

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

- 1. 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

I. COMMON SERVICE PROVISIONS

1 Definitions

- 1.1 Affiliate
- 1.2 Ancillary Services
- 1.3 Annual Transmission Costs
- 1.3A Annual Transmission Revenue Requirement (ATTR)
- 1.4 Application
- 1.4A Balancing Authority (BA)
- 1.4B Balancing Authority Area (BAA)
- 1.4B1 Balancing Authority Area Resource
- 1.4C Bid Cost Recovery (BCR)
- 1.4D California Independent System Operator (CAISO)
- 1.4E CAISO Controlled Grid or CAISO BAA
- 1.5 Commission
- 1.6 Completed Application
- 1.7 Control Area
- 1.8 Curtailment
- 1.9 Delivering Party
- 1.10 Designated Agent
- 1.11 Direct Assignment Facilities
- 1.11A Dispatch Instruction
- 1.11B Dispatch Operating Point
- 1.11C Disturbance Recovery Event
- 1.11D Dynamic Transfer
- 1.11E Energy Imbalance Market (EIM)
- 1.11F EIM Area
- 1.11F1 EIM Available Balancing Capacity
- 1.11G EIM Entity
- 1.11H EIM Transfer
- 1.12 Eligible Customer
- 1.12A e-Tag
- 1.13 Facilities Study
- 1.14 Firm Point-To-Point Transmission Service
- 1.14A Flexible Ramping Requirement (or Flexible Ramping Product)
 - 1.14A1 Flexible Ramping Forecasted Movement
 - 1.14A2 Flexible Ramping Uncertainty Award
 - 1.14A3 Flexible Ramping Uncertainty Requirement
- 1.14B Forecast Data
- 1.15 Good Utility Practice
- 1.15A Hourly Pricing Proxy
- 1.15B Interconnection Customer
- 1.15C Imbalance Energy
- 1.15D Instructed Imbalance Energy (IIE)
- 1.15E Interchange
- 1.15F Intrachange

1.16 Interruption
1.17 Load Aggregation Point (LAP)
1.17A Locational Marginal Price (LMP)
1.18 Load Shedding
1.19 Long-Term Firm Point-To-Point Transmission Service
1.19A Manual Dispatch
1.19B Market Operator (MO)
1.19C Measured Demand
1.19D Metered Demand
1.19E MO Tariff
1.20 Native Load Customers
1.21 Network Customer
1.22 Network Integration Transmission Service
1.23 Network Load
1.24 Network Operating Agreement
1.25 Network Operating Committee
1.26 Network Resource
1.27 Network Upgrades
1.28 Non-Firm Point-To-Point Transmission Service
1.29 Non-Firm Sale
1.29A Non-Participating Resource
1.30 Open Access Same-Time Information System (OASIS)
1.30A Operating Hour
1.30B PacifiCorp COI Segment
1.30C PacifiCorp's BAAs
1.30D PacifiCorp BAA Transmission Owner
1.30E PacifiCorp EIM Business Practice (PacifiCorp EIM BP)
1.30F PacifiCorp EIM Entity
1.30G PacifiCorp EIM Entity Scheduling Coordinator
1.30H PacifiCorp EIM Participating Resource
1.30I PacifiCorp EIM Participating Resource Scheduling Coordinator
1.30J PacifiCorp Interchange Rights Holder
1.31 Part I
1.32 Part II
1.33 Part III
1.34 Part IV
1.35 Part V
1.36 Parties
1.37 Point(s) of Delivery
1.38 Point(s) of Receipt
1.39 Point-To-Point Transmission Service
1.40 Power Purchaser
1.41 Pre-Confirmed Application
1.41A Pricing Node (PNode)

- 1.42 Real Power Losses
- 1.43 Receiving Party
- 1.44 Regional Transmission Group (RTG)
- 1.45 Reserved Capacity
- 1.45A Resource Plan
- 1.46 Retail Access
- 1.47 Retail End-User
- 1.48 Secondary Receipt and Delivery Points
- 1.49 Service Agreement
- 1.50 Service Commencement Date
- 1.51 Short-Term Firm Point-To-Point Transmission Service
- 1.52 System Condition
- 1.53 System Impact Study
- 1.54 Third-Party Sale
- 1.55 Transmission Customer
- 1.55A Transmission Customer Base Schedule
- 1.56 Transmission Provider
- 1.57 Transmission Provider's Monthly Transmission System Peak
- 1.58 Transmission Service
- 1.59 Transmission System
- 1.60 Umbrella Service Agreement
- 1.60A Uninstructed Imbalance Energy (UIE)
- 1.61 Working Day

2 Initial Allocation and Renewal Procedures

- 2.1 Initial Allocation of Available Transfer Capability
- 2.2 Reservation Priority For Existing Firm Service Customers

3 Ancillary Services

- 3.1 Scheduling, System Control and Dispatch Service
- 3.2 Reactive Supply and Voltage Control from Generation or Other Sources Service
- 3.3 Regulation and Frequency Response Service
- 3.4 Generator Regulation and Frequency Response Service
- 3.5 Energy Imbalance Service
- 3.6 Operating Reserve - Spinning Reserve Service
- 3.7 Operating Reserve - Supplemental Reserve Service
- 3.8 Generator Imbalance Service

4 Open Access Same-Time Information System (OASIS)

- 5 Local Furnishing Bonds**
 - 5.1 Transmission Providers That Own Facilities Financed by Local Furnishing Bonds
 - 5.2 Alternative Procedures for Requesting Transmission Service

- 6 Reciprocity**

- 7 Billing and Payment**
 - 7.1 Billing Procedure
 - 7.2 Interest on Unpaid Balances
 - 7.3 Customer Default

- 8 Accounting for the Transmission Provider's Use of the Tariff**
 - 8.1 Transmission Revenues
 - 8.2 Study Costs and Revenues

- 9 Regulatory Filings**

- 10 Force Majeure and Indemnification**
 - 10.1 Force Majeure
 - 10.2 Indemnification

- 11 Creditworthiness**

- 12 Dispute Resolution Procedures**
 - 12.1 Internal Dispute Resolution Procedures
 - 12.2 External Arbitration Procedures
 - 12.3 Arbitration Decisions
 - 12.4 Costs
 - 12.4A EIM Disputes
 - 12.5 Rights under the Federal Power Act

- 12A Undergrounding Existing Transmission Facilities**
 - 12A.1 Obligations for Costs of Undergrounding Existing Transmission Facilities
 - 12A.2 Estimate of Undergrounding Costs
 - 12A.3 Payment of Estimated Undergrounding Costs
 - 12A.4 Payment of Actual Undergrounding Costs

- 12B Undergrounding Planned Transmission Facilities**
 - 12B.1 Obligations for Costs of Undergrounding Planned Transmission Facilities
 - 12B.2 Estimated Incremental Undergrounding Costs

- 12B.3 Payment of Estimated Incremental Undergrounding Costs
- 12B.4 Payment of Actual Incremental Undergrounding Costs

II. POINT-TO-POINT TRANSMISSION SERVICE

Preamble

13 Nature of Firm Point-To-Point Transmission Service

- 13.1 Term
- 13.2 Reservation Priority
- 13.3 Use of Firm Transmission Service by the Transmission Provider
- 13.4 Service Agreements
- 13.5 Transmission Customer Obligations for Facility Additions or Redispatch Costs
- 13.6 Curtailment of Firm Point-To-Point Transmission Service
- 13.7 Classification of Firm Transmission Service
- 13.8 Scheduling of Firm Point-To-Point Transmission Service

14 Nature of Non-Firm Point-To-Point Transmission Service

- 14.1 Term
- 14.2 Reservation Priority
- 14.3 Use of Non-Firm Point-To-Point Transmission Service by the Transmission Provider
- 14.4 Service Agreements
- 14.5 Classification of Non-Firm Point-To-Point Transmission Service
- 14.6 Scheduling of Non-Firm Point-To-Point Transmission Service
- 14.7 Curtailment or Interruption of Service

15 Service Availability

- 15.1 General Conditions
- 15.2 Determination of Available Transfer Capability
- 15.3 Initiating Service in the Absence of an Executed Service Agreement
- 15.4 Obligation to Provide Transmission Service that Requires Expansion or Modification of the Transmission System, Redispatch or Conditional Curtailment
- 15.5 Deferral of Service
- 15.6 Other Transmission Service Schedules
- 15.7 Real Power Losses

- 16 Transmission Customer Responsibilities**
 - 16.1 Conditions Required of Transmission Customers
 - 16.2 Transmission Customer Responsibility for Third-Party Arrangements

- 17 Procedures for Arranging Firm Point-To-Point Transmission Service**
 - 17.1 Application
 - 17.2 Completed Application
 - 17.3 Deposit
 - 17.4 Notice of Deficient Application
 - 17.5 Response to a Completed Application
 - 17.6 Execution of Service Agreement
 - 17.7 Extensions for Commencement of Service
 - 17.8 Expedited Treatment for Requests for and Reservation of Short-Term Firm Point-To-Point Transmission Service
 - 17.9 Completed Application for Participation in EIM Utilizing Firm Point-to-Point Transmission Service

- 18 Procedures for Arranging Non-Firm Point-To-Point Transmission Service**
 - 18.1 Application
 - 18.2 Completed Application
 - 18.3 Reservation of Non-Firm Point-To-Point Transmission Service
 - 18.4 Determination of Available Transfer Capability
 - 18.5 Completed Application for Participation in EIM Utilizing Non-Firm Point-to-Point Transmission Service

- 19 Additional Study Procedures for Firm Point-To-Point Transmission Service Requests**
 - 19.1 Notice of Need for System Impact Study
 - 19.2 System Impact Study Agreement and Cost Reimbursement
 - 19.3 System Impact Study Procedures
 - 19.4 Facilities Study Procedures
 - 19.5 Facilities Study Modifications
 - 19.6 Due Diligence in Completing New Facilities
 - 19.7 Partial Interim Service
 - 19.8 Expedited Procedures for New Facilities
 - 19.9 Penalties for Failure to Meet Study Deadlines
 - 19.10 Clustering of Point-to-Point Studies

- 20 **Procedures if the Transmission Provider is Unable to Complete New Transmission Facilities for Firm Point-To-Point Transmission Service**
 - 20.1 Delays in Construction of New Facilities
 - 20.2 Alternatives to the Original Facility Additions
 - 20.3 Refund Obligation for Unfinished Facility Additions

- 21 **Provisions Relating to Transmission Construction and Services on the Systems of Other Utilities**
 - 21.1 Responsibility for Third-Party System Additions
 - 21.2 Coordination of Third-Party System Additions

- 22 **Changes in Service Specifications**
 - 22.1 Modifications On a Non-Firm Basis
 - 22.2 Modification On a Firm Basis

- 23 **Sale or Assignment of Transmission Service**
 - 23.1 Procedures for Assignment or Transfer of Service
 - 23.2 Limitations on Assignment or Transfer of Service
 - 23.3 Information on Assignment or Transfer of Service
 - 23.4 Use by EIM

- 24 **Metering and Power Factor Correction at Receipt and Delivery Points(s)**
 - 24.1 Transmission Customer Obligations
 - 24.2 Transmission Provider Access to Metering Data
 - 24.3 Power Factor

- 25 **Compensation for Point-To-Point Transmission Service**

- 26 **Stranded Cost Recovery**

- 27 **Compensation for New Facilities and Redispatch Costs**

III. NETWORK INTEGRATION TRANSMISSION SERVICE

Preamble

- 28 **Nature of Network Integration Transmission Service**
 - 28.1 Scope of Service
 - 28.2 Transmission Provider Responsibilities
 - 28.3 Network Integration Transmission Service
 - 28.4 Secondary Service
 - 28.5 Real Power Losses
 - 28.6 Restrictions on Use of Service
 - 28.7 Participation in the EIM

- 29 Initiating Service**
 - 29.1 Condition Precedent for Receiving Service
 - 29.2 Application Procedures
 - 29.3 Technical Arrangements to be Completed Prior to Commencement of Service
 - 29.4 Network Customer Facilities
 - 29.5 Filing of Service Agreement

- 30 Network Resources**
 - 30.1 Designation of Network Resources
 - 30.2 Designation of New Network Resources
 - 30.3 Termination of Network Resources
 - 30.4 Operation of Network Resources
 - 30.5 Network Customer Redispatch Obligation
 - 30.6 Transmission Arrangements for Network Resources Not Physically Interconnected With The Transmission Provider
 - 30.7 Limitation on Designation of Network Resources
 - 30.8 Use of Interface Capacity by the Network Customer
 - 30.9 Network Customer Owned Transmission Facilities

- 31 Designation of Network Load**
 - 31.1 Network Load
 - 31.2 New Network Loads Connected With the Transmission Provider
 - 31.3 Network Load Not Physically Interconnected with the Transmission Provider
 - 31.4 New Interconnection Points
 - 31.5 Changes in Service Requests
 - 31.6 Annual Load and Resource Information Updates

- 32 Additional Study Procedures for Network Integration Transmission Service Requests**
 - 32.1 Notice of Need for System Impact Study
 - 32.2 System Impact Study Agreement and Cost Reimbursement
 - 32.3 System Impact Study Procedures
 - 32.4 Facilities Study Procedures
 - 32.5 Penalties for Failure to Meet Study Deadlines
 - 32.6 Clustering of Network Service Studies

- 33 Load Shedding and Curtailments**
 - 33.1 Procedures
 - 33.2 Transmission Constraints

- 33.3 Cost Responsibility for Relieving
Transmission Constraints
- 33.4 Curtailments of Scheduled Deliveries
- 33.5 Allocation of Curtailments
- 33.6 Load Shedding
- 33.7 System Reliability

34 Rates and Charges

- 34.1 Monthly Demand Charge
- 34.2 Determination of Network Customer's Monthly
Network Load
- 34.3 Redispatch Charge
- 34.4 Stranded Cost Recovery

35 Operating Arrangements

- 35.1 Operation under the Network Operating
Agreement
- 35.2 Network Operating Agreement
- 35.3 Network Operating Committee

**IV. LARGE GENERATION INTERCONNECTION SERVICE
LGIP Table of Contents**

36 Definitions

37 Scope and Application

- 37.1 Application of Standard Large Generator
Interconnection Procedures
- 37.2 Comparability
- 37.3 Base Case Data
- 37.4 No Applicability to Transmission Service
- 37.5 EIM Requirements

**38 Interconnection Requests and Informational
Interconnection Study Requests**

- 38.1 Interconnection Requests
- 38.2 Identification of Types of Interconnection
Services
- 38.3 Utilization of Surplus Interconnection
Service
- 38.4 Valid Interconnection Request
- 38.5 OASIS Posting
- 38.6 Coordination with Affected Systems
- 38.7 Withdrawal
- 38.8 Identification of Contingent Facilities
- 38.9 Informational Interconnection Study Requests

- 39 Interconnection Request Evaluation Process**
 - 39.1 Queue Position
 - 39.2 General Study Process
 - 39.3 Transferability of Queue Position
 - 39.4 Modifications

- 40 New Transmission Provider**
 - 40.1 Reserved
 - 40.2 New Transmission Provider

- 41 Informational Interconnection Study**
 - 41.1 Informational Interconnection Study Request
 - 41.2 Informational Interconnection Study Agreement
 - 41.3 Scope of Informational Interconnection Study
 - 41.4 Informational Interconnection Study Procedures

- 42 Cluster Study**
 - 42.1 Cluster Study Agreement
 - 42.2 Customer Engagement Window
 - 42.3 Execution of Cluster Study Agreement and Scope of Cluster Study
 - 42.4 Cluster Study Procedures
 - 42.5 Cluster Study Withdrawals and Re-Studies

- 43 Interconnection Facilities Study**
 - 43.1 Interconnection Facilities Study Agreement
 - 43.2 Scope of Interconnection Facilities Study
 - 43.3 Interconnection Facilities Study Procedures
 - 43.4 Meeting with Transmission Provider
 - 43.5 Re-Study

- 44 Engineering & Procurement ("E&P") Agreement**

- 45 Reserved**

- 46 Standard Large Generator Interconnection Agreement (LGIA)**
 - 46.1 Tender
 - 46.2 Negotiation
 - 46.3 Execution and Filing
 - 46.4 Commencement of Interconnection Activities

**47 Construction of Transmission Provider's
Interconnection Facilities and Network Upgrades**

- 47.1 Schedule
- 47.2 Construction Sequencing

48 Miscellaneous

- 48.1 Confidentiality
- 48.2 Delegation of Responsibility
- 48.3 Obligation for Study Costs
- 48.4 Third Parties Conducting Studies
- 48.5 Disputes
- 48.6 Local Furnishing Bonds

V. SMALL GENERATION INTERCONNECTION SERVICE

SGIP Table of Contents

- 49 Application**
- 50 Fast Track Process**
- 51 Study Process**
- 52 Provisions that Apply to All Interconnection Requests**
- 53 EIM Requirements**

SCHEDULE 1

Scheduling, System Control and Dispatch Service

SCHEDULE 2

**Reactive Supply and Voltage Control from Generation or
Other Sources Service**

SCHEDULE 3

Regulation and Frequency Response Service

SCHEDULE 3A

Generator Regulation and Frequency Response Service

SCHEDULE 4

Energy Imbalance Service

SCHEDULE 5

Operating Reserve - Spinning Reserve Service

SCHEDULE 6

Operating Reserve - Supplemental Reserve Service

SCHEDULE 7

**Long-Term Firm and Short-Term Firm Point-To-Point
Transmission Service**

SCHEDULE 8

Non-Firm Point-To-Point Transmission Service

SCHEDULE 9

Generator Imbalance Service

SCHEDULE 10

Real Power Losses

SCHEDULE 11

Unauthorized Use of Transmission Service

ATTACHMENT A

Form Of Service Agreement For Firm Point-To-Point
Transmission Service

ATTACHMENT A-1

Form Of Service Agreement For The Resale, Reassignment Or
Transfer Of Point-To-Point Transmission Service

ATTACHMENT B

Form of Umbrella Service Agreement For Non-Firm Point-To-
Point Transmission Service

ATTACHMENT C

Methodology To Assess Available Transfer Capability

ATTACHMENT D

Methodology for Completing a System Impact Study

ATTACHMENT E

Index of Point-to-Point Transmission Service Customers

ATTACHMENT F

Service Agreement For Network Integration Transmission
Service

ATTACHMENT G

Form of Network Operating Agreement

ATTACHMENT H

Annual Transmission Revenue Requirement For Network
Integration Transmission Service

ATTACHMENT H-1

PacifiCorp's Formula Rate

ATTACHMENT H-2

Formula Rate Implementation Protocols

ATTACHMENT I

Index Of Network Integration Transmission Service Customers

ATTACHMENT J

Reserved for Future Use

ATTACHMENT K

Transmission Planning Process

ATTACHMENT L

Creditworthiness Procedures

ATTACHMENT M

Special Conditions Associated with Transmission Service
Provided Pursuant to State Mandated Retail Access Programs

ATTACHMENT N

APPENDICES TO LGIP

APPENDIX 1

Interconnection Request for a Large Generating Facility

APPENDIX 2

Informational Interconnection Study Request

APPENDIX 2A

Informational Interconnection Study Agreement

APPENDIX 3

Cluster Study Agreement
APPENDIX 4
Interconnection Facilities Study Agreement
APPENDIX 5
Surplus Interconnection Service System Impact Study
Agreement
APPENDIX 6
Standard Large Generator Interconnection Agreement
APPENDIX 7
Interconnection Procedures for a Wind Generating Plant
APPENDIX 8
Technological Advancement Study Agreement
ATTACHMENT O
APPENDICES TO SGIP
APPENDIX 1
Glossary of Terms
APPENDIX 2
Small Generator Interconnection Request
APPENDIX 3
Certification Codes and Standards
APPENDIX 4
Certification of Small Generator Equipment Packages
APPENDIX 5
Application, Procedures, and Terms and Conditions for
Interconnecting a Certified Inverter-Based Small Generating
Facility No Larger than 10 kW ("10 kW Inverter Process")
APPENDIX 6
[Reserved]
APPENDIX 7
[Reserved]
APPENDIX 8
Facilities Study Agreement
APPENDIX 9
Small Generator Interconnection Agreement
ATTACHMENT P
Index of Generation Interconnection Customers
ATTACHMENT Q
Wholesale Electric Quadrant Standards of the North American
Energy Standards Board
ATTACHMENT R
[Reserved]
ATTACHMENT S
Provisions Relating to Transmission Service Between Malin
and Round Mountain
ATTACHMENT T
Energy Imbalance Market
ATTACHMENT U

Requirements for Self-Supply of Schedules 5 and 6, 0.5.1
ATTACHMENT V

Self-Supply Calculation for Schedules 5 and 6, 0.0.0
ATTACHMENT W

Process for Transitioning to "First-Ready, First-Served"
Interconnection Queue Procedures