UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

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Order 845 Compliance Filings)	Docket No. ER19-1948-000
PacifiCorp)	

COMMENTS OF THE NORTHWEST AND INTERMOUNTAIN INDEPENDENT POWER PRODUCERS COALITION

Intervenor Northwest and Intermountain Independent Power Producers Coalition ("NIPPC") respectfully submits these Comments on PacifiCorp's Order No. 845 Compliance filing, submitted in this docket on May 22, 2019. ¹

ABOUT NIPPC

NIPPC is a not-for-profit trade association that advocates for competition in the power sector. NIPPC's members include independent power producers who develop and operate power plants, power marketers, and independent transmission companies. NIPPC members have collectively invested billions of dollars in existing generation resources in the United States and have substantial operating assets in the Northwest along with renewable and thermal projects in advanced stages of development, many of which are tied to or rely on PacifiCorp's transmission system for access to power markets. NIPPC is filing these comments because it is deeply concerned that PacifiCorp's compliance filing, particularly its reliance on Business Practice 73 ("BP-73"), is antithetical to the Federal Energy Regulatory Commission's ("FERC" or

¹ The Commission extended the date for intervention and comments in this proceeding to June 26, 2019, by notice issued on June 13, 2019.

"Commission") long-standing policies of open transmission access, regional transmission planning, and competitive wholesale power markets.

COMMENTS

I. OVERVIEW

While PacifiCorp's Order No. 845 compliance filing itself is largely unexceptionable, NIPPC is concerned about BP-73, which is alluded to elliptically in the PacifiCorp filing, and which we have attached hereto as Appendix A. BP-73, which addresses how PacifiCorp will handle interconnection studies when PacifiCorp believes generation exceeds the load in its Balancing Authority Area ("BAA"), will, as a practical matter, shut down *all* new interconnections in PacifiCorp's BAA because, if PacifiCorp's claim is correct, interconnection requests already substantially exceed load in the PacifiCorp BAA. In one fell swoop, BP-73 terminates the market for new generation anywhere in PacifiCorp's BAA, an action that will have impacts in markets across the West since many of the region's best solar, wind, and geothermal resources are located within the PacifiCorp territory and PacifiCorp sits astride key transmission corridors that connect these resources with the region's load centers.

As a legal matter, NIPPC believes the Commission must reject BP-73 because: (1) new interconnection requests will be met with the simple response, after superficial analysis, that the project is "non-viable," which is contrary to Order No. 845's intention to increase the transparency of the transmission study process, and effectively bars construction of any new generation without evaluating what alternatives are available, what network upgrades might permit the new project to transmit some or all of its power to purchasers, and whether PacifiCorp is effectively managing its interconnection queue and transmission study processes, while making PacifiCorp the sole arbiter of all these issues; (2) BP-73 assumes that PacifiCorp's BAA operates in isolation from

surrounding BAAs, and therefore is fundamentally inconsistent with open access and regional transmission planning required under the Commission's foundational Orders No. 888, 890, and 1000. The Commission must reject PacifiCorp's attempt to use BP-73 and the Order No. 845 compliance process to circumvent the established Commission process for implementing changes to a Transmission Provider's Open Access Transmission Tariff ("OATT"), which requires PacifiCorp to demonstrate that any modifications it proposes are consistent with or superior to the *pro forma* OATT. BP-73 obviously fails to meet this high standard, particularly in light of the fact that it was put forth as a "solution" to a problem that has not been clearly documented, with little more than a cursory examination of the underlying "problem," no examination whatsoever of possible alternative solutions, and less than no examination of the potential impacts and consequences of its actions on its customers or other utilities in the region.

II. BACKGROUND

On April 17, 2019, while PacifiCorp was in the process of putting together its Order No. 845 compliance filing, it posted BP-73. A number of interested parties, including NIPPC, filed comments opposing BP-73. Nonetheless, PacifiCorp implemented BP-73 without material change and it became effective on June 3, 2019, shortly after PacifiCorp submitted the compliance filing at issue in this case. The compliance filing (at page 5) makes clear that PacifiCorp views BP-73 as integral to its compliance with Order No. 845's requirements for transparent study processes, so that interconnection customers can make "informed interconnection decisions."

But BP-73 will not attain this goal. As BP-73 states, when "the aggregate of existing generation, higher-queued proposed generation, and generators with executed agreements" in PacifiCorp's BAA reaches "levels that exceed load in that BAA, certain requests for generation interconnection service cannot be modeled," and the result will be that any new interconnection

requests will be labelled as "non-viable." BP-73 at 2. PacifiCorp reports that the interconnection queue already substantially exceeds the load in its BAA.² BP-73 thus amounts to a moratorium on new interconnections in PacifiCorp's BAA.

NIPPC recognizes that the large volume of interconnection requests in its BAA presents new challenges for PacifiCorp. But PacifiCorp's response – to throw its hands up because its power flow model does not work when generation exceeds load in its BAA – is unacceptable. This is particularly so because PacifiCorp has yet to demonstrate the existence of any problem beyond a technical flaw in its modeling software or, if the problem does exist, that it was not caused by PacifiCorp itself in allowing a backlog of interconnection requests to accumulate for years.

NIPPC urges the Commission to reject BP-73 and to require PacifiCorp to engage in a stakeholder process to develop improved study and queue processes that will, at a minimum: (a) recognize that, consistent with the mandate for regional transmission planning set forth in the Commission's Orders No. 888, 890 and 1000, that generation constructed in PacifiCorp's BAA is likely to be moved across the regional transmission system to load centers outside PacifiCorp's BAA and that generation, including new interconnections, must be planned on a regional level that recognizes impacts, and identifies available alternatives, across the system; (b) recognize new loads in the queue, not just existing loads and not just new generation, and make the load queue available for inspection; (c) that documents the amount of load in PacifiCorp's BAA, as well as in specific load pockets, and clearly identifies the basis for the claimed load; (d) that recognizes planned retirements of generation capacity (much of it now mandated by policy recently adopted in several Western states), including PacifiCorp generation capacity, that will affect transmission

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² PacifiCorp claims that it has received 25,000 MW of interconnection requests in the past two years and that its interconnection queue now totals approximately 37,000 MW in a BAA with peak load of 12,600 MW. PacifiCorp Compliance Filing at 5 n.19.

availability within a timeframe that might allow construction of queued projects; and, (e) reforms the queue process to eliminate projects, including PacifiCorp projects, that have been abandoned or are otherwise no longer viable.

On the latter point, NIPPC believes that a simple public examination of the PacifiCorp queue is likely to identify a number of projects that all parties can agree should be removed from the queue. In fact, PacifiCorp's generation interconnection queue includes approximately 20,000 MW of active requests that were submitted before the end of 2017 – the approximate "cut off point" in which PacifiCorp unilaterally elected to stop studying interconnection requests submitted in its eastern BAA – and have not either proceeded to an interconnection agreement or been removed from the queue in accordance with OATT timelines. These facts suggest that the PacifiCorp itself is responsible for the problem BP-73 is supposedly attempting to solve, and that the problem could easily be remedied through a queue audit and proper adherence to OATT timelines and procedures.

ARGUMENT

For all or nearly all new interconnection requests, BP-73 will result in an unexplained "non-viable" finding. It is therefore contrary to Order No. 845's core goal of increasing the transparency of interconnection study processes. Because BP-73 effectively bars new interconnections in PacifiCorp's BAA, it is contrary to the Commission's open-access transmission regime established in the landmark Order No. 888. Because it treats PacifiCorp's BAA as an island isolated from the rest of the Western Interconnection, BP-73 is contrary to the Commission's Orders No. 890 and 1000, which require transmission planning on a regional scale and are intended to overcome the inefficiencies that result when individual transmission systems are planned in isolation. Indeed, BP-73 suggests that PacifiCorp may not have properly studied flows on connected systems, which

suggests that PacifiCorp incorrectly studied the entire body of interconnection requests in its queue. If correct, this would, to say the least, have significant ramifications for the current state of the PacifiCorp queue, costs ratepayers may have borne, and costs project owners may have borne in the competitive process, to their detriment.

A. The Commission Should Reject PacifiCorp's Compliance Filing Because BP-73 Is Fundamentally At Odds With Order No. 845's Requirement for Study Transparency.

Order No. 845's core goals include increasing the transparency and predictability of the interconnection process so that interconnection customers are better informed, resulting in fewer disputes and greater emphasis on projects that are likely to reach commercial operation.³ BP-73 is fundamentally at odds with these goals because new interconnection requests where requests exceed BAA load will result in an unexplained PacifiCorp determination that the request is "non-viable." Order No. 845 is intended to improve the interconnection study process, not to permit interconnection studies to become a roadblock to independent energy generation development. Because BP-73 is exactly such a roadblock, the Commission should reject BP-73.

BP-73 violates Order No. 845's requirements because any new interconnection request will result in a "non-viable" determination automatically, without any transparency around the study assumptions causing the load resource imbalance. Worse, because PacifiCorp claims that generation requests will exceed load in its BAA for the foreseeable future, it is likely that every interconnection request for the foreseeable future will result in such an unexplained "non-viable" determination. The Commission should reject BP-73 and require PacifiCorp to use the established OATT interconnection process to work through the backlog of requests. If that does not solve the problem, the Commission should order PacifiCorp to develop a considerably more transparent and

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³ Order No. 845, Reform of Generator Interconnection Procedures and Agreements, 163 FERC \P 61,043 (2018), order on reh'g, Order No. 845-A, 166 FERC \P 61,137 (2019).

effective process that will allow interconnection customers and electricity buyers to assess, for example, the baseline load and interconnection conditions studied by PacifiCorp, the changes in load and generation resources anticipated by PacifiCorp, alternatives considered by PacifiCorp, and the extent to which PacifiCorp has modeled loads and resources in neighboring systems. Otherwise, BP-73 will defeat the Commission's goals in Order No. 845 by making it impossible to determine if interconnection requests are being treated consistently and if study assumptions reflect actual conditions on the transmission system.

BP-73 is inconsistent with Order No. 845 in several specific ways. To start with, Order No. 845 requires the network models and underlying assumptions to "be representative of current system conditions." BP-73 fails this test because, by effectively barring any interconnections where the interconnection queue inside PacifiCorp's BAA exceeds load in that BAA, it treats PacifiCorp's BAA as if it is isolated from the rest of the Western Interconnection. But PacifiCorp is not isolated from the rest of the West's transmission system. On the contrary, PacifiCorp itself buys and sells large quantities of generation moving across the boundaries of other BAAs, as demonstrated by its participation in the Western Energy Imbalance Market, which currently encompasses eight major transmission providers from Canada to Mexico, including PacifiCorp, with several additional transmission providers set to join the EIM in the next few years. The latest to announce its intentions to join EIM, the Bonneville Power Administration ("BPA"),⁵ abuts and directly interconnects with much of PacifiCorp's transmission system.

⁴ Order No. 845 at P 237 (revising Section 2.3 of the *pro forma* OATT).

⁵ On June 20, 2019, BPA initiated a process with the aim of joining the EIM in March 2022. *See https://www.bpa.gov/PROJECTS/Initiatives/EIM/Pages/Energy-Imbalance-Market.aspx*.

Nor does BP-73 reflect the emerging reality of the Western electricity markets. On the contrary, states representing the bulk of the West's population centers – Washington, Oregon, California, Colorado, Nevada and New Mexico – have recently enacted policies requiring the retirement of coal-fired resources and mandating a transition to non-emitting resources in the next 1-2 decades. Because PacifiCorp's transmission system connects much of the best solar, wind, and geothermal resources in the interior west to load centers on the West Coast, the inability to obtain transmission access could thwart attainment of these aggressive state mandates. PacifiCorp's power flow models should also recognize that, due to these state mandates, much of the coal fleet in the interior West will be coming off line, often on an accelerated schedule, in the next few years. Failure to accurately model these changes in the generation market risks stranding valuable transmission assets that could otherwise be used to great advantage to move new renewable generation to the West's major load centers, while helping to mitigate the economic impacts of the closure of fossil-fired generators in producing states. Likewise, the failure to model loads, including anticipated loads, in neighboring systems makes BP-73 an artificial roadblock to effective open transmission access and therefore to the competitive wholesale power markets envisioned by the Commission.

In short, by treating the PacifiCorp BAA as if it is isolated from the rest of the Western Interconnection, BP-73 does not reflect "current system conditions" and the Commission therefore should reject it.

⁶ The 2019 Washington State legislature adopted and the governor signed ESSB 5116, which requires the elimination of coal-fired resources from the electricity portfolio serving Washington electric consumers by 2025, mandates a greenhouse-gas-neutral electricity portfolio by 2030, and requires that only renewable or non-emitting generation resources be used after 2045. Similar legislation has been adopted recently in Oregon, California, Colorado, Nevada, and New Mexico. *See* Brad Plumer, *Blue States Roll Out Aggressive Climate Strategies, Red States Keep to the Sidelines*, New York Times, June 21, 2019.

PacifiCorp's purported reasoning for rejecting requests that it consider loads outside its BAA is particularly troubling. In its Response to Stakeholder Comments concerning its adoption of BP-73, PacifiCorp claims that, "[t]o the extent an interconnection customer has an executed contract with off-system load, PacifiCorp would consider the viability of such a project on a case-by-case basis." PacifiCorp's approach places independent generators squarely on the horns of a dilemma – most purchasers require that a generator have secured a transmission path before they will execute a power purchase agreement. PacifiCorp's own recent solicitations demonstrate that the BP-73 approach effectively kills competition for new generation resources.

For example, for its "2017R RFP" seeking wind generation delivered into its Wyoming system, PacifiCorp stated that bids would be disqualified for "12. Failure to provide completed interconnection system impact study for a directly interconnected project from transmission provider in bid proposal" or "13. Failure to provide transmission service study documenting long-term firm third-party transmission service to PacifiCorp's Wyoming transmission system, if applicable." Similarly, in its recent solicitation for solar generation in Utah, PacifiCorp insisted that bidders demonstrate that they had completed interconnections or at least their interconnection processes were in the late stages, despite the fact that its interconnection queue in Utah has been shut down for over two years. Specifically, on March 26, 2019, PacifiCorp responded to an inquiry about the Utah RFP asking whether "projects without PacifiCorp generated interconnection studies" would be "considered for this RFP." In response, PacifiCorp stated, "[w]e will accept bids that have not received a final study, but it will be difficult to assess bids that do not have final

⁷ PacifiCorp Response to Stakeholder Comments and Revised Business Practice at 7 (available at: https://www.oasis.oati.com/woa/docs/PPW/PPWdocs/BP73_PacifiCorp's_Responses_to_Public_Comment_053120 19.pdf).

⁸ Renewable Request for Proposals (2017R RFP), at p. 11 (issued Sept. 27, 2017) (available at: http://www.pacificorp.com/sup/rfps/2017-rfp/2017R RFP Doc and Appendices.html).

completion dates and interconnection pricing." NIPPC members are not aware of any RFP issued in the West in recent years that has not contained similar requirements for bidders to demonstrate that they can deliver power from their project to the off-taker either through a direct interconnection or through an established transmission path for delivering their output, or at least that the interconnection process has advanced to a late stage.

BP-73 therefore effectively prevents any potential new generation in PacifiCorp's BAA from bidding into any RFP, including both for PacifiCorp itself and for other utilities, even though the RFP demonstrates there is an express need for that generation. BP-73 thus strongly discourages investment in competitive generation supplies, which will undercut competition in the Western wholesale markets for years to come. The Commission has rejected proposed LGIP amendments where an interconnection customer is forced to withdraw from the queue if it does not win a state competitive business process because "that proposal . . . unnecessarily raises the stakes by making" the competitive bid "an all-or-nothing gamble." BP-73 is even worse than this because it effectively forecloses interconnection customers from participating in such competitive bidding processes. BP-73 allows PacifiCorp to ring-fence its Transmission System and prevent independent generators from interconnecting, whether with the intent to wheel through PacifiCorp's system or to sell power to PacifiCorp directly, with obvious and devastating consequences for competitive wholesale power markets across the West.

Order No. 845's transparency requirement is also aimed at allowing transmission providers to "improve queue management," thereby decreasing the administrative burden on transmission

⁹ See http://www.pacificorp.com/content/dam/pacificorp/doc/Suppliers/RFPs/2019R_Utah_RFP/2019R_Utah_RFP-Bidder_QA_3-26-19.pdf.

¹⁰ *Xcel Energy Operating Cos.*, 107 FERC ¶ 61,313, at P 25, order on reh'g, 109 FERC ¶ 61,072 (2004).

providers and "mitigate[ing] the potential for study disputes, re-studies, and late-stage withdrawals, thus increasing the efficiency of the interconnection process." BP-73 defeats these goals by allowing PacifiCorp to issue generic "non-viable determinations" to all interconnection requests, without transparency around study assumptions and the impacts different assumptions may have on the viability of any particular interconnection request. In particular, there is no transparency as to the amount of load PacifiCorp claims is present in its BAA because (unlike, for example, BPA), PacifiCorp does not publish its load queue. This is especially troubling because PacifiCorp identifies both the lengthy interconnection queue and the relatively low level of loads as the reason for adopting BP-73. But without greater transparency, it will be difficult or impossible to verify PacifiCorp's claims about load, to identify unviable projects that remain in the queue, or to manage the queue in an open and effective manner.

Similarly, Order No. 845 requires transmission providers to identify "Contingent Facilities" at the end of the System Impact Study process. BP-73 undermines this goal by allowing PacifiCorp to issue a generic "non-viable" determination that, as a practical matter, means the System Impact Study will never be conducted and the Contingent Facilities will never be identified. Likewise, there will be no opportunity to run alternative scenarios, as is common and appropriate in interconnection studies, which allow both interconnection customers and purchasers to make reasoned business decisions based on scenarios involving different load and generator levels, as well as cases with and without generators in senior queue positions. Without this information, independent generation developers will be unable to make an informed decision about the viability of their interconnection requests on the PacifiCorp system and what alternatives are

¹¹ Order No. 845 at P 239.

available to them. Buyers likewise will be unable to make informed decisions about the deliverability of generation resources they wish to purchase.

Finally, Order No. 845 requires transmission providers to use "reasonable efforts" to complete each stage of the interconnection study process within the deadlines established in the order. BP-73 is contrary to this requirement because it would permit PacifiCorp to simply issue a "non-viable" determination at the outset of the study process, with no further "reasonable efforts" to meet the remaining requirements. This will undermine not only the ability of independent power producers to identify the interconnection requests most likely to be viable on the PacifiCorp system, but also will undermine the Commission's ability to determine why delays are occurring in the PacifiCorp interconnection queue and the efforts of all interested parties to manage that queue. It will also result in greater inefficiency since many lower-queued projects will be better and more efficient options than "zombie" projects that have sat in the queue indefinitely with no forward progress.

As the above discussion makes clear, BP-73 is in substance a modification to the *pro forma* OATT, including the changes mandated by Order No. 845.¹² Hence, PacifiCorp bears the burden of demonstrating that this modification is consistent with or superior to the *pro forma* OATT.¹³ PacifiCorp plainly cannot satisfy this standard. Accordingly, BP-73 should be rejected consistent with Commission precedent rejecting proposed modifications to the *pro forma* OATT that would,

¹² As the Commission correctly notes, its "Rule of Reason" policy requires that all provisions that significantly affect the terms of transmission service to be published in the transmission provider's tariff. Order No. 845 at P 200. BP-73 obviously significantly affects the terms of service in PacifiCorp's BAA by making interconnection service unavailable. It is therefore well beyond the mere "technical implementation details" that are appropriate for publication in business practices. *Id.*

 $^{^{13}}$ E.g., Public Service Co. of Colorado, 163 FERC ¶ 61,146 at P 32 (2018), reh'g denied, 167 FERC ¶ 61,141 (2019); Southern Co. Servs., Inc., 109 FERC ¶ 61,070 (2004), order on reh'g, 111 FERC ¶ 61,004, reh'g denied, 111 FERC ¶ 61,329, at P 23 (2005); Va. Elec. & Power Co., 107 FERC ¶ 61,010, at PP 21, 38, denying reh'g, 108 FERC ¶ 61,206 (2004).

as here, put independent generators at a significant disadvantage when compared to independent generators interconnecting outside the transmission provider's region.¹⁴ Because of BP-73, PacifiCorp's compliance filing is inferior to what is required under the *pro forma* OATT and Order No. 845. The Commission should therefore reject it, make clear that PacifiCorp must include all material modifications to the *pro forma* OATT in the OATT and not in business practices, and that it must develop interconnection study procedures that are consistent with Orders No. 845, 888, 890, and 1000.

B. The Commission Should Reject PacifiCorp's Compliance Filing Because BP-73 Is Fundamentally At Odds With The Commission's Order No. 888, Order No. 890 and Order No. 1000 as Well As The Commission's PURPA Regulations.

In Order No. 888, the Commission determined that it "must eliminate the remaining patchwork of closed and open jurisdictional transmission systems and ensure that all these systems ... cannot use monopoly power over transmission to unduly discriminate against others." In particular, the Commission was concerned that consumers in high-cost regions like California would have access to lower-cost resources and generation constructed by independent power producers and other non-traditional market participants. As the Commission observed, non-discriminatory open access to the transmission system was critical to reach these goals. BP-73 is utterly contrary to these fundamental purposes of Order No. 888 because it effectively treats a technical issue – how to model powerflows in a BAA where queued generation in the queue exceeds the BAA's load – as an absolute bar to transmission access. The transgression of fundamental Commission policy is particularly egregious because BP-73 is presented without any

 $^{^{14}}$ Xcel Energy Operating Cos., 107 FERC ¶ 61,313, at PP 22-23, order on reh'g, 109 FERC ¶ 61,072 (2004).

¹⁵ Order No. 888, FERC Stats. & Regs. Regulatory Preambles, ¶ 31,362 at p. 31,365 (1996).

¹⁶ *Id.* at 31.651-52.

¹⁷ *Id*.

reasonable evidence of a genuine problem or discussion of possible solutions, especially solutions that would be consistent with Commission policy. To permit PacifiCorp to limit access to its transmission system in this way would be to effectively abandon Order No. 888's open access principles.

A simple hypothetical example demonstrates the depth of the problem: Assume PacifiCorp operates a BAA with 100 MW of load but 300 MW of interconnection requests. But PacifiCorp's high-voltage transmission system connects with an adjacent BAA with 2000 MW of load but only 400 MW of generation. There is, in this example, clearly both a need and a market for the electricity produced in the PacifiCorp system and a place for that electricity to flow. Further, if the generation in the PacifiCorp system can be produced at the lowest cost, the most efficient solution economically is to export the power to the adjacent market. But BP-73 defeats the efficient market solution by assuming both the market for the electricity and the flow of power out of existence, and thereby defeats the efficient wholesale generation marketplace Order No. 888 aimed to establish.

Subsequent to the adoption of Order No. 888, the Commission adopted a series of reforms intended to improve the functioning of the OATT, to regularize the process of interconnection with the interstate transmission grid, and to improve transmission planning. Among the major reforms were Order No. 890, which "require[d] each public utility transmission provider to have a coordinated, open, and transparent regional transmission planning process," and Order No. 1000, which required transmission providers to amend their OATTs to improve the regional transmission planning process in several particulars, with the goal of "ensur[ing] that transmission planning processes at the regional level consider and evaluate, on a non-discriminatory basis, possible

¹⁸ Order No. 1000 at P 1.

transmission alternatives," including "solutions that may be located in a neighboring transmission planning region." ¹⁹

BP-73 is fundamentally inconsistent with each of these foundational Commission orders because the starting assumption – that generation exceeding load in a particular BAA has no market – is flatly inconsistent with open access and regional planning. Open access and efficient regional planning logically require consideration of all loads being served, not just those confined to a particular BAA, and also require consideration of the regional transmission system outside the boundaries of a particular BAA. BP-73 stymies open access and regional planning because it labels any new interconnection request "inviable" without consideration of markets outside PacifiCorp's BAA and without any consideration of regional transmission planning or transmission solutions that may exist outside PacifiCorp's BAA.

For the same reason, BP-73 is inconsistent with the Commission's PURPA regulations. The Commission has for decades provided Qualifying Facilities ("QFs") with the option of making "off-system" sales – that is, a QF interconnecting with PacifiCorp has the option of transmitting its power across the PacifiCorp system and selling to another utility.²⁰ BP-73 forecloses this option and therefore violates PURPA as well as the landmark Commission orders discussed above.

CONCLUSION

BP-73 amounts to an across-the-board bar on any new generation interconnections in PacifiCorp's BAA. It therefore violates fundamentals of the Commission's open access transmission regime. BP-73 starts with the assumption that the PacifiCorp BAA is isolated from

¹⁹ *Id.* at P 4.

²⁰ 18 C.F.R. § 292.303(d).

any other BAA in the Western Interconnection. This assumption violates fundamental requirements of the Commission's regional transmission planning regime.

For these reasons, the Commission should reject BP-73 and require PacifiCorp to comprehensively evaluate the options available to it to address interconnection study and queue issues in its BAA. These options should include, but are not limited to:

- A comprehensive review of the existing queue, including a process to identify and remove
 projects, including PacifiCorp projects that are no longer viable, with a focus on the
 existing OATT requirements for queue management.
- A review of modeling assumptions about future generation retirements, including retirements of PacifiCorp plants, particularly in light of recent legislation adopted in several Western states mandating the phase-out of coal-fired resources and increased use of renewable and/or non-emitting generation.
- A transparent model for identifying loads within PacifiCorp's BAA, including anticipated
 new loads and loads in geographic pockets, and a system impact model that reflects these
 assumptions about load. In particular, the model should recognize anticipated near-term
 growth of large loads like data centers, as has recently occurred in both central Oregon
 and central Washington, which have created demand for significant new generation.
- A model that properly recognizes power demands and power flows outside the PacifiCorp
 BAA and accurately models the impacts of new load and generation on neighboring
 systems as well as the PacifiCorp system.
- Ensuring that the study and queue assumptions are consistent with PacifiCorp's Integrated
 Resource Plans and permit competing generators to bid into PacifiCorp competitive
 bidding processes on a level playing field.

• Ensuring that study and queue assumptions are consistent with known and reasonably projected demand in adjoining systems and markets, including the EIM and retail electricity markets in all states that could reasonably be served by generation located in

PacifiCorp's BAA.

Respectfully submitted this 26th day of June, 2019.

BEVERIDGE & DIAMOND

s/ Eric L. Christensen

Eric L. Christensen, WSBA # 27934

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Business Practice #73: Study Models and Assumptions When Modeled Generation Exceeds Study Area Load

Posted: 04/17/2019 **Effective:** 06/03/2019

Revision No.: 1.0

A. Policy References and Regulatory Framework

For requests to interconnect under PacifiCorp's Open Access Transmission Tariff ("OATT"), the Federal Energy Regulatory Commission ("FERC") is the regulatory body with jurisdiction over the interconnection service, and the primary policy reference is the OATT. FERC has stated that "increasing transparency of network models and assumptions will allow interconnection customers to make informed interconnection decisions, which could potentially help interconnection customers avoid entering the queue with non-viable interconnection requests." Order No. 845 at P 239 (2018).

For requests to interconnect under the Public Utility Regulatory Policies Act of 1978 ("PURPA"), the primary policy references are PURPA's federal statutory provisions, FERC's PURPA regulations, and federal policies and precedent. In addition:

- If the qualifying facility seeking an interconnection under PURPA is also seeking to sell the entirety of its output to PacifiCorp, then the regulatory body with jurisdiction over the interconnection service is the relevant state commission, and primary policy references also include the state's PURPA statutory provisions, as well as the state commission's PURPA regulations, policies, and precedent (which often incorporate OATT processes).
- If the qualifying facility seeking an interconnection under PURPA is not seeking to sell the entirety of its output to PacifiCorp, then FERC is the regulatory body with jurisdiction over the interconnection service, and primary policy references also include the OATT.

For requests to interconnect to the distribution system that trigger state jurisdiction (outside of PURPA), primary policy references include the relevant state's applicable interconnection statutes, regulations, policies, procedures and precedent.

B. Background on Interconnection Study Assumptions and Process

PacifiCorp must follow a prescriptive process to analyze requests for generator interconnection service. The key principles of that process include that interconnection studies are performed in serial-queue order and start with the baseline assumption that the following are in-service:



- Generators already directly interconnected to the system;
- Generators interconnected to affected systems that may have an impact on the request;
- Generators with a pending higher-queued interconnection request, including all of their associated network upgrade requirements;
- Generators that no longer have a queue position but have an executed interconnection agreement.

C. Impacts of the Interconnection Study Assumptions and Process

1. Network Upgrade Solution for Providing Interconnection Service under Constrained System Conditions

Under the study parameters described above, the cost and timing requirements associated with granting each consecutive interconnection service request (assuming all requests before it are in service) can be significant where:

- (1) a transmission provider's interconnection queue contains a volume of interconnection requests in the same area of the system that exceed the interconnection capability in that area; and/or
- (2) interconnection service is requested in constrained load center areas (also referred to as load "pockets" or load "bubbles") where there is insufficient load to sink additional generation.

An interconnection request submitted under these circumstances can be granted if the network upgrades identified in the interconnection customer's study (or in higher-queued studies assumed in-service for purposes of the study) are constructed.

2. No Network Upgrade Solution for Providing Interconnection Service under Extreme Generation-to-Load System Conditions

Where the amount of generation considered in-service in an interconnection study (i.e., the aggregate of existing generation, higher-queued proposed generation, and generators with executed agreements) in the Balancing Authority Area ("BAA") reaches levels that exceed load in that BAA, certain requests for generator interconnection service cannot be modeled. In other words, the interconnection request is non-viable because there are no network upgrade solutions that PacifiCorp transmission can identify to allow the interconnection request to be granted, as the system cannot absorb additional power from the proposed generator. Under those circumstances, the interconnection request cannot be granted until system or queue conditions change sufficiently to permit the interconnection. Additional generation could be absorbed if, for example, a sufficient number of higher-queued generators withdraw from the queue, load sufficiently increases, or battery storage assets are developed as a non-transmission solution.

D. Study Models and Assumptions When Modeled Generation Exceeds Study Area Load



A non-viable interconnection study status can arise in all types of interconnection service requests, including requests for both network resource interconnection service ("NRIS") and energy resource interconnection service ("ERIS"), where extreme generation-to-load system conditions are assumed as a study baseline. This is because all interconnection studies – whether NRIS or ERIS – consist of power flow studies. Power flow studies cannot solve unless system balance is maintained, i.e., unless generation equals load. For each new generator modeled in an interconnection study, a commensurate amount of generation must be reduced in the BAA for the power flow base case to balance and solve. As described in further detail below, depending on the type of study, the ability to balance the base case may not be possible.

The following descriptions provide specific modeling and study assumption details that will inform whether a non-viable interconnection study status occurs for different types of interconnection service requests:

- (1) NRIS: The NRIS study evaluates the proposed generator under a variety of stressed conditions to determine whether the aggregate of generation in the local area where the generator is proposing to interconnect can be delivered to the aggregate of load on a transmission provider's system. If there is insufficient load in the BAA to sink additional generation, then there is no network upgrade solution to delivering the aggregate of generation to the aggregate of load (i.e., even a new transmission line from the proposed generator cannot solve the problem because there is not enough load to which to deliver the output of the proposed generator). Under those circumstances, the interconnection study will deem the request non-viable until system conditions change.
- (2) **ERIS**: An ERIS study does not contain a deliverability component because it is a lower level of interconnection service that only makes the generator eligible to deliver its output using the existing capacity of the system on an "as available" basis. The lack of sufficient load in the BAA can nevertheless prevent the ERIS power flow study from solving under steady state (thermal and voltage) and stability analyses where insufficient load in the study area causes thermal and voltage issues that cannot be solved by network upgrades. For example, an interconnection power flow study relies on the transmission provider to reduce remote resource levels to accommodate the addition of new generation and testing of a proposed new generator under various load conditions, otherwise total generation levels would exceed load and the base case would not solve. The ability to assume a reduction in remote¹ resources (existing or higher-queued) for modeling purposes is finite, however—once all remote resources in the BAA have been exhausted, the model cannot absorb additional proposed generation in that

¹ Remote resources are those within the area coordinator area as defined by the WECC Data Preparation Manual but not proximate to the proposed point of interconnection under study, as assuming a reduction in generators in the local area to the studied interconnection would distort the actual impact of that interconnection.



particular area. Under those circumstances, the interconnection study will deem the request non-viable until system conditions change.²

E. Practice

Consistent with FERC's policy preference of allowing interconnection customers to make "informed interconnection decisions" and "avoid entering the queue with non-viable interconnection requests," (Order No. 845 at P 239), PacifiCorp will inform the interconnection customer of a non-viable study status at the earliest possible opportunity. In the event that a study for a specific interconnection request deems that request nonviable, it should not be interpreted as:

- (1) impacting higher-queued interconnection requests that have already received studies indicating what, if any, requirements are necessary for their requested interconnection service to be accommodated; or
- (2) an indication that all requests with lower queue positions will yield the same study result.

With respect to the latter, interconnection study results can and do vary considerably depending on the geographical location of the requested interconnection, the interconnection service type, and assumed and actual system conditions. That said, it is possible that a study will deem a request non-viable based solely on an interconnection request's queue position once either a geographical area or an entire BAA (depending on the circumstances) reaches extreme load-to-generation conditions.

Upon issuance of a non-viable study, PacifiCorp will follow the applicable study process and conduct a study review meeting with the customer to provide initial feedback on whether a project change might resolve the non-viable determination. For example, depending on the specific circumstances contributing to the interconnection customer's study result, the interconnection customer might be able to resolve the non-viable determination with a size reduction, and PacifiCorp will also consider whether provisional or surplus interconnection products may be applicable. (Additional details on these FERC Order No. 845 interconnection products is available in PacifiCorp's OATT and other generator interconnection service business practices.)

If the interconnection customer is not ultimately satisfied with the interconnection service options at its chosen point of interconnection and existing queue position, it may opt to either withdraw its interconnection request or maintain its position in the queue.

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PacifiCorp Business Practices

² In such a situation, the only way to solve the model would be to assume the construction of a new

transmission path to another third-party transmission provider's system, but that assumed export may bear no relationship to the customer's actual delivery intentions—intentions that are only made clear to the transmission provider as part of a separate request for transmission service, not interconnection service. For those customers seeking interconnection to sell to PacifiCorp's load-serving entity, solving the interconnection power flow model by assuming the power is exported is unrealistic and will create undue impacts on PacifiCorp's system and neighboring affected systems.



Revision History

Version	Date	Change Summary
0.0	4/17/19	Draft
1.0	6/3/19	Final effective, revised to remove statement that caused confusion during
		stakeholder process