Office of the Secretary
Service Date
June 26, 2024

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF ROCKY MOUNTAIN POWER'S APPLICATION REQUESTING AUTHORIZATION TO UPDATE THE WIND AND SOLAR INTEGRATION RATE FOR SMALL POWER GENERATION QUALIFYING FACILITIES	**CASE NO. PAC-E-23-24** **ORDER NO. 36243**

On November 29, 2023, Rocky Mountain Power, a division of PacifiCorp ("Company"), applied to the Idaho Public Utilities Commission ("Commission") for authority to adjust the wind and solar integration rate applicable to new power purchase agreements ("PPAs") between the Company and the wind and solar qualifying facilities ("QFs") ("Application"). Supporting workpapers were also filed with the Application. The Company requested that its Application be processed by modified procedure.

On January 2, 2024, the Commission issued a Notice of Application and Notice of Intervention Deadline. Order No. 36051. No one intervened.

On March 7, 2024, the Commission issued a Notice of Modified Procedure and set public comment and Company reply comment deadlines. Order No. 36107. Staff filed comments to which the Company replied.

Having reviewed the record, the Commission enters this Order approving the Company's Application on the conditions described below.

BACKGROUND

In 2007, the Company requested approval of a utility-specific wind integration adjustment to the published avoided cost rates. *See* Case No. PAC-E-07-07. The Commission approved a stipulation by the parties in that case and "determined that a utility-specific wind integration cost adjustment to a utility's published avoided costs, among other adjustments, was appropriate." Application at 2 citing Order No. 30497 at 12. Further, the Company stated the Commission ordered the Company to file any changes to its wind integration charge as reflected in future Integrated Resource Plans ("IRP"). *Id*. citing Order No. 30497 at 13.

The Company represented that on October 8, 2020, the Company filed to update the wind integration rate and implement a solar integration rate based on the results of the 2019 IRP Flexible Reserve Study. This was approved in Case No. PAC-E-20-14, Order No. 34966.

THE APPLICATION

The Company requested authorization to decrease the wind integration rate from $1.25 to $1.18 per megawatt-hour ("MWh") for wind-powered QFs. The Company also requested authorization to increase the solar integration rate from $0.96 to $1.40 per MWh for solar-powered QFs.[1]

The Company stated the proposed changes are due to the integration costs of the wind and solar power compared to published avoided cost rates. However, the Company noted that an exception to this default practice of determining the price occurs when the QF delivers energy to the Company on a firm hourly schedule as specified in a PPA.

COMMENTS

Staff Comments: Overview

Staff reviewed the Company's Application, focusing on its compliance with Order Nos. 33937 and 34966, analyzing the Company's method, historical data, changes to the preferred portfolio, treatment of hybrid resources, load assumption, modeled results timeframe, lack of inter-hour analysis, format of integration charges, and the use of published or IRP-based avoided cost rates. Staff recommended approving the proposed wind and solar integration charges included in Tables 1 and 2 of Attachment 1, applying them to both published and IRP-based avoided cost rates, unless QF developers agree to schedule and deliver output on a firm hourly basis.

Staff reviewed the last Flexible Reserve Study ("FRS") and recommended that these seven changes be implemented in the next FRS:

1. Consistently file a case to update integration charges after the acknowledgement of each IRP to comply with Order Nos. 33937 and 34966;
2. Explain why capital and fixed operation and maintenance ("O&M") cost of regulation reserves should not be included in wind and solar integration costs supported by quantifiable evidence;
3. Use the most recent data that meet reasonably sufficient duration of operations;
4. Determine with quantifiable evidence whether hybrid wind or hybrid solar should be treated differently than wind or solar alone;
5. Quantify the effect of holding load constant in scaling portfolio diversity benefits;
6. Create at least 25 years of modeled results so that non-levelized rates are all generated under the same method; and
7. Determine with supporting quantifiable evidence whether integration costs should include inter-hour integration costs included in prior studies.

[1] The Company specifically requested that the proposed wind and solar integration rate be priced "in 2024 dollars." Application at 1 and 6.

Staff Comments at 2.

***Company Reply*: Overview**

The Company agreed with Staff's first four recommendations but noted limitations or difficulties associated with carrying out Staff's last three recommendations. Staff's seven recommendations and the Company's position are discussed under the same subject headings.

1. Compliance with Order Nos. 33937 and 34966 and Overall Methodology[2]

Staff Comments

Staff noted Order Nos. 33937 and 34966 require the Company to file a case updating integration charges after the acknowledgement of the IRP and recommended that the Company comply with this mandate since it failed to file this update after the 2021 IRP's acknowledgement.

Staff opined that the Company's method for determining integration costs in the proposed FRS is reasonable but questioned whether capital and fixed O&M costs for regulation reserves should be included (as these costs were not included in the Company's Application). Despite believing the Company's proposed method was reasonable for determining the incremental energy cost to integrate wind and solar, Staff noted the Company's method fails to capture capital and fixed O&M costs of regulation reserves. Staff stated that the Company plans for certain resources to meet the forecasted load as well as the planning reserve margin—with the latter including a regulation reserve for capacity to balance differences among different classes of variability included in the integration charge. Staff suggested an appropriation of that capacity cost to integrate wind and solar, and the Company's response did not justify excluding capacity cost. Staff recommended the Company "explain why capital and fixed O&M cost of regulation reserves should not be included in wind and solar integration costs" in the next FRS. *Id*. at 4.

Company Reply

The Company agreed to comply with Order Nos. 33937 and 34966 and will explain why fixed O&M costs should not be included in the wind and solar integration costs in its next FRS.

[2] Although Staff made seven recommendations, these suggestions do not perfectly align with the nine subheadings listed below. Heading number one covers Staff's first and second recommendations whereas no recommendation was made in heading number three. It also appears that Staff made a recommendation in headings eight and nine that do not appear on Staff's list of recommendations.

2. Historical Data in 2018 and 2019

Staff Comments

The Company used historical data from 2018 and 2019 for the FRS due to time constraints, without considering capacity from the wind and solar installed in 2021. Going forward Staff recommended using the most recent data with sufficient duration for future studies.

Company Reply

The Company agreed to follow Staff's recommendation of using the most recent, reasonably available data in its upcoming 2025 IRP FRS. However, the Company stated that the data could become outdated between the FRS conducted during the IRP process and the filing of the next case based on the FRS (which happens after the acknowledgement of the IRP).

3. Changes to Preferred Portfolio

Staff Comments

Staff noted that since developing the preferred portfolio, there have been several contract changes. The Company believed that the modest changes are not expected to significantly alter regulation reserve requirements and that using the proposed preferred portfolio is acceptable.

4. Hybrid Wind or Hybrid Solar

Staff Comments

In the FRS, wind and solar with storage (also known as hybrid wind and hybrid solar) are evaluated just like wind and solar alone. However, Staff recommended the Company evaluate if hybrid wind and hybrid solar should be evaluated differently than wind and solar alone in the next FRS—as hybrid resources may require different levels of regulation reserve.

Company Reply

The Company stated that it will explain the implications of operating parameters of battery storage in hybrid resources will be addressed in the FRS for the 2025 IRP. However, the Company stated that the impacts of hybrid resources on integration needs depends on the contract structure—in particular whether the Company has "dispatch control over the battery resource." Reply Comments at 3.

5. Load Assumption Used in Scaling Portfolio Diversity Benefits

Staff Comments

Staff stated that portfolio diversity benefits occur "because forecast errors in each class tend not to occur simultaneously" or often offset each other. Staff Comments at 5. The "study

scaled the benefits to a wide variety of wind and solar capacity combinations—while holding the load constant." *Id*. However, Staff believed that the Company did not adequately justify holding the load constant, and the Company did not provide evidence to justify the exclusion of varying loads in the scaling process. Staff recommended determining (with quantifiable evidence) whether the load should be constant in the subsequent FRS.

Company Reply

The Company plans to reexamine the calculation of regulation reserve requirements and diversity benefits for the FRS for the 2025 IRP and does not know whether Staff's fifth recommendation will be pertinent to the resulting methodology. "The Company is considering a range of modeling enhancements for the 2025 IRP, including impacts related to weather conditions that drive variation in load, wind, and solar." Reply Comments at 4. The Company stated that it would attempt to determine how holding load constant on portfolio diversity benefits would affect the calculation. The Company suggested parties review and provide feedback on the 2025 IRP public input process results to help the IRP analysis before filing.

6. Time Range of Modeled Results

Staff Comments

Staff stated that the modeled results concluded in 2042—after which integration charges rose based on inflation rate. Staff believed that using an inflation rate after 2042 was acceptable but recommended creating at least 25 years of modeled results in the next FRS. That way, rates will be generated using the same method.

Company Reply

The Company stated that the computing power and the time of calculation limit the study's horizon—forcing a trade-off between the number of years and granularity. Extending the horizon would likely reduce granularity in each year modeled. Additionally, the Company argued that data accuracy and availability decrease over longer periods, so "modeled results may not be significantly more accurate than" the extrapolated results. *Id*. at 5. However, the Company further stated that "to the extent that additional years are modeled as part of the IRP, the Company agrees to use all available years of modeling results to inform the integration cost." *Id*.

7. Inter-hour Analysis

Staff Comments

The Company should quantify inter-hour integration costs in its next FRS and then determine "whether the costs are significant enough to be included." Staff Comments at 6. "Because the inter-hour integration costs were minimal in the 2017 FRS, the Company stopped the inter-hour analysis in the 2019 FRS." *Id*. However, Staff believed the inter-hour costs in the 2017 FRS (at 24.56% and 23.33% of total wind and solar integration charges respectively) were not insignificant enough to be excluded. "At a minimum, Staff believes the inter-hour costs should be quantified in the next FRS before deciding to exclude it." *Id*.

Company Reply

The Company expected reduced inter-hour integration costs from participating in the California ISO ("CAISO") Enhanced Day-ahead Market ("EDAM") due to optimized unit commitment across a larger market footprint. However, the Company stated that quantifying the impact on the wind and solar integration costs is challenging given EDAM's development stage and differing assumptions from the Company's IRP. The Company aimed to look again at system impacts but stated that it may not "be able to develop an appropriate methodology to quantify the results for wind and solar in the FRS for the 2025 IRP." Reply Comments at 5.

8. Format of Integration Charges

Staff Comments

The Company sought approval for the wind and solar QF integration rates of $1.18 and $1.40 per MWh (in 2024 dollars), respectively. The Company also recommended 20-year levelized and non-levelized integration costs. Staff recommended aligning integration charges with avoided cost rates. Therefore, Staff recommended using charges found in Table Nos. 1 and 2 in Attachment No. 1.

9. Published Avoided Cost Rates Versus IRP-based Avoided Cost Rates

Staff Comments

The Company suggested using integration charges only against published avoided cost rates, but functionally, they also apply them in IRP-based method. Staff advised using the integration charges from Table Nos. 1 and 2 to discount published as well as IRP-based avoided cost rates.

COMMISSION FINDINGS AND DECISION

The Commission has jurisdiction over this matter under *Idaho Code* §§ 61-502 and 61-503. The Commission is statutorily authorized to investigate rates, charges, rules, regulations, practices, and contracts of public utilities and to determine whether they are just, reasonable, preferential, discriminatory, or in violation of any provision of law, and to fix the same by order. *Idaho Code* §§ 61-502 and 61-503. In addition, the Commission has authority under PURPA and Federal Energy Regulatory Commission ("FERC") regulations to set avoided costs, to order electric utilities to enter fixed-term obligations for the purchase of energy from qualified facilities and to implement FERC rules. The Commission may enter any final order consistent with its authority under Title 61 and PURPA.

The Commission here reiterates that the Company needs to comply with Commission Order Nos. 33937 and 34966 and file a case updating integration charges after the acknowledgement of each IRP. The Commission also notes that, in its next FRS, the Company must elaborate as to why capital and fixed O&M cost of regulation reserves should be excluded in the wind and solar integration costs. The Company must use quantifiable evidence—thus ensuring the Commission has the best options before it. Specifically, the Company must use the latest data that meets the sufficient duration of operations for its next FRS (i.e. the length of operations should be long enough to assess). The next FRS should also determine whether hybrid wind or hybrid solar should receive different treatment than wind or solar alone. This will allow the Commission to better understand how the inclusion or exclusion of specific resources impacts the appropriate levels of regulation reserve. The Company should also determine the effect of holding load constant in scaling portfolio diversity benefits. If such is pertinent, this should be implemented with the new method developed in the next FRS.

The Commission understands value of Staff's recommendation that the Company model at least 25 years results relative to using an inflation rate after 2042. The Commission also understands the Company's concern regarding the reduction of granularity. Accordingly, the Commission directs the Company to work with Staff in modeling and obtaining sufficiently useful results to allow modeled results for additional online-years. The next FRS should also evaluate the usefulness of integration costs including inter-hour integration costs and whether such is justified.

With each of these items in mind, the Commission finds it fair just and reasonable to approve the integration charges contained in Table No. 1 and Table No. 2 of Attachment No. 1—thus discounting both published avoided cost rates and IRP-based avoided cost rates.

ORDER

IT IS HEREBY ORDERED that the Company shall comply with Commission Order Nos. 33937 and 34966 and file updates to integration charges upon acknowledgement of each IRP.

IT IS FURTHER ORDERED that the Company will include those items discussed by the Commission above in its next FRS—supported by sufficient and quantifiable evidence.

IT IS FURTHER ORDERED that the integration charges contained in Table No. 1 and Table No. 2 of Attachment No. 1 are approved; both published avoided cost rates and IRP-based avoided cost rates are discounted accordingly.

THIS IS A FINAL ORDER. Any person interested in this Order may petition for reconsideration within twenty-one (21) days of the service date of this Order about any matter decided in this Order. Within seven (7) days after any person has petitioned for reconsideration, any other person may cross-petition for reconsideration. *Idaho Code* § 61-626.

DONE by order of the Idaho Public Utilities Commission at Boise, Idaho this 26th day of June 2024.

ERIC ANDERSON, PRESIDENT

JOHN R. HAMMOND JR., COMMISSIONER

EDWARD LODGE, COMMISSIONER

ATTEST:

Monica Barrios-Sanchez
Commission Secretary
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Table No. 1: Wind Integration Charges

Year	Non-Levelized Rates $/MWh	Levelized Rates Contract Length	Online Year 2024	2025	2026	2027	2028	2029
2024	2.03	1	$2.03	$5.64	$3.51	$2.26	$0.45	$0.36
2025	5.64	2	$3.76	$4.61	$2.91	$1.39	$0.41	$0.31
2026	3.51	3	$3.68	$3.89	$2.15	$1.07	$0.36	$0.30
2027	2.26	4	$3.37	$3.13	$1.76	$0.89	$0.34	$0.28
2028	0.45	5	$2.87	$2.66	$1.50	$0.79	$0.32	$0.26
2029	0.36	6	$2.53	$2.33	$1.33	$0.71	$0.30	$0.24
2030	0.27	7	$2.28	$2.10	$1.21	$0.64	$0.28	$0.24
2031	0.27	8	$2.09	$1.92	$1.11	$0.60	$0.28	$0.26
2032	0.21	9	$1.94	$1.78	$1.03	$0.57	$0.28	$0.25
2033	0.14	10	$1.81	$1.66	$0.98	$0.56	$0.28	$0.26
2034	0.14	11	$1.71	$1.58	$0.94	$0.54	$0.28	$0.26
2035	0.26	12	$1.63	$1.52	$0.90	$0.53	$0.29	$0.27
2036	0.39	13	$1.58	$1.46	$0.87	$0.52	$0.29	$0.29
2037	0.24	14	$1.52	$1.41	$0.85	$0.51	$0.30	$0.31
2038	0.29	15	$1.48	$1.37	$0.83	$0.52	$0.32	$0.33
2039	0.34	16	$1.44	$1.34	$0.83	$0.53	$0.34	$0.34
2040	0.36	17	$1.41	$1.32	$0.83	$0.54	$0.36	$0.36
2041	0.67	18	$1.39	$1.30	$0.83	$0.54	$0.37	$0.37
2042	0.81	19	$1.37	$1.29	$0.83	$0.55	$0.38	$0.39
2043	0.83	20	$1.36	$1.28	$0.83	$0.56	$0.39	$0.40
2044	0.84	21						
2045	0.86	22						
2046	0.88	23						
2047	0.90	24						
2048	0.91	25						

Table No. 2: Solar Integraion Charges

Year	Non-Levelized Rates $/MWh	Levelized Rates Contract Length	Online Year 2024	2025	2026	2027	2028	2029
2024	1.92	1	$1.92	$3.85	$4.80	$3.48	$0.64	$0.67
2025	3.85	2	$2.85	$4.30	$4.17	$2.12	$0.65	$0.72
2026	4.80	3	$3.45	$4.05	$3.08	$1.67	$0.69	$0.71
2027	3.48	4	$3.46	$3.29	$2.54	$1.47	$0.69	$0.71
2028	0.64	5	$2.98	$2.85	$2.24	$1.34	$0.70	$0.67
2029	0.67	6	$2.66	$2.56	$2.03	$1.26	$0.67	$0.64
2030	0.77	7	$2.45	$2.35	$1.88	$1.17	$0.64	$0.63
2031	0.70	8	$2.28	$2.20	$1.75	$1.10	$0.63	$0.65
2032	0.72	9	$2.16	$2.06	$1.64	$1.06	$0.65	$0.63
2033	0.46	10	$2.04	$1.95	$1.57	$1.04	$0.63	$0.62
2034	0.43	11	$1.94	$1.87	$1.53	$1.00	$0.62	$0.62
2035	0.58	12	$1.87	$1.81	$1.47	$0.98	$0.62	$0.62
2036	0.81	13	$1.82	$1.75	$1.42	$0.96	$0.63	$0.65
2037	0.45	14	$1.77	$1.70	$1.39	$0.95	$0.65	$0.68
2038	0.49	15	$1.72	$1.65	$1.36	$0.96	$0.67	$0.70
2039	0.59	16	$1.68	$1.62	$1.36	$0.97	$0.69	$0.72
2040	0.70	17	$1.65	$1.61	$1.35	$0.98	$0.71	$0.74
2041	1.16	18	$1.64	$1.60	$1.35	$0.99	$0.73	$0.76
2042	1.30	19	$1.63	$1.59	$1.35	$1.00	$0.75	$0.78
2043	1.32	20	$1.62	$1.59	$1.35	$1.01	$0.76	$0.79
2044	1.35	21						
2045	1.38	22						
2046	1.40	23						
2047	1.43	24						
2048	1.46	25						