STATE OF MINNESOTA
BEFORE THE PUBLIC UTILITIES COMMISSION

Katie Sieben	Chair
Joseph Sullivan	Vice-Chair
Valerie Means	Commissioner
Matt Schuerger	Commissioner
John Tuma	Commissioner

In the Matter of Otter Tail Power Company's 2022–2036 Integrated Resource Plan

DOCKET NO. E-017/RP-21-339

COMMENTS OF THE OFFICE OF THE ATTORNEY GENERAL

INTRODUCTION

The Office of the Attorney General—Residential Utilities Division ("OAG") respectfully submits the following Comments on the March 31, 2023 Application for Supplemental Resource Plan Approval of Otter Tail Power Company ("Otter Tail" or "the Company"). The Company's supplemental preferred plan is a step backward from its original proposal, filed in September 2021, which would have saved ratepayers millions of dollars by divesting its interest in an uneconomical coal plant. The Company now proposes to retain ownership of that plant through 2041 while also investing millions of new dollars in a peaking plant that has been in service for less than three years—and whose construction costs the Commission approved only last year. The Company's preferred plan is inconsistent with Minnesota's resource-planning criteria and the public interest, and modifying the plan as recommended in these Comments would save customers more than $140 million. The Commission should do so.

BACKGROUND

Otter Tail's resource-selection decisions in recent years have been marked by an overreliance on fossil-fuel generation that has increased costs for its ratepayers. In 2012, the Company signed a fuel-supply agreement for one of its power plants, Coyote Station, that required the plant to burn coal from a nearby mine until 2041 or face stiff cancellation fees. As a result of this contract, Coyote Station incurred millions more in production costs than it received in offsetting market revenues ("production-cost losses").

After Coyote Station had begun realizing substantial production-cost losses, Otter filed a resource plan ("the 2016 IRP"[1]). The 2016 IRP contained no mention of these losses. It also overestimated the cost of alternative resources such as wind generation. The Commission nonetheless approved twice the amount of wind that Otter Tail had originally proposed in the 2016 IRP. The Company unfortunately did not take advantage of this authority to procure more wind, missing an opportunity to lower energy costs for ratepayers. Otter Tail also twice asked the Commission to allow the Company to delay filing its next IRP, without mentioning Coyote Station's ongoing production-cost losses. Ultimately, these losses did not come to the Commission's attention until the OAG and other parties raised the issue in early 2021.

When Otter Tail finally filed its current IRP, in September 2021, the Company initially proposed to divest its interest in Coyote Station, only to back away from this proposal months later, citing certain "risks and uncertainties" that might impact its future capacity position. At the same time, however, Otter Tail argues that various risks and uncertainties militate in favor of *approving* expensive new investments in Astoria Station, a recently built gas-fired peaking plant. These investments would enable onsite fuel storage at Astoria but would also expose ratepayers to an increased risk of stranded assets if future regulations limit or ban the use of fossil rules for electricity generation.

[1] These Comments use the terms "integrated resource plan," "IRP," and "resource plan" interchangeably.

I. OTTER TAIL'S SELF-IMPOSED RELIANCE ON COAL-FIRED GENERATION HAS COST ITS RATEPAYERS MILLIONS.

Despite retiring its sole Minnesota-based coal-fired generator in 2021, Otter Tail remains heavily reliant on coal. The Company's two remaining coal-burning plants, in North and South Dakota, are expected to supply approximately 55 percent of the Company's generation mix in 2023.[2] One of these plants, Coyote Station, was the subject of controversy in the Company's last rate case due to its substantial production-cost losses.

Coyote Station is a 427 megawatt ("MW") coal-fired power plant near Beulah, North Dakota.[3] Otter Tail co-owns the plant with three other utilities.[4] In 2012, the Company and its co-owners signed a new fuel-supply agreement with Coyote Creek Mining Company, LLC, a subsidiary of the North American Coal Corporation.[5] This contract, known as a Lignite Sales Agreement, or "LSA," obligates the plant to burn the mine's output beginning in May 2016 and continuing through December 2040.[6] Otter Tail entered into the LSA without giving the Commission an opportunity to evaluate it. Because of the way the contract is structured, the result has been more coal burned at increased costs for ratepayers.

The Lignite Sales Agreement includes a relatively large fixed-cost component, which makes up **[TRADE SECRET DATA BEGINS TRADE SECRET DATA ENDS]** of the total fuel price.[7] In economic terms, Coyote Station's large fixed fuel costs are "sunk." As long as the plant's owners are purchasing fuel under the LSA, they must pay the fixed portion regardless of how often the plant is actually dispatched.[8] This means that the owners dispatch the

[2] *See* OTP Appl. for Suppl. Resource Plan Approval at 10 (Mar. 31, 2023) [hereinafter "Suppl. Plan"].
[3] Docket No. E-017/GR-20-719, Direct Test. of Andrew Twite at 53 (Apr. 2, 2021) [hereinafter "Twite Direct"].
[4] The plant has three owners in addition to Otter Tail: Northern Minnesota Municipal Power Agency, Montana-Dakota Utilities Co., and Northwestern Energy. Suppl. Plan at 34.
[5] Twite Direct at 55.
[6] *Id.*
[7] *Id.* at 56.
[8] *Id.*

plant more often under the LSA than they would if more of the plant's fuel costs were variable.[9] Put differently, the large sunk component of the LSA gives Coyote Station a "leg up" on other sources of generation by decreasing the variable cost of operating the plant.

Otter Tail's decision to enter into the Lignite Sales Agreement has had negative consequences for its ratepayers. Analysis by the OAG in the Company's last rate case revealed that Coyote Station's production costs have increased by 35 percent since deliveries began under the LSA.[10] In terms of dollars, production costs increased by $4.7 million per year under the LSA, holding generation levels and market prices constant.[11] This amount does not include the plant's significant nonproduction costs that ratepayers bear, such as depreciation, taxes, and return on rate base. In 2022 alone, the Minnesota share of Coyote Station's depreciation, taxes, and return totaled $5.6 million.[12]

Otter Tail filed its last IRP in June 2016[13] after Coyote Station had begun incurring large production-cost losses.[14] The 2016 IRP contained no discussion of Coyote Station's production-cost losses or the LSA. The Company also significantly underestimated Coyote Station's operating costs and overestimated the cost of alternative generation resources, such as wind.[15] Neither Coyote Station's ongoing production-cost losses—nor a 2016 wind solicitation whose results suggested that the wind-cost assumptions in the IRP were too high[16]—prompted Otter Tail to bring these issues to the Commission's attention. Instead, the Company twice asked to postpone

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[9] *Id.*
[10] *Id.* at 59.
[11] *Id.*
[12] *See* OTP Resp. to OAG IR No. 018 (May 16, 2023). By email, Otter Tail confirmed that the figures for Coyote Station's depreciation, return, and grossed-up return listed at pages two to three of the response are not trade secret.
[13] *See In the Matter of Otter Tail Power Company's 2017–2031 Integrated Resource Plan*, Docket No. E-017/RP-16-386, Initial Filing (June 1, 2016).
[14] *See* Twite Direct at 54 fig.7 (showing losses beginning in 2015 and continuing through 2020).
[15] *Id.* at 62–64.
[16] *See id.* at 64 (discussing wind and solar RFP results); *see also* Docket No. E-017/M-17-279, Petition for Approval of the Merricourt Wind Project (Apr. 11, 2017).

the filing of its next IRP, delaying any meaningful scrutiny of Coyote Station's economics even as the plant's production-cost losses continued to mount.

II. Otter Tail Failed to Procure Most of the Wind Generation Contemplated by the Commission's Last IRP Order, Missing an Opportunity to Save Ratepayers Millions.

Otter Tail's preferred plan in the 2016 IRP included adding 100 MW of wind generation in 2018 and another 100 MW in 2020.[17] Modeling by the Department of Commerce, however, showed that adding even more wind generation would lower system costs.[18] The Commission agreed and modified Otter Tail's preferred plan to include 200 MW of wind generation in 2018–2020 and another 100 to 200 MW in 2022–2023.[19] Thus, in the Company's last IRP proceeding, the Commission ordered Otter Tail to procure a total of 300 to 400 MW of wind in 2018–2023. As of September 2021, when it filed this IRP, however, the Company had only procured a fraction of that amount, completing the 150 MW Merricourt Wind Farm at the end of 2020.[20]

Otter Tail's initial filing does not identify any plans to procure the remainder of the wind generation that the Commission authorized for 2018–2023. The Company also fails to acknowledge the shortfall[21] or to address with any specificity the Commission's request that it "discuss[] how incremental levels of new wind could be reasonably procured and worked into the system while maintaining reliability of service."[22] Otter Tail's failure to procure more wind or, apparently, to even take a hard look at how more wind could be procured, is unfortunate not only

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[17] *Id.* at 2-3 tbl.2-1.
[18] Docket No. E-017/RP-16-386, Order Approving Plan with Modifications and Setting Requirements for Next Resource Plan at 8 (Apr. 26, 2017) [hereinafter "2017 IRP Order"].
[19] 2017 IRP Order at 10.
[20] OTP Appl. for Resource Plan Approval at 4 tbl.2-1 (Sept. 1, 2021) [hereinafter "Initial Plan"].
[21] *See id.* (mentioning the Commission's directive to procure 200 MW in 2018–2020 but not the additional 100–200 MW in 2022–2023).
[22] 2017 IRP Order at 10.

because it contravenes Commission direction but also because the Company consequently missed an opportunity to procure a large amount of low-cost generation for its customers.

If Otter Tail had heeded the Commission's direction to procure more wind, it would likely have been able to obtain very low-cost wind, significantly reducing customer bills. When the Company last issued a request for proposals for wind generation, in 2016, it received bids for hundreds of megawatts in wind power-purchase agreements priced under $25 per megawatt–hour ("MWh").[23] Since then, however, the interconnection process has slowed to a crawl due in part to the lack of regional transmission capacity,[24] making it much harder for new generation projects to access the grid. A further result of this bottleneck is that the median price to purchase wind has now risen to around $55 per MWh.[25] These developments mean that Otter Tail missed out on a golden opportunity to procure low-cost energy for its customers. As a result, instead of seeing their bills reduced by additional wind resources, customers had to pay for more-expensive energy from other sources, such as Coyote Station.

III. Otter Tail Pushed to Postpone Filing the Current IRP Even as Coyote Station's Production-Cost Losses Continued to Mount.

Following its 2016 IRP, Otter Tail twice requested and received extensions on the filing of its next IRP, ostensibly for the purpose of gaining certainty about federal environmental-compliance costs. The resulting delay postponed Commission scrutiny of Coyote Station's economics but, ultimately, yielded no certainty about the plant's environmental-compliance costs.

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[23] *See In the Matter of Otter Tail Power Company's Petition for Approval of the Merricourt Wind Project*, Docket No. E-017/M-17-279, Department's Trade Secret Comments attach. B (June 19, 2017) (comparing proposals).
[24] *See* Emma Penrod, *Why the Energy Transition Broke the U.S. Interconnection System*, Utility Dive (Aug. 22, 2022), https://www.utilitydive.com/news/energy-transition-interconnection-reform-ferc-qcells/628822/.
[25] *See In the Matter of the Petition of Northern States Power Company for Approval of Sherco Solar 3 and the Apple River Solar Power Purchase Agreement*, Docket No. E-002/M-22-403, Xcel Petition at 7 fig.2 (May 5, 2023) (showing wind and solar PPA prices from Q1 2023).

The Commission's April 2017 IRP order had directed Otter Tail to file a new resource plan by June 2019.[26] In August 2018, Otter Tail requested that this deadline be extended by one year to gain more certainty on the potential cost of federal environmental regulations.[27] At that time, two states where Otter Tail operates coal-fired power plants, North Dakota and South Dakota, were developing strategies to comply with the U.S. EPA's Regional Haze Rule.[28] Otter Tail stated that it expected the states to "identify[] preliminary year 2028 [pollution-]control strategies by the end of 2019."[29] The Commission granted the Company's extension request.[30]

In August 2019, Otter Tail sought another extension of its IRP filing deadline, this time to September 2021.[31] The primary basis of this request was the same as the first: uncertainty around the cost of complying with the Regional Haze Rule. The Company revealed that Coyote Station might have to take steps to limit emissions of nitrogen oxides and sulfur dioxides under North Dakota's forthcoming state implementation plan, or "SIP."[32] According to Otter Tail, accurate information on the cost of compliance would be very important for the Company to develop a useful resource plan.[33] Otter Tail stated that this information would be available once North Dakota completed its SIP, which was due to the EPA in July 2021.[34] With some misgivings, the Commission granted the Company's second extension request.[35]

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[26] 2017 IRP Order at 10.
[27] Docket No. E-017/RP-16-386, OTP Letter at 3 (Aug. 23, 2018).
[28] The Regional Haze Rule calls for state and federal agencies to "to develop and implement air quality protection plans to reduce the pollution that causes visibility impairment" in 156 U.S. national parks and wilderness areas. U.S. EPA, Regional Haze Program https://www.epa.gov/visibility/regional-haze-program (Apr. 20, 2023).
[29] OTP Letter at 3 (Aug. 23, 2018).
[30] Docket No. E-017/RP-16-386, Order Extending Deadline for Filing Resource Plan (Dec. 13, 2018).
[31] Docket No. E-017/RP-16-386, OTP Letter (Aug. 29, 2019).
[32] *Id.* at 7–8.
[33] *Id.* at 9.
[34] *Id.* at 7, 9.
[35] *See* Docket No. E-017/RP-16-386, Order Extending Deadline for Filing Resource Plan, Requiring Supplemental Filing, and Completing Competitive Bidding Process at 4 (Dec. 30, 2019) (granting extension request while noting Commission's "concern[] about the need for a second extension").

July 2021 came and went without North Dakota issuing a proposed SIP. When the state finally issued its proposed SIP, in August 2022, it did not call for any new pollution controls to be added to Coyote Station.[36] This development, however, does not mean that Coyote Station will incur no compliance costs, because the EPA has the final word on the adequacy of North Dakota's proposed SIP.[37] The EPA's final ruling may not come until 2024.[38] While the EPA's final decision is impossible to predict, the agency's comments on the proposed SIP state that North Dakota should reassess its determination that emissions controls are not warranted for Coyote Station.[39]

IV. When It Finally Filed Its 2021 IRP, Otter Tail Proposed to Divest Its Ownership Interest in Coyote Station by 2028. It Retracted That Proposal Months Later.

In early 2021, the OAG highlighted Coyote Station's production-cost losses in Otter Tail's rate case[40] and the Commission's investigation into self-commitment and self-scheduling of large baseload generation facilities.[41] In the latter docket, the OAG recommended that the Commission require Otter Tail to include in its next IRP filing a scenario in which the Company divests its ownership interest in Coyote Station by the end of the 2022–2023 planning year.[42] The Commission did not adopt this recommendation. Nonetheless, when Otter Tail filed its initial resource plan on September 1, 2021, the Company not only analyzed divesting from Coyote

36 *See* N.D. Dep't of Env. Quality, *North Dakota State Implementation Plan Revision for Regional Haze* at 100 (Aug. 10, 2022), *available at* https://deq nd.gov/publications/AQ/Planning/RegionalHaze/Round 2/ND Proposed RH2 SIPrevision 8-11-2022.pdf.
37 *See* OTP Response to OAG IR No. 023.
38 *See id.* at 2 (stating that Otter Tail expects a proposed decision from EPA in 2023 and a final decision 6–12 months thereafter).
39 *Id.*
40 *See* Twite Direct at 53–71.
41 Docket No. E-999/CI-19-704, OAG Reply Comments (June 1, 2021).
42 *Id.* at 7.

Station but affirmatively proposed to divest its ownership interest by 2028—13 years ahead of the plant's currently approved accounting life of 2041.

Otter Tail characterized the economic case for early withdrawal as "compelling." The Company stated,

> In almost every scenario and permutation analyzed, the results are clear: It is no longer in customers' best interest for Otter Tail to continue to participate as an owner in Coyote Station. This outcome is true regardless of any future compliance obligation or potential change in law. Should significant investments need to be made at Coyote Station for environmental compliance purposes, the economic analysis is even more compelling. Consequently, Otter Tail is proposing to commence the process of withdrawing from its ownership interest in Coyote Station upon approval of this Preferred Plan with the consummation of that process expected by the end of 2028.[43]

In other words, *Otter Tail's own modeling* showed early withdrawal from Coyote Station to be overwhelmingly the most cost-effective course of action, regardless of whether major upgrades were needed to comply with the Regional Haze Rule.[44] Moreover, all of the scenarios Otter Tail analyzed assume *full* rate recovery of early termination fees under the LSA *and* a return on the remaining undepreciated plant balance.[45] As discussed later in these Comments, however, these assumptions are not reasonable, and when these post-withdrawal costs are disregarded, the case for early withdrawal becomes even stronger.

Otter Tail retracted its proposal to exit Coyote Station in a supplemental IRP filed March 31, 2023. Although the Company's modeling continues to show that exiting Coyote in 2028 would decrease costs for customers,[46] Otter Tail now supports retaining its interest in Coyote Station barring the need for "a large, non-routine capital investment, such as may be required by

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[43] Initial Plan at 6–7.
[44] Although Otter Tail proposes to withdraw in 2028, its modeling shows that earlier withdrawal would be even more cost effective. *See* Initial Plan, app. I at 1, row 3 (showing a lower NPVRR for a 2026 exit than for 2028).
[45] *See* Initial Plan at 46 (discussing "Estimated Foreseeable Withdrawal Costs" included in modeling).
[46] *See* Suppl. Plan, app. I.

the federal Regional Haze Rule."[47] The Company summarized the reason for its about-face as follows:

> As a winter peaking utility we are particularly concerned about [the Midcontinent Independent System Operator's[48]] new seasonal reserve margin requirements, open questions concerning MISO accreditation methodologies, and projected capacity deficits within MISO—especially when we consider changes to our load forecasts. These and other factors discussed herein raise significant concerns about our future capacity position and the degree to which MISO capacity and energy markets will be available . . . at a reasonable cost.[49]

Though MISO's shift to seasonal reserve margins has long been anticipated, Otter Tail asserts that this change, along with the other noted factors, means that exiting Coyote Station no longer furthers the public interest.[50] The Company argues that its updated plan should be viewed not as a significant departure from its initial plan but as a "cautious pause" in the face of various risks and uncertainties.[51]

V. While Recommending a "Cautious Pause" on Withdrawing from Coyote Station, Otter Tail Urges Swift Approval of Its Proposal to Sink Millions of Dollars into a Newly Minted Gas Peaking Plant.

The Commission's 2017 IRP order found a need for 250 MW of peaking capacity in 2021.[52] To address this need, Otter Tail built a 245 MW simple-cycle natural-gas-fired generator, Astoria Station, that came online in early 2021.[53] Otter Tail included the plant's construction costs, which totaled approximately $148 million, in the rate case that it filed in November 2020.[54] Before the Commission had even had an opportunity to evaluate Astoria Station's initial construction

[47] Suppl. Plan at 3.
[48] The Midcontinent Independent System Operator, or "MISO," is the organization responsible for planning and operating the Midwestern transmission grid. *See* About MISO, https://www misoenergy.org/about/ (last visited Sept. 10, 2023).
[49] Suppl. Plan at 2.
[50] *Id.* at 3.
[51] *Id.* at 13.
[52] 2017 IRP Order at 10.
[53] Initial Plan at 4 tbl.2-1.
[54] Docket No. E-017/GR-20-719, Direct Test. of Kirk Phinney at 4 (Nov. 2, 2020).

costs, Otter Tail filed the current resource plan, proposing to invest an additional **[TRADE SECRET DATA BEGINS TRADE SECRET DATA ENDS]** million in the plant to enable it to burn fuel oil as an alternative to natural gas ("dual-fuel proposal").[55] Otter Tail later increased its cost estimate to **[TRADE SECRET DATA BEGINS SECRET DATA ENDS]** million and proposed to use liquified natural gas ("LNG") as a backup fuel instead of fuel oil.[56]

Based on these numbers, Otter Tail's dual-fuel proposal marks a **[TRADE SECRET DATA BEGINS TRADE SECRET DATA ENDS]** increase in the cost of a peaking plant that, at the time that the Company made the proposal, had been in service for less than a year. In contrast to its cautious approach to Coyote Station, Otter Tail pushed for the Commission to expedite consideration of the Astoria dual-fuel proposal so that it could be heard and decided ahead of the other components of the Company's resource plan.[57] The Commission initially granted the Company's request to bifurcate the case but ultimately decided to take up the dual-fuel proposal along with the rest of the Company's resource plan.[58]

It is unclear why dual-fuel capability was not included in Otter Tail's original proposal for Astoria Station. The Company states that, during project development, it confirmed that any of the combustion turbines under consideration could be converted to dual fuel, but that the plant "was designed, permitted, and constructed with natural gas as the sole source of fuel."[59] Dual-fuel capability is not mentioned in Otter Tail's rate-case testimony supporting cost recovery, and it is unclear whether the Company's decision to select a dual-fuel-capable turbine increased the costs of the original plant.

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[55] Initial Plan at 6, 35.
[56] OTP Suppl. Comments at 17–18 (Nov. 4, 2022).
[57] *See* OTP Letter (Oct. 14, 2022).
[58] *See* Order Reintegrating Astoria Station Duel Fuel Proposal with Resource Plan at 8 (May 16, 2023) (deferring a decision on the merits of the dual-fuel proposal to a future Commission meeting).
[59] Initial Plan at 54.

LEGAL STANDARD

Minnesota utilities must periodically file resource plans to identify "a set of resource options that a utility could use to meet the service needs of . . . customers over a forecast period."[60] Nonutility parties and other interested persons may file alternative resource plans.[61] The Commission must approve, reject, or modify a utility's resource plan[62] based on criteria set forth in statute and rule. The Commission evaluates resource plans on their ability to:

A. maintain or improve the adequacy and reliability of utility service;

B. keep customers' bills and rates as low as practicable;

C. minimize adverse socioeconomic and environmental impacts;

D. enhance the utility's ability to respond to changes in the financial, social, and technological factors affecting its operations; and

E. limit the risk of adverse effects on the utility and its customers from financial, social, and technological factors beyond the utility's control.[63]

Together, these criteria help ensure that utilities are planning to meet their customers' energy needs reliably, cost-effectively, and consistent with socioeconomic and environmental considerations.

ANALYSIS

Otter Tail characterizes its supplemental preferred plan as a least-cost/least-risk plan.[64] Close scrutiny of the Company's proposals regarding Coyote Station and Astoria Station, however, shows that the Company's current plan comes with substantial costs and risks. Exiting Coyote Station by 2028 and shelving the Astoria dual-fuel project would save ratepayers more than $140 million in present value compared to the Company's preferred plan—even without considering environmental impacts or potential EPA-required upgrades. Otter Tail's preferred plan thus would

[60] Minn. Stat. § 216B.2422, subds. 2(a), 1(d).
[61] Minn. R. 7843.0300, subp. 11.
[62] Minn. Stat. § 216B.2422, subd. 2(a).
[63] Minn. R. 7843.0500, subp. 3.
[64] Suppl. Plan at 46

not keep customers' bill and rates as low as practicable. It also would not minimize adverse socioeconomic and environmental impacts. And it would expose ratepayers to the financial risk of future federal or state laws limiting or banning the use of fossil fuels in energy generation. For these reasons, and as further explained below, the Commission should find that Otter Tail's preferred plan is not in the public interest.

I. OTTER TAIL HAS NOT PROVEN THAT ITS CONTINUED PARTICIPATION IN COYOTE STATION IS IN THE PUBLIC INTEREST.

Coyote Station is a 427 MW coal-fired power plant that was built in the early 1980s.[65] The plant is a "mine mouth" plant,[66] meaning that it is sited where its fuel is mined—specifically, the Coyote Creek Mine near Beulah, North Dakota. The specific kind of coal that Coyote Station burns is known as lignite.[67] As with other types of coal, burning lignite emits not only climate-modifying carbon dioxide but also "hazardous" air pollutants like mercury and "criteria" pollutants such as sulfur dioxide, nitrogen oxides, and fine particulate matter. Mercury is a neurotoxin that builds up in the tissue of fish and other aquatic life, making them unsafe for humans to consume.[68] Sulfur dioxide and nitrogen oxides cause respiratory harm and form other types of pollution, such as acid rain, ozone, and particulate matter.[69] Recent research has shown fine particulate matter to be responsible for one in five deaths worldwide.[70]

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[65] *See id.* at 34.
[66] Docket No. E-017/GR-20-719, Rebuttal Test. of Bruce Gerhardson at 27 (Apr. 30, 2021).
[67] Lignite has the lowest energy content of all coals, which means that more must be burned to generate a given amount of energy. *Coal Explained*, U.S Energy Info. Admin., https://www.eia.gov/energyexplained/coal/ (last visited Sept. 10, 2023).
[68] *How People Are Exposed to Mercury*, U.S. Env't Prot. Agency, https://www.epa.gov/mercury/how-people-are-exposed-mercury#methylmercury (last visited Sept. 10, 2023).
[69] *Sulfur Dioxide Basics*, U.S. Env't Prot. Agency, https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#effects (last visited Sept. 10, 2023); *Basic Information About NO_2*, U.S. Env't Prot. Agency, https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects (last visited Sept. 10 2023).
[70] *Fossil Fuel Air Pollution Responsible for One in Five Deaths Worldwide*, Harvard Sch. of Pub. Health (Feb. 9, 2021), https://www hsph.harvard.edu/c-change/news/fossil-fuel-air-pollution-responsible-for-1-in-5-deaths-worldwide/.

In 2012, Otter Tail entered into a Lignite Sales Agreement that required Coyote Station to burn the mine's output until 2041 or face stiff exit penalties.[71] As discussed earlier, the LSA has a substantial fixed-cost component, causing the plant to run more than it would have if its variable costs had reflected its full fuel costs. As a result of the LSA, the plant's total per-MWh production costs have greatly exceeded the revenues that the plant receives from market energy sales.[72] The decision to enter the LSA thus not only locked Otter Tail into burning coal until 2041, but it also harmed ratepayers by forcing them to underwrite these production-cost losses.

Coyote Station's operation is also complicated by the fact that it has multiple owners and sells power into the markets of two independent system operators—MISO and the Southwest Power Pool ("SPP").[73] Otter Tail notes in its supplemental IRP filing that "[t]he SPP and MISO markets do not have mechanisms for inter-ISO coordination of commitment status of jointly owned units that partially operate in each ISO."[74] Moreover, the plant is physically one generator, and the co-owners' shares cannot be dispatched separately. As a result, the co-owners are contractually obligated to take their share of the plant's minimum output if any owner dispatches its share.[75]

Coyote Station's multi-market, multi-owner arrangement, along with the high fixed costs of the LSA, constrains Otter Tail's ability to dispatch the plant economically in response to fluctuating market prices. Perhaps unsurprisingly, then, Otter Tail's IRP modeling shows withdrawing from Coyote Station to be cost-effective in the majority of sensitivities. In the Company's initial plan, there were only two sensitivities in which the model found withdrawal to be uneconomic, and these scenarios assumed that actual natural gas and energy market prices

[71] *See* Initial Plan at 46 tbl.3-11 (listing Coyote Station withdrawal costs, including $21.7–$33.3 million in "LSA Early Termination Costs").
[72] *See* Twite Direct at 57–60 (reviewing Coyote Station's production costs under the LSA and concluding that the LSA "is likely the largest factor contributing to the plant's production cost losses over the past five years").
[73] *Id.* at 53.
[74] Suppl. Plan at 34.
[75] *Id.* at 34–35.

would end up being *double* the forecasted levels.[76] Even in those scenarios, however, early withdrawal was only marginally uneconomic.[77] As Otter Tail stated in its initial plan, "the results are clear: It is no longer in customers' best interest for Otter Tail to continue to participate as an owner in Coyote Station."[78]

In its March 31, 2023 supplemental IRP filing, Otter Tail backed away from its proposal to withdraw from Coyote Station. But in the great majority of the Company's modeling scenarios, a 2028 exit continues to be more cost-effective than a 2040 exit—with a 2028 exit yielding a $40 million savings under Base Case assumptions.[79] This savings assumes that *no* upgrades are required to comply with the Regional Haze Rule. It also assumes *full* rate recovery of $21.7 million in coal contract exit fees and an additional $33.4 million in stranded-asset costs.[80] But if the EPA ends up requiring upgrades, or if the Commission limits the recoverability of some of these post-withdrawal costs, the customer savings of an early exit from Coyote would be much greater than $40 million. Section III below demonstrates that when the full potential savings of exiting Coyote Station are combined with the savings from foregoing the Astoria dual-fuel project, they add up to nearly $146 million in ratepayers savings on a present-value basis.

The foregoing analysis does not consider Coyote Station's impact on human health and the environment. As a ratepayer advocate, the OAG generally focuses its resource-planning analysis on customer bill impacts. The growing environmental and socioeconomic impacts of human-driven climate change, however, have become impossible to ignore. Numerous recent news articles have documented the extreme heat, unusual weather patterns, and natural disasters that

[76] Initial Plan at 25 & n.21.
[77] *See id.*, app. I, at 1 col. G.
[78] *Id.* at 6–7.
[79] Suppl. Plan, app. I at 1, col. A.1 row 2.
[80] Suppl. Plan at 41 tbl. 5-3 (listing Coyote Station withdrawal costs).

have occurred this year alone. For example, following Earth's hottest June on record, in July 2023 the planet set records for the hottest day and month ever recorded.[81] It then immediately experienced the hottest August on record, which was also the second hottest month ever recorded, after July.[82] Continuing to burn lignite at Coyote Station until 2040 would aggravate these climate impacts as well as exacerbate the effects of conventional air pollutants.

Fortunately, the Commission does not have to choose between minimizing ratepayer costs and minimizing harm to the environment because an early exit from Coyote Station would minimize both. In resource planning, the human and environmental impacts of electricity generation are modeled using damage values set by the Commission, known as "externalities."[83] According to Otter Tail's modeling, exiting Coyote Station in 2028 would save $113 million when counting externality values.[84] Because early withdrawal would minimize both customer costs and environmental costs, Otter Tail has not demonstrated that its supplemental preferred plan is in the public interest, and the Commission should direct the Company to instead pursue withdrawing from Coyote Station by 2028 as it originally proposed.

Otter Tail's supplemental preferred plan proposes to await the EPA's decision on North Dakota's Regional Haze SIP and to exit the plant only if the agency requires major upgrades. While a wait-and-see approach might avoid major investments in the plant, it is unnecessary because the Company's own modeling shows that withdrawal is cost-effective *regardless* of whether major investments are required. Otter Tail also highlights several risks and uncertainties

[81] *July 2023 Is Set to Be the Hottest Month on Record*, World Meteorological Org. (July 31, 2023), https://public.wmo.int/en/media/press-release/july-2023-set-be-hottest-month-record.
[82] *Earth Had Hottest Three-Month Period on Record, with Unprecedented Sea Surface Temperatures and Much Extreme Weather*, World Meteorological Org. (Sept. 6, 2023), https://public.wmo.int/en/media/press-release/earth-had-hottest-three-month-period-record-unprecedented-sea-surface.
[83] *See* Minn. Stat. § 216B.2422, subd. 3 (establishing requirement to consider environmental costs in resource planning).
[84] Suppl. Plan, app. I at 3, col. A.1 row 2.

that it argues support a "cautious pause" on exiting Coyote Station.[85] These risks and uncertainties include new modeling scenarios, the Company's capacity position, MISO's capacity position, and energy-market volatility.[86] While Otter Tail characterizes these risks and uncertainties as being new, they do not appear to differ materially from the risks and uncertainties that the Company has always faced. MISO's shift to a seasonal resource-adequacy construct, for example, has been anticipated for some time even if the particulars were not known until recently.[87]

Otter Tail has not shown that its supplemental preferred plan would keep customers' bills and rates as low as practicable or minimize adverse socioeconomic and environmental impacts. The Commission should therefore find that it is in the public interest for Otter Tail to begin the process of withdrawing from Coyote Station, as recommended in its initial plan.

II. OTTER TAIL HAS NOT ESTABLISHED THAT THE ASTORIA DUAL-FUEL PROPOSAL IS IN THE PUBLIC INTEREST.

Otter Tail has not demonstrated that it is necessary or reasonable to sink tens of millions more dollars into Astoria Station. As shown in the OAG's previous comments, the dual-fuel proposal would greatly increase ratepayer costs while doing little or nothing to increase Astoria Station's capacity accreditation or improve system reliability.[88] Moreover, Otter Tail's economic analysis of gas prices during Winter Storm Uri greatly overstates the proposal's benefits as a hedge against high market prices, a conclusion the Department agreed with.[89] Finally, investing substantial sums in new fossil-fuel infrastructure would expose Otter Tail's customers to the risk

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[85] Suppl. Plan at 12–13.
[86] *Id.*
[87] *See In the Matter of the Application of Otter Tail Power Company for Authority to Increase Rates for Electric Service in Minnesota*, Docket No. E-017/GR-15-1033, Findings of Fact, Conclusions, and Order at 83 (May 1, 2017) (requiring Otter Tail to calculate its demand allocator to reflect MISO resource-adequacy rules "whether this be a single summer peak or a seasonal approach").
[88] OAG Comments at 2–4 (Dec. 30, 2022).
[89] *Id.* at 4–8; *accord* DOC Comments at 8 (Dec. 30, 2022) (concluding that "refurbishing Astoria is not justified solely based on the economic benefits as calculated by OTP").

of new federal or state policies restricting or banning the use of fossil fuels in energy generation.[90] For these reasons, and the reasons explained below, the Commission should find that the dual-fuel proposal is not in the public interest.

Otter Tail's justifications for the dual-fuel proposal have been something of a moving target. The Company initially argued that the project was necessary to make its generation portfolio "resilient."[91] The Company, however, walked back its resilience-based argument at a Commission hearing in May 2023.[92] In its most recent filing, Otter Tail instead argues that fuel storage at Astoria Station is justified because it would provide "fuel assurance."[93] Adding onsite fuel storage may well improve fuel assurance for an individual generator, but this does not mean that Otter Tail has justified the dual-fuel proposal. To the contrary, the Company's justifications do not stand up to scrutiny.

Perhaps the biggest flaw in Otter Tail's case is its mistaken assumption that adding fuel assurance to one 245 MW generator would materially improve grid reliability. Otter Tail's system is part of a much larger, regional grid; a single utility, acting alone, cannot meaningfully improve the reliability of the MISO system, which has a peak load of more than 100 gigawatts. Neither MISO nor FERC has incentivized, much less required, onsite fuel storage for gas-fired units. Otter Tail acknowledges that MISO has not even defined "fuel assurance."[94] Yet the Company's dual-fuel proposal would preempt definitive action by MISO and FERC, the organizations responsible for deciding how to make the grid resistant to extreme weather. The Company's ratepayers should

[90] OAG Reply Comments at 4–5 (Feb. 1, 2023).
[91] Initial Plan at 32–40, 57; OTP Suppl. Comments at 3–11 (Nov. 4, 2022).
[92] *May 4, 2023 Agenda Meeting*, Minn. Pub. Utils. Comm'n, https://minnesotapuc.granicus.com/player/clip/2048?view_id=2&redirect=true&h=a5255a57004300373e4fa344d0294037 at 19:22–:28 (stating that "we chose a word, 'resiliency,' that I now in some ways wish we wouldn't have chosen").
[93] OTP Suppl. Comments at 2–5 (June 23, 2023).
[94] *Id.* at 3.

not be responsible for shoring up the reliability of the regional grid absent any requirements or incentives to do so.

Otter Tail also justifies its dual-fuel proposal based on the fact that it had to put Astoria Station on forced outage for two days in December 2022 during Winter Storm Elliot. The Company states that it was unable to procure gas "for any price" from the Northern Border Pipeline due to increased demand and production freeze-offs[95] and had to curtail Astoria's operations from early morning December 24 until mid-morning December 26. According to EPA data, however, at least five power plants supplied by the Northern Border Pipeline were able to procure gas during the same timeframe. Specifically, four gas-fired plants owned by Basin Electric Power Cooperative, including one just ten miles away from Astoria Station, and another plant much farther downstream in Iowa operated for some or all hours on December 24–26.[96] These plants are shown in Figure 1, below:

Figure 1:
Northern Border Pipeline-Supplied Power Plants that Operated While Astoria Station Was on Forced Outage

			Operated		
Plant	Location	Owner	12/24	12/25	12/26
Deer Creek Station	Brookings, SD	Basin	x	x	x
Groton Generating Station	Groton, SD	Basin	x	x	
Lonesome Creek Station	Watford City, ND	Basin	x	x	x
Pioneer Generating Station	Williston, ND	Basin	x	x	x
Marshalltown Generating Station	Marshalltown, IA	Alliant	x	x	x

[95] OTP Reply Comments at 3 (Feb. 1, 2023).
[96] *See Clean Air Markets Program Data*, U.S. EPA, https://campd.epa.gov/data/custom-data-download (last visited Aug. 31, 2023).

Other than Pioneer Generating Station, none of the above plants has dual-fuel capability.[97] It is unclear how the operators of these plants procured gas when Otter Tail could not, but there clearly was gas available on the Northern Border Pipeline, or the plants could not have operated. Thus, the Commission should not give much weight to the fact that Astoria Station was on forced outage during Winter Storm Elliot.

The OAG has suggested in prior comments that Otter Tail could address the risk of extreme weather events by exploring other investments that could meaningfully improve customers' safety during power outages. Energy efficiency and weatherization, in particular, are more attractive than ever in light of the significant rebates and tax credits included in the recently passed Inflation Reduction Act.[98] Widespread home weatherization would significantly reduce energy usage and peak demand while also reducing customers' energy costs—benefits that are absent from the dual-fuel proposal. Moreover, improvements to building envelopes such as insulation, air sealing, and window replacement also help homes maintain safe temperatures during inevitable power outages.[99] This approach could much more meaningfully improve customers' safety and resilience, all while lowering bills and reducing Otter Tail's peak demand.

Otter Tail has not shown that its Astoria dual-fuel proposal is in the public interest. With specific regard to the resource-planning factors, the Company has not shown that the proposal would keep its customers' bills and rates as low as practicable or minimize the risk of new

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[97] *See Form EIA-860 Detailed Data with Previous Form Data*, U.S. Energy Info. Admin. https://www.eia.gov/electricity/data/eia860/ (last updated June 1, 2023). Pioneer Generating Station has 112 MW of reciprocating engines that can burn gas or propane.

[98] *See, e.g.*, Laura Benshoff, *Three Ways the Inflation Reduction Act Would Pay You to Help Fight Climate Change*, National Public Radio (Aug. 13, 2022, 2:56 PM), https://www.npr.org/2022/08/11/1116769983/3-ways-the-inflation-reduction-act-would-pay-you-to-help-fight-climate-change.

[99] *See* Joe Burns, *Energy-Efficient Buildings Save Lives During Extreme Weather Events: Department of Energy*, Smart Cities Dive (July 28, 2023), https://www.smartcitiesdive.com/news/energy-efficient-buildings-extreme-weather-save-lives/689166/ (citing U.S. DOE report finding that meeting or exceeding current building codes can improve habitability up to 140 percent during extreme heat events and 120 percent during extreme cold).

regulations limiting or banning the use of generation that emits carbon. The Commission should modify the Company's supplemental preferred plan by removing the dual-fuel proposal.

III. WITHDRAWING FROM COYOTE STATION BY 2028 AND SHELVING THE ASTORIA DUAL-FUEL PROJECT, TOGETHER, WOULD SAVE OTTER TAIL'S CUSTOMERS $146 MILLION COMPARED TO THE COMPANY'S SUPPLEMENTAL PREFERRED PLAN.

The preceding sections demonstrate that retaining Otter Tail's interest in Coyote Station and building the Astoria dual-fuel project are not in the public interest. The cumulative impact of rejecting these components of Otter Tail's preferred plan would save ratepayers nearly $146 million in a net-present-value-of-revenue-requirements ("NPVRR") basis. This section explains how that figure was calculated.

Through discovery, the OAG asked Otter Tail to provide the annual revenue requirements associated with its "2023 Base Case, Withdraw from Coyote 12/31/2028, No Externalities Included" scenario after making the following modifications:

- Remove Astoria dual fuel
- Remove the $21.7 million in LSA Early Termination Costs for Coyote retirement
- Remove any return on Coyote's remaining book value upon retirement[100]

Otter Tail provided the requested modeling but clarified that Astoria dual-fuel costs were not included in its EnCompass model for any sensitivities.[101] Therefore, the OAG added the Astoria dual-fuel proposal's revenue requirements[102] to the revenue requirements of Otter Tail's supplemental preferred plan[103] before comparing the preferred plan's NPVRR to that of the modified plan just described. Figure 2, below, shows the comparison:

[100] *See* OTP Resp. to OAG IR No. 22 (June 15, 2023).
[101] *Id.* at 2.
[102] *See* OTP Suppl. Resp. to OAG IR No. 8 (Nov. 8, 2022) (providing Total Company revenue requirements for the Astoria dual-fuel project). By email, Otter Tail confirmed that annual revenue requirements for the Astoria dual-fuel project are not trade secret—only the underlying data.
[103] *See* OTP Resp. to OAG IR No. 21 at 2, col.1 (June 15, 2023) (providing "the annual revenue requirements for the 'Preferred Plan, Withdraw from Coyote 12/31/2040, No Externalities Included' scenario").

Figure 2:
NPVRR of OTP Preferred Plan vs. OAG-Modified Preferred Plan[104]

Otter Tail's Supplemental Preferred Plan	Modified Preferred Plan – No Astoria Dual Fuel, Exit Coyote Station 2028	NPVRR Difference
$2.853 billion	$2.707 billion	$146 million

About 60 percent of the $146 million savings result from foregoing dual-fuel upgrades at Astoria, while the other 40 percent result from withdrawing early from Coyote Station.[105] The Coyote Station-related savings assume that ratepayers are not charged for (1) the early-termination costs of the LSA or (2) a return on Coyote Station after Otter Tail withdraws from the plant. The first assumption is reasonable because the Commission did not approve Otter Tail's decision to enter into a coal contract with high fixed costs and a penalty for early termination. This contract has caused Coyote Station to operate at a significant loss in recent years, and the Commission should not allow ratepayers to be further harmed by having to pay the exit fees from a contract it never approved. The second assumption is reasonable because ratepayers should not have to pay for a return on a coal plant that is no longer serving them. And it is consistent with both Minnesota law[106] and the Commission's decision in Minnesota Power's recent rate case denying a return on a power plant that was no longer used and useful.[107]

[104] The annual revenue requirements are included in Attachment A. Note that this comparison excludes both the cost of fuel for the Astoria dual-fuel proposal and any net revenues that Otter Tail may receive from MISO as a result of the project because Otter Tail excluded them from its modeling. It is exceedingly unlikely, however, that the net savings from LNG operation would have a significant impact on the NPVRR difference between Otter Tail's preferred plan and the OAG's modified plan.
[105] *Compare* Attachment A, col. (b) (showing dual fuel NPVRR of approximately $89 million) *with id.* col (e) (showing total NPVRR savings of $146 million).
[106] *See* Minn. Stat. § 216B.16, subd. 6 (providing that utilities are allowed a reasonable return on their investment in property "used and useful in rendering service").
[107] Docket No. E-015/GR-21-335, Findings of Fact, Conclusions, and Order at 79 (Feb. 28, 2023) (denying request to earn a return on Taconite Harbor Energy Center).

Otter Tail's supplemental preferred plan would cost ratepayers $146 million more than the modified plan outlined above—without considering any externality costs or potential Regional Haze Rule-compliance costs. Accordingly, and for all the reasons discussed in these Comments, the Commission should modify the supplemental preferred plan by removing the Astoria dual-fuel proposal and reverting to the Company's original plan to exit Coyote Station in 2028.

CONCLUSION

Otter Tail's preferred resource plan would subject ratepayers to unnecessary costs and risk due to its overreliance on fossil-fuel resources. The Commission should therefore modify the Company's plan to protect ratepayers, as outlined in these Comments.

Dated: September 13, 2023

Respectfully submitted,

KEITH ELLISON
Attorney General
State of Minnesota

/s/ **Peter G. Scholtz**

PETER G. SCHOLTZ
Assistant Attorney General
Atty. Reg. No. 0389936

445 Minnesota Street, Suite 1400
St. Paul, Minnesota 55101-2131
(651) 757-1473 (Voice)
(651) 296-9663 (Fax)
peter.scholtz@ag.state.mn.us

ATTORNEYS FOR OFFICE OF
THE ATTORNEY GENERAL—
RESIDENTIAL UTILITIES DIVISION

PUBLIC DOCUMENT -
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	(a) OTP Preferred Plan Excluding Astoria Dual Fuel	(b) Astoria Dual Fuel Rev Requirements	(c) OTP Preferred Plan (Total)	(d) OAG Modified Plan	(e) OAG Savings
	OAG IR 21	Supp TS* OAG IR 8	(a) + (b)	OAG IR 22	(d) - (c)
NPVRR	$2,764,110,000	$88,917,925	$2,853,027,925	$2,707,283,000	($145,744,925)
Annual					
2023	$187,660,000	$0	$187,660,000	$187,660,000	$0
2024	$175,680,000	$0	$175,680,000	$175,680,000	$0
2025	$194,790,000	$0	$194,790,000	$194,790,000	$0
2026	$192,527,000	$11,333,590	$203,860,590	$192,527,000	($11,333,590)
2027	$197,191,000	$11,043,579	$208,234,579	$197,191,000	($11,043,579)
2028	$205,063,000	$10,722,057	$215,785,057	$205,063,000	($10,722,057)
2029	$206,310,000	$10,417,123	$216,727,123	$196,616,000	($20,111,123)
2030	$207,544,000	$10,127,168	$217,671,168	$197,768,000	($19,903,168)
2031	$211,376,000	$9,850,850	$221,226,850	$200,854,000	($20,372,850)
2032	$216,495,000	$9,584,224	$226,079,224	$206,412,000	($19,667,224)
2033	$215,251,000	$9,321,006	$224,572,006	$204,496,000	($20,076,006)
2034	$221,061,000	$9,058,148	$230,119,148	$213,581,000	($16,538,148)
2035	$225,145,000	$8,795,750	$233,940,750	$220,347,000	($13,593,750)
2036	$231,027,000	$8,533,821	$239,560,821	$225,783,000	($13,777,821)
2037	$234,306,000	$8,272,369	$242,578,369	$226,865,000	($15,713,369)
2038	$233,422,000	$8,011,405	$241,433,405	$227,686,000	($13,747,405)
2039	$237,618,000	$7,750,939	$245,368,939	$237,965,000	($7,403,939)
2040	$245,373,000	$7,490,980	$252,863,980	$243,279,000	($9,584,980)
2041	$260,729,000	$7,258,055	$267,987,055	$253,149,000	($14,838,055)
2042	$262,191,000	$7,078,782	$269,269,782	$254,535,000	($14,734,782)
2043	$264,520,000	$6,926,565	$271,446,565	$257,031,000	($14,415,565)
2044	$268,744,000	$6,774,897	$275,518,897	$262,416,000	($13,102,897)
2045	$266,675,000	$6,623,788	$273,298,788	$260,579,000	($12,719,788)
2046	$276,147,000	$6,473,252	$282,620,252	$270,795,000	($11,825,252)
2047	$322,815,000	$6,323,298	$329,138,298	$313,987,000	($15,151,298)
2048	$319,750,000	$6,173,938	$325,923,938	$311,971,000	($13,952,938)
2049	$318,277,000	$6,025,184	$324,302,184	$311,551,000	($12,751,184)
2050	$310,764,000	$5,877,049	$316,641,049	$301,274,000	($15,367,049)

*Otter Tail confirmed that the annual amounts are not trade secret.