Before the South Dakota Public Utilities Commission
State of South Dakota

In the Matter of the Application of Otter Tail Power Company
For Authority to Increase Rates for Electric Utility
Service in South Dakota

Docket No. EL25-

Exhibit___

JURISDICTIONAL AND CLASS ALLOCATION FACTORS, GENERATOR INTERCONNECTION PROJECTS, TEST YEAR SALES, CLASS COST OF SERVICE STUDY, AND CLASS REVENUE RESPONSIBILITY

Direct Testimony and Schedules of

AMBER M. GRENIER

PUBLIC – TRADE SECRET DATA HAS BEEN EXCISED

June 4, 2025

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ATTACHED SCHEDULES

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND CURRENT EMPLOYER.

A. My name is Amber M. Grenier. I am employed by Otter Tail Power Company (OTP or the Company).

Q. PLEASE SUMMARIZE YOUR CURRENT RESPONSIBILITIES.

A. I am OTP's Manager, Regulatory Economics. I am responsible for providing leadership in areas of financial analysis related to setting rates and overall cost recovery, cost allocation methodologies, cost of energy, and cost of service study analysis.

Q. HAVE YOU INCLUDED AN ATTACHMENT OF YOUR QUALIFICATIONS AND EXPERIENCE?

A. Yes. A summary of my qualifications and experience is included as Exhibit___(AMG-1), Schedule 1.

II. PURPOSE AND OVERVIEW OF DIRECT TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. My Direct Testimony addresses a variety of regulatory and cost allocation issues, including development of jurisdictional and class allocation factors, treatment of generator interconnection procedures projects (GIPs) and weather normalized sales in the 2024 Test Year. I also sponsor and present the results of OTP's 2024 Test Year Class Cost of Service Study (CCOSS) and OTP's proposed class revenue responsibilities.

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF YOUR DIRECT TESTIMONY.

A. The allocation factors OTP uses in its Jurisdictional Cost of Service Study (JCOSS) and CCOSS are reasonable and appropriate for determining the 2024 Test Year revenue requirement and calculating class cost responsibilities. OTP's proposed treatment of GIPs and weather normalized sales in the 2024 Test Year is just and reasonable. The Company's CCOSS is an appropriate, but not exclusive, guide for establishing class revenue responsibilities. Ultimately, considering the CCOSS and other relevant factors, OTP's proposed class revenue responsibilities are reasonable and should be adopted.

III. JURISDICTIONAL AND CLASS ALLOCATION FACTORS

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR DIRECT TESTIMONY?

A. In this section of my Direct Testimony, I address several issues related to the development of the allocation factors OTP uses in its jurisdictional and class cost of service studies. OTP witness Ms. Annalise M. Smith presents the 2024 Test Year jurisdictional and class allocation factors in her Direct Testimony.[1]

Q. WHAT IS THE ROLE OF JURISDICTIONAL AND CLASS ALLOCATORS IN THE RATEMAKING PROCESS?

A. Jurisdictional allocators are used to allocate system costs among jurisdictions, and class allocators are used to allocate jurisdictional costs among customer classes.

Q. WHY ARE JURISDICTIONAL AND CLASS ALLOCATORS NECESSARY?

A. OTP operates an integrated electrical system that serves customers across multiple jurisdictions. This integrated system design takes advantage of economies of scale to provide least-cost energy solutions for all our customers. Because OTP operates as one system, costs of investment in the system and the expenses necessary to operate the system need to be allocated among the jurisdictions. Costs allocated to each jurisdiction need to be further allocated to customer classes to design rates.

Q. HOW DO THESE ALLOCATIONS OCCUR?

A. OTP uses the JCOSS to allocate system costs and revenues to the various jurisdictions in which it provides service, as described in more detail by OTP witness Ms. Christy L. Petersen. OTP then uses the CCOSS to allocate jurisdictional costs and revenues to customer classes, which I describe in more detail below.

Q. HAS OTP REFINED HOW IT IS ALLOCATING COSTS IN THE JCOSS AND CCOSS SINCE ITS LAST RATE CASE?

A. Yes. We have made various refinements to the jurisdictional and class allocation factors since OTP's last South Dakota rate case (the 2018 Rate Case).[2] These refinements are identified in the CAPM and are discussed below.

[1] Ms. Smith sponsors the OTP Cost Allocation Procedures Manual (CAPM), included as Exhibit___(AMS-1), Schedule 2 to her Direct Testimony.
[2] Docket No. EL18-021.

A. Jurisdictional Allocators

Q. HAS SOUTH DAKOTA BECOME A LARGER PART OF OTP'S SYSTEM SINCE THE LAST SOUTH DAKOTA RATE CASE?

A. Yes. As shown in Ms. Smith's Table 2, the South Dakota jurisdictional allocation factors generally have increased since the 2018 Rate Case. This is mostly due to the relative growth in OTP's South Dakota sales since 2018 (as compared to other jurisdictions served by OTP), including sales to a potential new customer, Big Stone Energy Storage Project, LLC (BSESP), discussed in more detail later in my testimony.

Q. DOES OTP USE THE SAME JURISDICTIONAL ALLOCATION METHODOLOGIES ACROSS ALL OF ITS JURISDICTIONS?

A. Yes. Each of our jurisdictions follows the same jurisdictional cost allocation methodologies, though refinements to those methodologies are made with each rate case.

Q. IS IT IMPORTANT TO MAINTAIN CONSISTENCY IN JURISDICTIONAL ALLOCATION METHODOLOGIES ACROSS JURISDICTIONS?

A. Yes. Maintaining consistency in cost allocation methodologies across jurisdictions helps minimize the potential for any over- or under-recovery of costs from an overall system perspective.

Q. PLEASE DESCRIBE THE REFINEMENTS TO OTP'S JURISDICTIONAL ALLOCATORS SINCE ITS LAST SOUTH DAKOTA RATE CASE.

A. Since OTP's last South Dakota rate case, we have added one new jurisdictional allocator (the D5 allocator). We also have refined the calculation of the D1, D2, D3, and D4 allocators, as well as the classification of wind production plant in the JCOSS.

1. New JCOSS Allocators

Q. WHAT IS THE D5 ALLOCATOR?

A. The JCOSS D5 allocator is determined based on each jurisdiction's contribution to OTP's average monthly three-hour transmission peak kW demand. Any loads for which OTP provides transmission service are included in this factor. The hours used are the peak hour, the hour prior to the peak hour, and the hour after the peak hour.

Q. WHAT COSTS ARE ALLOCATED USING THE D5 ALLOCATION FACTOR?

A. Costs allocated using the D5 allocation factor include charges from Midcontinent Independent System Operator (MISO) Schedule 26, as well as Southwest Power Pool (SPP) Schedules 1 and 9.

Q. WHY DID OTP ADD THIS ALLOCATION FACTOR TO THE JCOSS?

A. OTP incurs MISO Schedule 26, SPP Schedule 1, and SPP Schedule 9 charges based on monthly peak demand. To more accurately allocate these costs, we introduced the D5 allocation factor, which assigns expenses to the jurisdictions responsible for driving them.

2. Refinements to JCOSS Allocators

Q. HOW DID OTP REFINE THE CALCULATION OF THE JCOSS D1 AND D2 ALLOCATION FACTORS?

A. OTP made two refinements to the calculation of the JCOSS D1 and D2 allocators: (1) revised the hours considered in the calculation; and (2) eliminated Controlled Services loads from the calculation.

Q. HOW DID OTP REVISE THE HOURS CONSIDERED IN THE CALCULATION OF THE D1 AND D2 JCOSS ALLOCATORS?

A. Previously, the D1 and D2 allocation factors were based on relative demands during the hours of 9:00, 10:00, and 11:00 a.m., and 6:00, 7:00, and 8:00 p.m. on the day of OTP's system peak. We have refined the calculation to replace the six hours on the peak day with the morning peak hour, the hour prior to the morning peak hour, the hour after the morning peak hour, the afternoon peak hour, the hour prior to the afternoon peak hour, and the hour after the afternoon peak hour, regardless of when those peaks occur.

Q. WHY DID OTP MAKE THIS REFINEMENT?

A. The D1 and D2 allocators allocate the capacity-related portion of production plant and transmission-related costs, both of which are driven by peak demands. The refinement is designed to make sure the allocation factors are capturing relative demands during the system peak, as opposed to fixed hours on the peak day that may or may not correspond to when the system is experiencing its greatest demand.

Q. WHAT OTHER REFINEMENTS WERE MADE TO THE D1 AND D2 ALLOCATORS?

A. OTP has set the D1 and D2 allocation factors for the Controlled Service classes to zero kilowatts (kW). Setting these classes to zero kW reflects OTP's ability to completely turn off these loads during high priced periods, as well as during OTP's peak. These classes are considered a low-cost resource and prevent OTP from needing to obtain additional capacity.

Q. DID OTP MAKE SIMILAR REFINEMENTS TO THE D3 AND D4 ALLOCATORS?

A. Yes. We have omitted water heating load from the calculation of the D3 and D4 allocators. The D3 and D4 allocators are used for distribution investments and demand-related costs. Customers with controllable water heating load do not contribute to those costs due to our ability to curtail those loads. As such, the water heating loads are being omitted from the D3 and D4 calculations.

Q. IS OTP REVISING THE ALLOCATION FACTOR APPLIED TO MISO REVENUES?

A. Yes. In the 2018 Rate Case, MISO revenues were allocated to jurisdictions based on the net electric plant in service (NEPIS) allocation factor. This was in error: MISO revenues are credited to customers through the Transmission Cost Recovery (TCR) Rider, with the jurisdictional share based on the D2 allocation factor. Using the D2 allocation factor in the JCOSS maintains alignment between the MISO revenues and the MISO investment. It also maintains alignment between the present revenue calculation and how those revenues actually are credited to customers. Therefore, using the D2 allocation factor in the JCOSS is reasonable and appropriate.

Q. HOW ARE WIND GENERATING RESOURCES TREATED IN THE JCOSS?

A. As discussed in the CAPM, wind generation is a non-dispatchable resource with operating characteristics that are different from other production facilities. OTP uses MISO's capacity accreditation to classify wind production plant into base energy and peak demand components.

Q. HAS MISO CHANGED HOW IT ACCREDITS WIND CAPACITY SINCE THE 2018 RATE CASE?

A. Yes. On February 16, 2023, the Federal Energy Regulatory Commission (FERC), approved revisions to MISO's Energy and Operating Reserve Market Tariff (MISO Tariff).[3] Those revisions implement a seasonal resource adequacy construct whereby Load Serving Entities (LSEs), including OTP, are required to have enough resources (generation, purchased capacity, or load management resources) to cover expected customer demand and contingencies for each season (summer, winter, fall, and spring). Previously, MISO only required LSEs to meet planning reserve margins during the summer season. With the adoption of a seasonal resource adequacy construct, MISO has changed how it accredits wind capacity, looking to production during all seasons, not just the summer. As a result, OTP's wind facilities have higher accredited capacity under the new construct.

Q. WHAT IS THE EFFECT OF MISO'S NEW RESOURCE ADEQUACY RULES ON THE CLASSIFICATION OF WIND PRODUCTION PLANT?

A. Table 1, below, shows the capacity accreditation factors for each of OTP's wind facilities for each season. Winter capacity factors are higher than summer capacity factors. Thus, the change to MISO's resource adequacy rules increases each facility's accredited capacity and thus, the portion of wind production plant classified as peak demand.

Table 1
OTP Wind Facility MISO Capacity Accreditation

Wind Facility	Summer 2024-25	Fall 2024-25	Winter 2023-24	Spring 2023-24	Average
Ashtabula	2.03%	2.17%	7.19%	2.91%	3.67%
Ashtabula III	2.51%	3.20%	9.85%	3.68%	4.76%
Langdon	1.34%	2.51%	6.45%	3.05%	3.28%
Luverne	2.48%	2.94%	7.93%	3.14%	4.27%
Merricourt	8.39%	9.82%	22.26%	15.27%	14.91%
Total	16.75%	20.63%	51.68%	28.05%	**30.89%**

[3] *See* Order Addressing Arguments Raised on Rehearing and on Compliance, 182 FERC ¶ 61,096 (Feb. 16, 2023).

B. Class Allocators

Q. PLEASE DESCRIBE THE REFINEMENTS TO OTP'S CCOSS ALLOCATORS SINCE ITS LAST SOUTH DAKOTA RATE CASE.

A. We have refined the CCOSS allocators since the last South Dakota rate case by adding the D5 allocator. We also have refined how the D1, D2, D3, and D4 allocators are calculated for purposes of the CCOSS, along with revisions to the calculation of the E1-E8760 and E2-E8760 allocators. These refinements also are addressed below.

Q. ARE THERE OTHER UNDERLYING CHANGES THAT IMPACT THE 2024 TEST YEAR ALLOCATION FACTORS?

A Yes. As discussed below, OTP has modified its CCOSS by reorganizing rate schedules into different customer classes since its last South Dakota rate case. It therefore is not possible to make direct comparisons between the 2017 Test Year and 2024 Test Year CCOSS allocation factors for the reorganized classes.

1. New CCOSS Allocators

Q. PLEASE DISCUSS THE ADDITION OF THE D5 ALLOCATOR TO THE CCOSS.

A. I explain the basis of the D5 allocator above, which is applied to the same costs in the CCOSS as the JCOSS (MISO Schedule 26, SPP Schedules 1 and 9). That allocator is used in the CCOSS based on relative class shares of the average monthly three-hour transmission peak kW demand.

2. Refinements to CCOSS Allocators

Q. HOW DID OTP REFINE THE CALCULATION OF THE D1, D2, D3, AND D4 CCOSS ALLOCATORS?

A. We made the same refinements to the CCOSS D1, D2, D3, and D4 allocators that were made to the JCOSS D1, D2, D3, and D4 allocators, for the same reasons discussed above.

Q. DID OTP REFINE ANY OTHER ASPECTS OF ITS CCOSS ALLOCATORS?

A. Yes. The CCOSS uses an E8760 modification to various energy allocators. Historically, the E1-E8760 allocator was calculated based on applying a 10/24ths factor to annual kWhs for water heating and deferred loads. We have refined the calculation to better weigh the capacity costs avoided by OTP's ability to control these loads.

The refinement excludes kWhs related to up to 14 hours of control for water heating and deferred loads based on the highest priced 14 of 24 hours using forecasted marginal hourly capacity costs. This issue is discussed further in the CAPM.

Q. DID OTP MAKE ANY OTHER CHANGES TO THE E8760 COMPONENT OF ITS CCOSS ALLOCATION FACTORS?

A. Yes. OTP is now using hourly day ahead pricing to calculate the E8760 component of the E1-E8760 and E2-E8760 allocators. Previously, the E8760 component was calculated using marginal costs. The day ahead pricing aligns the historical embedded costs with the market costs the Company incurred in 2024.

IV. GENERATOR INTERCONNECTION PROCEDURES PROJECTS

Q. WHAT ARE GENERATOR INTERCONNECTION PROCEDURES PROJECTS?

A. Generator Interconnection Procedures Projects, or GIPs, are upgrades to OTP's transmission facilities that are located beyond a generator's point of interconnection with the MISO transmission grid. New generators typically require such upgrades.

Q. DO GENERATORS NEED TO CONTRIBUTE TO THE COST OF GIPS?

A. Yes. Under the MISO Tariff, the entire cost of facilities that are specific to accommodate the generator itself and provide the initial point of interconnection to the MISO transmission system are paid for in advance by the generator.

The MISO tariff also provides two alternatives to be elected by a transmission owner (TO) for the types of network upgrades included in OTP's GIPs: (1) pre-funding by the generator; or (2) TO Provided Funding. The TO may elect pre-funding, which requires full payment by the generator in advance of network upgrades being constructed. Alternatively, the TO may elect TO Provided Funding, which allows TOs (including OTP) to provide funding for network upgrades being constructed on the TO's transmission system that are required to transmit energy from the new generators.[4] If the TO elects TO Provided Funding, the generator is required to pay for 100 percent of transmission network upgrades

[4] Order Accepting Tariff Revisions, 171 FERC ¶ 61,075 (2020) [*hereinafter* FERC Transmission Owner Provided Funding Order].

to facilities of 230 kilovolts (kV) or below, and 90 percent of upgrades to facilities of 345 kV or above. The remaining 10 percent of upgrades to facilities of 345 kV or above are allocated to utilities throughout the MISO region.[5] OTP has selected TO Provided Funding for all GIPs requiring network upgrades to OTP's system.

Q. WHAT TYPES OF UPGRADES ARE INCLUDED IN THE GIPS CATEGORY?

A. GIPs frequently require an increase to transmission system capacity, such as: (1) replacing structures to increase line clearances; (2) replacing existing conductors with larger conductors; (3) adding new or replacing existing substation equipment; (4) constructing new substations or switch stations; and (5) building new transmission lines or modifying existing transmission lines to interconnect with new switching stations or substations.

Q. DO GIPS PROVIDE RELIABILITY BENEFITS TO OTP CUSTOMERS?

A. Yes. GIPs do provide opportunities for improved reliability and resilience of the OTP transmission system. For example, some of OTP's GIPs involve replacing aging equipment that can be between 40 and 60 years old.

Additionally, GIPs can involve new substations or new transmission lines that may offer future lower-cost opportunities for OTP to support the underlying transmission system or serve customers, thereby resulting in reliability benefits. For example, OTP was able to install a 345/115 kV transformer at the Astoria Station 345 kV switching station that was constructed for the Astoria Station and the Tatanka Ridge wind farm. Had the Astoria 345 kV switching station not been there, it would have likely resulted in a higher cost solution to support the 115 kV system in the area.

Q. HOW MUCH HAS OTP INVESTED IN GIPS TO DATE?

A. By the end of 2024, OTP had approximately $60.0 million (OTP Total) / $6.4 million (OTP SD) of transmission rate base investment for GIPs made in connection with approximately 20 different generating facilities, including Merricourt Wind and Astoria Station.

[5] FERC Transmission Owner Provided Funding Order, ¶ 2.

Q. ARE THESE INVESTMENTS INCLUDED IN IN THE 2024 TEST YEAR?

A. Yes. These investments, along with associated MISO revenue, are included in the 2024 Test Year.

Q. IS THIS THE FIRST TIME GIPS INVESTMENTS AND ASSOCIATED MISO REVENUES HAVE BEEN INCORPORATED INTO SOUTH DAKOTA RETAIL RATES?

A Yes. The GIPs investments arose after the conclusion of the 2018 Rate Case, and they have not been included in the TCR Rider due to certain limitations on that cost recovery mechanism.[6]

Q. IS IT BENEFICIAL TO SOUTH DAKOTA CUSTOMERS TO INCLUDE THE GIPS INVESTMENTS IN THE RETAIL REVENUE REQUIREMENT?

A. Yes. The net present value of estimated MISO revenues associated with the GIPs investments (which are a credit to retail rates) is greater than the estimated retail revenue requirement associated with the GIPs investments.

Q. WHY IS THAT THE CASE?

A. The MISO Tariff provides for calculation of the revenue paid by generators based on a FERC-approved pro forma template that utilizes a 20-year repayment period. This is shorter than the 40- to 60-year useful life of the GIPs as they are depreciated under Generally Accepted Accounting Principles (GAAP). As a result, the retail revenue requirement for the GIPs generally is negative during the years in which OTP receives revenues under the MISO tariff.

Q. WHY IS THERE A DIFFERENCE IN THE REPAYMENT PERIOD UNDER THE MISO TARIFF AND THE UNDERLYING USEFUL LIFE OF THE NETWORK UPGRADES?

A. MISO's tariff is designed so that the generator must pay for the full life of the transmission assets over the expected life of the generation assets. The expected life of the generation assets typically is shorter (approximately 20 years) than the life of the transmission assets.

[6] S.D.C.L. §49-34A-25.1 (limiting TCR Rider to projects that are more than five miles in length).

Q. WHAT WILL OCCUR AT THE END OF THE 20-YEAR REPAYMENT PERIOD UNDER THE MISO TARIFF?

A. While the MISO tariff utilizes a 20-year repayment period for calculation of the GIPs revenue, OTP continues to depreciate the facilities according to their actual useful life (between 40 and 60 years, depending on the assets), in accordance with GAAP. This means there will continue to be return of and return on the GIPs investments in years after MISO revenue concludes. Once the MISO Tariff revenue ends, there will not be a credit to retail revenue requirement would turn positive at that time. However, as discussed above, over the life of the projects, we estimate that the net effect will be a credit to South Dakota retail rates.

Q. WHAT IS THE CURRENT STATUS OF THE MISO TARIFF PROVISIONS RELATED TO RATEMAKING FOR THE GIPS?

A. On June 13, 2024, FERC issued an Order to Show Cause in Docket No. EL24-80-000 (the Self-Fund Show Cause Order),[7] requiring MISO and other regional transmission organizations to justify the GIPs ratemaking treatment provided for under its tariff. That proceeding is ongoing. The FERC is holding in abeyance the pending proceeding involving the right of MISO TOs to self-fund that was remanded to the FERC from the D.C. Circuit in 2022.

Q. WHAT APPEARS TO BE THE FOCUS OF THE FERC PROCEEDING?

A. It appears that the FERC's primary focus is to reexamine the transmission owners' existing ability to decide how generators pay for GIPs,[8] though the FERC also appears to be assessing ways to lower the amounts generators pay for GIPs.[9] It should be noted that the FERC is not obligated to act on the Self-Fund Show Cause Order.

Q. HOW DOES THE RESOLUTION OF THE FERC PROCEEDING IMPACT OTP'S PROPOSAL IN THIS CASE?

A. I am not an attorney and the Self-Fund Show Cause Order remains open, but there is now a lengthy history regarding how GIPs are funded, and it seems unlikely generators would have no obligation to pay for GIPs associated with their projects. It seems even more unlikely that a material change like eliminating generators'

[7] Order to Show Cause, 187 FERC ¶ 61,170 (June 13, 2024).
[8] Self-Fund Show Cause Order, ¶67.
[9] Self-Fund Show Cause Order, ¶68.

obligation to pay for GIPs associated with their projects would apply retroactively. As such, OTP commits that whatever revenues it receives from generators for the GIPs will be credited to retail rates.

Q. WHAT IS YOUR ULTIMATE CONCLUSION REGARDING THE INCLUSION OF THE GIPS INVESTMENTS IN THE 2024 TEST YEAR?

A. Ultimately, the GIPs do benefit retail customers through opportunities for improved reliability and resilience of the OTP transmission system. Generators will make contributions toward the cost of the projects, and those contributions will be reflected in retail rates. OTP therefore supports including the GIPs in the 2024 Test Year.

V. 2024 TEST YEAR NORMALIZED RETAIL REVENUES

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. This section of my testimony describes the development of 2024 South Dakota normalized retail revenues. First, I will describe 2024 South Dakota actual retail revenues, followed by adjustments made to actual retail revenues to arrive at normalized retail revenues for the 2024 Test Year.

A. 2024 Actual Retail Revenues

Q. PLEASE DEFINE RETAIL REVENUES.

A. For the purposes of ratemaking, retail revenues are the total retail revenues (billed and unbilled) on a calendar month basis, plus or minus the adjustments I discuss below. In other words, the calendar month revenue includes revenue for the billed sales and estimated revenue for electricity that has been delivered to customers, but not yet billed. This includes revenues collected through base rates as well as revenues applicable to OTP's various cost recovery riders.

Q. WHAT DO YOU MEAN BY "REVENUES ON A CALENDAR MONTH BASIS"?

A. Calendar month revenues are determined by making an adjustment for unbilled revenues to billing month retail revenues. Billing month revenues do not coincide with the calendar month, as they are billed on cycles (20 cycles in a month for OTP). Total 2024 billed revenues for the South Dakota retail jurisdiction were $40.2 million.

To have retail revenues match to the calendar year for which expenses are incurred, the incremental amount of revenues that have not been billed at the end

of the year for each of the 20 billing cycles are estimated using a comprehensive model. This model calculates the unbilled revenues for 2024 that were billed in January 2025, net of the December 2023 unbilled revenues that were billed in January of 2024. For 2024, the unbilled revenue calculation increased South Dakota retail revenues by approximately $4,000. However, OTP omitted this amount from the 2024 Test Year due to its immateriality.

In addition, total billed revenues also are adjusted by the amount of any over or under collection balance attributable to OTP's cost recovery riders to reflect the actual calendar year revenue requirement within that rider. The total amount of these adjustments was an increase to South Dakota retail revenue of $0.1 million. OTP's total South Dakota retail revenues for 2024 before any normalizing adjustments were $40.3 million.

B. Weather Normalization

Q. HAVE ACTUAL 2024 SOUTH DAKOTA RETAIL REVENUES BEEN WEATHER ADJUSTED TO ARRIVE AT THE 2024 TEST YEAR REVENUES?

A. Yes, actual 2024 South Dakota retail revenues have been weather normalized as described below.

Q. WHAT IS THE PURPOSE OF WEATHER NORMALIZING HISTORIC DATA?

A. If OTP were using a projected test year based on a budget, a weather normalization adjustment would not be necessary, since budgets assume normal weather. However, in a test year based on historic data, the historic sales data needs to be adjusted to produce retail revenue and variable costs that are representative of the effects of "normal" weather.

Q. PLEASE DESCRIBE THE WEATHER NORMALIZATION METHODOLOGY.

A. OTP's weather normalization process uses a similar methodology to what was used in OTP's last South Dakota general rate case. OTP's weather normalization process uses the current year plus the prior 20 years of OTP hourly weather data, monthly revenue, and monthly kWh data. A statistical regression procedure is used to determine weather normalization models for each of 40 different rate groups within each of OTP's three states. Variables used include: (i) kWh/day; (ii) heating and cooling degree days; (iii) the number of months since January 1997; and (iv) up to 13 autoregressive terms. The results are checked for accuracy and reasonableness using graphs and reports. Weather normalized kWh sales are then

priced on current rates using a calendar month basis. The resulting revenue amounts do not include Energy Adjustment Rider (EAR) revenues.

Q. HOW DOES WEATHER NORMALIZATION IMPACT EAR REVENUES?

A. Weather normalized kWh sales are multiplied by the appropriate total cost of energy rate for each of the twelve months to determine the fuel and purchased power costs.

Q. WHAT IS THE FINANCIAL IMPACT OF WEATHER NORMALIZATION ON 2024 ACTUAL RETAIL REVENUES?

A. The weather normalization adjustment results in an increase to South Dakota base revenues of $0.7 million. The weather normalization adjustment also results in increased fuel expenses and associated EAR revenues of approximately $0.2 million for South Dakota. The combination of these adjustments is shown as Adjustment B-01a in Volume 4A Workpapers

Q. WHY DID WEATHER NORMALIZATION RESULT IN AN INCREASE TO BASE REVENUES AND FUEL EXPENSES?

A. Overall, 2024 had fewer heating and cooling degree days than the 20-year average.

C. Known and Measurable Changes

Q. DID OTP MAKE ANY KNOWN AND MEASURABLE CHANGES TO 2024 ACTUAL RETAIL REVENUES?

A. Yes. OTP made a known and measurable change for anticipated sales to BSESP. Also, beginning January 1, 2025, an existing South Dakota large industrial customer materially increased its load. That load change also has been incorporated into the 2024 Test Year Normalized Retail Revenues.

Q. WHAT IS THE STATUS OF OTP'S RELATIONSHIP WITH BSESP?

A. On April 22, 2025, OTP filed a petition with the Commission, seeking approval of a new Electric Service Agreement (ESA) with BSESP. That request is pending before the Commission in Docket No. EL25-015.[10] While our ESA request remains pending in Docket No. EL25-015 and BSESP is not anticipated to begin

[10] Related requests regarding the existing ESA with POET Biorefining – Big Stone, LLC and a new Thermal Technology Market Energy Rate offering also are pending in Commission Docket Nos. EL25-016 and EL25-017, respectively.

commercial operation until later in 2025,[11] we believe it is reasonable to include the BSESP sales in the 2024 Test Year as a known and measurable change.[12]

Q. WHAT IS THE IMPACT OF INCLUDING BSESP SALES IN THE 2024 TEST YEAR?

A. Including BSESP sales in the 2024 Test Year does increase South Dakota's overall share of system costs, but that increase is more than offset by BSESP revenues. Overall, including BSESP sales in the 2024 Test Year reduces the 2024 Test Year revenue deficiency by approximately **[PROTECTED DATA BEGINS... ...PROTECTED DATA ENDS]**.

Q. WHAT AMOUNT OF BSESP SALES ARE INCLUDED IN THE 2024 TEST YEAR?

A. As explained in Docket No. EL25-015, BSESP is a partially controllable load, with a maximum demand of 155 megawatts (MW).[13] The firm portion of the load is **[PROTECTED DATA BEGINS... ... PROTECTED DATA ENDS]**, which will be served under OTP's Large General Service (LGS) Tariff Section 10.04.[14] We have included **[PROTECTED DATA BEGINS... ... PROTECTED DATA ENDS]** in the 2024 Test Year, along with **[PROTECTED DATA BEGINS... ... PROTECTED DATA ENDS]**.

Q. IS THIS A REASONABLE WAY TO TREAT BSESP IN THE 2024 TEST YEAR?

A. Yes. Cost allocation is predicated on firm service: we did not consider non-firm, controllable portions of this load in allocation process. We anticipate that BSESP's firm service **[PROTECTED DATA BEGINS... ... PROTECTED DATA ENDS]**. Finally, including BSESP in the 2024 Test Year accounts for the fact that we anticipate BSESP will be taking service during the period rates are in effect.

[11] Docket No. EL25-015, Petition at 3.
[12] If the Commission does not approve the Company's ESA request, OTP will make appropriate changes to the 2024 Test Year.
[13] Docket No. EL25-015, Petition at 1.
[14] Docket No. EL25-015, Petition at 1-2.

Q. IF THE BSESP ESA IS APPROVED, WILL THERE BE CHANGES TO JURISDICTIONAL AND CLASS ALLOCATORS IN FUTURE RATE CASES?

A. Yes. OTP is proposing that BSESP's non-firm service occur under a new Thermal Market Energy Pricing (TMEP) rider.[15] TMEP non-firm service does not directly rely on OTP's generation resources but rather will rely on the broader MISO market for procurement and associated hourly market pricing. These costs will be directly assigned to BSESP. Therefore, in future rate cases, OTP will use new energy allocators (E3 and E3-E8760) that will exclude TMEP sales to allocate base energy costs in the JCOSS and CCOSS if approved in all three of its jurisdictions, replacing the E2 and E2-E8760 allocators.[16]

Q. IS OTP USING THESE NEW ENERGY ALLOCATORS IN THIS CASE?

A. No. The actual amount of TMEP sales is too uncertain to implement these changes in this case. We are continuing to allocate base energy costs using the E2 and E2-E8760 allocators for this case.

Q. PLEASE DESCRIBE THE LARGE INDUSTRIAL CUSTOMER LOAD CHANGE.

A. In 2024, a large industrial customer completed a 4.5 MW expansion of its existing facility. The customer has been operating at the new, higher levels since January 2025, and we anticipate it will continue to do so through the rest of 2025 and beyond.

Q. IS THIS LOAD CHANGE PAIRED WITH COSTS INCLUDED IN THE 2024 TEST YEAR?

A. Yes, in part. To support the increased load associated with this expansion, as well as broader load growth in OTP's South Dakota service area, OTP constructed a new radial 115 kV transmission line. This line extends from OTP's Big Stone area substation to a newly constructed 115 kV/12.5 kV substation and constitutes Phase 1 of a two-phase transmission project. Phase 1 was placed into service in December 2024 and is included in the annualization adjustment under Test Year Adjustment TY-01.

[15] Docket No. EL25-017. The TMEP rider has similar attributes to a new Market Energy Rate tariff the Company will be proposing to replace the closed portions of the voluntary Large General Service (LGS) Rider, Tariff Section 14.03 related to System Marginal Energy Pricing (SMEP) and the voluntary Real Time Pricing (RTP or RT Pricing) Tariff Section 14.02.

[16] The E3 and E3-E8760 allocators also will exclude SMEP, RTP and Market Energy Rate sales.

Phase 2 of the project will provide looped 115 kV transmission service to enhance reliability for the area as well as operational flexibility for the expanded facility. This phase is currently scheduled to be placed in service in 2026. Phase 2 is not included in the current rate case and will remain in the Transmission Cost Recovery (TCR) Rider until OTP's next South Dakota general rate case.

Q. WHAT IS THE FINANCIAL IMPACT OF THESE KNOWN AND MEASURABLE SALES CHANGES?

A. These known and measurable changes increase South Dakota base revenues by $3.4 million and EAR revenues by $1.5 million. The effects of these adjustments are incorporated into Test Year Adjustments TY-16 and TY-17 in Schedule 12 to Ms. Petersen's Direct Testimony.

D. Billing Adjustments

Q. DO THE 2024 TEST YEAR SALES REFLECT ANY BILLING ADJUSTMENTS?

A. Yes. During 2024 OTP made minor bill adjustments attributable to time periods prior to 2024. There have also been billing adjustments to remove temporary facility extension contract (FEC) minimums and penalty revenues.

Test Year Adjustment TY-03 in Schedule 12 to Ms. Petersen's Direct Testimony removes the revenues. These adjustments decrease 2024 South Dakota revenues by approximately $0.2 million.

E. Total 2024 Normalized Retail Revenues

Q. WHAT ARE THE TOTAL 2024 NORMALIZED SOUTH DAKOTA RETAIL REVENUES?

A. Table 2 below summarizes OTP's total 2024 normalized South Dakota retail revenues.

Table 2

South Dakota 2024 Normalized Retail Revenue Summary

Revenue Component	SD Total
Billed Revenues	$40,297,989
Unbilled Revenue	3,981
Rider Revenue Adjustments	$108,183
Total 2024 Retail Revenue	**$40,410,153**
Weather Normalization Adjustments (Base + Fuel)	$667,617
Known and Measurable Changes	$4,853,436
Billing Adjustments	$(173,168)
Total 2024 Normalized Retail Revenue	**$45,753,953**

VI. CLASS COST OF SERVICE STUDY AND CLASS REVENUE RESPONSIBILITY

Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I explain OTP's 2024 Test Year CCOSS and present OTP's proposed class revenue responsibilities. The 2024 Test Year CCOSS is included in Volume 4A, Supporting Information. A one-page summary of the CCOSS results is provided as Exhibit___(AMG-1), Schedule 2.

A. Class Cost of Service Study

Q. WHAT COSTS ARE MEASURED BY THE CCOSS?

A. OTP's CCOSS is an embedded cost study, meaning it measures the 2024 Test Year cost of service for the South Dakota jurisdiction and all costs are fully distributed to classes.

Q. DOES OTP ALSO USE A MARGINAL COST STUDY?

A. Yes. OTP witness Mr. Eric P. Schiffer discusses the marginal cost study and its use in his Direct Testimony.

Q. ARE THE CCOSS AND THE MARGINAL COST STUDY USED FOR DIFFERENT PURPOSES?

A. Yes. OTP uses the CCOSS to inform the development of inter-class revenue responsibilities. As discussed in more detail by Mr. Schiffer, OTP uses the marginal

cost study to develop rate elements (i.e., energy charges, demand charges, etc...) and for intra-class revenue allocation for some customer classes.

Q. WAS THE CCOSS PREPARED USING THE SAME GENERAL CCOSS METHODOLOGY AS WAS USED IN OTP'S LAST SOUTH DAKOTA RATE CASE?

A. Yes. The proposed CCOSS was prepared using the same basic cost classification and allocation methodology used in OTP's last South Dakota rate case. I discussed changes to different allocation factors in Section III, above.

Q. HAS OTP REVISED ITS CCOSS CUSTOMER CLASSES SINCE ITS LAST SOUTH DAKOTA RATE CASE?

A. Yes. OTP has changed its customers classes since its last South Dakota rate case. First, we have eliminated the Irrigation and Other Public Authority (OPA) customer classes, instead moving those rate schedules into the Farm, Lighting and General Service customer classes. Second, we have revised the controlled services classes to better group similar customers.

Q. WHY DID OTP ELIMINATE THE IRRIGATION AND OPA CUSTOMER CLASSES?

A. Ultimately, this revision was made to simplify the CCOSS. Neither the Irrigation nor OPA classes had material numbers of customers or costs. Further, many of the Irrigation customers also are Farm customers, so grouping of those services together made sense. Grouping of Irrigation into Farm, Municipal Pumping Service (a component of the former OPA class) into General Service and Civil Defense-Fire Sirens (the other component of the former OPA class) into Lighting yields customer classes with similar enough usage characteristics to provide a reasonable basis for cost allocation.

Q. PLEASE DESCRIBE THE REVISIONS TO THE CONTROLLED SERVICES CLASSES.

A. OTP has three controlled services classes: (1) Controlled Service Deferred Load; (2) Controlled Service Interruptible; and (3) Controlled Service Off-Peak. Since the 2018 Rate Case, we have engaged in a rate restructuring initiative that resulted in a reorganization of our controlled services classes to better group and align the underlying rate offerings. The reorganization is shown below.

Table 3
Organization of Controlled Services Classes

	Current Rate Case	2018 Rate Case
Controlled Service Deferred Load	Section 14.01 Section 14.06	Section 14.01
Controlled Service Interruptible	Section 14.04	Section 14.04 Section 14.05
Controlled Service Off-Peak	Section 14.07	Section 14.06 Section 14.07

Q. WHY IS THIS RE-ORGANIZATION OF THE CONTROLLED SERVICES CLASSES REASONABLE?

A. Ultimately, the re-organization of the controlled services classes better reflects how those rates are used today and results in more homogeneous customer class groupings. This in turn, improves cost allocation and rate design, providing for more accurate pricing.

Q. PLEASE SUMMARIZE THE RESULTS OF THE 2024 CCOSS.

A. Table 4 below compares the present revenue responsibilities (Column B) and cost responsibilities (Column C) of OTP's customer classes, as calculated in the CCOSS. As shown in Table 4, the revenue responsibility of the Residential class currently is below its CCOSS-indicated cost responsibility. Conversely, the revenue responsibility of the Large General Service class is greater than its CCOSS-indicated cost responsibility.

Table 4
Comparison of Present Revenue Responsibility and Cost Responsibility

	A	B	C	D
Line No.	Class	Present Revenue Responsibility	CCOSS Cost Responsibility	Difference
1	Residential	24.50%	27.49%	2.98%
2	Farms	1.78%	1.94%	0.16%
3	General Service	17.18%	16.85%	-0.33%
4	Large General Service	51.82%	48.30%	-3.52%
5	Lighting	1.41%	1.31%	-0.10%
6	Controlled Service Deferred Load	1.21%	0.98%	-0.23%
7	Controlled Service Interruptible	1.85%	2.36%	0.52%
8	Controlled Service Off-Peak	0.24%	0.77%	0.52%

B. Class Revenue Responsibility

Q. PLEASE SUMMARIZE HOW OTP USED THE CCOSS IN THE DEVELOPMENT OF OTP'S RECOMMENDED CLASS REVENUE RESPONSIBILITIES.

A. The CCOSS is the primary guide for setting the class revenue responsibilities. However, determining the appropriate class revenue responsibilities is not as simple as setting them to equal the results of the CCOSS. It is necessary to consider other objectives, particularly the objective of maintaining reasonable rate continuity, and mitigating disproportionate or abrupt rate impacts. Mr. Schiffer provides a more complete discussion of the rate design considerations applied by OTP in his Direct Testimony.

Q. HOW DOES OTP PROPOSE TO ALLOCATE TOTAL REVENUE TO CUSTOMER CLASSES?

A. Absent a rate case, OTP estimates 2024 class revenues (including riders) are approximately $45.8 million, as shown in Column B of Table 5 below. OTP's proposed 2024 Test Year revenues are approximately $51.5 million as shown in Column C of Table 5. The total net dollar increase for OTP's South Dakota customers is $5.7 million (Column D), or 12.5 percent (Column E).

Based on a consideration of all of OTP's rate design objectives, OTP proposes the distribution of revenue responsibilities contained in Table 5. This distribution of revenue responsibilities results in a reasonable movement toward class cost responsibility (as calculated in the proposed CCOSS) without producing unreasonable bill impacts.

Table 5
Proposed Revenue Allocation and Net Bill Impact

Line No.	A Class	B Total Present Revenues	C Total Proposed Revenues	D Net Bill Increase	E Net Bill Impact
1	Residential	$ 11,572,118	$ 13,173,964	$ 1,601,845	13.84%
2	Farms	$ 846,917	$ 962,424	$ 115,507	13.64%
3	General Service	$ 8,038,092	$ 9,116,288	$ 1,078,195	13.41%
4	Large General Service	$ 22,844,623	$ 25,628,683	$ 2,784,060	12.19%
5	Lighting	$ 678,084	$ 686,976	$ 8,892	1.31%
6	Controlled Service Deferred Load	$ 695,244	$ 705,986	$ 10,742	1.55%
7	Controlled Service Interruptible	$ 952,436	$ 1,058,510	$ 106,074	11.14%
8	Controlled Service Off-Peak	$ 126,439	$ 140,794	$ 14,355	11.35%
9	Total	$ 45,753,953	$ 51,473,624	$ 5,719,671	12.50%

Q. PLEASE EXPLAIN HOW YOU ARRIVED AT THE TOTAL NET DOLLAR INCREASE IDENTIFIED IN TABLE 5.

A. OTP currently receives a certain amount of base rate and rider revenue from its South Dakota customers that it would continue to receive without a rate case. The combined total of these amounts is identified in Column B of Table 5. Like Column B, Column C (Total Proposed Revenues), also includes base rate and rider revenue. The detail for the base revenue amounts included in Columns B and C of Table 5 is provided in Exhibit____(AMG-1), Schedule 3. Mr. Schiffer's proposed base rate design, discussed in his Direct Testimony, utilizes the base revenue of $43.1 million as provided in Schedule 3, Table 3 (Column E, Line No. 10).

OTP witness Ms. Paula M. Foster explains in her Direct Testimony that as part of this case, OTP proposes to move certain projects currently being recovered in riders into base rates. This is a shift in the recovery mechanism and does not result in a change to a customer's overall bill. Therefore, Table 5, Column B, which is the sum of the base and rider revenues, provides the appropriate base from which to measure the rate increase being proposed in this case. Table 5, Column C identifies the 2024 Test Year proposed revenues, which includes the shift in recovery mechanism between riders and base rates. The overall bill impact that customers will experience under OTP's proposal is shown in Table 5, Column E.

Q. DOES OTP'S PROPOSAL GENERALLY MOVE CLASSES CLOSER TO COST RESPONSIBILITY?

A. Yes. OTP attempted to move class revenue responsibilities closer to their CCOSS-indicated cost responsibilities, and as shown in Table 6, and was able to do so for its two largest classes (by revenue) and several of the smaller customer classes. Table 6 below compares present revenue and cost responsibilities (as measured in the CCOSS) and OTP's proposed revenue responsibilities for all of OTP's customer classes.

Table 6
Comparison of Proposed Revenue Responsibility and Cost Responsibility

	A	B	C	D
Line No.	**Class**	**Present Revenue Responsibility**	**Cost Responsibility from CCOSS**	**Proposed Revenue Responsibility**
1	Residential	24.50%	27.49%	25.59%
2	Farms	1.78%	1.94%	1.87%
3	General Service	17.18%	16.85%	17.71%
4	Large General Service	51.82%	48.30%	49.79%
5	Lighting	1.41%	1.31%	1.33%
6	Controlled Service Deferred Load	1.21%	0.98%	1.37%
7	Controlled Service Interruptible	1.85%	2.36%	2.06%
8	Controlled Service Off-Peak	0.24%	0.77%	0.27%

Q. PLEASE PROVIDE FURTHER CONTEXT FOR OTP'S PROPOSED REVENUE RESPONSIBILITY FOR THE RESIDENTIAL CLASS.

A. As shown in Table 6, the CCOSS indicates Residential class revenues would need to increase from 24.5 percent (Column B) to 27.5 percent (Column C) to bring the revenues for this class up to its cost level. To provide a reasonable balance of the cost of service and rate continuity objectives of rate design, OTP proposes increasing the Residential class revenue responsibility from 24.5 percent (Column B) to 25.6 percent (Column D).

Q. IF OTP'S RECOMMENDED REVENUE DISTRIBUTION IS ACCEPTED, WILL THERE STILL BE DIFFERENCES BETWEEN CLASS REVENUE RESPONSIBILITY AND COST RESPONSIBILITY?

A. Yes. OTP does not propose an unmoderated adherence to the results of the CCOSS. For this reason, differences remain between OTP's proposed class revenue

responsibility and cost responsibilities identified by the CCOSS. For example, OTP's recommended revenue increase of approximately $1.6 million for the Residential class (shown above in Table 5, Column D) moves the Residential class closer to its cost responsibility. In order to be at its full cost responsibility, the Residential class revenues would need to increase by approximately $2.6 million, an additional $1.0 million of revenue responsibility compared to OTP's proposal. Table 7 below identifies the net bill impacts if revenue responsibility is based entirely on cost.

Table 7
Unmoderated Revenue Responsibilities

	A	B	C	D	E
Line No.	**Class**	**Total Present Revenues**	**Total Cost-Based Revenues**	**Net Bill Increase**	**Net Bill Impact**
1	Residential	$ 11,572,118	$ 14,148,710	$ 2,576,591	22.27%
2	Farms	$ 846,917	$ 997,099	$ 50,182	17.73%
3	General Service	$ 8,038,092	$ 8,673,833	$ 635,741	7.91%
4	Large General Service	$ 22,844,623	$ 24,861,961	$ 2,017,338	8.83%
5	Lighting	$ 678,084	$ 674,094	$ (3,990)	-0.59%
6	Controlled Service Deferred Load	$ 695,244	$ 506,447	$ (188,797)	-27.16%
7	Controlled service Interruptible	$ 952,436	$ 1,217,041	$ 264,604	27.78%
8	Controlled Service Off-Peak	$ 126,439	$ 394,440	$ 268,002	211.96%
9	Total	$ 45,753,953	$ 51,473,624	$ 5,719,671	12.50%

Q. HOW MUCH OF THE RECOMMENDED INCREASE IN CLASS REVENUES IS TIED TO MOVING CLASSES CLOSER TO CLASS COST RESPONSIBILITY?

A. Table 8 below identifies the portion of the change in revenue responsibility due to the change in the revenue requirement and the portion due to the movement towards cost. For most classes, the recommended movement toward cost is a minor component of the overall change in revenue responsibility.

Table 8
Components of Change in Class Revenue Responsibility

Line No.	A Class	B Due to Change in Revenue Requirement	C Due to Movement to Cost	D Total Change in Class Revenue Responsibility
1	Residential	$ 1,041,305	$ 560,540	$ 1,601,845
2	Farms	$ 69,724	$ 45,783	$ 115,507
3	General Service	$ 807,185	$ 271,010	$ 1,078,195
4	Large General Service	$ 3,826,941	$ (1,042,880)	$ 2,784,060
5	Lighting	$ 48,366	$ (39,474)	$ 8,892
6	Controlled Service Deferred Load	$ (71,004)	$ 81,746	$ 10,742
7	Controlled Service Interruptible	$ (2,038)	$ 108,112	$ 106,074
8	Controlled Service Off-Peak	$ (809)	$ 15,164	$ 14,355
9	Total	$ 51,473,624	$ 0	$ 5,719,671

Q. PLEASE SUMMARIZE YOUR RECOMMENDATION WITH RESPECT TO CLASS REVENUE RESPONSIBILITY.

A. OTP's recommended class revenue responsibility moves rates closer to cost while moderating impacts, particularly to the Residential class. OTP's proposed class revenue responsibility proposal is appropriately based on the CCOSS results and rate design objectives, and it is therefore reasonable for setting rates in this case.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.