

**STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION**

**In the Matter of Otter Tail Power
Company’s 2022-2036 Integrated
Resource Plan**

Docket No. E017/RP-21-339

**OTTER TAIL POWER COMPANY’S
MINNESOTA PREFERRED PLAN
WITH AME**

Otter Tail Power Company (Otter Tail or the Company) respectfully submits this supplemental filing to: (1) inform the Commission of its efforts to, and the tools it has identified to help it, balance the interests of the jurisdictions it serves and fulfill its planning obligations; and (2) propose its Minnesota Preferred Plan with AME for the Commission’s consideration.

I. INTRODUCTION

In Reply Comments Otter Tail filed in this proceeding on October 30, 2023, it informed the Commission that changes to the Supplemental Preferred Plan (“Supplemental Plan”) it filed in this proceeding could make it impossible for Otter Tail to continue planning on an integrated basis and may require solutions on a non-integrated basis, i.e., bifurcated resource planning.¹ Since that time, Otter Tail has received additional feedback on its Supplemental Plan, through an informal hearing regarding resource planning in North Dakota² and through settlement discussions in this proceeding, that affirm that conclusion. Therefore, Otter Tail is making this filing to (1) inform the Commission about a tool Otter Tail believes it can use to address Coyote Station and (2) propose to the Commission a bifurcated resource plan that implements bifurcation using this new tool for Coyote Station.

When Otter Tail proposed its Integrated Resource Plan (IRP) in Minnesota³ and

¹ *In the Matter of Otter Tail Power Company’s 2022–2036 Integrated Resource Plan*, Docket No. E017/RP-21-339, Reply Comments p. 7 (October 30, 2023) (“Modifications to Otter Tail’s Supplemental Preferred Plan may make it impossible for Otter Tail to comply with all of the laws in the states it serves. Should that occur, Otter Tail would have to tailor solutions to meet the priorities of all three Otter Tail jurisdictions, potentially on a non-integrated basis.”).

² *In the Matter of Otter Tail Power Company’s 2022–2036 Integrated Resource Plan*, North Dakota Case No. PU-21-380, Informal Hearing (Nov. 20, 2023).

³ *In the Matter of Otter Tail Power Company’s 2022–2036 Integrated Resource Plan*, Docket No. E017/RP-21-339, Initial Filing (September 1, 2021).

North Dakota⁴ on September 1, 2021 (Initial Filing), its modeling did not support continued operation of Coyote Station as a least cost resource. Otter Tail, therefore, proposed to begin the process to withdraw from Coyote Station in 2028. Since the time of that filing, several significant developments have occurred that materially impact the planning landscape, including the Company’s planning for Coyote Station and, more broadly, its ability to balance the interests of its stakeholders and states to conduct resource planning on an integrated basis. Those developments include: (1) the Midcontinent Independent System Operator, Inc. (MISO) adopting a seasonal resource adequacy construct and capacity requirements that increased planning reserve margins above the quantities included in the Initial Filing; (2) MISO’s projection for capacity deficits and recent volatility in energy markets and warnings from MISO, the Federal Energy Regulatory Commission (FERC), and the North American Electric Reliability Corporation (NERC) about the rapid pace of baseload thermal unit retirements and the potential for consequences for grid stability and reliability; (3) load additions and changes in Otter Tail’s load forecast; (4) the enactment of the Inflation Reduction Act with renewed and new incentives for renewable energy;⁵ and (5) Minnesota’s adoption of the 2040 carbon free standard (CFS).⁶

In the face of these developments, Otter Tail re-evaluated the implications of commencing withdrawal from Coyote Station without more clarity regarding the future. Specifically, while the economic analysis generally continued to point to the economic benefits of commencing the process of withdrawing from Coyote Station, the overall planning landscape indicated that a more cautious approach was the most prudent course of action in light of the near-to-mid-term uncertainty that the energy transition was imposing on operations. Thus, Otter Tail presented its Supplemental Plan to the Commission on March 31, 2023.⁷ The Supplemental Plan modified the Initial Preferred Plan by, among other things, proposing that instead of commencing the process of withdrawal from Coyote Station, the Company would continue to operate Coyote Station consistent with its contractual obligations until such time as a “significant, non-routine

⁴ *In the Matter of Otter Tail Power Company’s 2022–2036 Integrated Resource Plan*, North Dakota PU-21-380, Initial Filing (September 1, 2021). In South Dakota, integrated resource plans are filed to keep the South Dakota Public Utilities Commission (SD PUC) apprised of the Company’s plans; however, there is not any statute or rule requiring the SD PUC to review or approve resource plans. Therefore, Otter Tail has not formally engaged in the planning process in South Dakota and its views of the issues raised in this Supplemental Filing are unknown. South Dakota has not passed laws consistent with the policy priorities of Minnesota’s carbon-free legislation or requirement that environmental externalities inform the prudence of new utility projects.

⁵ See Inflation Reduction Act, Pub. L. No. 117-169 (2022).

⁶ Minnesota Statutes § 216B.1691, subd. 2g.

⁷ *Application for Supplemental Resource Plan Approval 2023-2037*, Docket No. E017/RP-21-339, Supplemental Resource Plan (March 31, 2023).

capital investment” was required for the plant to continue to operate.⁸ This would allow Otter Tail to maintain as much flexibility as possible and not make an irrevocable choice to withdraw as it navigates the energy transition over the next several years.

Since presenting its Supplemental Plan, Otter Tail has received comments and other feedback from its stakeholders in this proceeding and has participated in an informal hearing in North Dakota on our IRP pending there.⁹ Based on this feedback from stakeholders, Otter Tail began exploring the potential for bifurcating its resource planning. Due, in part, to these concerns with respect to a lack of interjurisdictional consensus,¹⁰ Otter Tail is now proposing to prospectively plan to serve its Minnesota customers with resources dedicated to and recovered solely from Minnesota customers and serve its other jurisdictions with resources dedicated to and recovered from those jurisdictions.

Otter Tail believes it can accomplish Minnesota-specific planning through the MISO energy market, which provides the tools necessary to allow Otter Tail to pursue a bifurcation model for generation resources while maintaining a unified distribution and transmission system in the interest of its customers. Planning for the Minnesota jurisdiction independently allows Otter Tail to creatively employ tools available to it in the MISO Tariff. One key tool Otter Tail has identified—Available Maximum Emergency (AME) resource designation—can likely be used to help balance the need for the reliable capacity that Coyote Station provides to the Otter Tail and regional systems with stakeholders’ important concerns regarding the continued operation of the station.

II. AME DESIGNATION

Through discussions with MISO and the Independent Market Monitor, Otter Tail has identified the Available Maximum Emergency (AME) resource designation in the MISO tariff as a means through which it potentially could limit the dispatch of the approximately 70 megawatts (MW) of Coyote Station capacity attributable to Minnesota

⁸ *Id.* at 2. Otter Tail views such an investment as likely to be required as a result of environmental regulations. Otter Tail does not, however, know when such an investment will be required.

⁹ *In the Matter of Otter Tail Power Company’s 2022–2036 Integrated Resource Plan*, Case No. PU-21-380, Informal Hearing (Nov. 20, 2023).

¹⁰ Otter Tail’s assessment is underpinned by the legislative requirements of the two states. Where the North Dakota Public Service Commission is required by law to find prudent the least cost resource, regardless of environmental impacts, *See* N.D.C.C. § 49-05-17 (requiring that North Dakota resource planning focus on the “least cost plan”); ND Admin. Code 69-09-12-03(6) (“[T]he North Dakota preferred plan may not select resources based on a carbon cost, greenhouse gas reduction goals, renewable energy standards, emissions goal, or other externalities.”), in Minnesota the Commission is legally obligated to consider the environmental impacts of the energy generation resources and it may privilege carbon reduction over issues of cost and reliability. Minnesota Statutes § 216B.1691, subd. 2 (g); Minn. R. 7843.0500, subp. 3.

customers¹¹ to emergencies and dispatch it distinctly from Otter Tail's remaining share and that of other owners. These discussions also identified that the Commission would need to explicitly order the limitation of operations at Coyote Station so that Coyote Station could be designated as an AME Resource due to the requirement that such operating limit must be established by regulation.

AME Resources are resources that are called upon only in the event of a Maximum Generation (Max Gen) event, such as in the cases of extreme heat, cold, or other extreme events.¹² If MISO anticipates a capacity shortage, it can declare a Max Gen event, which declaration would call on emergency resources including those with AME status to operate.¹³ This novel use of AME is uniquely available to Otter Tail at Coyote Station given its jurisdictional allocation of a jointly owned coal plant.

¹¹ OTP would apply the then-approved capacity allocation methodology annually to Coyote Station to determine the Minnesota allocated share for any particular year. This would account for any material changes to the ratio of load in all of OTP's jurisdictions.

¹² See MISO Tariff § 39.2.5 (stating as follows with respect to AME):

An Emergency Commitment Status indicates that the Resource is an AME Resource and that the Transmission Provider is authorized to commit the Resource only under an Emergency condition for the Hour. The Emergency Commitment Status will not be available to any Resource unless it has satisfied the conditions set forth in this Section 39.2.5.b.xxvi. An Outage Commitment Status indicates the Resource is not available for commitment during the Hour due to a planned or forced outage. A Not Participating Commitment Status indicates the Market Participant will not operate a Resource that is otherwise available. The Not Participating Commitment Status will not be available to any Resource that has all or a portion of its capacity designated as a Capacity Resource. In order to submit an Offer with an Emergency Commitment Status, a Resource must meet one of the following conditions: i) the AME Resource has an operating limit established by regulation (e.g., permits or federal and state laws or regulations) where the AME Resource can only be accessed during an Emergency to preserve its reliability value; ii) the Offer is based on a demonstrated severe energy limit, including but not limited to a fuel shortage affecting the Resource's capability to respond to three days of Emergency conditions; or, iii) the operating configuration of the Resource is inconsistent with "good utility practice" due to potential damage to equipment that is significant and difficult to quantify. Each of these conditions are further described in Business Practice Manual -009 Market Monitoring and Mitigation. A Market Participant for a Resource which does not satisfy any of these conditions may designate a Resource as an AME Resource and use the Emergency Commitment Status through consultation with the IMM as set forth in section 64.3.d of Module D.).

See also MISO: Operating Procedures (Oct. 25, 2022), <https://cdn.misoenergy.org/Three%20Pager%20-%20MISO%20Operating%20Procedures%2010252022318965.pdf> (identifying extreme weather as the type of condition that might ultimately warrant a Max Gen Event and necessitate placing all "available resources in use").

¹³ However, in order for Otter Tail to designate Coyote Station as an AME Resource, it must show that it i) has an operating limit established by regulation (e.g., permits or federal and state laws or regulations) where the AME Resource can only be accessed during an Emergency to preserve its reliability value; ii) the Offer is based on a demonstrated severe energy limit, including but not limited to a fuel shortage affecting the Resource's capability to respond to three days of Emergency conditions; or, iii) the operating configuration of the Resource is inconsistent with "good utility practice" due to potential damage to equipment that is significant and difficult to quantify. MISO Tariff § 40.2.7B.xxxiii. Consequently, to make use of the AME designation, Otter Tail would need the Commission to order that Otter Tail's Minnesota share of Coyote Station can only be accessed in an emergency and that doing so is a necessary operating limit established by regulation.

Designating the Minnesota share as an AME, Coyote Station will experience a reduction of generation of approximately 400,000 MWh annually (assuming MISO would have dispatched 70 MW at 65% capacity factor), equating to 488,000 tons of carbon reduction, while also being available in emergency circumstances to support reliability for Minnesota customers and all utility consumers in the region. Historically, between 2018 and 2022, these emergencies have been rare and lasted only for a short duration, with the longest Max Gen Status occurring in 2019 and lasting 46.5 hours. Under its current plan, and subject to the Commission ordering the limited dispatch of Coyote Station, Otter Tail would designate the Minnesota-allocated share of Coyote Station capacity as an AME Resource beginning March 1, 2029, and then annually during the annual nomination process until Otter Tail's withdrawal from Coyote Station or the plant's retirement.

Thus, if Otter Tail's Minnesota-allocated share of Coyote Station were designated as an AME Resource, it would effectively serve as an extremely low-capacity factor peaking plant—without requiring additional installation and other startup costs of a new generation facility—that does not run on a regular basis but is available if MISO calls on it during a Max Gen event. This solution retains the capacity and the emergency energy hedge that Coyote Station currently provides Minnesota customers, while reducing costs and carbon emissions resulting from day-to-day generation of the 70 MW attributable to Minnesota. With that said, Otter Tail will need to conduct a fatal flaw analysis to ensure that the AME designation can be implemented as envisioned. Should the Commission order that Coyote Station operations be limited, Otter Tail will then undertake the necessary analysis to determine the specific details of AME implementation and provide updates to the Commission in its next IRP, which is expected to be filed well before implementation of AME in 2029.

In sum, AME is anticipated to be a valuable tool for Otter Tail, until it withdraws from Coyote Station or the plant is retired, as it undertakes to plan its system on a bifurcated basis because it will allow the Company to plan for the Minnesota-specific share of Coyote Station with increased optionality. AME at Coyote Station will allow the Company to retain Coyote Station's capacity, thereby providing an important reliability benefit, and will help the Company ensure that it remains compliant with market monitoring regulations and its contractual obligations to the co-owners of Coyote Station. With respect to reliability, Coyote Station helps Otter Tail, as a winter-peaking system, mitigate substantial risk resulting from volatility in weather patterns, changes to MISO capacity accreditation standards, increased load on the Otter Tail system, capacity deficits across the industry and MISO in particular, and increased renewables onto the grid with the passage of the IRA. In other words, it provides capacity and an energy

hedge in the face of serious reliability concerns. Additionally, without an AME designation, Otter Tail would be required to offer the Minnesota-share of Coyote Station to MISO at all times to meet minimum loads¹⁴ and offer remaining energy generated into the market at a reasonable price, pursuant to FERC regulations prohibiting economic and physical withholding of generated energy.¹⁵ AME designation, however, allows Otter Tail not to generate beyond its contractually mandated minimum loads and to be dispatched only if MISO declares a Max Gen event as discussed above, thereby providing reliability and economic benefits while advancing Otter Tail toward compliance with Minnesota's carbon-free standard.

III. MINNESOTA PREFERRED PLAN WITH AME

As Otter Tail anticipated in its Reply Comments in this proceeding,¹⁶ it now views bifurcated resource planning as necessary to implement at this time. Consistent with its Supplemental Plan, Otter Tail continues to propose to begin the process of withdrawing from Coyote Station only if there is a material non-routine capital investment. In addition, Otter Tail is requesting that the Commission issue an order allowing it to designate Minnesota's jurisdictionally allocated share of the generation from Coyote Station as an AME Resource beginning March 1, 2029, subject to a fatal flaw analysis to be performed by the Company.

With the designation of Otter Tail's Minnesota-allocated share of Coyote Station as an AME Resource, Otter Tail reasonably anticipates that the energy available to Minnesota customers will decrease and that the costs of operating Coyote Station allocated to Minnesota customers will also decrease. With respect to costs, although Otter Tail believes that Minnesota rates should continue to reflect the Minnesota-

¹⁴ Coyote Station is 427 MW lignite-mine mouth facility located near Beulah, North Dakota that is co-owned by Otter Tail (35 percent), Northern Minnesota Municipal Power Agency (represented by Minnkota Power Cooperative) (30 percent), Montana-Dakota Utilities Co. (MDU) (25 percent), and Northwestern Energy (10 percent). Otter Tail is contractually obligated to these co-owners to operate to meet minimum loads.

¹⁵ Otter Tail must comply with FERC market manipulation regulations, including prohibitions on physical and economic withholding. *See generally* MISO, Business Practices Manual: Market Monitoring and Mitigation (January 17, 2023) (outlining the prohibitions against physical and economic withholding; defining physical withholding to mean making an electric facility or resource "partly or totally unavailable to the Energy and Operating Reserve Markets by, among other things, derating, forcing out of service or otherwise making the resource unavailable; and defining economic withholding to mean "submitting Offers for a Resource or Planning Resource" such that "any of the following would occur: 1) Resource output would not be dispatched or scheduled; 2) Resource or Planning Resource Offers would clear at prices significantly above competitive levels; or 3) RSG MWP's would change substantially"). If it fails to comply with these regulations, it could be exposed to substantial financial penalties. *See, e.g.,* News Release, *Commission Approves \$13.8 Million Settlement with Reliant Energy Over Physical Withholding in California Power Exchange Market* (January 31, 2003); *Reliant Energy to Refund \$13.8 Million*, LOS ANGELES TIMES (Feb. 2, 2003), <https://www.latimes.com/archives/la-xpm-2003-feb-02-admn-energy2-story.html>.

¹⁶ Reply Comments p. 7.

allocated share of Otter Tail's fixed costs for owning and operating the plant,¹⁷ the variable costs of operation should not be attributed to Minnesota except when the plant is called upon by MISO in emergency situations.¹⁸ These avoided costs would be a savings realized by Minnesota customers and would primarily consist of the portion of fuel that is variable.¹⁹ Based on actual and forecasted data, Otter Tail anticipates Minnesota customers can realize Coyote Station-related savings in a range of \$6.9 to 7.9 million annually through the AME designation beginning in 2029.

Otter Tail proposes that these cost savings should be used to offset the costs of adding renewable resources onto its system to help replace the 70 MW of energy that would no longer be available to Minnesota as a result of designation of Otter Tail's Minnesota-allocated share of Coyote Station as an AME Resource and to help Minnesota comply with its carbon-free standards. In its Reply Comments, Otter Tail presented different scenarios of what a Minnesota-only plan could entail in Table 7. Otter Tail believes that because this analysis also assumed the loss of energy from Coyote Station at the same time as the Minnesota Preferred Plan with AME, resource additions and timing should remain consistent.

Based on that analysis, and the Minnesota policy requiring the assessment of externalities on resource planning decisions, Otter Tail is proposing the following Minnesota Preferred Plan with AME.

¹⁷ Otter Tail assumes that, should it formally withdraw from Coyote Station, it would still be allowed to recover from Minnesota customers its stranded costs and a return on those stranded costs. Minn Stat 216B.16, subd. 6. *See also In the Matter of a Commission Inquiry into the Ratemaking Treatment for Early Retiring Generating Facilities Owned by Regulated Electric Utilities*, Docket No. E017/CI-23-375, in which the Commission is considering questions related to stranded costs.

¹⁸ Similarly, Otter Tail would expect the benefits of energy dispatch – such as market revenues and financial transmission rights – be allocated to the jurisdictions supporting such dispatch.

¹⁹ There may be some additional minor savings related to fixed O&M at the plant (for example, less maintenance due to reduced soot blowing or boiler washes) however, these costs are shared pro-rata by the plant co-owners and would be minimal when compared to the cost above.

Table 1: Minnesota Preferred Plan with AME

	Minnesota Preferred Plan with AME
Year	
2023	Hoot Lake Solar
2024	
2025	Wind Repowers 200 MW Surplus Solar*
2026	Astoria Onsite Fuel* 100 MW Generic Wind*
2027	
2028	
2029	AME at Coyote
2030	
2031	
2032	50 MW Generic Wind
Wind	150
Solar	200
Battery	0
Total	350

* The timing of the addition of 200 MW of surplus solar and 100 MW of generic wind is subject to project development requirements and may require adjustment given the passage of time. Similarly, Otter Tail now anticipates an in-service date for Astoria Station Onsite Fuel in 2027.

As show in Table 1, Otter Tail’s Minnesota Preferred Plan with AME adds 200 MW of Solar and 150 MW of wind by 2032 that will be solely allocated to the Minnesota jurisdiction. An expansion of the renewable generation resources on Otter Tail’s system serving Minnesota would allow sufficient renewables to be brought online to replace the energy from Coyote Station lost through AME designation. These resources would more than double the overall renewable generation serving Otter Tail’s Minnesota customers as well as advancing Otter Tail’s compliance with the CFS. Additionally, Otter Tail is proposing to remove the battery previously proposed in its Supplemental Plan, as the capacity at this time is no longer viewed as necessary by 2032 in light of the available capacity provided by Coyote Station under the AME designation.

IV. CONCLUSION

Although late in this proceeding, Otter Tail is presenting its Minnesota Preferred Plan with AME at this time as it the best possible plan to work toward meeting the needs of all of Otter Tail's stakeholders while providing flexibility to address the energy transition without requiring that irrevocable decisions be made today. Therefore, Otter Tail's Minnesota Preferred Plan with AME is in the public interest.

Dated: December 15, 2023

Respectfully submitted,

OTTER TAIL POWER COMPANY

Sincerely,

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