STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION

Katie Sieben	Chair
Hwikwon Ham	Commissioner
Valerie Means	Commissioner
Joseph Sullivan	Commissioner
John Tuma	Commissioner

In the Matter of Otter Tail Power Company's 2023-2027 Integrated Resource Plan

Docket No. E017 / RP-21-339

REPLY COMMENTS OF THE CLEAN ENERGY ORGANIZATIONS

April 17, 2024

TABLE OF CONTENTS

INTRODUCTION

The Clean Energy Organizations ("CEOs") appreciate the opportunity to submit reply comments to Otter Tail Power's ("the Company's") comments of April 3, 2024,[1] as well as to the settlement agreement submitted on April 2, 2024, between Otter Tail, the Department of Commerce, and labor organizations.[2] The CEOs are comprised in this case of the nonprofit organizations Fresh Energy, Clean Grid Alliance, Sierra Club, and the Minnesota Center for Environmental Advocacy.

ARGUMENT

I. Response to Otter Tail's April 3, 2024 Comments

In this section, CEOs respond to several points raised by Otter Tail's April 3 Comments: 1) the reliability and economic value of AME; 2) whether AME actually provides future resource flexibility; 3) the carbon emissions impact of AME; 4) compliance with the Minnesota Carbon Free Standard; 5) regulatory cost risks; 6) jurisdictional risks; and 7) commercial risks. The Company's April 3 Comments did not assuage our concern that there is not enough evidence in the record to support approval of AME, nor to show that its benefits outweigh its costs. While the Company's April 3 Comments discuss the costs of AME generally and claim that "In many respects our Minnesota customers' costs and benefit allocation is that associated with a peaking

[1] Otter Tail Power Company's Comments, April 3, 2024 (hereinafter, OTP April 3 Comments).
[2] Comprehensive Settlement Agreement, April 2, 2024.

plant," it did not provide a quantitative assessment of the costs or benefits of AME, and provided no quantitative comparison to alternatives in its filings.[3] CEOs' April 3 Comments remain the most robust quantitative analysis of the Company's AME proposal and alternatives in this proceeding.

A. Reliability and Economic Value

Otter Tail's April 3 Comments state that utilizing AME at "Coyote Station provides significant reliability and economic benefits while reducing the plant's carbon emissions and advancing Otter Tail toward compliance with the CFS."[4] CEOs do not disagree that utilizing AME at Coyote is environmentally preferable to continuing to operate the plant under business as usual until 2040. But we disagree that AME provides reliability or economic benefits over available alternatives. As demonstrated in our April 3 Comments, replacing the Minnesota share of Coyote with 75 MW of battery resources would provide the same (perhaps more) accredited capacity value, provide winter energy adequacy, and do so at a lower cost.[5]

Specifically, CEOs' April 3 Comments demonstrate that replacing Minnesota's share of Coyote with a 75 MW battery resource would result in 554 MW of winter accredited capacity in 2029 under today's accreditation methods, just 1 MW less than the Company's AME Plan provides that year.[6] CEOs note that Table 4 of our April 3

---

[3] OTP April 3 Comments, p. 21-24.
[4] OTP April 3 Comments, p. 8.
[5] CEOs Supplemental Comments, April 3, 2024 (hereinafter, CEOs April 3 Comments), p. 9-17.
[6] CEOs April 3 Comments, p. 12.

Comments which illustrates winter accredited capacity erroneously omitted data for 2030-2032. We provide the correct table below.

Table 4. Winter Season Accredited Capacity (MN Portion of OTP System, MW)
Corrected

	2025	2026	2027	2028	2029	2030	2031	2032
OTP AME Plan	516	556	557	558	555	555	536	556
Alt. CEO Plan with Battery	516	556	557	558	554	554	535	555

And contrary to the Company's assertions about capacity risks,[7] under the DLOL framework MISO has proposed to FERC, the battery would provide 17 MW *more* winter capacity than AME would: 68 MW compared to 51 MW from the AME share of Coyote. MISO plans to implement DLOL starting in the 2028-29 planning year,[8] so the DLOL numbers are relevant ones for this resource decision. We did not use DLOL in our modeling because MISO has not provided an explanation or proposal for how a new planning reserve margin requirement ("PRMR"), calculated using DLOL, will be allocated to each load serving entity ("LSE"). However, we do have a good sense of MISO's DLOL *resource accreditation* methodology and the resulting class-level accreditation values for each resource type.

CEOs also demonstrated that replacing Minnesota's share of Coyote with a 75 MW battery resource provides sufficient energy availability in peak winter conditions,

[7] OTP April 3 Comments, p. 23.
[8] MISO Resource Adequacy Subcommittee (RASC), Market Redefinition: Accreditation Reform, presented to MISO RASC Meeting Feb. 28, 2024, Slide 17.

including days with low wind output.[9] CEOs modeled this storage resource as a four-hour lithium-ion battery, and our production cost analysis demonstrates that this portfolio supplies enough energy to meet Otter Tail's Minnesota customer demand in each hour, even in challenging winter conditions. If the Company were to procure a longer duration (e.g., 6-12 hour) battery instead, energy adequacy would be further augmented. This is why CEOs recommend the Commission order that Otter Tail procure 75 MW of energy storage of *at least* four-hour duration, so that the Company can evaluate options and cost-effectiveness of medium duration storage on the market by 2029.

And last, CEOs demonstrated that replacing Coyote with a 75 MW battery resource is cheaper than AME, even before considering any externality values. Our modeling demonstrates that the change from pursuing AME to adding battery storage results in a PVRR savings of $22.8 million over the planning period.[10] While this is not a large difference overall (1.6% of total system costs) – it is significant given that this cost difference is exclusively driven by one 75 MW resource decision.

B. Operational Flexibility Provided by AME

Otter Tail states that one of the benefits of AME is that it "does not foreclose any future course of action concerning Coyote."[11] From a public interest perspective, the most desirable "future course of action" at Coyote is for the plant to retire by 2028 or as soon as possible thereafter. This would provide significant environmental and public health

[9] CEOs April 3 Comments, p. 15-16.
[10] CEOs April 3 Comments, p. 9-12.
[11] OTP April 3 Comments, p. 8.

benefits, provide climate benefits, and be most cost-effective for the customers that pay for Coyote station. However, since March 2023, Otter Tail has indicated that it is not willing to exercise its option to initiate a wind-down process at Coyote until there is a regulatory directive or unavoidable "major, nonroutine capital investment."[12] Under this circumstance, withdrawal from the Minnesota share of the plant (whether this leads to retirement or not) is the best option for Otter Tail's Minnesota customers.

However, instead of pursuing withdrawal, Otter Tail proposes AME as a way to reduce emissions while waiting for a large capital expense to materialize. As we note in our April 3 Comments, AME is partly a means of helping Otter Tail out of the difficulties presented by the Coyote Station operating agreement and its 2012 fuel supply agreement.[13] While AME may benefit the *Company*, Otter Tail has not shown that it confers the same level of benefit to customers. Given the Coyote Operating Agreement's five-year notice provision, and the likely timeline of litigation on pending environmental rules (discussed in our April 3 Comments),[14] this wait-and-see approach risks supporting the operation of Coyote well into the 2030s—much longer than is best for customers or the climate.

---

[12] See for example: OTP Supplemental IRP, March 31, 2023, pp. 38-40; OTP Reply Comments, October 30, 2023, p. 32; OTP April 3 Comments, pp. 14-16.
[13] CEOs April 3 Comments, p. 46.
[14] CEOs April 3 Comments, p. 49.

C. Carbon Emissions Impact

The Company's April 3 Comments suggest that AME may avoid "up to a half million tons of CO_2 per year," and "will result in emissions from Coyote Station being reduced on behalf of Minnesota customers by 99.8 percent."[15] CEOs do not take issue with the Company's characterization that AME will reduce emissions attributable to Minnesota, but we disagree that AME could avoid up to 500,000 tons of CO_2 per year. Carbon emissions attributable to Minnesota are a key consideration during Minnesota resource planning, but the Company's emissions estimate does not capture how AME would operate in reality. In our April 3 Comments, CEOs calculated a more precise carbon reduction impact looking at hourly historical operations and found that AME will on average lower emissions by only 277,000 tons of CO_2 per year, approximately a 9% reduction at the plant.[16] Thus, Otter Tail has overstated the emissions impact by nearly a factor of two.

The delta between our estimate and the Company's is due to our evaluation of hourly generation over three historical years versus the Company's improper use of annual estimated capacity factors. The Company calculates the AME impacts as an across-the-board decrease in generation and emissions. But as discussed in CEOs' April 3 Comments, section II.B., AME operations will in practice only lower the plant's economic *maximum* to 357 MW (except in emergency events, when the plant will be able to operate up to its 427 MW maximum). This 357 MW represents 84% of the plant's

---

[15] OTP April 3 Comments, p. 9.
[16] CEOs April 3 Comments, p. 24.

current maximum, and there are many hours throughout the year when MISO dispatches Coyote below this level. During such hours, AME would lead to no change in the generation and emissions at Coyote. AME will reduce emissions only during very high output hours by reducing the non-emergency maximum.

CEOs are deeply concerned about emissions from Coyote Station and would like to see them reduced and eliminated as soon as possible. However, we have determined that the high costs of AME make withdrawing from the Minnesota share, and investing in battery storage instead, a better option for the state of Minnesota and Otter Tail's Minnesota customers. As we note in our April 3 Comments, Minnesota customers would continue to pay the majority of operational costs at Coyote under AME—in large part due to the large portion of fixed costs at the plant.[17] If Minnesota customers continue to subsidize Coyote, we could well be extending its operating lifetime and therefore its CO_2 (and criteria pollutant) emissions. If pursuing AME delays the plant's retirement even by one year, the emissions resulting from that delay could outweigh emissions reductions resulting from AME over the remainder of Coyote's life. Instead, we believe it would be better to make a resource decision consistent with Minnesota's commitment to the clean energy transition and let actors with different priorities shoulder Coyote's costs if they so choose. In this case, the path aligned with Minnesota state policy also lowers resource

[17] CEO April 3 Comments, p. 25-30.

costs for Otter Tail's Minnesota customers, diversifies Otter Tail's resource portfolio, and invests in a technology (energy storage) which is urgently needed at scale in our region.[18]

D. Compliance with the Minnesota Carbon Free Standard

Otter Tail notes that its proposed AME Plan assists with the Company's efforts to comply with the Minnesota Carbon Free Standard ("CFS").[19] CEOs appreciate that the Company is taking CFS compliance seriously and is seeking to maximize the use of Minnesota-attributed carbon free generation to meet its obligation. However, the primary factor in advancing the Company's compliance position is renewable generation additions attributable to Minnesota. Its compliance position would be the same or better under CEOs Alternative Plan with Battery rather than the AME Plan. Both plans have the same wind and solar additions, and both plans eliminate (or nearly eliminate, in the case of AME) energy generated by Coyote Station that is attributable to Minnesota customers. CEOs' plan has the advantage of including battery storage, which will certainly help to speed future decarbonization efforts.

E. Regulatory Cost Risks

Otter Tail suggests that the AME plan will reduce Minnesota customers' exposure to carbon regulatory cost risks due to the emissions reductions of AME.[20] Otter Tail does not discuss the more imminent regulatory cost risks facing Coyote Station and Otter Tail's

---

[18] Siemens PTI, Energy Storage System Capacity Study Report, prepared for the State of Minnesota, Mar. 1, 2024, available at: https://www.lrl.mn.gov/docs/2024/mandated/240414.pdf.
[19] OTP April 3 Comments, p. 11-13.
[20] OTP April 3 Comments, p. 24.

customers given pending federal regulations on regional haze, carbon emissions from power plants, and the mercury and air toxics standard. As CEOs note in our April 3 Comments in section III.A and III.E, Otter Tail is not a majority owner of this plant and it is possible Otter Tail could be outvoted if its co-owners want to invest in expensive emissions controls.[21] If that happens, Otter Tail will have to choose between making its share of this investment, finding a buyer willing to make such an investment, or breaching its contract.

F. Jurisdictional Risk

Otter Tail suggests that other parties in this proceeding want the Commission to "order a full withdrawal" from Coyote and this "could be perceived as extending MN's policy prerogatives beyond its borders" prompting inter-state litigation.[22] Contrary to this assertion, CEOs did not ask for such an order. This is a planning proceeding, and we asked that the Commission approve withdrawal from the Minnesota portion of Coyote as part of Otter Tail's resource plan for serving its Minnesota customers.[23] We also note that approval of a resource plan including withdrawal from Coyote Station by 2028 is what Otter Tail originally sought in this proceeding as well.

CEOs have asked that the Commission ensure Minnesota ratepayers are not continuing to pay for or depend on coal generation from Coyote. Surely costs borne by Minnesota ratepayers and the type of resources they depend on are within the

[21] CEO April 3 Comments, p. 38 and 43-45.
[22] OTP April 3 Comments, p. 24.
[23] CEO April 3 Comments, p. 50.

jurisdiction of the Commission. Deferring to a neighboring jurisdiction's pro-coal policies would be subordinating Minnesota's legitimate policy interests to those of another state.

G. Commercial Risk

Otter Tail also reiterates in its April 3 Comments concerns about litigation and other business costs it could incur if withdrawal from or termination of the Coyote Station agreement results in disputes with co-owners.[24] While CEOs do not wish disputes on anyone, these risks and business costs are not the responsibility of Minnesota customers or regulators to resolve. As discussed in our April 3 Comments in section III.F, the Company entered into Coyote Station's Lignite Sales Agreement ("LSA") in 2012 without the Commission's approval. It did not describe its intent to make this new long-term commitment to coal power at Coyote in its resource plan that was then before the Commission, despite obvious Commission interest in the question of whether new long-term investments in aging coal plants were prudent. For example, whether to retire or invest in Hoot Lake was a major issue in the 2010 IRP, and whether to retire or invest in Big Stone was the subject of its own companion proceeding.

Moreover, Otter Tail chose to effectively extend Coyote's operating life through the LSA without amending the plant operating agreement to provide more options for exiting the plant or altering contract terms, such as in the event of a dispute or diverging jurisdictional preferences. By 2012, it was certainly clear that there would be a high likelihood for disputes and conflicting jurisdictional policy preferences regarding coal

---

[24] OTP April 3 Comments, p. 24.

plants during the term of this contract. We say this not to challenge Otter Tail's ability to enter into contracts, which it certainly is at liberty to do, but to challenge the presumption that its customers must pay for risks that Otter Tail unilaterally took on.

II. Response to Settlement Agreement Terms

While CEOs consider it more prudent and consistent with the public interest for the Commission to approve a plan that includes withdrawal from the Minnesota portion of Coyote by 2028, if the Commission decides to approve Otter Tail's AME Plan, CEOs agree that some provisions of the Settlement document[25] filed by Otter Tail are necessary for good implementation of the AME plan. The provisions CEOs recommend be adopted (subject to some modification) if the Commission approves AME are included below:

- 1a—If the Commission decides to approve use of AME at Coyote, CEOs recommend adopting an order point that would require AME to begin in 2026 or as soon as replacement renewable energy resources can be brought online, as this would allow for the greatest environmental benefit from the AME proposal. This timeline for renewable resource additions is consistent with Otter Tail's capacity expansion modeling, which selected new wind and solar in 2025 and 2026 when optimizing for the lowest-cost reliable portfolio, and therefore is likely to be lower cost for customers than waiting until late in the decade to bring on these resources.

- 2— If the Commission decides to approve use of AME at Coyote, CEOs do not oppose granting Otter Tail the ability to withdraw from the Minnesota share of Coyote if a material, non-routine capital investment is required. However, we also believe that Otter Tail should be required to get pre-approval from the Commission for any large, non-routine capital investment in Coyote that it does plan to make for the reasons discussed in our April 3 Comments, section III.A. CEOs also agree that an annual filing documenting capital projects at Coyote is appropriate. We are interested in the explanation from the settling parties and feedback from other commenters on whether the $30 million total

[25] Comprehensive Settlement Agreement, April 2, 2024.

plant (e.g., $10.5 million for Otter Tail) threshold is appropriate, or if the cost threshold should be lowered.

- 3—CEOs support Otter Tail's proposed addition of at least 200MW of solar and at least 150 MW of wind and also support the settlement's proposal that the Commission grant Otter Tail flexibility to obtain additional solar and wind capacity if economic projects are available. However, we recommend two modifications to this term: First, the Commission should order that the solar addition be completed as soon as possible, but no later than December 31, 2027, and the wind addition should be ordered to occur as soon as possible but no later than December 31, 2029. Otter Tail's optimized modeling selects 200 MW of solar in 2025 and 100 MW of wind in 2026; this indicates that customers are likely to benefit from bringing new resources online as soon as competitively priced projects can be acquired. Second, we recommend these order points allow hybrid projects to be considered, to provide the Company flexibility and encourage consideration of storage resources. CEOs support all costs and benefits of these carbon free resources being allocated to Minnesota customers only.

- 4—CEOs agree that it would be ideal for the carbon free projects discussed in Settlement item 3 to be located in Minnesota when possible.

- 5—CEOs support the maximization of high-quality jobs and creation of opportunities for local workers in Otter Tail's service territory and host communities.

- 6—CEOs believe it is critical for Otter Tail to explore storage options as storage will be critical for Otter Tail to transition away from its two existing coal plants. We agree that storage options should be modeled in Otter Tail's next IRP.

- 8—CEOs agree that in its next IRP, Otter Tail must model a plan to withdraw from the Minnesota share of Coyote by December 31, 2031, given the significant regulatory risk surrounding that plant due to EPA's greenhouse gas rule, regional haze rule, and mercury and air toxics standards. However, we urge the Commission to require that Otter Tail model Minnesota's withdrawal from Coyote as a fully explored scenario that is tested against various sensitivities (as opposed to the withdrawal run being one sensitivity performed on a no-withdrawal proposal).

- 9—CEOs are comfortable with this proposal on resource procurement for the Company given DOC's agreement with this plan.

Even if the Commission approves AME, CEOs recommend *against* Commission adoption of the following terms in the Settlement:

- 1b—CEOs do not support Otter Tail's proposed allocation of costs under the AME proposal. As discussed in our April 3 Comments, sections II.C-D and III.B, the Coyote plant has *significant* fixed costs that Otter Tail proposes Minnesota customers continue to pay despite the Minnesota share acting as a capacity-only resource. There is no record evidence to support a finding that it would be just and reasonable for Minnesotans to pay these high fixed costs if Minnesota's share of the plant is put on AME. Therefore, as set forth in our April 3 Comments, section III.B., CEOs believe any approval of the AME plan should be conditioned on agreement from Otter Tail that it will refund Minnesota customers if a future rate case, fuel adjustment proceeding, or other docket determines it is not just and reasonable for Minnesota customers to continue to pay the full amount of fixed costs at Coyote under AME operations.

- 7—CEOs also do not support Otter Tail's proposal to add on-site LNG to its Astoria natural gas facility, especially if the AME plan is approved. In that instance, Minnesotans will: (1) continue to pay for fixed costs at the Coyote plant (which will cost Minnesotans even more than at present due to lost market revenues), (2) pay for the entire cost of at least 350 MW of new renewable projects, and (3) will also pay a significant price for an "insurance" policy that adds LNG to the Astoria facility. CEOs' modeling indicates the renewable additions are a good investment for Minnesota customers (i.e., these additions are selected when the model optimizes for the lowest PVRR). However, neither AME nor the Astoria LNG addition are similarly good investments. Instead, they are intended as "insurance policies" against capacity and energy risk. However, Otter Tail has not shown why the Company needs these two insurance policies at the same time. Thus, CEOs do not believe Astoria should be approved in a plan where the Commission also approves AME.

We note in closing that the Settlement does not describe what should happen in the event that the AME plan cannot be carried out. While this risk appears diminished given the MISO correspondence attached to Otter Tail's April 3 Comments,[26] it is not

[26] Steven Clay, Senior Corporate Counsel, MISO, email to Lauren Donofrio, March 6, 2024, OTP April 3 Comments, Attachment 2.

eliminated, particularly given potential constraints under the Coyote operating agreement. We therefore continue to recommend that the Commission put in place the back-up requirements we discuss in our April 3 Comments, Section III.C, if it approves the AME proposal.

CONCLUSION

CEOs continue to support the recommendations we made in our Supplemental Comments of April 3, for the reasons set forth above and in those comments.

/s/ Amelia Vohs
Amelia Vohs
Climate Director and Regulatory Attorney
Minnesota Center for Environmental Advocacy
1919 University Ave W Suite 515
St. Paul, MN, 55401