ORDER NO. 24-248

ENTERED Jul 29, 2024

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1729

In the Matter of PACIFICORP, dba PACIFIC POWER, Update to Standard Avoided Cost Schedule for Qualifying Facilities.	ORDER

DISPOSITION: STAFF'S RECOMMENDATION ADOPTED WITH MODIFICATIONS

This order memorializes our decision, made and effective at our July 23, 2024 regular public meeting to adopt Staff's recommendation, with one modification. Rather than Staff's proposed direction for PacifiCorp to assume interconnection and network upgrade costs at the levels set forth in the National Renewable Energy Laboratory (NREL) 2024 Annual Technology Baseline (ATB) for grid connection costs, we direct PacifiCorp to recalculate avoided cost prices for its avoided solar resource using assumed interconnection and network upgrade costs of $125 million for a proxy 200 MW Utah solar resource. This represents a reasonable compromise between cost assumptions derived from the NREL ATB and from PacifiCorp's cluster studies. The Staff Report with the recommendation is attached as Appendix A.

Made, entered, and effective Jul 29, 2024.

Megan W. Decker
Chair

Letha Tawney
Commissioner

Les Perkins
Commissioner

A party may request rehearing or reconsideration of this order under ORS 756.561. A request for rehearing or reconsideration must be filed with the Commission within 60 days of the date of service of this order. The request must comply with the requirements in OAR 860-001-0720. A copy of the request must also be served on each party to the proceedings as provided in OAR 860-001-0180(2). A party may appeal this order by filing a petition for review with the Circuit Court for Marion County in compliance with ORS 183.484.

ITEM NO. RA3

PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: July 23, 2024

REGULAR X **CONSENT** ____ **EFFECTIVE DATE** N/A

DATE: July 15, 2024

TO: Public Utility Commission

FROM: Ryan Bain

THROUGH: Caroline Moore and Scott Gibbens **SIGNED**

SUBJECT: PACIFIC POWER:
(Docket No. UM 1729(9))
Update to Standard Avoided Cost Schedule for Qualifying Facilities.

STAFF RECOMMENDATION:

Direct Pacific Power (PacifiCorp or Company) to revise and resubmit their update to their Schedule 37 standard avoided cost rates for Qualifying Facilities (QFs) to reflect Staff's proposed methodological changes no later than September 5, 2024.

DISCUSSION:

Issue

Whether the Oregon Public Utility Commission (OPUC or Commission) should direct Pacific Power to revise and resubmit its post-IRP avoided cost updates to reflect the following Staff proposed modifications:

- Set the deficiency period to begin on January 1, 2027;
- Use the National Renewable Energy Laboratory's (NREL) 2024 Annual Technology Baseline (ATB) cost values for the solar QF proxy resource, including Grid Connection Costs; and
- Incorporate the most recent long-term gas forecast and electric forward market inputs available to the Company.

Applicable Orders and Rules

ORS 758.525(1) provides that "at least once every two years each electric utility shall prepare, publish and file with the Public Utility Commission a schedule of avoided costs equaling the utility's forecasted incremental cost of electric resources over at least the next 20 years. Prices contained in the schedules filed by public utilities shall be reviewed and approved by the commission."

OAR 860-029-0085(1) specifies that each public utility must file with the Commission standard avoided cost rates within 30 days of a Commission decision regarding acknowledgement of the public utility's IRP to be effective 30 days after filing unless otherwise determined by the Commission.

OAR 860-029-0085(3) provides the standard avoided cost rates filed by a public utility under sections (1) of this rule are subject to review and approval as well as modification by the Commission. The Commission may suspend the standard avoided cost rates during review. In any such review, the public utility has the burden of supporting and justifying its standard avoided cost rates. The standard avoided cost rates will be effective 30 days after filing unless otherwise determined by the Commission.

OAR 860-029-0085(4)(a) states additionally that on May 1 of each year, a public utility must file with the Commission updates to its standard avoided cost rates.

OAR 860-029-0085(4)(b) provides that in the event a utility's integrated resource plan is acknowledged within 60 days of May 1 in a particular year, the utility may seek a waiver of either the May 1 update or the post IRP-acknowledgement filing.

OAR 860-029-0005(4) provides that the Commission may waive any of the Division 29 rules for good cause shown upon request or its own motion.

Oregon Commission Order No. 10-488 specifies "[w]here the utility's IRP and IRP action plan are partially acknowledged, the determination of the resource sufficiency/deficiency demarcation will be made on a case-by-case basis. Specifically, the utility will be directed to offer its own proposal for the demarcation of resource sufficiency and deficiency. Parties will be allowed to respond to the utility proposal. The Commission will then make the final determination."[1]

[1] Order No. 10-488, p. 8.

Analysis

Background
On March 5, 2024, the Commission acknowledged, in part, Pacific Power's 2023 IRP at its public meeting. The Commission declined to acknowledge many planning elements that provide clarity into the Company's planned resource acquisition actions and, therefore, into its avoided costs. This included non-acknowledgement of the preferred portfolio, long-term resource strategy, and the Company's New Resource Action items. On April 30, 2024, the Commission suspended the Company's post-IRP avoided cost update for to allow time for consideration of the appropriate inputs to use in light of the Commission's IRP acknowledgement decision.

The Company submitted a compliance filing with revised inputs on May 14, 2024. Staff held a workshop with the Company and stakeholders on June 7, 2024, and the Company provided a supplemental response to issues raised at the workshop on June 14, 2024. The Community Renewable Energy Association and the Renewable Energy Coalition (collectively the "QF Trade Associations") submitted comments on June 28, 2024, and Oregon Solar + Storage Industries Association submitted comments on July 1, 2024. Following review of the Company's IRP and avoided cost inputs along with submitted stakeholder comments, Staff outlines the following concerns and offers recommendations for the Company to revise its methodology and resubmit its standard avoided rates.

Filing Overview
The Company's proposed standard fixed levelized avoided costs for a 15-year contract (2025 through 2039), as shown in Table 1, saw an average decrease of 11.3 percent across non-renewable resource types, and an 11.6 percent decrease across renewable resource types. Staff reviewed the Company's inputs and methods and considered compliance with the Commission policy. Given the status of IRP acknowledgement, Staff also considered whether the rates reflect Staff's understanding of the Company's actual anticipated avoided costs i.e., whether these lower costs reflect a reasonable procurement strategy given planning dialogue surrounding the Company's short position to the market, uncertain future for the coal fleet, and the increasing regional conversation about resource adequacy.[2]

[22] See Docket No. LC 82, Staff Comments on 2024 IRP Update, June 14, 2024, pp. 11-16, which state among other things, "Finally, it is worth noting that Oregon will have an energy shortfall in 2030 of just over 3,500 GWh. Until a compliance pathway is identified, PacifiCorp will meet this energy need through market purchases, which carries price volatility risks discussed and a rate of emissions greater than natural gas."

Table 1 Current and Proposed 15-year Levelized Avoided Costs (2025-2039)

Standard Fixed Non-Renewable Avoided Costs ($/MWh)

	Baseload	Wind	Fixed Solar	Tracking Solar	Solar + Storage
Current (2025-2039)	$ 62.67	$ 62.40	$ 56.86	$ 57.09	$ 77.43
Proposed (2025-2039)	$ 56.77	$ 57.07	$ 47.31	$ 47.70	$ 73.48

Standard Renewable Fixed Avoided Costs ($/MWh)

	Baseload	Wind	Fixed Solar	Tracking Solar	Solar + Storage
Current (2025-2039)	$ 52.67	$ 44.51	$ 33.55	$ 36.55	$ 58.98
Proposed (2025-2039)	$ 44.07	$ 40.88	$ 28.41	$ 30.04	$ 58.68

Issue 1 – Resource Deficiency Period Start Date

The Commission did not acknowledge the Company's Action Plan, or any other action that would indicate what date to use as an indicator of the start of PacifiCorp's deficiency period for avoided cost pricing. In the case of non-acknowledgment of an IRP Action Plan, the Commission will decide the deficiency period start date on a case-by-case basis, although the utility is required to propose a deficiency start date and explain its reasoning.[3]

Pacific Power's deficiency period start date reflected in currently effective avoided cost rates is January 1, 2026.[4] In this post-IRP avoided cost filing, Pacific Power has changed the deficiency period start date to January 1, 2025. The QF Trade Associations recommend a deficiency start date of "2027 to 2030,"[5] while OSSIA comments recommend the Commission "set the demarcation date in 2030."[6]

Staff recommends a deficiency period start date of January 1, 2027, for both renewable and non-renewable schedules, based on the Company's planned near-term major resource acquisitions in 2027 of 654 MW of solar resources, 565 MW of battery storage,

[3] Order No. 10-488.
[4] See UM 1726(6) PacifiCorp's Standard Avoided Cost Filing, App. 2, p. 3 ("Therefore, the resource sufficiency period for the standard avoided cost rates is from 2022-2025 and the non-renewable and renewable resource deficiency period starts in 2026."); and *Standard Avoided Cost Purchases from Eligible Qualifying Facilities*, Order No. 22-253 (July 11, 2022).
[5] See UM 1729(9) QF Trade Associations' Comments, p. 16.
[6] See UM 1729(9) OSSIA's Comments, p. 3.

and 79 MW of wind resources.[7][8] Staff agrees with stakeholders that the 2025 deficiency is not a realistic reflection of the Company's actual resource actions, such as the cancellation of the near-term procurement actions described in the 2023 IRP. While the Company's IRP Update states clearly that "there is a material benefit to scaling down and delaying resource acquisition until after 2030,"[9] the Company's scaled down resource acquisitions easily meet the definition of a major resource for the purpose of indicating the start of the Company's deficiency period.[10]

For reference, Staff's proposal in UM 2000 aims to modernize the sufficiency/deficiency demarcation process to better reflect the approach to resource procurement expected under the current policy and regional landscape. Staff proposes in UM 2000 to: "Replac[e] the sufficiency/deficiency demarcation with a fixed ramp-in to reflect the expected ongoing procurement of non-emitting resources, while acknowledging that the driver of the procurement is not an energy or capacity shortage."[11]

Issue 2 – Proxy Resource Cost

The Company's post-2023 IRP avoided cost filing updates the avoided renewable proxy resource to that of a solar resource in southern Utah. As the basis for renewable avoided costs, stakeholders describe the 2023 IRP Utah South Solar resource's costs as "stale", "cherry picked", and "simply below market".[12] The QF Trade Associations point out that the that the average price for bids for wind and solar without storage on the final shortlist for PGE's most recently complete RFP was $60.94/MWh.[13] Staff notes that this value includes prices for resources that were not contracted for, but is useful in understanding the distance between the Company's prices, seen in Table 1 above, and the market.

The Company points out that stakeholders, including Renewable Northwest and the Sierra Club, provided comments during the 2023 IRP process demonstrating where the Company's assumed renewable resource costs were unreasonably elevated.[14] However, Staff notes that the Utah solar proxy appears to be the same facility from the Company's 2021 IRP, adding to concern of stale inputs not reflective of recent market conditions. The 2023 IRP Base Capital ($/kW) value for the 200 MW Milford, UT solar

[7] See UM 1729(9) PacifiCorp's Supplemental Response to Issues Raised at the June 7, 2024 Workshop, pp. 4-5, 10.
[8] See LC 82 PacifiCorp's 2023 Integrated Resource Plan Update, pp. 6-7.
[9] Id., p. 14.
[10] OAR 860-089-0100(1).
[11] See UM 2000 Staff's Phase 1 Proposal, at B(ii).
[12] See UM 1729(9) QF Trade Associations' Comments, pp. 7-8, 14.
[13] Id., p. 8.
[14] See UM 1729(9) PacifiCorp's Supplemental Response to Issues Raised at the June 7, 2024 Workshop, p. 7.

resource is stated as $1,140, whereas the National Renewable Energy Laboratory's (NREL) 2024 Annual Technology Baseline (ATB) moderate scenario value of base capital costs for utility-scale PV is approximately $1,483 $/kW, with both amounts stated in 2022$.[15] The base capital value from NREL ATB's moderate scenario is approximately 30 percent greater. Staff agrees that the Company's price assumptions are stale and not reflective of the Company's actual avoided costs. Staff recommends for the sake of accessibility, consistency, and transparency that the Company rely on NREL's 2024 ATB for the Utah South Solar's assumed cost data.

In UM 2000, Staff has proposed to, "derive avoided energy resource assumptions from actual utility procurements if available. If procurement data is unavailable, the utility should use independent and open-source data to develop the QF proxy characteristic assumptions. Staff proposes the NREL Annual Technology Baseline (ATB) for use in initial implementation."[16] The concept of using procurement data has not been fully detailed in UM 2000 and therefore, Staff believes that the more expedient source of price data is the NREL ATB. Staff also notes that NREL's ATB has been relied upon for technology cost and performance data by Portland General Electric (PGE) in PGE's 2019 and 2023 IRPs. Therefore, Staff recommends that the Commission direct the Company to refile its avoided cost update using NREL's 2024 ATB price data for the avoided proxy solar resource.

Issue 3 – Proxy Resource Interconnection and Network Upgrade Costs
Per Commission Order No. 23-005, the utilities are "directed to make clear, on a going forward basis, that avoided Net Upgrade costs are included in avoided cost calculations." As highlighted in comments from the QF Trade Associations, and echoed by OSSIA, the Company's avoided solar resource is not associated with any specific interconnection, transmission, or network upgrade costs identifiable in the Company's workbooks nor its 2023 IRP. The Company's 2023 Cluster 3 Generator Interconnection Report for Cluster Area 12, encompassing "Southwest Utah" suggests that resources of a similar size to the 200 MW Milford, Utah solar resource requesting interconnection would cost between $175 to $281 million.[17] Staff does not believe that resources in the interconnection study stage of development are an ideal proxy for the cost of interconnecting a resource that is economically feasible enough to be procured. However, Staff agrees that the Company's absent assumption of any dollar amount is lower than the Cluster Study results. Until additional study can be conducted, Staff recommends that the Company rely on the NREL 2024 ATB assumptions for Grid

[15] https://atb.nrel.gov/electricity/2024/utility-scale_pv.
[16] See UM 2000 Staff's Phase 1 Proposal, at C.
[17] PacifiCorp's Generator Interconnection Cluster 3 Study Report, Cluster Area 12 at 8-42 & 112-113 (Mar. 8, 2024).

Connection Costs, which include: distance-based spur line cost, transmission substation upgrades, and network upgrades.[18]

As a higher cost alternative, the Commission could direct the Company to use an average of interconnection and upgrade costs for similarly sized and located facilities in the 2023 Cluster cited by the QF Trade Associations. Staff examined costs for resources ranging in size from 150-250 MW from the Company's 2023 Cluster 3 Generator Interconnection Report for Cluster Area 12, which encompasses southwest Utah. The average value for interconnection and network upgrade costs for similarly sized and located solar resources to the 200 MW Milford, Utah solar resource is roughly $238.5 million.[19]

Staff's Proposal in UM 2000, part D(i), addresses avoided deliverability issues by recommending that, "…cost assumptions for the avoided resource must reflect the avoided resource's proportional share of transmission build out estimated in the IRP preferred portfolio."[20] This is a preliminary concept and Staff's goal in UM 2000 is to identify a methodology that reflects realistic interconnection and deliverability costs while recognizing that the region is in a period of change in the transmission planning space and renewable generation projects in the development stage may not be an ideal proxy for resources that will come on line or execute a prudent contract with the Company.

Remaining Updated Inputs

Electric Forward Prices. Pacific Power updated its Official Market Price Forecast with March 2024 data for on-peak and off-peak electric market prices using a weighted blend of forward monthly market prices for Mid-Columbia, California-Oregon Border (COB), and Palo Verde for their sufficiency period pricing ending December 31, 2024, as filed. Forward electric market prices in the near term, the 2024 combined (flat) On- and Off-peak annual rate, have decreased by approximately 12.4 percent since the Company's previous approved avoided cost schedule update. Electric forward prices for the next fifteen full years, 2025-2039, have decreased by approximately 3.4 percent since the Company's previously approved avoided cost schedule update. Forward prices are relatively elevated in the near-term, 2024-2027, before declining toward and flattening around the 2025-2039 combined average price of approximately $57.

Natural Gas Forward Prices. Pacific Power filed their post-IRP compliance update utilizing the Company's Official Forward Price Curve from March 2024. In the updated

[18] https://atb.nrel.gov/electricity/2024/definitions#capitalexpenditures.
[19] See UM 1729(9) OSSIA's Comments, p. 2., "…the avoided solar resource should be corrected to reflect an average interconnection and transmission assumption based on the location it is proposed."
[20] See UM 2000 Staff's Phase 1 Proposal at D (i).

forecast, gas prices have decreased by an average of 6.1 percent over the 2025-2039 forecast horizon.

Tax Credits. As highlighted by the Sierra Club in its Round 1 Comments on Pacific Power's 2023 IRP, the South Utah Solar resource would be eligible for a 10 percent Energy Communities Tax Credit. "An "energy community" is any census tract where a coal mine or coal-fired power plant has closed since 2009 and all directly adjacent census tracts; brownfield sites; and areas where fossil fuels have accounted for at least (1) 0.17 percent of direct employment, or (2) 25 percent of local tax revenues and where the unemployment rate is above the national average for the previous year.[21] The Company's initial application of tax credits did not include this value, and the Company corrected this oversight in its June 14 supplemental response filing to issues raised at the workshop, along with correcting two additional errors concerning the application of the production tax credit (PTC). The initially-filed workpapers contained an incorrect start date for PTCs, modelling them to start in 2022, and they are now corrected to begin in 2024. The initially-filed workpapers included a 'levelization factor', or nominal discount rate, from the 2023 IRP Update that should have remained as the value from the 2023 IRP, a value that was 0.08 percent higher. The later PTC start date and increased levelization factor both reduce the impact of the PTC, while the 10 percent Energy Communities Tax Credit increases the total tax credit value. The corrections result in a net increase to avoided renewable costs, all else equal, as demonstrated in the Company's workpapers and supplemental response filing.[22]

Conclusion

Consistent with ORS 860-029-0005(4) and Commission Order No. 10-488, Staff recommends directing the Company to update its resource deficiency period to begin January 1, 2027, and refile its (formerly) Schedule 37 avoided costs using the most recent long-term gas forecast and electric forward market inputs, along with using NREL ATB cost and performance values for the solar renewable proxy resource, including for interconnection and network upgrade costs.

PROPOSED COMMISSION MOTION:

Direct the Company to revise and resubmit their update to their Schedule 37 standard avoided cost rates for Qualifying Facilities to reflect Staff's proposed methodological changes no later than September 5, 2024.

[21] See LC 82 Sierra Club's Round 1 Comments, pgs. 4-5.
[22] See UM 1729(9) PacifiCorp's Supplemental Response to Issues Raised at the June 7, 2024 Workshop, p. 6, Table 2 – "2026 Avoided Cost ($/MWh) and Capacity Contribution (%)".