

March 14, 2022

VIA ETARIFF

The Honorable Kimberly Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

**Re: *PacifiCorp*, Docket No. ER22-834-____
Response to Deficiency Letter and Request for Shortened Comment Period**

Dear Secretary Bose:

PacifiCorp respectfully submits this response to the March 3, 2022 deficiency letter (“Deficiency Letter”) in the above-referenced proceeding regarding the proposed revisions to PacifiCorp’s Large Generator Interconnection Procedures (“LGIP”) and Small Generator Interconnection Procedures (“SGIP”) in the Company’s Open Access Transmission Tariff (“Tariff”), which was submitted to the Federal Energy Regulatory Commission (“FERC” or “Commission”), in the above-captioned proceeding on January 18, 2022 (“PacifiCorp Filing”).¹

In the interest of expedient approval by the Commission, PacifiCorp explains which of its proposals may be severable from the Company’s broader proposed tariff revisions. PacifiCorp respectfully requests a shortened comment period of no more than 7 days on this deficiency response, to allow the Commission to consider these issues and issue an order as close to April 1, 2022 as possible, for the proposed tariff revisions to become effective for PacifiCorp’s next Cluster Study Window, which opens April 1, 2022.²

I. Response to Deficiency Letter

- PacifiCorp uses a “first-ready, first-served” cluster study process. PacifiCorp proposes to revise section 42.3 of its LGIP to provide that:***

In conducting the first iteration of the Cluster Study and determining the necessary Interconnection Facilities and Network Upgrades, Transmission Provider may model operating resources in the Transmission System at less than full output to the extent consistent with maintaining system reliability, Good Utility Practice, and expected operation of the resources in the Transmission System based on historical operating patterns and/or capacity factors. All such modeling assumptions shall be described in the Cluster

¹ PacifiCorp, Revisions to Generator Interconnection Procedures (Jan. 18, 2022), eLibrary No. 20200131-5112 (“PacifiCorp Filing”). All capitalized terms used herein that otherwise are not defined have the same meaning as they have under the PacifiCorp Tariff.

² In accordance with directions in footnote 1 of the Deficiency Letter, PacifiCorp is submitting this response using eTariff filing code 180, utilizing an unmodified copy of FERC Record ID 93 (OATT Volume 11) Tariff Record Version 12.0.0 (now Version 12.0.1) as the “tariff record” required pursuant to Staff’s directions in the footnote.

Study Report.

a. Please explain how the historical operating patterns and/or capacity factors will be determined

At the outset, PacifiCorp wishes to clarify that it is not seeking to adjust study assumptions for the *proposed* Generating Facilities being evaluated for new interconnection service in the Cluster Study.³ Rather, the Company seeks only to adjust the way that it models *existing* Generating Facilities that are already in operation on PacifiCorp's system and included in the Company's interconnection models when studying new Interconnection Requests. As explained further below, utilizing such flexible study assumptions for existing resources would be permitted solely "to the extent consistent with maintaining system reliability, Good Utility Practice, and expected operation of the resources in the Transmission System based on historical operating patterns and/or capacity factors."⁴

In response to Staff's question regarding "how the historical operating patterns and/or capacity factors will be determined," the determination would be based off of historical operating data of existing Generating Facilities. As explained further below, PacifiCorp would use the historical operating data to transparently calculate capacity factors averaged over a three-year operational period. Importantly, the results of the calculations would be set forth in studies posted to OASIS, and the underlying operating data would be available to Interconnection Customers through PacifiCorp's powerflow models.

To calculate the capacity factors averaged over a three-year operational period, PacifiCorp will use observable historical data regarding how resources of various types in certain locations have operated over time in response to weather and seasonal events. Capacity factors for each type of resource can be calculated by averaging performance over the system peak hour, as well as the hour prior to, and the hour after the system peak.⁵

In addition, because operational performance of renewable resources may vary significantly by type and location, PacifiCorp can determine different capacity factors for different types of resources (solar, wind, hydro, etc.) and for different locations across PacifiCorp's system. For example, wind facility operating profiles in Wyoming often vary significantly from wind facility operating profiles in southern Utah, particularly during system peak load conditions. Therefore, historical variable operating data can influence the capacity factors attributable to wind resources in different areas on the PacifiCorp system.

Finally, to ensure that the resulting capacity factors reflect typical resource performance for the particular system location, PacifiCorp will use a rolling three-year average of hourly generation history to determine the expected capacity factors at system peak conditions. Although historical conditions can and

³ The Commission's Order No. 845 reforms provided certain flexibility in modeling newly interconnecting generators, and PacifiCorp does not seek to replace those concepts in this proceeding. *Reform of Generator Interconnection Procedures and Agreements*, Order No. 845, 163 FERC ¶ 61,043, P 367 (2018), *errata notice*, 167 FERC ¶ 61,123, *order on reh'g*, Order No. 845-A, 166 FERC ¶ 61,137 (2019), *errata notice*, 167 FERC ¶ 61,124, *order on reh'g*, Order No. 845-B, 168 FERC ¶ 61,092 (2019) (adopting reform to pro forma LGIP allowing interconnection customers to request interconnection service that is lower than full generating facility capacity).

⁴ PacifiCorp Proposed Tariff Sec. 42.3.

⁵ Interconnection Studies are predominantly performed utilizing system peak conditions. However, there may be system conditions that warrant study at conditions other than system peak for reliability purposes, and PacifiCorp reserves the right to study such conditions.

do change, the rolling average would capture these changes. PacifiCorp will perform the above-described analysis for all resource types in a Cluster Area.

Tables 1 and 2 below illustrate PacifiCorp’s proposal and demonstrate how it provides a more realistic inventory of available capacity for ERIS requests. Specifically, Table 1 shows the historical average hourly generation over the system peaks for 2019-2021 from each of the wind facilities in a common Cluster Area on PacifiCorp’s system. Table 2 converts that generation data into a capacity factor,⁶ which is then averaged for each hour and for all three years to arrive at an average capacity factor of 13 percent for wind facilities in that Cluster Area.

Table 1. Cluster Area 1 Wind Generation at System Peak (2019, 2020, 2021)

Cluster Area 1 Wind Facilities	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11
Max Gen (MW)	200	120	115	200	115	200	111	135	250	250	250
Pace Peak											
22-Jul-19 16:00:00	0.0	0.0	50.9	115.5	49.9	0.0	18.4	4.2	0.0	0.0	0.0
22-Jul-19 17:00:00	0.0	0.0	58.4	145.5	60.9	0.0	45.8	4.0	0.0	0.0	0.0
22-Jul-19 18:00:00	0.0	0.0	60.3	130.2	63.1	0.0	35.5	34.2	0.0	0.0	0.0
17-Aug-20 15:00:00	0.0	0.0	6.2	4.6	4.3	0.4	4.5	-0.4	0.0	0.0	0.0
17-Aug-20 16:00:00	0.0	0.0	3.8	4.9	3.6	0.8	5.3	-0.5	0.0	0.0	0.0
17-Aug-20 17:00:00	0.0	0.0	0.7	1.8	0.8	0.5	5.3	-0.4	0.0	0.0	0.0
07-Aug-21 16:00:00	41.3	27.0	14.3	21.1	11.8	46.6	39.3	52.2	47.5	31.7	80.8
07-Aug-21 17:00:00	27.1	14.4	10.9	9.2	7.4	36.4	56.7	53.7	65.2	54.1	68.1
07-Aug-21 18:00:00	11.1	3.1	19.5	6.8	17.6	5.2	44.4	52.2	48.0	51.4	61.5

Table 2. Cluster Area 1 Wind Capacity Factor Average (2019, 2020, 2021)

Cluster Area 1 Wind Facility Capacity Factors	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	Average
Pace Peak												
22-Jul-19 16:00:00	0%	0%	44%	58%	44%	0%	17%	3%	0%	0%	0%	15%
22-Jul-19 17:00:00	0%	0%	51%	73%	53%	0%	41%	3%	0%	0%	0%	20%
22-Jul-19 18:00:00	0%	0%	52%	65%	55%	0%	32%	25%	0%	0%	0%	21%
17-Aug-20 15:00:00	0%	0%	5%	2%	4%	0%	4%	0%	0%	0%	0%	1%
17-Aug-20 16:00:00	0%	0%	3%	2%	3%	0%	5%	0%	0%	0%	0%	1%
17-Aug-20 17:00:00	0%	0%	1%	1%	1%	0%	5%	0%	0%	0%	0%	1%
07-Aug-21 16:00:00	21%	22%	12%	11%	10%	23%	35%	39%	19%	13%	32%	22%
07-Aug-21 17:00:00	14%	12%	9%	5%	7%	18%	51%	40%	26%	22%	27%	21%
07-Aug-21 18:00:00	6%	3%	17%	3%	15%	3%	40%	39%	19%	21%	25%	17%
Average Capacity Factor												13%

As demonstrated by this example, under PacifiCorp’s proposal, the Company can model a more realistic and data-driven 13 percent total plant capacity factor for existing wind resources in this area, as opposed to assuming a 100 percent capacity factor, which is less realistic and not supported by historical data. Not only would this mitigate the need for unnecessary Network Upgrades relating to the interconnection of ERIS resources, but also, because this data would be available through PacifiCorp’s

⁶ A “capacity factor” is the ratio of the generator’s average output for a specific hour divided by the maximum generation capability of the facility. For example, a 100 megawatt facility producing 80 megawatts would have a capacity factor of 80%, which would be demonstrated in the above table as 0.80 (or 80/100).

powerflow models, current and future Interconnection Customers would have a more accurate representation of available capacity in this, and all other, Cluster Areas.

- b. Given that PacifiCorp will be studying newly interconnecting resources, please explain whether historical operating patterns and/or capacity factors will be used to model resources seeking interconnection. If so:***
- i. Please explain whether the interconnection customer will be consulted or will have the opportunity to submit its own expected operating pattern to be used in the cluster study.***

As clarified above, PacifiCorp's proposed changes to Tariff Section 42.3 would not adjust the proposed operating characteristics for Generating Facilities seeking new interconnection service, but rather, PacifiCorp is proposing to potentially adjust modeling assumptions for Generating Facilities that are already interconnected, generating, and for which there is information to determine historical operating patterns and/or capacity factors. Consequently, new Interconnection Customers would not be required to provide information regarding their expected operating patterns, as such information would not be necessary for the Cluster Study process. On the other hand, if an Interconnection Customer requested Interconnection Service below its Generating Facility capacity (in anticipation of, for example, how the Customer intends to operate its new Generating Facility), such a request can already be accommodated pursuant to the process set forth in existing PacifiCorp Tariff Section 38.1—a process that is unchanged by the instant proposal.

- ii. Please explain whether interconnection customers will have the opportunity to contest the operating pattern and output levels selected by PacifiCorp upon issuance of the cluster study report, and if so, the process for such challenges.***

Again, PacifiCorp's proposed changes to Tariff Section 42.3 would not adjust assumptions for Generating Facilities seeking new interconnection service, but rather, for resources that are already interconnected, generating, and for which there is sufficient information to determine historical operating patterns and/or capacity factors. Accordingly, there is no need to establish a separate process for Interconnection Customers to challenge any operating patterns or output levels identified by PacifiCorp for the ERIS iteration of the Cluster Study. As demonstrated above, PacifiCorp's proposal seeks to maximize the use of existing available capacity on PacifiCorp's system to help reduce for the identification of unnecessary Network Upgrades.

- iii. Please explain whether PacifiCorp proposes to require the interconnection customer to commit to the operating patterns and output levels used in conducting the cluster study in its Large Generator Interconnection Agreement.***

For the reasons already discussed, PacifiCorp does not propose to require customers seeking new interconnection service to commit to certain operating patterns or output levels. The proposed revisions to Tariff Section 42.3 would not adjust assumptions for these proposed generators.

- c. Please explain whether PacifiCorp will model all operating resources in a cluster study using historical operating patterns and/or capacity factors and, if not, how PacifiCorp will determine which operating resources will be studied under this model. Additionally, please explain whether modeling will be resource-specific or, for example, all operating resources of a certain fuel type will be modeled using the same historical operating patterns and/or capacity factors.***

In response to Question 1(a) above, PacifiCorp described how the Company will determine capacity factors based upon historical operating data of existing Generating Facilities. The methodology described above would be applied for all resource types in each Cluster Area.

d. Please explain whether PacifiCorp will model operating energy storage and hybrid resources containing energy storage as charging at less than full capacity during peak load periods based on historical operating patterns and/or capacity factors.

PacifiCorp is not proposing changes to how the Company models new energy storage or hybrid Interconnection Requests in the Cluster Study process. However, to the extent that this question refers to how PacifiCorp may consider the historical operating patterns and/or capacity factors of existing energy storage or hybrid storage resources that may *generate* at less than their full capacity, then PacifiCorp would consider such information through the methodology described above. That is, PacifiCorp would consider objective data to determine historical operating patterns and/or capacity factors to the extent consistent with maintaining system reliability and Good Utility Practice. The presence of storage would not affect this analysis from a generation perspective. To the extent that the question does refer to *charging* at less than full capacity, then such a load evaluation would fall outside the scope of PacifiCorp's proposal for when to model existing resources at less than their full output.

2. PacifiCorp's proposed Tariff revisions replace the existing five business day notification period in section 38.4.3 of its LGIP with language requiring the transmission provider to instead "use Reasonable Efforts" to notify the interconnection customer of deficiencies in its interconnection request "as soon as practicable" after receiving the interconnection request. PacifiCorp also proposes to remove the existing 10 business day cure period in section 38.4.3, such that the interconnection customer will be required to cure any deficiency no later than the close of the cluster request window. The proposed revisions further clarify that an interconnection request with an uncured deficiency at the time the cluster request window closes will be deemed invalid.

a. Please explain how the proposed Tariff revisions in section 38.4.3 are consistent with or superior to the Commission's pro forma LGIP.

PacifiCorp's experience with the first Cluster Study demonstrated that a significant majority of Interconnection Requests were submitted near the close of the Cluster Request Window.⁷ Specifically, according to data compiled regarding the 2021 Cluster Study, more than half of the Interconnection Requests (31 requests of the 59 total received), were tendered to PacifiCorp within the last five days of the 45-day Cluster Request Window, and approximately 41 percent of all of the Interconnection Requests (24 of the 59 received) were submitted on the very last day of the Cluster Request Window.

Under the current tariff, Interconnection Customers submitting projects so late forego the opportunity for PacifiCorp to identify deficiencies in time for them to be cured by the close of the Cluster Request Window – *i.e.*, PacifiCorp's current obligation to identify deficiencies within five business days does not help the Interconnection Customer if there are fewer than five business days left in the Cluster Request Window. Moreover, it is administratively difficult and unduly burdensome to process the sufficiency of so many requests submitted within five Business Days. In addition, when a request is

⁷ PacifiCorp is not alone in this observation. *See, e.g.,* Public Serv. Co. of Colo., *Informational Report on Large Generator Interconnections*, Docket No. ER19-2774, at 18 (Dec. 10, 2021) (also observing that "[m]ost requests are received at the very end of the request window").

submitted with one day remaining in the Cluster Request Window, it is simply not possible to both process that request (and practically speaking, process multiple requests) within the currently-required five Business Day timeframe while also adhering to existing Tariff language stating that deficiencies must be corrected by “no later than the close of the Cluster Request Window.”

PacifiCorp proposed this change to encourage Interconnection Customers to submit their projects earlier in the process, which reduces the current burden of processing such requests, but also provides the Interconnection Customers a better opportunity to cure deficiencies. Accordingly, PacifiCorp proposed a substantive modification and two minor clarifications to Section 38.4.3. First, from a substantive perspective, PacifiCorp proposed to modify the timeframe for identifying request deficiencies from the rigid five Business Days in favor of a “Reasonable Efforts” standard to notify the Interconnection Customer of deficiencies in its Interconnection Request “as soon as practicable” after receipt. The Company does not propose a new strict intermediate deadline, but rather, commits to processing all requests “timely and consistent with Good Utility Practice,” and otherwise treat all requests equivalent to how PacifiCorp would evaluate its own requests, which is the essence of the Reasonable Efforts standard that the Commission has accepted throughout the Interconnection study process,⁸ and therefore, is consistent with or superior to the *pro forma* LGIP.

Finally, with regard to the other edits in Tariff Section 38.4.3, PacifiCorp proposed revisions clarify that the key deadline for customers is the close of the Cluster Request Window. These edits eliminate the current, unnecessary intermediate 10 Business Day deadline for Interconnection Customers to cure deficiencies when, in actuality, all Interconnection Customers have until the close of the Cluster Request Window to cure deficiencies. This change is consistent with or superior to the *pro forma* LGIP in that it ensures that all Interconnection Customers are on a level playing field for remedying deficiencies while ensuring against unnecessary delays in commencing the Cluster Study process.

- b. You state that the proposed revisions “will improve the Interconnection Request submission process by encouraging Interconnection Customers to submit their requests earlier in the Cluster Request Window if they have concerns about the sufficiency of their submittals.” Given the absence of a fixed deadline by which PacifiCorp must notify the interconnection customer of any deficiencies, what assurance would an interconnection customer with a deficient interconnection request submitted early in the 45-day cluster request window have that it will be given sufficient opportunity to cure the deficiency?***

Interconnection Customers have an entire year to prepare their Interconnection Requests ahead of the next Cluster Study. PacifiCorp understands that customers prepare well in advance of the opening of the Cluster Request Window, and the Company commits to timely processing of requests. As explained above, however, processing multiple requests on a tight timeframe close to the end of the Cluster Window is infeasible for the Company. Accordingly, Interconnection Customers submitting close to the end of the Cluster Request Window (e.g., one week or less) should not have an expectation that they will be notified of deficiencies ahead of the close of the Cluster Request Window. For Interconnection Customers that submit their requests earlier in the Cluster Study Window, the tariff will require PacifiCorp to use Reasonable Efforts to identify any deficiencies *as soon as practicable* after the request is received. Customers submitting early also have the benefit of being able to discuss their requests with PacifiCorp while there remains a reasonable timeframe remaining in which to cure any deficiencies.

⁸ PacifiCorp Tariff Sec. 36 (“Reasonable Efforts” definition).

3. Please explain whether the proposed Tariff revisions in the instant filing are severable or whether PacifiCorp intends that all of the proposed Tariff revisions be considered together as part of a single package of modifications.

PacifiCorp is willing to sever the proposed changes in Section 38.4.3 from the rest of the filing package. That is, in the event that the Commission deems that PacifiCorp's proposed changes regarding the timing of responding deficient Interconnection Requests to not be just and reasonable, the Company is willing to sever that proposal such that the remainder of the PacifiCorp Filing may be preserved for consideration by the Commission.⁹

III. Request for Shortened Comment Period

PacifiCorp respectfully requests that the Commission establish a shortened comment period of no more than seven (7) days on PacifiCorp's responses to the Deficiency Letter. Good cause warrants such a time period, as it will permit the Commission to consider the PacifiCorp Filing as augmented by these responses and issue an order as close to April 1, 2022, as possible, so that the reforms can be in place for the 2022 Cluster Study.

IV. Conclusion

Wherefore: (1) for the reasons discussed herein PacifiCorp respectfully requests that the Commission establish a shortened comment period of no more than seven (7) days on PacifiCorp's responses to the Deficiency Letter; and (2) for the reasons discussed herein and in the PacifiCorp Filing, PacifiCorp respectfully requests that the Commission issue an order accepting the changes discussed herein, to be effective April 1, 2022.

Respectfully submitted,

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⁹ Under *NRG Power Mktg., LLC v. FERC*, 862 F.3d 108, 114-15 (D.C. Cir. 2017), the Commission may propose modifications to a rate filing when the utility consents to the modifications.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon the parties identified on the Commission's official service list for this proceeding.

Dated at Portland, OR, this 14th day of March, 2022.

/s/ Christian R. Marble
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PACIFICORP

FERC ELECTRIC TARIFF

VOLUME NO. 11

PRO FORMA OPEN ACCESS

TRANSMISSION TARIFF

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