



June 8, 2021

Via Electronic Filing

Oregon Public Utility Commission
Attention: Filing Center
201 High Street, Suite 100
Post Office Box 1088
Salem, OR 97308-1088

Re: UM 1728 – PGE 2021 Annual Avoided Cost Update

Dear Commissioners, Staff and Stakeholders,

NewSun Energy LLC (NewSun) submits these preliminary comments regarding Portland General Electric Company's (PGE) annual avoided cost update filed on May 3, 2021. NewSun expects to file supplemental comments in this docket once it has received responses to its many of its data requests and completed its analysis. PGE's effective load carrying capability (ELCC) calculation for solar resources in this avoided cost update suffers from inconsistent and unreasonable data assumptions and methodological issues. NewSun hired an outside consultant to assist in analyzing these issues and illustrate a reasonable approach for the ELCC calculation.

I. Request for Additional Time

In conjunction with filing these comments, NewSun requests that Staff and the Commission provide additional time for NewSun to submit supplemental comments, for Staff to review those comments before issuing its Staff Report and before the Commission considers this matter at a public meeting.

Alternatively, NewSun requests that the Commission suspend PGE's avoided cost filing to allow additional time for Staff and stakeholders to verify PGE's inputs, perform analysis, and provide the Commission with recommendations.

Additional time is necessary for a variety of reasons. PGE's deadline to respond to NewSun's outstanding data requests is this Friday, June 11, 2021. NewSun's independent analysis is also under progress but not quite complete and somewhat dependent on what and how much data PGE provides in its data responses.

According to a PGE data response in this docket, PGE has no standard contracts in its contracting queue. NewSun affiliates represent most of the non-standard contracts, therefore NewSun has an interest in the outcome of this docket and will be adversely affected or aggrieved if a result is reached that is incorrect, not based on substantial evidence, is discriminatory, or otherwise in violation of the Public Utility Regulatory Policies Act (PURPA) or Oregon law.

PGE's proposed changes to its ELCC value for solar in this docket are significant—and substantially out of line with results seen in other relevant CAISO/CPUC examinations of solar ELCC (showing 80%+ ELCCs)—and there is not sufficient evidence in the record to support PGE's proposal, particularly when substantial evidence exists of major flaws (See Attachment A, Partial List of HDR/PGE flaws). PGE proposes to lower the ELCC for solar from 15.8% to just 5.5%.

This has the impact of lowering the solar avoided costs by ___ and ___% for standard and renewable solar prices [significant]. Such a major change in an annual update is a substantial concern given that a complete analysis in a full integrated resource plan (IRP) has not been performed.

Meanwhile, while PGE responded to one set of data request from NewSun, its other answers are not complete, impeding proper analysis. NewSun as a small company, does not have the bandwidth to try to compel such responses, but hopes that PGE will respond to NewSun's next set in good faith. Further, only NewSun and the Renewable Energy Coalition have submitted data requests in this docket.

Therefore, given the magnitude of the issues, and the lack of supporting evidence for PGE's position, and evidence supporting likely material flaws, it is appropriate to take just a little more time to review and make sure everything is correct. Conversely, it would be inappropriate to adopt highly erroneous inputs absent due process, particularly given the lack of any other QF stakeholders in contracting (but even if so, given harm to such if prices inappropriately lowered).

II. Summary of Issues

In this annual avoided cost update, PGE includes updated inputs from its acknowledged IRP Update. The most impactful input PGE updated in its IRP Update is the amount of solar in its baseline portfolio. PGE says the net increase of solar since its IRP snapshot was approximately 200 MW, which resulted in a decline in the ELCC for solar from 15.8% to just 5.5%. PGE's proposal is unreasonable and, in violation of the PURPA, creates prices that discriminate against QFs because it updates only the variables that PGE wishes to update and uses unreasonable assumptions.

First, PGE's ELCC for solar is flawed in that PGE completely refuses to use any reasonable assumptions about the amount of solar resources that will actually come online. PGE assumes that 100% of QFs with executed contracts will achieve commercial operations. For projects that have not yet reached their scheduled commercial operation date (COD), PGE assumes that they will achieve commercial operations as scheduled, but for QFs that have passed their scheduled COD, PGE assumed that they all achieved commercial operations on a date only two weeks following its snapshot date. These are simply not reasonable assumptions given the volume of contracts that PGE has terminated or expects to terminate and the volume of contracts that miss their scheduled CODs.

Second, PGE's ELCC for solar is inaccurate because PGE updated the amount of solar in the baseline portfolio without also updating other solar performance variables or other inputs to its models. For example, PGE assumes that most solar resources in its baseline and all new solar being added are all generating with the same outdated characteristics (i.e., at the same time of day and with the same capacity factors and DC/AC ratios). However, solar resources do not all have the same performance characteristics. They have varying capacity factors, varying DC/AC ratios, and solar resources located in different areas (eastside vs westside) have different performance characteristics. Additionally, newer resources are more able to meet capacity needs in the summer evening hours where older resources may be lacking. PGE's inaccurate assumptions do not reflect these variables and trends.

[INSERT ADDITIONAL HDR STUDY AND SOLAR FORECAST ISSUES, BOTH EXISTING AND PENDING ANALYSIS]

III. Recommendations

Once NewSun's analysis is complete, NewSun intends to submit a more robust recommendation to correct the deficiencies identified in PGE's proposed avoided cost filing. NewSun's methodological changes would be on an interim basis only until PGE performs a complete analysis in its next full IRP. As of the time of filing, NewSun recommends that:

1. As of the selected snapshot date, PGE should make reasonable assumptions as detailed below regarding the amount of solar that will achieve commercial operations and the amount that will be delayed in reaching commercial operations; and
2. PGE should either:
 - a. Not update the amount of solar in the baseline until a comprehensive and logically consistent set of data can be fully updated in the next IRP including the costs and performance variables of those solar resources, or
 - b. If PGE insists on updating the amount of solar in its baseline portfolio, then it should also update:
 - i. Solar performance characteristics to reflect geographically specific actual or forecasted performance characteristics of the solar resources in the baseline using industry standard typical meteorological year data, and
 - ii. The proxy resource performance characteristics (e.g., capacity factor and DC/AC ratio) to reflect advances in the technology for new resources being added.

IV. Comments

A. Solar Baseline Data Should be Based on Reasonable Assumptions

PGE's snapshot should include reasonable assumptions about what and how many resources will come online. PGE should assume that something less than 100% will come online and that some projects will have delayed commercial operations. This could include reasonable forecasting assumptions like that which the Renewable Energy Coalition has advocated for in the past in PGE's IRP and other dockets. It could also include reasoned assumptions based on facts known to PGE at the time it makes its snapshot, including by removing projects PGE knows will not reach commercial operations or delaying the assumed commercial operation date for projects PGE knows need more time. Those known facts could also inform a more reasoned forecast of the projected project failures or delays.

At the time of PGE's snapshot, it should include projects that:

- Already achieved COD or started full facility construction; and
- Are not operational or under construction at the time of the snapshot, but reasonably likely to succeed in reaching COD by the end of their one-year cure period, so long as
 - PGE has not sent a termination notice to; and
 - The QF has not sent PGE any notices or material information indicating that the project does not expect to make schedule by the end of its cure period.

PGE should exclude projects that:

- Are not operational or under construction at time of snapshot, and have one of the following:
 - Been issued a termination notice from PGE,
 - Have advised PGE that the project does not expect to make schedule by the end of its cure period,
 - Where the project has advised PGE that the project does not expect to make schedule by the end of its cure period and PGE has refused to modify the schedule, or
 - Are project which are otherwise not reasonably able to be constructed between the snapshot date and the end of their cure period.

PGE should also revise the expected COD based on reasonable assumptions about the delays projects face in coming online, rather than simply assume the same online date for all projects that missed their scheduled COD.

B. Solar Baseline Data Should be Updated in a Comprehensive and Logically Consistent Manner

In PGE's avoided cost update, PGE updates the amount of solar in its baseline portfolio for purposes of calculating the ELCC of solar, yet PGE neither updates the actual or assumed solar performance characteristics for those resources or the assumed performance characteristics for new resources being added in the ELCC calculation (or a variety of other factors such as the hydro forecast or distributed energy resources). It is logically inconsistent to only update the

amount of solar in the baseline without also updating the performance characteristics. This is so because the increased amount of solar in the baseline compounds the outdated assumptions.

For example, instead of having 100 MW of solar resources generating all at the same assumed times and with the same performance characteristics, PGE now reflects that it has 300 MW of solar all generating at the same times and with the same performance characteristics. Solar resource performance characteristics differ by location and technology. As solar is added to the system, the variety of solar resource performance characteristics also changes, i.e., you may end up having more resources located in an area where the solar irradiance may be markedly different than that for other locations.

Here, PGE's 2019 Integrated Resource Plan (IRP) assumed solar performance characteristics for a proxy resource located in Christmas Valley, Oregon (east of the mountains), yet many of PGE's actual resource acquisitions are in the Willamette Valley (west of the mountains). Solar irradiance is quite different in those areas, so in applying the proxy resource performance characteristics to actual resources, PGE is inappropriately overestimating the contribution that existing solar resources fill its capacity need and underestimating the contribution that new resources can contribute capacity.

NewSun's analysis to be provided will illustrate the differences between PGE's assumptions and NewSun's proposed methodological changes.

V. Conclusion

NewSun provides the above preliminary recommendations to be supplemented with additional analysis and recommendations once data becomes available from PGE and NewSun's consultant. As discussed, additional time should be provided so Staff and stakeholders can adequately review the substantial changes proposed by PGE, the Commission can ensure PGE's proposal complies with PURPA, and the decision can be based on substantial evidence, which is currently lacking.

ATTACHMENT A – INITIAL PARTIAL ISSUES FOR PGE/HDR SOLAR ELCC INPUTS

[PRELIMINARY

Some basic flaws we've already identified:

- I. HDR forecast - Wrong in Multiple Ways
 - *No single hour in 7 years produces facility AC nameplate*
 - Max Hour is 92 MW, not 95
 - Unclear whether other distort linearly or not, but
 - Facility is never generating max and
 - Facility never showing expected flat-max output we'd expect on sunny days
 - *%CF at 24.8% is peculiarly low, even for 1.3 DC:AC ratio*
 - ~29% expected
 - ~14% lower overall
 - But especially low in key marginal hours --
 - *%CF of 24.8% doesn't match calculated %CF of 26-27% (for 92 and 95 MW AC)*
 - Even if matched, 26-27% is low for 1.3 DC:AC
 - Outage assumptions -- including timing and relationship of outage timing vs LOLP map -- still unknown (need DR responses)
 - Under-designed facility vs Industry Norms (1.3 vs 1.5 DC:AC ratio)
 - *Overall production very (~17%) low (24.8% vs 30% CF), PLUS:*
 - *Under-represents performance/ELCC contrib during key LOLE hours At Shoulders/Marginal Hours (i.e. August evenings and winter mornings)*
 - Tapers off prematurely during key need
 - Due to i) underdesign + ii) bad/low forecast = iii) material shorting
- II. In Lower gen months (Dec/Jan)
 - Under-estimated output for low design means not getting ELCC credit deserved
 - *Increases facility variability inappropriately*
 - Will have 'wobbles' during sunny/max days when facility should have firm/solid multi-hour max nameplate output.

Over-Stacked Single HDR forecast as basis for ELCC

- Hyper-stacking the *same* exact output profile over-and-over-and-over *distorts*:

ELCC Base Gen Stack

Exaggerates both the lows and highs
Overlays will distort LOLE/LOLP
modeling

Contribution of incremental solar QF

Same high stacked on distorted highs
Underperformance restacked on
distorted lows

Further, these issues amplified by flawed underlying HDR forecast (see above)

- Not linear or minor issue

III. Other Key Issues & Missing Information

- Solar
 - Scheduling assumptions unclear
 - If never generating nameplate, then more problems:
 - Can't ever schedule nameplate
 - Unlikely to have firm [3 or 10] MW blocks to schedule
 - Causes further price discount

[IN PROGRESS]

CT %CF was reduced