

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

LC 80

In the Matter of

Portland General Electric,

2023 Integrated Resource Plan and Clean
Energy Plan.

ROUND 0 COMMENTS OF
NEWSUN ENERGY LLC

I. INTRODUCTION

Pursuant to the Conference Memorandum issued April 20, 2023, NewSun Energy LLC (“NewSun”) hereby submits these initial Phase 0 Comments on Portland General Electric Company’s (“PGE’s”) draft 2023 Integrated Resource Plan (“IRP”) and Clean Energy Plan (“CEP”). First, NewSun recommends that sooner rather than later the Oregon Public Utility Commission (“Commission”) hold a Commissioner workshop focused on transmission in this IRP/CEP. Second, NewSun recommends that PGE revise the draft IRP/CEP to include several portfolios or sensitivities in order to better illuminate whether PGE’s preferred portfolio is technically feasible especially in terms of transmission constraints. Finally, NewSun further recommends several clarifications and explanations to create additional transparency around transmission and resource options.

Oregon House Bill 2021 (2021 Session) (“HB 2021”) mandates that PGE reduce its greenhouse gas (“GHG”) emissions by 80% below a 2010-2012 baseline by 2030, 90% by 2035, and 100% by 2040.¹ The law also states that it is the policy of the State of

¹ ORS 469A.410.

Oregon for the retail electricity suppliers to rely on non-emitting power, that such electricity be generated in a manner that, to the maximum extent practicable, provides additional benefits in this state in the form of creating and sustaining meaningful living wage jobs, workforce equity, energy security and resiliency, and in a manner that minimizes burdens for environmental justice communities.² This Commission is also charged with ensuring that electric companies demonstrate continual progress and are taking actions “as soon as practicable that facilitate rapid reduction of greenhouse gas emissions.”³ Finally, in considering whether to acknowledge a CEP, the Commission must find that it is in the public interest which includes a variety of factors including the GHG expected through the plan and any related environmental or health benefits, the “economic and technical feasibility of the plan,” the effect on reliability and resiliency, the availability of federal incentives, the costs and risks of the plan, and any other relevant factors as determined by the Commission.⁴

NewSun is particularly concerned with the economic and technical feasibility of the plan especially as relates to resource selections that rely on significant transmission upgrades that may not be able to be constructed prior to the resource need. In this IRP, PGE states that the “[Bonneville Power Administration’s (“BPA’s”)] system is fully subscribed, and incremental transmission requests are unlikely to be granted until the late 2020s or early 2030s, pending significant upgrades.”⁵ And “PGE has long relied on BPA

² ORS 469A.405.

³ ORS 469A.415(6).

⁴ ORS 469A.420(2).

⁵ PGE 2023 IRP at 217.

transmission to deliver energy throughout the west to serve PGE load.”⁶ As such, PGE views “[t]he magnitude and timing of additional transmission capacity as the largest factor that influences resource additions and the cost and risk metrics of portfolios.”⁷ Thus, while PGE says it can meet 2030 targets with technologies and resources that are currently known and commercially available and believes that it can delay transmission upgrades somewhat with distribution connected resource, PGE does not believe it is feasible to meet the 2030 target without some transmission upgrades and finds that the need for transmission increases over time and that decarbonization pathways to 2040 will require either further technological advancement of non-emitting resources or transmission or both.⁸

Significant transmission lines or upgrades take significant time to plan, permit, develop, and construct. PGE notes that the Boardman to Hemingway line has been in various stages of the permitting process for nearly two decades.⁹ Two decades from now, is 2043 and by then PGE will have missed its deadline to reach zero GHG emissions. As such, it is critical that we take a hard look now and those transmission assumptions, their economic and technical feasibility, and the alternatives to meeting PGE’s 2030, 2035, and 2040 targets in the event such transmission is no able to be procured in time.

Specifically, NewSun recommends the following:

⁶ *Id.*
⁷ *Id.* at 31.
⁸ *Id.* at 8.
⁹ *Id.* at 231.

Portfolios/Sensitivities

- 1. 25% Fewer Emissions Associated with Market Sales.**
- 2. 100% Zero Emissions by 2040 Company-Wide.**
- 3. Unconstrained CBREs.**
- 4. Achievable Potential of Distributed Solar.**
- 5. Achievable Potential of DERs.**

Assumptions, Clarifications, Explanations, Transparency

- 1. Realistic assumptions around the availability of conditional firm and long-term firm transmission of confirmed and in-study BPA transmission service requests.**
- 2. Discussion of PGE’s proxy transmission resources and the basis upon which PGE determined the cost and availability of those resources.**
- 3. Expand CBRE resources to include transmission-scale and -interconnected projects (consistent with statutory definitions) and include it in the modeling.**
- 4. More detailed analysis of major BPA transmission upgrades, their timelines and work to build those assumptions into the base case.**
- 5. Ensure proper comparison of new transmission build costs with West of Cascades, On-System, DER, EE, Solar and Storage resources.**
- 6. Provide draft avoided cost information required under OAR 860-029-0080(3).**

Each of these recommendations is explained in more detail below.

II. COMMENTS

PGE’s draft inaugural CEP and 2023 IRP confirms NewSun’s concerns regarding the technical feasibility of meeting PGE’s GHG emissions reduction targets. The lion’s share of the total emissions reductions necessary to reach zero must occur by 2030 and the lion’s share of the reductions necessary to meet the 2030 target need to stem from the action plan in this IRP. PGE’s mandate is to reduce emissions from its 8.1 million metric ton CO₂ equivalent (“MMTCO₂e”) to only 1.62 by 2030, 0.81 by 2035, and zero

by 2040.¹⁰ To help meet this target, PGE proposes to conduct one or more requests for proposals (“RFPs”) for 66 MW of community based renewable energy (“CBRE”) resources by 2026 and 155 MW of CBRE resources by 2030, 181 MWa (~520 MW nameplate) of non-emitting resources each year through 2028 in addition to the ~1000 MW projected from the 2021 RFP and forecasts a 624 MW summer, 614 MW winter 2028 capacity need.¹¹ In total, PGE estimates it needs 3,000 to 4,000 MW in non-emitting resources and capacity to meet its 2030 target.¹² The schedule for this docket calendars IRP acknowledgment for January 25, 2024, meaning that PGE’s next IRP will not be due until January 2026¹³ leaving less than four years to acknowledge that IRP, issue one or more RFPs, negotiate, procure, and construct any additional resources to meet the 2030 target, and that’s assuming there are no delays or extensions. There is simply not enough time to procure substantial additional resources based on that next IRP/CEP action plan in time to have them online by 2030. As such, it is extremely important for the Commission, Staff, and Stakeholders to devote additional time, resources, and effort now to ensure that this 2023 IRP/CEP is robust, technically feasible, in the public interest, and actually calculated to reach that 2030 target. NewSun’s below recommendations and requests for additional clarity, explanations, and transparency are designed to help get us there.

¹⁰ *Id.* at 15, 17.

¹¹ *Id.* at 32.

¹² *Id.* at 21.

¹³ OAR 860-027-0400 (3).

A. Portfolios/Sensitivities

1. 25% Fewer Emissions Associated with Market Sales.

PGE has already reduced its emissions attributable to Oregon retail customers to 6.06 MMTCO₂e as reported in 2022¹⁴ and proposes a linear emissions reduction path for emissions associated with Oregon retail customers between 2026 and 2030 and between each subsequent target.¹⁵ However, PGE’s preferred portfolio forecasts emissions of 5.9 MMTCO₂e attributable to Oregon retail customers in 2023 and an additional 2 MMTCO₂e attributable to wholesale sales for a total of 7.9 MMTCO₂e in emissions.¹⁶ Further, PGE’s emissions from its fossil resources for market sales, including from its five Oregon-sited natural gas facilities, continue to remain high ranging from 1.9 to 4.1 MMTCO₂e in each year between now and the end of the planning period in 2043.¹⁷

It should be concerning that total emissions from Oregon-sited fossil resources could *increase* under Oregon’s new clean energy law simply because the utility may export that power out of state. NewSun is concerned that doing so may allow utility shareholders to capture the benefits that ratepayers paid for in the forms of the capacity, reliability, dispatchability, and transmission associated with those generators. NewSun

¹⁴ PGE 2023 IRP at 15.

¹⁵ *Id.* at 33.

¹⁶ PGE CEP Data Template, Annual GHG Impacts of Actions Tab.

¹⁷ *Id.*

recommends that fossil resources be converted to run less, so that they are available to Oregon ratepayers in a reliability event, and that freed up transmission capacity be made available to Oregon ratepayers to help balance variable resources.

To help illustrate the impact of NewSun’s recommendation, NewSun recommends that PGE model a portfolio where the generators run less and GHG emissions associated with market sales are 25% lower.

2. 100% Zero Emissions by 2040 Company-Wide.

PGE made a voluntary climate pledge to reach net zero GHG emissions across company operations by 2040,¹⁸ yet, as note above, PGE’s CEP data template continues to show emissions associated with market sales in 2040 and beyond. As such, NewSun further recommends that PGE model a portfolio with zero company-wide emissions by 2040 (including for market sales).

3. Unconstrained CBREs.

PGE’s model, given transmission constraints, selects 100% of the technical potential of CBRE resources.¹⁹ Further, even in the “Optimize CBRE” portfolio where CBRE resources compete economically, without the 10% adder, still 100% of the technical potential is selected.²⁰ This illustrates that CBRE resources as modeled are extremely cost effective and raises the question of whether additional CBRE’s could be procured to further meet PGE’s needs and alleviate transmission issues. PGE states that “in a transmission-constrained system, CBRE resources can decrease cost and increase

¹⁸ PGE 2023 IRP at 10.

¹⁹ *Id.* at 30.

²⁰ *Id.* at 274.

community benefits.”²¹ As such, NewSun recommends that PGE run a portfolio with CBREs unconstrained by the 155 MW technical potential.

4. Achievable Potential of Distributed Solar.

PGE states that “[d]ecarbonization pathways to 2040 will require further technological advancement of non-emitting resources and transmission to meet the region’s energy and capacity needs.”²² For example, PGE states that “[e]merging non-GHG-emitting technologies that could have a high capacity and/or energy contribution such as nuclear, hydrogen, long-duration storage, and advanced geothermal can mitigate this significant dependence on transmission over the long-term.”²³ NewSun has significant concerns about the nuclear and advanced geothermal options and their feasibility within even the 2040 timeline. Nuclear cannot be sited in Oregon so it is not clear where PGE envisions it could be sited to mitigate dependence on transmission. Further, NewSun’s understanding of advanced geothermal in the state is that it is still 20 years away given permitting concerns. However, other resources that are readily available and feasible could be modeled to help fill this gap: distributed solar and energy efficiency/demand response.

On distributed solar, despite finding there is 7 GW of technical potential within its service area by 2050, PGE only models the “economic potential (cost-effective)” direct customer adoption of distributed solar.²⁴ However, a large percentage of people

²¹ *Id.* at 270.

²² *Id.* at 8.

²³ *Id.* at 31.

²⁴ *Id.* at 109.

who install distributed solar do so not necessarily out of a pure cost-benefit analysis but also out of concern for the environment.²⁵ Also, other measures could be adopted to increase adoption rates that may be more cost-effective than these other emerging non-emitting resources PGE is looking towards. Distributed solar also has immense potential to help alleviate transmission constraints given that it is sited near load. NewSun, therefore, recommends that PGE model a portfolio of distributed solar up to the achievable potential unconstrained by cost-effectiveness.

5. Achievable Potential of DERs.

Based on the above discussion, NewSun also recommends that PGE model a portfolio of energy efficiency and demand response (distributed energy resources or DERs) up to the achievable potential unconstrained by cost-effectiveness.

B. Assumptions, Clarifications, Explanations, Transparency

1. Realistic assumptions around the availability of conditional firm and long-term firm transmission of confirmed and in-study BPA transmission service requests.

PGE makes two concerning assumptions related to the availability and type of transmission service attributable to certain 2016 to 2021 transmission service requests (“TSRs”) in BPA’s queue. First, PGE assumes that all TSRs pointing to PGE’s system

²⁵ Pew Research Center, *Home Solar Panel Adoption Continues to Rise in U.S.*, available at <https://www.pewresearch.org/short-reads/2022/10/14/home-solar-panel-adoption-continues-to-rise-in-the-u-s/> (“Most homeowners who said in January that they’ve installed or seriously considered installing solar panels at home said helping the environment was a motivation for doing so (81%).”)

are potentially available to PGE, and second, PGE assumes that TSRs in “study” status are conditional firm and TSRs that are “confirmed” are long-term firm.²⁶

PGE’s first assumption is concerning because TSRs that are currently pointed at PGE’s system could be redirected to other points of delivery if, for example, the associated generator ends up procuring a contract to sell to a different utility. Given Washington State’s Clean Energy Transformation Act, and pressures on other utilities, local governments, and companies to decarbonize, there is significant competition within the Northwest for resources. Therefore, NewSun’s believes that it is unlikely that 100% of all TSRs pointed at PGE’s system will ultimately be available for PGE to use.

PGE’s second assumption is concerning because it is overly simplistic. Simply because a TSR is in “study” status or is “confirmed” does not convey conditional firm or long-term firm transmission service respectively, and it is not an accurate representation based on NewSun’s reading of the BPA TSR study reports. Although it was not clear from the IRP, we assume this was meant to be a simplifying assumption to allow PGE some manner of estimating how much transmission is available in those different service types. Following this assumption to its logical conclusion, however, would mean that over time as more TSRs move out of the study process and become confirmed more requests are awarded long-term firm and fewer requests are awarded conditional firm. However, just the opposite is true: as long-term firm transmission fills up, more of the later requests will be offered conditional firm service. Further, “confirmed” TSRs can be either long-term firm or conditional firm and TSRs that are still in “study” are not

²⁶ PGE 2023 IRP at 537.

properly assumed to be conditional firm as it depends on the upgrades required. Finally, it is NewSun’s experience that confirmed offers of transmission service can be updated from time to time as conditions change.

NewSun recommends that PGE incorporate more realistic assumptions about the availability of transmission service and the service types.

2. Discussion of PGE’s proxy transmission resources and the basis upon which PGE determined the cost and availability of those resources.

PGE modeled two proxy transmission options: 1) a South of Allston upgrade available as early as 2027 (at \$1.97/kW-month) that unlocks up to 400 MW of northwest proxy resources such as a Christmas Valley solar project or Gorge wind resource, and 2) a purchase of transmission rights available as early as 2026 to either Wyoming (at \$20.46/kW-month) or the desert Southwest (at \$23.04/kW-month) that would unlock an equivalent amount of either a WY wind or southern Nevada solar.²⁷ These are “proxy” transmission projects meant to describe general characteristics that may be found on the market.

NewSun generally agrees that South of Allston upgrades are a realistic and viable path to opening up more Northwest-based resources, however, both the South of Allston upgrade proxy and the Wyoming/Nevada proxy could benefit from additional discussion on the basis for which PGE has determined these represent general characteristics that may be found on the market including why PGE believes they are available and how PGE estimated their costs. Further, it would be beneficial to understand how PGE plans

²⁷ *Id.* at 227-228.

to share in the costs of any potential South of Allston upgrade, and how PGE is positioning itself in the market for limited transmission capacity.

Finally, PGE also suggests upgrading the Bethel to Round Butte line from 230 kV to 500 utilizing the existing right of way. NewSun's understanding is that even using an existing right of way may trigger National Environmental Policy Act ("NEPA") analysis and still result in long development timelines. As such, NewSun recommends that any reliance on or analysis of that potential transmission path, incorporate such timeline considerations.

3. Expand CBRE resources to include transmission-scale and -interconnected projects (consistent with statutory definitions) and include it in the modeling.

PGE appears to have only modeled small scale (20 MW and under) distribution connected CBRE resources yet the HB 2021 definition of CBRE includes distribution and transmission interconnected resources with no size limitation.²⁸ NewSun recommends that PGE develop several transmission scale CBRE solar + storage resource to include in the modeling of CBRE potential. These should include a variety of resources in the Willamette Valley area, both on and off PGE's system. Materially improved solar resource exists south of Salem, better as you go farther south, and should not be excluded from the modeling cases (especially given transmission constraints crossing the Cascades). These projects are likely to improve achievability of HB 2021 requirements while mitigating new transmission costs and risks.

²⁸ *Id.* at 151, 156.

4. More detailed analysis of major BPA transmission upgrades, their timelines and work to build those assumptions into the base case.

NewSun also recommends detailed, in-depth analysis in the IRP of major upgrades identified by BPA and incorporating those into the base case analysis. For example, NewSun understands that the Big Eddy-Chemawa line upgrade included in BPA's 2022 TSR cluster study report will route through Mt. Hood National forest, requiring NEPA analysis and is unlikely to be online before, say, 2035 (or worse, given B2H timeframes for less sensitive areas). This issue applies to essentially every transmission upgrade needed to get power to the Portland area, as essentially all major powerlines cross public lands and thus trigger NEPA reviews (i.e., B2H type permitting timelines).

Incorporating valid assumptions on achievable timelines such as this into the base case is critical to IRP modeling, and determining which proposals are technically feasible. IRP modeling must constrain transmission availability and resources available in a timeline realistic manner, otherwise the model will choose unachievable portfolios and plans that are not possible (i.e., not "technically feasible"), and therefore not permissible to be acknowledged by the Commission under HB 2021's legal standards for CEP acknowledgement. The Commission must assure timeline viability, especially as relates permitting, for all transmission assumptions, in all modeling cases.

5. Ensure proper comparison of new transmission build costs with West of Cascades, On-System, DER, EE, Solar and Storage resources.

The Commission should make sure to pay special attention to the simple fact that once new transmission builds are triggered, there are timeline delays and costs (\$B costs) that should result in very different model outcomes. The Commission should focus on

making sure these comparisons and tradeoffs properly occur. You can buy a lot of home insulation and rooftop solar panels for one billion dollars. And buy a lot of time for NEPA permitting to occur.

6. Provide draft avoided cost information required under OAR 860-029-0080(3).

Under OAR 860-029-0080(3) PGE is required to file draft avoided cost information at the time it files its IRP. This information is not included in the IRP. Please provide it. To the extent PGE believes it has complied with this requirement, please explain where in the IRP this information is contained. These avoided costs should reflect the transmission costs associated with the proposed resources, including for new builds capital expenditure, as well as wheeling costs (including as per BPA's incremental tariff rates analysis for new transmission builds, as will be applied to all new BPA transmission projects).

III. CONCLUSION

NewSun recommends that PGE make the above changes to its IRP and that the Commission hold a Commissioner workshop related to PGE transmission resources and options in this IRP.

Dated this 4th day of May 2023.

Respectfully submitted,

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