a severe convective storm sublimit and the fluidity of the insurance market, the Company cannot say with precision what level of loss coverage this would secure, but it is reasonable to expect it would fall somewhere within the $25 million to $50 million sublimit range noted above. This sublimit is significantly less than the anticipated cost to replace Abercrombie facilities that suffer significant damage in a severe event. Assuming for analysis that all Abercrombie panels required replacement, that cost could be as much as $150 million. However, based on the VDE analysis and design features Otter Tail Power intends to incorporate into the Abercrombie project the risk of such an uninsured loss is remote based on the data available to Otter Tail Power.

To be clear, there are other risks for the Abercrombie Solar project including flooding and tornados. The Abercrombie Solar project will be constructed on 3,400 acres near the Red River of the North, which is prone to flooding. Otter Tail Power anticipates design features and site construction will address part of this risk. The risk of tornados is extremely difficult to assess. The severe rotational winds associated with these events are not likely mitigated by design features. Otter Tail Power is further assessing these risks and is currently unable to provide any probabilities or PML assessments. Suffice to say either a 500-year flood or extreme and well-targeted tornado could result in losses not fully covered by insurance.

The Solway Solar project faces similar risk and insurance challenges, but the Solway project is substantially smaller than the Abercrombie project. Otter Tail Power intends to design the Solway project similar to the

Abercrombie project to mitigate hail and wind risk. The Solway project's costs assume these design features.

In sum, the Abercrombie and Solway Solar projects are excellent projects that will provide low-cost, carbon free energy for our customers for decades to come. However, the favorable costs of these projects come with certain risks for our customers. These risks, especially the hail and wind risk, can be largely mitigated by thoughtful design. Other risks, such as catastrophic flood and tornadic storms, are much more difficult to assess and address.

6. Other Risks

Otter Tail Power anticipates both projects will be eligible for production tax credits (PTC) as passed in the Inflation Reduction Act (IRA) of 2022. The PTCs are a significant part of the overall economics for both the Solway and Abercrombie projects. Otter Tail Power has taken steps to preserve PTC eligibility for both projects. This includes efforts to satisfy safe harbor requirements related to the commencement of construction. These efforts focus primarily on transformer acquisitions and related work that aligns with current IRS guidance.

Whether the in-coming Trump administration will seek changes to the IRA or the way PTCs are administered is not known. Currently, no proposal exists to repeal the IRA or to eliminate or limit PTCs necessary for the Abercrombie and Solway projects. That said, it is likely that the new administration's approach to energy policy will differ substantially from that of the former administration. While congressional action would presumably be necessary for substantial changes to the IRA, the U.S. Treasury Department develops regulations and guidance for tax credits under the IRA. Notably, Treasury Secretary nominee Scott Bassett has been critical of the IRA, and it is possible that the Treasury Department could seek to revise prior guidance or provide new guidance that may impact various provisions of the IRA designed to promote renewable energy. In addition to potential changes to the IRA, the new administration could pursue and implement other policy changes that may impact the Solway and Abercrombie projects, including various tariffs that may affect the availability and pricing of project components. In sum, it is very difficult at this time to predict whether new laws, regulations, or regulatory guidance will alter the economics of the Solway and Abercrombie projects.

Should there be substantial statutory or regulatory changes affecting the economics of the Solway project, Otter Tail Power as the developer and project manager would have leeway in assessing the most effective and timely mitigation efforts. With respect to the Abercrombie project, the APA between Otter Tail Power and Flickertail LLC permits the Company to terminate the Abercrombie APA for a sum certain before closing. After the APA closes, Otter Tail Power would need to assess any post-closing statutory or regulatory changes to determine the most effective and timely mitigation measures.

Finally, contract and counterparty risks associated with suppliers, vendors, and on-site contractors will be addressed through use of prudent contracting terms Otter Tail Power has applied in other large projects.

H. Lake Norden Area Load Growth Credit – Attachments 13a - 13d

As contemplated in the Rate Case and in Docket No. EL16-020, Otter Tail Power anticipated additional revenues associated with load growth in its South Dakota Lake Norden area service territory. The Settlement directed that Otter Tail Power reflect future benefits associated with the additional post-test year load in the Lake Norden, South Dakota area in the Rider. Otter Tail Power's Rate Case utilized a 2017 Test Year and included costs and revenues associated with the 2017 Test Year. This Rider credit due to Lake Norden Area load growth includes the impact of the new load revenues as well as the impact on costs associated with changes in jurisdictional allocation factors for each recovery period. The impacts of the Lake Norden Area load growth in comparison to the 2017 Test Year are provided in Attachment 13a. The revenue requirement credit to customers due to the Lake Norden Area load growth compared to the 2017 Test Year is spread evenly over the months of each of the respective recovery periods included in the Rider and shown in Attachment 3, Line No. 18.

The jurisdictional allocation factors for the 2017 Test Year were included in Otter Tail Power's initial filing in the Rate Case.[12] Otter Tail Power includes Attachment 13b, which provides the 2017 Test Year baseline kWh and the Lake Norden Area additional kWh. Otter Tail Power includes Attachment 13c, which provides the summary of the D and E allocation factors from the 2017 Test Year jurisdictional cost of service study (JCOSS) compared to the inclusion of the Lake Norden Area load growth in the 2017 Test Year allocation factors for the various recovery periods. The E1 and E2 jurisdictional allocation factor updates provided in Attachment 13c for the various recovery periods result from the actual and

[12] Rate Case Initial Filing, Volume 4A, Section 1 2017 Test Year Workpapers, JCOSS, Page 15-1.

forecasted Lake Norden Area load growth.[13] Otter Tail Power applies the historical relationship between the demand allocation factors and the E2 allocation factor to the incremental kWh from the load growth to determine the estimated increase in the demand allocation factors. These updates to South Dakota jurisdictional allocation factors result in additional JCOSS allocations to South Dakota, which is more than offset by the additional revenues associated with the load growth.

Otter Tail Power provides Attachment 13d that includes a revenue summary of the Lake Norden Area load growth for the 2017 Test Year revenues compared to the respective recovery periods. The 2017 Test Year baseline sales and sales forecast for the Lake Norden Area are provided in Attachment 13b.

Attachment 13a [Line No. 21] provides the annual changes in revenue due to Lake Norden Area load growth as compared to the 2017 Test Year baseline. This credit is spread evenly by month over the calendar year.

The credit due to Lake Norden Area load growth calculated for the September 2025 through August 2026 collection period is $209,199, which is shown in Attachment 3 [Line No. 18].

Detailed in Attachment 13a, the Lake Norden Area load growth has resulted in a cumulative revenue requirement credit, including forecasted amounts through December 2026, of $1,811,855 (Attachment 13a, Line No. 21). Otter Tail Power will continue to update the actual revenues as they are available in future updates.

I. Hoot Lake Plant Adjustment – Attachment 14

The Settlement requires Otter Tail Power to discuss the retirement of Hoot Lake Plant (HLP) and include the net savings associated with Otter Tail Power's retirement of this facility (HLP Adjustment) within the Rider. HLP ceased operations on May 27, 2021. Decommissioning of equipment and abatement of hazardous materials was substantially complete in 2021. Demolition of structures and foundations was completed in 2022. Final site grading commenced in May 2023 and was completed in July 2023.

The 2017 Test Year included components of HLP that are representative of the way that the plant operated until it ceased operations in May 2021. Since June 2021, Otter Tail Power has included an estimated monthly credit in the Rider that reflects the HLP Adjustment. In this filing, Otter Tail Power provides a credit for all 2017 Test Year items related to HLP that are no longer on Otter Tail Power's books, with the exception of the Ash Landfill, which remains on Otter Tail Power's

[13] The change provided in Attachment 11c represent the load growth provided in Attachment 11b plus a line loss factor estimate.

books and continues to depreciate. Details of the HLP Adjustment are provided in Attachment 14. Otter Tail Power includes the monthly actual and forecasted credits for the September 2024 through August 2025 recovery period, totaling ($979,812), and the monthly forecasted credits for the requested September 2025 through August 2026 recovery period, totaling ($991,803) in Attachment 3 [Line 19]. These amounts are based on the 2024, 2025 and 2026 forecasted calendar year amounts shown in Attachment 14, Line 40. Otter Tail Power will continue to update forecasts with actuals in subsequent Rider updates.

J. Percent of Bill Revenue Requirement Components and Tracker

Attachments 1 - 3 are, respectively, the Revenue Requirements Summary, Rate Design, and Tracker Summary calculations used for Otter Tail Power's Percent of Bill Phase-In Plan rate submittal. Attachments 4 through 12 provide the revenue requirement calculations for the projects for which Otter Tail Power requests percent of bill Rider recovery. Attachments 13a through 13d provide the adjustment reflecting the net benefit of new load in the Lake Norden area, including corresponding updates to jurisdictional allocation factors resulting from the increased load to South Dakota. Attachment 14 provides the Hoot Lake Plant revenue requirement share back calculation. Further information on these components is included earlier in this section.

Specifically, the calculations of the revenue requirement in this Petition include the following:

- *Rate base section*. This section provides details on the amount of plant in service, accumulated depreciation (if applicable), construction work in progress (CWIP),[14] accumulated deferred taxes including the effect of proration on Federal amounts, accumulated deferred and utilized LTSA, and a 13-month average rate base calculation.
- *Expense section*. The expenses applicable to a project are listed here and include operating costs, property taxes, depreciation, and income taxes.
- *Revenue requirements section*. This section shows the components of the revenue requirements, including expenses and return on rate base.
- *Return on investment (cost of capital)*. The return on investment utilizes the return on equity approved in Otter Tail Power's Rate Case. As described on page 15 in the Settlement for the Rate Case:

[14] SDCL 49-34A-25.2 allows a current return on CWIP.

> *While the projects are under construction, the rate of return will include the weighted average cost of debt calculated at year-end levels, including short-term debt costs, and the equity ratio calculated at year-end levels. Once the projects are in-service the weighted average cost of long-term debt calculated at year-end levels will be used.*

- *Depreciation expense*. Depreciation expense is calculated using the Company's current depreciation rates.
- *Property taxes*. The property tax calculation is based on Otter Tail Power's composite tax rate for the jurisdiction in which the facilities are located and the procedures specified by that state. Based on agreements with the state of South Dakota, the year after Astoria Station is in-service (Astoria went into service in 2021), the total property tax expense will be subject to a ramp-up period where the total property tax will be multiplied by zero percent the first year, 20 percent the second year, 40 percent the third year, 60 percent the fourth year, and 80 percent the fifth year, and 100 percent the sixth year and years forward. With Astoria Station going into service in 2021, the zero percent treatment began with the property tax expense in 2022 (calculated using 2021 year-end values). Some components of the Astoria Station project (related to distribution work, switching station work, and transmission line modifications) did not receive approval of this treatment from the State of South Dakota; thus, the property tax amount on Attachment 4 is not equal to $0 in 2022. Land is not applicable to the property tax ramp-up treatment. It is taxed at the full composite tax rate. Merricourt and Ashtabula III have been placed into service, and are subject to taxes consisting of the following two components:
    1. A tax of two dollars and fifty cents per kilowatt times the rated capacity of the wind generator.
    2. A tax of one-half of one mill per kilowatt-hour of electricity generated by the wind generator during the taxable period.

  In Otter Tail Power's July 31, 2024 Phase-In Supplemental Filing, the Company mistakenly stated that a letter was received from the state of North Dakota exempting these facilities from "property tax". Accordingly, the Company removed property tax from the revenue requirement calculation for each Upgrade Project in that filing. However, the letter

received from the state of North Dakota notified the Company of a "sales tax" exemption, not a property tax exemption. Otter Tail Power includes the property tax in the revenue requirements for the Upgrade Projects in this filing.

- *Operation and Maintenance Expense*. Astoria Station, Merricourt, Ashtabula III, and Langdon Upgrade Projects are in service. Operation and maintenance costs specifically related to these projects are tracked in Attachments 4 through 12. Annual O&M expenses for these generation facilities include operating costs, ground lease payments, property taxes and depreciation.
- *Proration of Federal Accumulated Deferred Income Taxes (ADIT)*. Otter Tail Power provides Attachment 15 to this filing to show the Federal ADIT proration calculation impact on the revenue requirement for the recovery period. Otter Tail Power provides Attachment 16 calculating the Accumulated Deferred Income Tax (ADIT) balances to preserve the effect of the application of the proration methodology for the true-up period. This calculation methodology is necessary to comply with Section 1.167(l)-l(h)(6)(ii) of the IRS regulations and to avoid a tax normalization violation.[15]
- *Federal Production Tax Credit (PTC)*. Merricourt became eligible for PTCs when it was placed in service. Effective January 1, 2024, the rate per MWh increased from $28.00 to $29.00 per MWh.

  Beginning October 1, 2022, Otter Tail Power includes the PTCs as a credit to tax expense (Attachment 5, Line No. 43) based on Merricourt's capacity factor of 50.7 percent, which will continue until Otter Tail Power files an application for an increase in base rates (Rate Case).[16] As Langdon, Ashtabula I, Luverne, and Ashtabula III Upgrade Projects are commissioned, these wind farms will earn PTCs. The PTC rate for the Langdon Upgrade Project is $36 per megawatt hour for 2024, $37 Per

[15] *See* Treas. Reg. SS 1.167(l)-1(h)(6)(ii).

[16] In the Matter of the Application of Otter Tail Power Company for Docket No. EL18-021 Authority to Increase Its Electric Rates, Settlement Stipulation, page 5, 3. Merricourt Wind Project Capacity Factor. The Parties agree that the Phase-In Plan for the Merricourt Wind Project will reflect production tax credits (PTCs) based on Merricourt's actual production. If recovery for the Merricourt Wind Project under 6 the Phase-In Plan remains in effect after October 1, 2022, because the Company has not filed an application for an increase in base rates (Rate Case) to be effective by that date, the Phase-In Plan will reflect PTCs based on a Merricourt capacity factor of 50.7% until updated in OTP's next Rate Case.

megawatt hour for 2025, and $38 per megawatt hour for 2026.[17] The PTC rate for the Ashtabula I, Luverne, and Ashtabula III Upgrade Projects is $34 per megawatt hour for 2025, and $35.50 per megawatt hour for 2026.[18] The impact of the PTCs is incorporated into the revenue requirements in Attachments 7, 8, 9, and 10. The two new solar projects, Solway Solar and Abercrombie Solar, proposed for recovery in this filing, will both qualify for Federal PTCs when they go into service. The PTC rate for Solway Solar is estimated to be $35.50 per megawatt hour in 2026, which is when the facility is expected to go into service. The estimated PTC rate for Abercrombie Solar in 2028, when the facility is expected to go into service, is $38 per megawatt hour.

- *Baseline Year*. The Rate Case included a 2017 Test Year upon which base rates were set. Otter Tail Power utilizes the Commission approved 2017 Test Year as the baseline year. Attachments 13a through 13d reflect updates to the 2017 Test Year resulting from load growth in the Lake Norden Area.
- *Jurisdictional Allocation Factors*. Jurisdictional allocators are used to allocate system costs among jurisdictions. The Commission approved Otter Tail Power's South Dakota jurisdictional allocations for the 2017 Test Year in the Rate Case.

K. Percent of Bill Rate Design

The Commission approved the percent-of-bill method for the Rider in Docket No. EL19-025. Under this method, the rate is calculated by dividing the total Percent of Bill revenue requirement for September 2025 through August 2026 by the total base rate revenue for this recovery period. For this filing, this method results in a percent of base revenue charge of 9.863 percent. The rate design is shown on Attachment 2.

VI. PER METER CHARGE PROJECTS

In 2022 Otter Tail Power made its initial request for the establishment of the AGI per meter portion of the Phase-In rider for recovery of AMI, the OMS Project, and the DR system replacement. All three projects were approved for recovery and the new per meter

[17] The PTC rate for Langdon includes a 10 percent energy community bonus adder and a 10 percent domestic content bonus adder under guidance from the Internal Revenue Service (IRS).
[18] The PTC rates for Luverne, Ashtabula I, and Ashtabula III include a 10 percent domestic content bonus adder under guidance from the IRS.

rate went into effect September 1, 2022. This filing is the third annual update for AMI, OMS, and DR system replacement projects.

Otter Tail Power requests the continuation of the Phase-In recovery mechanism as costs are incurred for the AMI, OMS, and DR projects outside of a general rate case.

A. Advanced Metering Infrastructure (AMI) – Attachment 21

The original implementation plan for the AMI project anticipated business process development, system integration, and initial deployment from late 2021 to the fourth quarter of 2022, with full deployment from late 2022 to the third quarter 2024. The deployment schedule was delayed due to the integration requirements of the software systems. The AMI pilot of 500 meters occurred in December 2023. Full meter deployment started in mid-February 2024 and has continued throughout the year. While it is anticipated that most AMI meters will be installed by the end of 2024, there will be some AMI meter installations occurring in the first quarter of 2025, with final costs expected to continue through December 2025. Allegiant Utility Services, the Company's meter installation contractor, has completed their contracted portion of the installations, which represents approximately 91 percent of the total meter installations. The remaining meters, which represent meters associated with complex rates, complexity of metering configurations, and heightened impact to customer processes will be installed by Otter Tail Power employees. Allowing Otter Tail Power staff to manage these meter exchanges will allow for a more coordinated exchange process for those impacted customers, which includes larger commercial and industrial load.

Otter Tail Power realized minimal O&M savings beginning in April 2024 as a result of the commencement of the full AMI deployment. Otter Tail Power estimates that approximately 25 percent of total expected annual savings will be realized in 2024, 75 percent in 2025, and 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, as shown in Attachment 24.

B. Outage Management System (OMS) – Attachment 22

Otter Tail Power's OMS offers many operational and customer benefits related to outage response as well as a foundation that will be beneficial in future grid modernization plans. The OMS allows Otter Tail Power to identify outages more rapidly and deploy crews more efficiently to reduce the number and length

of outages. It also allows Otter Tail Power to better communicate with customers before, during, and after outage events, by sending outage notifications, updates on estimated time of restoration, and restoration notices. Outage notifications were enhanced with the implementation of the Customer Experience Portal (CEP) in August 2023 and for those customers who have signed up to receive additional notifications. OMS system modeling improvements, as part of the GIS portion of the project, were completed in May 2024 and will improve outage and restoration information and communications to customers. The total project cost for OMS is $3.9 million, which is under the budget of $4.2 million approved in the Company's 2022 Phase-In Annual Update Filing.[19]

Once the AMI implementation is complete, individual meters will provide power-off and power-on notifications to be utilized by the OMS. The speed in which the OMS receives outage information will be enhanced by this meter functionality, improving restoration times even further.

Otter Tail Power is currently working with the vendors as part of the AMI project to complete the necessary integrations and anticipates completion in early 2025.

C. Demand Response System – Attachment 23

The DR Replacement project began development in early 2021. In the Fall of 2021, Otter Tail Power retained Katama Technologies as a consultant. The Company and the consultant attended industry conferences, during which meetings with top vendors of DR programs were scheduled and their products reviewed. Investigation continued through interviews with nine utilities of interest from across the United States.

Otter Tail Power's complete Request for Proposals was released in the Fall of 2022. Six responses were received from major vendors in the DR industry. After a rigorous and extensive evaluation, two strategic partners were selected: Landis+Gyr (L+G) and Open Access Technology International (OATI).

The Commission approved the Company's DR project at a projected cost of **[PROTECTED DATA BEGINS… …PROTECTED DATA ENDS]**.[20] Otter Tail Power recently learned that the meters deployed under the AMI project could be used to facilitate load control for certain rates (water heater control, for example) and eliminate the need to replace existing load control devices (LCDs) for that select group of rates. This discovery has the potential

[19] Docket No. EL22-013.
[20] Docket No. EL22-013.

to reduce the overall cost of the DR project and optimize asset management to the benefit of the DR program. The Company now projects the total cost of the DR project to be **[PROTECTED DATA BEGINS…**
…PROTECTED DATA ENDS].

Otter Tail Power expects DR implementation to begin in the first quarter of 2025. The project is expected to be completed in the second quarter of 2028.

D. Per Meter Revenue Requirements Calculations

Attachments 17 through 20 are, respectively, the Projected Revenue, Revenue Requirement Summary, Rate Design, and Tracker Summary calculations used for Otter Tail Power's proposed Phase-In update. Attachments 21, 22, and 23 provide the revenue requirement calculations for the Projects for which Otter Tail Power has received approval for Phase-In recovery. Attachment 24 is the AMI adjustment reflecting the estimated O&M savings due to the AMI implementation in South Dakota.

Specifically, the calculations of the revenue requirement in this Petition include the following:

- *Rate base section*. This section provides details on the amount of plant in service, accumulated depreciation (if applicable), construction work in progress (CWIP), accumulated deferred taxes including the effect of proration on Federal amounts, and a 13-month average rate base calculation.
- *Expense section*. The expenses applicable to a project are listed here and include operating costs, property taxes, depreciation, and income taxes.
- *Revenue requirements section*. This section shows the components of the revenue requirements, including expenses and return on rate base.
- *Return on investment (cost of capital)*. The return on investment utilizes the return on equity approved in Otter Tail Power's Rate Case.
- *Depreciation expense*. Depreciation expense is calculated using the Company's current estimated depreciation rates.
- *Property taxes*. The property tax calculation is based on Otter Tail Power's composite tax rate for the jurisdictions in which the facilities are located and is calculated in accordance with the procedures specified by the states.
- *Operation and Maintenance Expense*. Otter Tail Power will track operation and maintenance costs specifically related to each project in Attachments 21, 22, and 23. Annual O&M expenses related to these

projects include operating costs, property taxes, and depreciation.

- *Operation and Maintenance Savings*. Otter Tail Power will track operation and maintenance savings specifically related to the AMI project in Attachment 24. Annual O&M savings related to AMI implementation primarily include costs related to manual meter reading, of which a portion is completed by third party contract services and a portion is conducted internally by service reps across the Company's service territory. Due to a delay in the installation of the AMI meters, the estimated O&M savings have been adjusted to reflect the new project timeline.
- *Proration of Federal Accumulated Deferred Income Taxes (ADIT)*. Once the project is in service, Otter Tail Power will include proration of Federal ADIT, as shown in Attachment 25. Otter Tail Power provides Attachment 26 calculating the Accumulated Deferred Income Tax (ADIT) balances to preserve the effect of the application of the proration methodology for the true-up period. The methodology used for proration of Federal ADIT is in adherence to United States Internal Revenue Service (IRS) rules related to proration, including recently issued IRS private letter rulings. Otter Tail Power interprets this to include proration of Federal ADIT for the (forward-looking) recovery period and, in future filings, preserving the effect of the application of the proration methodology for the true-up period. This calculation methodology is necessary to comply with Section 1.167(l)-l(h)(6)(ii) of the IRS regulations and to avoid a tax normalization violation.[21] In annual Updates, Otter Tail Power will include a workpaper with the details of the calculation of the proration of Federal ADIT for the recovery period and whether it results in an increase or decrease to the revenue requirement.
- *Jurisdictional Allocation Factors*. Jurisdictional allocators are used to allocate system cost among jurisdictions. The Commission approved Otter Tail Power's South Dakota jurisdictional allocations for the 2017 Test Year in the Rate Case.

E. Per Meter Rate (AGI) Rate Design

Otter Tail Power proposes to continue to use a monthly per meter charge rate design for the AGI portion of the Phase-In Rider. The proposed calculation

[21] *See* Treas. Reg. SS 1.167(l)-1(h)(6)(ii).

determines the average cost per meter for materials and labor 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. The weighted average cost per class, divided by the average annual number of meters per class, equals the monthly per meter charge.

VII. RATE APPLICATION AND IMPACT

As indicated earlier, the total annual revenue requirement to be collected for the next recovery period of September 2025 through August 2026 is estimated at $3,198,356, which includes $2,695,682 recovered under the percent of bill rate and $502,674 recovered under the per meter rates. The proposed percent of bill rate of 9.863 percent of base rates is calculated on Attachment 2, Line No. 5 and the proposed monthly per meter rates are listed on Attachment 17.

The new proposed total billed charge amount of the Phase-In rates, beginning September 1, 2025, for a residential customer using 1,000 kWh per month with a single residential meter is approximately $8.70 per month, which is a decrease of $0.68 per month from current rates. For a Large General Service (LGS) customer using 486 kW and 222,350 kWh with a single LGS Meter the total billed charge is approximately $1,1161.07 per month, which is a decrease of $81.40 per month from current rates. See the table below for bill impact and proposed rates.

Table 7
Phase-In Rider Rate Impact

	Average Usage per Month	Percent of Bill Sept 24-Aug 25	Per Meter Rate Sept 24-Aug 25	Percent of Bill Proposed Rate	Per Meter Proposed Rate	Percent of Bill Monthly Impact	Per Meter Rate Monthly Impact	Monthly Impact (increase or decrease from prior rate)
Residential	1,000 kWh	10.502%	$ 1.76	9.863%	$ 1.55	$ (0.46)	$ (0.22)	$ (0.68)
Large General Service	22,350 kWh and 486	10.502%	$ 96.92	9.863%	$ 85.22	$ (69.70)	$ (11.70)	$ (81.40)

The Customer Notice and Rate Impact, which represents the incremental decrease between the prior rate and updated rate, is provided as Attachment 28. Otter Tail Power provides the report of tariff schedule changes as Attachment 29 to this filing.

VIII. PHASE-IN RIDER TARIFF SHEET

Otter Tail Power's Phase-In Rider Rate Schedule (Section 13.09) is provided as Attachment 27 to this Petition. The rates listed in the RATE sections of the tariff sheets are updated to reflect the proposed changes described in this annual update.

South Dakota Tariff Schedules Volume II – Electric Service

Section 13.09	
Sixth Revised Sheet No. 1	Cancelling Fifth Revised Sheet No. 1
Fourth Revised Sheet No. 2	Cancelling Third Revised Sheet No. 2
Third Revised Sheet No. 3	Cancelling Second Sheet No. 3

IX. FILING FEE

Under SDCL 49-1A-8, the Commission may require a deposit of up to fifty thousand dollars for the filing of a tariff for approval under the provisions of 49-34A-4 and 49-34A-25.1 to 49-34A-25.4, inclusive, or makes a filing pursuant to 49-34A-97 to 49-34A-100. Otter Tail Power will pay such deposit amount as the Commission determines appropriate upon the Commission's Order assessing such fee.

X. CONCLUSION

For the foregoing reasons, Otter Tail Power respectfully requests the Commission approve the Company's proposals to:

1. Include updated costs and collections associated with current projects being recovered in the Phase-In Rider, the adjustments for Hoot Lake Plant and Lake Norden Area Load Growth, and the new Solway and Abercrombie solar projects.
2. Implement the proposed rates and changes in Otter Tail Power's Phase-In Rider, Section 13.09, effective as of September 1, 2025.

Date: December 20, 2024

Respectfully submitted:

OTTER TAIL POWER COMPANY

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