ITEM NO. RA2

PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: June 28, 2022

REGULAR __X__ **CONSENT** ____ **EFFECTIVE DATE** __July 1, 2022__

DATE: June 14, 2022

TO: Public Utility Commission

FROM: Ted Drennan

THROUGH: Bryan Conway, Caroline Moore, and Scott Gibbens **SIGNED**

SUBJECT: PACIFIC POWER:
(Docket No. UM 1729(6))
Update to Standard Avoided Cost Schedule for Qualifying Facilities.

STAFF RECOMMENDATION:

The Public Utility Commission of Oregon (Commission) should approve Pacific Power's (PacifiCorp or Company) filing, which updates its Standard Avoided Cost Schedule payments for both renewable (RPS compliant) and non-renewable resources, conditioned on the Company correcting the non-renewable proxy's fixed O&M costs. The Commission should also grant PacifiCorp's request of waiver of the May 1 annual avoided cost update.

DISCUSSION:

Issue

Whether the Commission should approve Pacific Power's update to its Standard Avoided Cost Schedule and request of waiver of the May 1 annual avoided cost update.

Applicable Law

OAR 860-029-0040(1) requires utilities to file updated avoided cost prices for qualifying facilities under the Public Utility Regulatory Policies Act of 1978 within 30 days of Commission acknowledgement of a public utility's Integrated Resource Plan (IRP).

OAR 860-029-0080(7)(a) requires an annual update of avoided costs on May 1. OAR 860-029-0085(7)(b) allows for a waiver of the May 1 avoided cost update filings in the event the utility's IRP is acknowledged within 60 days of the May 1 filing deadline.

<u>Analysis</u>

Background
The Company's current standard avoided cost schedule was approved in November 2021 by Commission Order No. 21-389.[1] Under OAR 860-029-085(1), PacifiCorp is required to file with the Commission standard avoided cost prices within 30 days of a Commission decision regarding acknowledgement of an IRP. On March 29, 2022, the Commission acknowledged the Company's 2021 IRP and on April 28, 2022, the Company filed their 2022 updated avoided cost schedule updating the fixed avoided cost prices for PacifiCorp's standard avoided cost price stream and its standard renewable avoided cost price stream. The latter prices are only available to QF resources that comply with Oregon's Renewable Portfolio Standard (RPS) and that agree to transfer their Renewable Energy Certificates (RECs) to PacifiCorp during PacifiCorp's deficiency period.

Because the Company's post-IRP avoided cost filing was made just three days before the due date of the Company's annual May 1 update to avoided cost prices, the Company filed a request for a Commission waiver of the May 1 avoided cost update under OAR 860-029-0085(1).

In response to a request from Staff for more time for stakeholders and Staff to investigate PacifiCorp's filing, the Commission suspended the filing for investigation at the May 31, 2022, Public Meeting.[2]

Staff hosted a workshop on June 3, 2022, where PacifiCorp presented their analysis and responded to stakeholder and Staff questions. Some stakeholders questioned the use of a combined cycle combustion turbine (CCCT) and a simple-cycle combustion turbine (SCCT) as the non-renewable avoided resource proxies considering the passage of HB 2021. The timing of gas price forecasts used in the avoided cost modeling was also questioned, with some parties believing more recent forecasts would result in higher avoided costs. Parties also raised the issue of the apparent negative capacity adder for solar QF prices, as well as off-peak solar prices in excess of on-peak prices.

Proxy Resource
HB 2021 Section 8(4)(a) requires the Commission to initiate a process to "ensure avoided costs accurately reflect the characteristics of generators that contribute to

[1] *In the Matter of PACIFICORP, d/b/a PACIFIC POWER, Update to Standard Avoided Cost Schedule for Qualifying Facilities* (UM 1729), Order No. 21-389.
[2] See Order No. 22-207.

compliance with sections 1 to 15 of this 2021 Act." This process "may commence **no sooner** (emphasis added) than two calendar years before the calendar year identified in the electric company's acknowledged integrated resource plan that shows the electric company will meet or exceed the requirements described in ORS 469A.052(1)(h)…"[3] The trigger cited in ORS 469A.052(1)(h) requires "at least 50 percent of the electricity sold by an electric company to retail electricity consumers in the calendar year 2040 and subsequent calendar years must be qualifying electricity." PacifiCorp's Preferred Portfolio in its acknowledged IRP shows that in 2031 the Company expects to have 53 percent of its energy mix met with renewables.[4] Given this, Staff does not believe that HB 2021 mandates that the Commission eliminate the use of a CCCT or SCCT as the proxy resources for non-renewable rates or that the standard non-renewable rate proposed by PacifiCorp violates HB 2021.

Staff recognizes that updating the proxy resource in light of HB 2021 is a broad issue that warrants consideration across many avoided cost use cases and is not appropriate for a single utility's regular avoided cost update. Absent new Commission direction, the venue for updating the PURPA avoided cost methodology is Docket No. UM 2000, which is projected to launch at the completion of Docket No. UM 2011.

Gas Price Forecast
PacifiCorp relies on a third party, Siemens Inc., for its long-term gas price forecasts. For this update the Company used their most recent long-term forecast, dated March 31, 2022. As with other independent forecasting organizations, Siemens updates its long-term forecasts on a limited basis. Siemens, like Platts, updates its long-term forecasts on a quarterly basis, while others such as IHS Market provide updates twice a year.

At the June 3 workshop PacifiCorp provided information on the movements of forecasts related to their filing. Near-term electric market prices, those that cover what will be the sufficiency period under PacifiCorp's updated Schedule, have increased since PacifiCorp filed their avoided cost update. The biggest impact is in the immediate future, with 2022 prices at Palo Verde up 20 percent and Mid-Columbia prices up 30 percent. These impacts fall over time, with five percent and seven percent increases in 2025 for the two hubs, respectively. The price increases are driven mainly by the increase in the cost of natural gas. This increase in natural gas prices is driven by several factors, with the Ukrainian conflict being one of the main drivers. Increases in United States LNG exports have put pressure on gas prices domestically. There are other factors at play as well, such as increased domestic demand.

The forecast for year 2026 is blended, an average of the forward electric market forecast and the long-term proxy resource, which is natural gas-fueled. The impact

[3] HB 2021, section 8(4)(b).
[4] See Figure 9.45 – Projected Energy Mix with Preferred Portfolio Resources page 305 of PacifiCorp's 2021 IRP.

here is minimal, at three percent. The forecast for years 2027 forward relies on the proxy resource and the long-term gas forecast. There are no changes to those avoided cost prices.

Staff does not believe that an update to the gas price forecasts used to calculate PacifiCorp's avoided cost prices is warranted. Updated long-term projections may reveal assumptions about a changed market for gas, but it is not clear at this point if such changes would be due to a market shock that will moderate over time or a more fundamental shift in the market. Furthermore, the service used by PacifiCorp has not produced a more recent gas price forecast than what is used in PacifiCorp's post-IRP update.

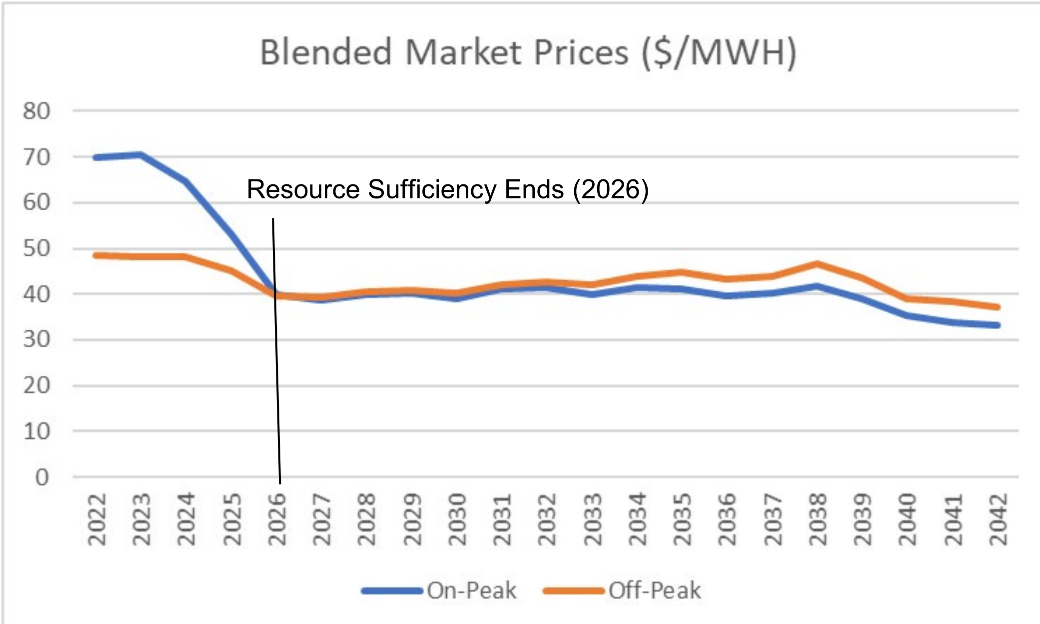
Staff acknowledges a new price forecast will be issued at the end of June. However, there is no certainty as to whether this forecast is a more reliable indicator of the long-term outlook for gas prices than the forecast produced in March. Furthermore, waiting for this new long-term gas price forecast and then vetting it will the delay avoided cost price update.

Capacity Adder
The apparent negative capacity adder for solar is an artifact of the Commission's methodology for adjusting the payments to different resources based on their respective capacity contributions. For this methodology, the capacity contribution of a proxy solar resource is compared to that of the proxy wind resource. The fixed solar resource has a capacity contribution of 11 percent and tracking solar at 14 percent, compared to a wind resource at 41 percent. The differences between the capacity contributions leads to a negative adder for solar as compared to wind. The values incorporated for the resources are the same as those included in PacifiCorp's acknowledged IRP.

Staff recognizes that the issues raised by stakeholders are appropriate issues to discuss but that this should be done in a larger forum, not a stand-alone update. In this case, PacifiCorp has calculated the avoided cost prices consistently with the Commission's methodology and with the assumptions in its recently acknowledged IRP.

On and Off-Peak Prices
One other issue Staff and stakeholders identified is the difference between on and off-peak prices in PacifiCorp's updated Schedule. Staff initially had concerns with the fact off-peak prices surpassed on-peak prices for standard renewable fixed avoided cost prices beginning in 2026. The Company explained that the increasing saturation of solar energy during daytime hours is responsible for the decline in on-peak prices. Figure 1 On-Peak vs Off-Peak Electricity Price Forecast shows the annual blended market prices for on-peak and off-peak rates.

Figure 1 On-Peak vs Off-Peak Electricity Price Forecast



This abundance of close-to-zero marginal cost resources driving on-peak prices down was also seen in the 2021 Northwest Power Plan, with many instances of negative pricing expected in the future. From the report:[5]

> Ongoing construction of inexpensive renewable resources is influencing the wholesale electricity market, with low prices, particularly in the middle of the day, when solar PV is producing at its peak. In light of the construction of renewable resources anticipated in this plan, these low prices are likely to become increasingly negative through time…

These pricing patterns may need to be addressed at some point in the future, as it seems counter-intuitive to have off-peak prices in excess of on-peak prices. However, any discussion should involve more than one utility as this is something that will impact all market participants.

Proxy CCCT Assumptions

As with the proxy renewable resources, PacifiCorp's IRP used an updated thermal unit, a J-Class CCCT, whereas the last IRP relied on a G/H-Class CCCT. The new proxy resource is larger, and more efficient, resulting in some price declines. However, the proxy resource in PacifiCorp's 2021 did not have the same level of fixed O&M costs as the proxy G/H Class CCCT from the 2019 IRP or even the same type of J-Class CCCT found in PacifiCorp's 2019 IRP. Instead, the fixed operations and maintenance (O&M) costs included for the proxy J-Class CCCT in the 2021 IRP included only pipeline costs.

[5] See page 43 of the report, found here: https://www.nwcouncil.org/fs/17680/2021powerplan_2022-3.pdf.

In a data response to CREA, PacifiCorp reported that if the fixed O&M costs from the J-Class CCCT with duct firing capacity included in the 2019 IRP were used for the avoided cost calculations there would be an increase in capitalized energy costs of $3.28/MWh starting in 2026.[6]

Staff believes PacifiCorp's avoided cost prices should be modified to include the omitted fixed O&M costs of PacifiCorp's proxy resource. These fixed O&M costs are included in PacifiCorp's currently effective avoided cost rates. Discovery provided by PacifiCorp reflects that not all of the fixed costs were not included in the avoided costs calculated in April 2021 because the costs were not in the IRP. PacifiCorp does not disagree that the costs are missing but explains that the avoided cost calculation is appropriate nonetheless because it is consistent with its 2021 IRP.

Staff recognizes the costs were not in PacifiCorp's 2021 IRP, but it appears that this is only because they were inadvertently omitted. This inadvertent omission should not carry over to the calculation of avoided cost prices. PacifiCorp has provided an estimate of the costs based on a proxy resource from the 2019 IRP. Staff sees no policy that would be advanced by excluding the costs from the calculation of avoided cost prices. Further, excluding the costs because PacifiCorp inadvertently omitted from PacifiCorp's IRP could incent inappropriate behavior in future IRPs. Therefore, Staff believes that the Company should correct this omission in its avoided cost update.

Price Comparison
The Company's 2022 filing incorporates annual updates to forecasted prices for natural gas and electricity. As discussed above it also included updates to the proxy resource.

The Company's proposed standard fixed levelized avoided costs for a 15-year contract (2023-2037) saw declines across all resources, as seen in Table 1 below. The table also includes a row demonstrating changes if all of the fixed O&M costs of the proxy energy resource were included. Here the baseload rate is up, but all other resources still see a decline, compared to current rates. Standard renewable fixed levelized avoided costs over the same time saw substantial increases in avoided cost rates, with wind rates up 29 percent, and solar up 51 percent.

[6] See PacifiCorp's Response to CREA Data Request 2.5, PacifiCorp explains that it obtained its estimate of the fixed O&M costs for a J-Class CCCT from its 2019 IRP.

Table 1 Current and Proposed 15-year Levelized Avoided Costs (2023-2037)

Standard Fixed Avoided Costs ($/MWh)

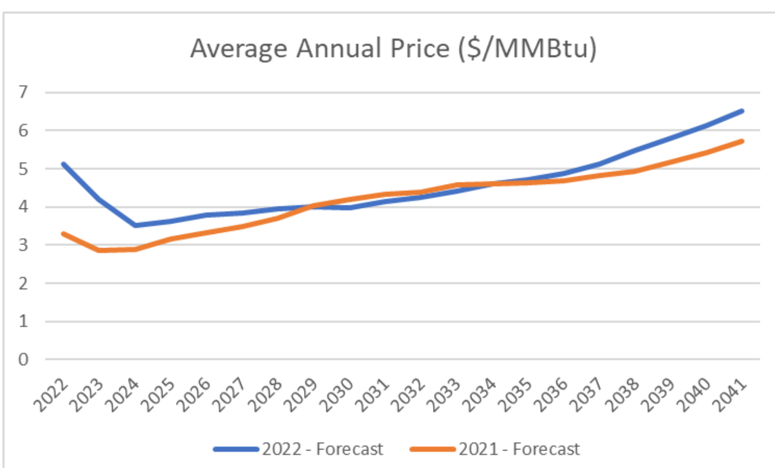
	Baseload	Wind	Fixed Solar	Tracking Solar
Current	$ 50.13	$ 53.38	$ 45.06	$ 45.56
Proposed	$ 46.91	$ 46.11	$ 41.92	$ 42.08
Adjusted for Fixed Costs	$ 52.09	$ 48.71	$ 44.52	$ 44.67

Standard Renewable Fixed Avoided Costs ($/MWh)

	Baseload	Wind	Fixed Solar	Tracking Solar
Current	$ 36.09	$ 37.57	$ 26.03	$ 27.57
Proposed	$ 55.44	$ 48.49	$ 39.18	$ 41.55

Drivers of Change
In the Company's 2022 filing the changes in the avoided cost schedule are driven by many factors. As discussed above, changes in the proxy resource characteristics are responsible for some of the changes in the avoided costs. Another factor driving changes in long-term market fundamentals are renewable resource additions. These additions are leading to the potential for low or even negative on-peak market prices, especially in later years. Finally, updates in the Company's gas and electricity price forecasts are also a factor. Figure 2 Gas Price Forecast Comparison below highlights the change in the gas price forecast.

Figure 2 Gas Price Forecast Comparison



Conclusion

Staff believes PacifiCorp has followed the rules and guidelines for this avoided cost price update. Some of the issues raised by Staff and stakeholders are better addressed in a more appropriate venue, and other issues lack sufficient supporting data to warrant an adjustment.

While there are current uncertainties in the market, requiring updates to natural gas prices at this stage is unwarranted. As discussed above, PacifiCorp used the most current long-term forecasts when the filing was made; there is currently no long-term update for them to use in their models.

Likewise, changing proxy resources away from gas turbines in light of HB 2021 is not mandated at this point. Further, such a move should not be taken in an avoided cost update filing of a single utility, rather consideration of the issue should occur in a forum that is open to all utilities and stakeholders. However, the Company should be required to fix the known omission in the proxy costs, specifically the fixed O&M, so that all proxy costs are included.

PROPOSED COMMISSION MOTION:

Approve PacifiCorp's filing, which updates its Standard Avoided Cost Schedule payments, conditioned on the Company correcting the non-renewable proxy's fixed O&M costs. The Commission should also grant PacifiCorp's request of waiver of the May 1 annual avoided cost update.