

**PUBLIC UTILITY COMMISSION OF OREGON  
STAFF REPORT  
PUBLIC MEETING DATE: June 15, 2021**

**REGULAR**  X  **CONSENT** \_\_\_\_\_ **EFFECTIVE DATE**  June 16, 2021

**DATE:** June 11, 2021

**TO:** Public Utility Commission

**FROM:** Michelle Scala

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

**SUBJECT:** IDAHO POWER COMPANY:  
(Docket No. UM 1730(6))  
Updates Schedule 85, Cogeneration and Small Power Production  
Standard Contract Rates to Reflect the 2021 Annual May Update of  
Avoided Cost Rates.

**STAFF RECOMMENDATION:**

Approve Idaho Power Company's (Idaho Power or Company) update of Schedule 85, Cogeneration and Small Power Production Standard Contract Rates, with the condition Idaho Power file an update to the integration charges for solar and wind qualifying facilities (QFs) within 60 days.

**DISCUSSION:**

Issue

Whether the Commission should approve Idaho Power's update of Schedule 85, Cogeneration and Small Power Production Standard Contract Rates.

### Applicable Orders and Rules

OAR 860-029-0040(4)(a) requires utilities to file updated avoided cost prices for QFs under PURPA<sup>1</sup> within 30 days of Commission integrated resource plan (IRP)<sup>2</sup> acknowledgment.<sup>3</sup>

OAR 860-029-0080(7)(a) specifies that on May 1 of each year, a public utility must file with the Commission updates to the avoided cost information filed under section (2) of this rule to be effective within 60 days of filing to reflect:

- (A) Updated natural gas prices;
- (B) On- and off-peak forward-looking electricity market prices;
- (C) Changes to the status of the Production Tax Credit [PTC]; and
- (D) Any other action of change in an acknowledged IRP update relevant to the calculation of avoided costs.

### Analysis

#### *Background*

Idaho Power's Schedule 85 avoided cost prices include three price streams: Baseload, Wind, and Solar, each adjusted for the resource type's relative capacity contribution. Idaho Power has no requirement to meet Oregon's Renewable Portfolio Standard at this time, and therefore has no avoidable renewable resource avoided cost.

Idaho Power filed its initial 2019 IRP on June 28, 2019. Subsequently, the Company submitted three additional iterations of the 2019 IRP, among which the Company made modifications to modeling inputs, Idaho Power's preferred portfolio, and to correct cost errors related to the Jim Bridger Power Plant.<sup>4</sup> On April 15, 2021, the Commission acknowledged Idaho Power's 2019 IRP.<sup>5</sup>

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<sup>1</sup> Public Utility Regulatory Policies Act of 1978.

<sup>2</sup> Integrated Resource Plan and least-cost plan are synonymous.

<sup>3</sup> "In the same manner as rates are published for electricity sales each public utility shall file with the Commission, within 30 days of Commission acknowledgement of its least-cost plan pursuant to Order No. 89-507, standard rates for purchases from qualifying facilities with a nameplate capacity of one megawatt or less, to become effective 30 days after filing. The publication shall contain all the terms and conditions of the purchase. Except when a public utility fails to make a good faith effort to comply with the request of a qualifying facility to wheel, the public utility's standard rate shall apply to purchases from qualifying facilities with a nameplate capacity of one megawatt or less."

<sup>4</sup> See Docket No. LC 74 Staff Report at p. 7.

<sup>5</sup> The Commission issued its written order regarding acknowledgment on June 4, 2021 (Order No. 21-184).

On May 1, 2021, Idaho Power filed a combined post-IRP acknowledgment avoided cost update and annual avoided cost update, requesting an effective date of June 16, 2021.

#### *Avoided Cost Updates*

As part of the Company's avoided cost calculations for Baseload, Wind, and Solar resources, Idaho Power utilizes a simple cycle combustion turbine (SCCT) as a proxy resource to determine the value of capacity (\$/kW). The value of capacity is determined for the year in which the Company forecasts a resource deficiency and adjusted for inflation in each year thereafter. Staff found the value of capacity declined from the previous May 2020 avoided cost update, and attributes this change to the Company's downward adjustment to the SCCT capacity factor from 10 percent to 5 percent.<sup>6</sup> In both the 2019 IRP and May 2021 avoided cost filing, Idaho Power uses a Contribution to Peak (CTP) value to approximate a resource's ability to serve load during peak hours (i.e. the average capacity factor during the heavy load hours). The CTP remained unchanged for both Baseload and Wind resources in the May 2021 update. However, CTP declined<sup>7</sup> for Solar resources to 34.7 percent. The Company stated that this decline is primarily driven by the addition of 120 MW of Solar through the Jackpot Solar Facility at year-end 2022. As stated in the Company's Second Amended 2019 IRP, "as the overall system peak load is decreased by the addition of incremental amounts of solar PV, eventually the top 100 hours of peak load contain fewer and fewer hours when solar PV may contribute to reducing the peak load".

In Idaho Power's post-IRP update, the on-peak capacity factor increased for Wind resources by 0.8 percent, while hours of on-peak availability increased by approximately 40 hours. The changes in these inputs reduced the value of on-peak capacity allocated to on-peak hours of a Wind resource. Conversely, both the on-peak capacity factor and hours of on-peak availability decreased for solar (3.1 percent and approximately 154 hours, respectively). However, the changes did not result in an increase to the value of on-peak capacity for Solar, as the reduction to Solar's CTP represented a greater impact to the calculation. As such, as proposed, the May 2021 update would reduce capacity payments to both Wind and Solar QFs.

Idaho Power's post-IRP acknowledgment update also reflects a revised deficiency date of August 2028. The deficiency date was pushed out from the July 2026 used in Idaho Power's current avoided cost prices. The Company stated that the date was adjusted as a result of increased market purchases in the 2019 IRP exceeding the increased loads forecast. When comparing the load and resource balance between the 2017 and 2019 IRPs, the original deficiency date in 2026 no longer shows a deficit.

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<sup>6</sup> See Docket No. LC 74, 2<sup>nd</sup> Amended 2019 IRP at p. 99.

<sup>7</sup> Contribution to Peak for a Solar resource declined by 16.6 percent in the proposed May 1, 2021, update.

With respect to the May 1 update to avoided cost prices, Idaho Power updated both the natural gas and forward market prices for electricity. The Company's updated natural gas prices are from S&P Platts' Henry Hub Forecast long-term forecast, dated March 4, 2021. The forecast was adjusted for Sumas Basis and transport costs added, resulting in a more tailored forecast at Idaho Citygate prices. A comparison of the April 2020 Platt's forecast and the more recent March 2021 update show that prices have generally increased while the Sumas Basis difference has gone down. In October 2020, as part of testimony submitted under Docket No. UE 384, Idaho Power's Annual Power Cost Update, the Company attributed the increase in prices to lower natural gas supply and rising demand.<sup>8</sup> Forward price curves for energy reflect market quotes at Mid-C from the Inter-Continental Exchange. Prices have increased, most notably in the near term summer months, reflecting traditional seasonality as well as higher energy consumption related to continued economic growth and the easing of COVID-19 restrictions.<sup>9</sup>

Integration charges are intended to capture the cost of how operations of dispatchable generating resources must be modified to integrate increasing levels of variable energy resources while ensuring the reliable delivery of electrical power. Idaho Power's avoided cost update did not include an update to integration charges to QFs that offset the additional cost incurred by the Company to integrate Variable Energy Resources (VER) such as wind and solar into Idaho Power's system.

#### *Staff Review*

Staff did not identify any issues with the inputs used to derive the updates to the avoided cost prices. The updates are reflective of the acknowledged 2019 IRP, including resource costs, resource performance, capacity contribution factors, and financial parameters.

Further, Staff met with the Company via teleconference and corresponded electronically to verify certain calculations and assumptions in the workpapers and did not find any errors in the Company's calculations or deviations in updated forecasts.

However, Staff identified a concern with leaving the integration charges imposed on wind and solar QFs unchanged in this post-IRP avoided cost update. Staff attributes its concerns with maintaining the current integration charges in avoided cost prices to the following two issues:

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<sup>8</sup> See Docket No. UE 384, *In the Matter of Idaho Power Company's 2021 Annual Power Cost Update*; Idaho Power/100.

<sup>9</sup> May 2021 US Energy Information Administration, Short-Term Energy Outlook ([https://www.eia.gov/outlooks/steo/pdf/steo\\_full.pdf](https://www.eia.gov/outlooks/steo/pdf/steo_full.pdf)).

- 1) In both the 2018 and 2020<sup>10</sup> Staff Reports for Docket No. UM 1730, Staff pointed to the uniquely high wind integration charges put forth by Idaho Power in its avoided cost filings and indicated that significant lower wind integration charges should be expected in future filings.
- 2) Idaho Power's 2020 Variable Energy Resource analysis is now complete and includes substantially lower integration charges than those currently in place.

To further elaborate on these issues, Staff notes that in 2018, Staff indicated that the "avoided costs for wind QFs is reduced significantly by the wind integration charges currently in place".<sup>11</sup> At the time of the 2018 Staff report, Idaho Power had not completed the updated wind integration study, which the Commission had requested in Order No. 17-075.<sup>12</sup> As stated, Staff expected to see the Company include the results in subsequent filings. However, despite the 2018 VER analysis being completed prior to the development of Idaho Power's 2019 IRP,<sup>13</sup> the Company did not include the study's reduced integration charges<sup>14</sup> in the IRP. Idaho Power addressed the 2018 VER study in its 2019 IRP stating:

While the 2018 VER study provided valuable information regarding the rules for reserve requirements, the modeling performed for the 2019 IRP provides more information on how VERs affect Idaho Power's system and the ability to maintain sufficient reserves.<sup>15</sup>

In the 2020 Docket No. UM 1730 Staff Report, Staff did not recommend requiring the Company to reflect the 2018 VER results as it determined that wind integration charges do not fall under any of the four factors for May 1 updates (see applicable law section above), but expected to address updated charges in the post-IRP acknowledgement update, which is before the Commission today. In its conclusion, Staff wrote:

While the wind integration charges used for the calculations are higher than recent studies suggest are appropriate, the May 1 Annual Update is not the appropriate venue for changing this input. Idaho

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<sup>10</sup> In 2019, Idaho Power's avoided cost update was captured in an interim measure, filed under Docket No. UM 2001, per Order No. 19-074. The Commission directed the utilities to make updates to a limited set of inputs to the existing standard avoided cost model, and no changes to the methodology.

<sup>11</sup> See 2018 Docket No. UM 1730 Staff Report at p.3.

<sup>12</sup> See Docket No. UM 1793, *Idaho Power Application for Approval of Solar Integration Charge*.

<sup>13</sup> The 2018 Variable Energy Resource Integration Analysis was submitted on July 31, 2018.

<sup>14</sup> The 2018 WIS evaluates integration costs at wind levels of 300, 500, 727, 800, 900, 1,000, and 1,100 MW using a median, low, and high hydro forecast. Integration charges ranged from \$2.29 at 300 MW wind nameplate to \$5.17 at 1,100.

<sup>15</sup> Idaho Power Second Amended 2019 IRP at p. 27.

Power's Post-IRP Avoided Cost update, when filed, should reflect findings of the most recently approved wind integration study available.<sup>16</sup>

In 2020, Idaho Power engaged Energy and Environmental Economics, Inc. (E3) to conduct an updated VER analysis.<sup>17</sup> E3 notes that the method of deriving integration costs [in the 2020 study] was substantially different in the last [2018] study.<sup>18</sup> E3 indicated the lower integration costs determined from the 2020 study are likely due to: 1) reduced need for modeled ancillary services, 2) the fact that the remaining 2023 coal fleet is modeled as must-run and thus commitment decisions are not affected by VER penetration; 3) access to the Energy Imbalance Market (EIM) makes it easier to use market transactions to integrate VERs;<sup>19</sup> and 4) allowing additional system flexibility in some cases (e.g. from batteries). Idaho Power presented the study's final integration costs to the Technical Review Committee (TRC) on November 6, 2020, and subsequently asked E3 to further verify the integration results against real-world transaction data from the EIM market. On May 19, 2021, Idaho Power reached out to the TRC, informing members that the additional review did not result in any changes to the previously presented integration costs. In this same correspondence, the Company indicated that it regarded the study work to be finalized and issued the "IPC VER final report" for any final thoughts or feedback from the committee. The wind integration charges computed by the E3 study are substantially lower than those included in the current prices and proposed update. Per the study, "the overall incremental integration costs were found to range from \$0.64/MWh-\$4.65/MWh".<sup>20</sup> Staff acknowledges that the E3 study was completed after Idaho Power's 2019 IRP, and thus not included in the IRP review. However, Staff notes that the study was conducted by an independent entity (E3) and the result of a lengthy review by an Idaho Power Technical Review Committee (TRC) that met several times and discussed at length the analysis undertaken by Idaho

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<sup>16</sup> See 2020 Docket No. UM 1730 Staff Report at p.3.

<sup>17</sup> In 2018, Idaho Power conducted a VER Integration Analysis in compliance with Order Nos. 17-075 and 17-223

(<https://docs.idahopower.com/pdfs/AboutUs/PlanningForFuture/wind/VariableEnergyResourceIntegrationAnalysis.pdf>).

<sup>18</sup> The 2018 Study Design simulated system operations for a test year under a load-alone share scenario where the system is not burdened with regulating reserves associated with wind and a load net wind scenario where the system must regulate reserves associated with netted load and wind time series. The 2020 E3 methodology identified metrics to estimate the cost of VER integration and performed multiple model runs for 11 case scenarios.

<sup>19</sup> The EIM was not included in the previous study.

<sup>20</sup> Energy and Environmental Economics, Inc., December 2020, Variable Energy Resource Integration Analysis, Idaho Power Company.

Power with the assistance of E3.<sup>21</sup> The TRC members included OPUC staff who actively participated in the committee meetings. Given these factors, Staff finds the E3 study results to be vetted and credible. At present, Staff does not know the specific impact the updated inputs from the E3 report would have on Idaho Power's VER integration charges. However, for illustrative purposes only, if Staff were to assume that wind integration charges in 2023 moved from their current value of \$20.29 to the E3 High Wind case 5<sup>22</sup> total integration cost of \$0.77,<sup>23</sup> on- and off- peak avoided cost prices for a wind resource would increase by 125 percent and 423 percent, respectively. Recognizing the significance of incorporating the revised numbers, Staff finds compelling reason to use the integration charges put forth by E3's 2020 VER analysis.

After Staff shared its concern with Idaho Power, Idaho Power agreed to make a compliance filing to update its integration charges using the E3 Study results within 60 days of the approval of this avoided cost filing. Idaho Power indicated it will utilize the numbers in the E3 executive summary Case 5, High Wind, as the basis for wind integration charges, adjusted to net present value for 2021. As the Company will be updating all integration charges, it expects solar integration charges to increase to approximately \$2.00/MWh.<sup>24</sup>

Staff did not receive comment from stakeholders on this filing.

### Conclusion

Staff has identified no concerns with the updates Idaho Power made to its standard avoided cost prices. Staff did identify a concern with the integration charges imposed on wind and solar QFs, which did not change in Idaho Power's filing. However, Idaho Power expressed sufficient confidence in the E3 study and has agreed to make a separate filing within 60 days to update the integration charges for wind and solar resources. The updated values are expected to reduce wind integration charges by approximately \$18.40 and increase solar integration charges by approximately \$1.96. Staff believes it is reasonable to allow Idaho Power's combined May 1 and post-IRP

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<sup>21</sup> Idaho Power articulated TRC functions in its 2016 Solar Integration Study Report in the Technical Review Committee Study Plan at p. 71-72 of the pdf (<https://docs.idahopower.com/pdfs/AboutUs/PlanningForFuture/wind/IPC2016SolarReport.pdf>).

<sup>22</sup> Energy and Environmental Economics, Inc., December 2020, Variable Energy Resource Integration Analysis, Idaho Power Company.

<sup>23</sup> Staff notes this value is comparable to wind integration charges currently in place with PAC and PGE; additionally E3 notes the range of integration costs produced in its study were also lower than those generated in the 2018 VER Study performed by Idaho Power.

<sup>24</sup> This estimate is based on Case 1, Base 2023, in the E3 VER analysis. When Idaho Power adds pending solar generation to the system (e.g. Jackpot Solar), the integration charges are expected to update to Case 3, High Solar.

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acknowledgment updates go into effect on June 16, 2021, with the condition Idaho Power make a filing to update the integration charges within 60 days.

**PROPOSED COMMISSION MOTION:**

Approve Idaho Power Company's update of Schedule 85, Cogeneration and Small Power Production Standard Contract Rates, with the condition Idaho Power file an update to the integration charges for solar and wind QFs within 60 days.

Idaho Power UM 1730(6)