BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

LC 67

In the Matter of	)	
	)	NORTHWEST AND INTERMOUNTAIN
PACIFICORP, dba PACIFIC POWER,	)	POWER PRODUCERS COALITION'S
	)	COMMENTS
2017 Integrated Resource Plan	)	
	)	

The Northwest and Intermountain Power Producers Coalition ("NIPPC") submits these comments regarding PacifiCorp's (or the "Company") 2017 integrated resource plan ("IRP") for electric service. NIPPC supports PacifiCorp's decision to move forward with early acquisition of renewable resources, but not the Company's decision to limit renewable resource acquisitions to only Wyoming wind. The Oregon Public Utility Commission (the "Commission") should encourage PacifiCorp to move forward with its planned renewable request for proposal ("RFP") after IRP acknowledgment, but it should be open to all renewable generation types and at any location that can cost effectively deliver the power to the Company's system.[1] It is fundamentally unfair to ratepayers for PacifiCorp to acquire new resources without rigorously testing the market, unrestricted by geography or renewable resource type.

[1] The Commission is in the process of potentially making significant changes to its competitive bidding rules to mitigate against utility bias to acquire more expensive and riskier utility owned generation. NIPPC continues to urge that those rules be adopted prior to PacifiCorp moving forward with its renewable RFP. If this does not occur, then PacifiCorp should proactively incorporate NIPPC's suggested rules to ensure that the Company actually acquires the least cost and risk resources.

PacifiCorp's IRP appropriately identified a need for renewable resources that could meet the Company's current and future energy demands at the lowest reasonable cost to ratepayers. Specifically, PacifiCorp's IRP shows that the acquisition of 1,100 megawatts ("MW") of renewable resources by 2020 is the least cost and least risk strategy to serve its customers energy and capacity needs. NIPPC is encouraged that PacifiCorp has been responsive to requests by the independent power community and has provided focused procurement information regarding its resource plans. Therefore, NIPPC supports the IRP's Action Plan's proposal to acquire renewable resources.

While NIPPC is supportive of PacifiCorp identifying its preferred resources and location; however, the Company has not demonstrated that only Wyoming wind resources and the associated Aeolus to Bridger/Anticline transmission line are the least cost and risk mix of resources to meet the Company's upcoming renewable resource needs. First, PacifiCorp has not performed adequate, transparent analysis to support its plan to only acquire Wyoming generation and new transmission. Renewable resources in other geographic areas should be provided an opportunity to serve PacifiCorp's customers, if they are more reasonably priced and less risky than Wyoming projects. Second, PacifiCorp should not discriminate against other potentially lower cost generation types, which PacifiCorp does not plan to consider until the 2028 to 2036 timeframe.[2] All renewable resource types regardless of location should be compared to the total all-in costs of Wyoming wind and associated incremental transmission to ensure that customers are served with the lowest reasonable cost generation and transmission

[2] PacifiCorp's IRP identifies potential other renewable generation acquisitions, but not starting until 2028. Therefore, the Action Plan's physical acquisitions only include wind generation. The IRP planning periods, ten years out, are essentially best guesses.

resource mix. PacifiCorp's plan appears to propose to meet its need for renewable resources with a fleet of mostly or entirely Company owned wind generation resources concentrated in small geographic areas to help justify the construction of a new transmission line.

Finally, the Commission should decline to acknowledge PacifiCorp's proposal to repower 905 MW of its existing wind projects. PacifiCorp has not provided sufficient economic analysis to demonstrate that this is reasonable based on the information available to the Commission at this time. In addition, if PacifiCorp moves forward with repowering, it should be required to open the process to a competitive bid. This should include using the repowering as a benchmark resource to bid each Company-owned resource proposed for repowering in the upcoming renewable request for proposal ("RFP").

II. LEGAL STANDARD

The Commission requires regulated energy utilities to engage in integrated resource planning, along with robust public involvement, and to file an IRP within two years of its last acknowledged plan.[3] Substantively, the Commission requires utilities to: 1) evaluate all known resource options on a consistent and comparable basis; 2) consider risk and uncertainty; 3) select a least cost and least risk portfolio of resources; and 4) create an action plan consistent with the long-run public interest, and Oregon and federal energy policy.[4]

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[3] Re Investigation into Least-Cost Planning for Resource Acquisitions by Energy Utilities in Oregon, Docket No. UM 180, Order No. 89-507 (Apr. 20, 1989) (adopting least cost planning that involved public involvement).

[4] Re Commission Investigation into Integrated Resource Planning, Docket No. UM 1056, Order No. 07-002 (Jan. 8, 2007) (establishing IRP Guidelines, including

Least-cost planning was originally established to "involve the Commission, the customers, and the public prior to the making of resource decisions rather than after the fact."[5] The Commission envisioned a process where "all of the options available for providing service are considered" and "the selection of that mix of options which yields, for society over the long run, the best combination of expected costs and variance of costs."[6]

III. COMMENTS

PacifiCorp's IRP should only be partially acknowledged because the Company has not proposed to meet its system demand with a least cost mix of energy supply resources. The Commission should recognize that PacifiCorp's IRP has appropriately identified that its current and future energy needs include over 1,000 MW of renewable generation, but refuse to acknowledge the Company's the selection of options which are not the best combination of expected costs and variance of costs because they consist entirely of one type of generation concentrated at one geographic location designed for one specific owner using a remote, radial 500 kV transmission line extending eastward from the Jim Bridger generating station. While the Aeolus/Bridger transmission line may relieve local area congestion in eastern Wyoming, but it is unclear whether it will

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Guideline 13, which requires utilities to identify a proposed acquisition strategy and assess advantages and disadvantages of utility owned generation as compared to PPAs); Re Commission Investigation into Integrated Resource Planning, Docket No. UM 1056, Order No. 07-047 (Feb. 9, 2007) (updating IRP Guidelines to include an inadvertently omitted guideline). The Commission also lists twelve procedural guidelines. If a utility's IRP satisfies the Commission's substantive and procedural requirements and seems reasonable, the Commission "acknowledges" the IRP. Acknowledgement means that the Commission finds the utility's preferred portfolio is reasonable at the time of acknowledgment, but does not guarantee favorable ratemaking.

5 Order No. 89-507 at 3.

6 Id. at 2.

increase the transfer capability of the Wyoming transmission system to move power to PacifiCorp loads west of Bridger without displacing existing generation. PacifiCorp has also not demonstrated that wind repowering is reasonable. There should be a fair competitive procurement process to determine which renewable resources provide the lowest reasonable cost and risk to ratepayers, which may or may not include Wyoming wind.

A. Pacific Power Has Identified a Renewable Resource Need that Warrants Early Acquisition

PacifiCorp appropriately recognizes the costs of renewable resources have dramatically dropped, and early acquisition may provide customers with the greatest benefits at the lowest cost. For wind generation at least, the gradual phase down of the production tax credits ("PTC") represents a significant cost savings for ratepayers. As explained by PacifiCorp, it is proceeding with the addition of up to 1,100 MW of wind resources by the end of 2020 "to fully achieve the benefits of federal wind production tax credits".[7]

While the size of PacifiCorp's renewable resource need has increased, the Company already identified a significant need for renewable resources in the pre-IRP filing stakeholder process. In the IRP stakeholder process, PacifiCorp provided justification for the acquisition of 428 MW of new wind in 2021, with 300 MW in Wyoming and 128 MW in Idaho.[8] While PacifiCorp did not fully analyze increasing the amount of renewable power in the stakeholder process, NIPPC believes it would be

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7 PacifiCorp 2017 IRP at 2 (Apr. 4, 2017), available at https://www.pacificorp.com/es/irp.html.

8 PacifiCorp General Public Input Meeting 8 Presentation at 7 (Mar. 2-3, 2017), available at http://www.pacificorp.com/es/irp/pip.html.

reasonable to at least test the market to see if larger amounts of renewable resources would be cost effective, especially in light of the decline in solar prices and the expiration of the PTC.

B. PacifiCorp Has Not Demonstrated that a Wyoming Only Resource Strategy Is Reasonable or the Least Cost-Risk for Customers

PacifiCorp's IRP is proposing to meet its 1,100 MW renewable resource need with only Wyoming wind resources.[9] PacifiCorp has not provided sufficient support that potentially low cost Wyoming wind coupled with expensive new transmission is lower cost or less risky than the acquisition of renewable generation in other states. Therefore, the Commission should not acknowledge or provide any weight to the information, analyses and strategies regarding an acquisition plan that relies only upon Wyoming wind.

PacifiCorp justifies the Wyoming wind approach based on the state's high capacity factor[10] and the expiration of the PTC, and further explains that the "project will provide extraordinary economic development benefits to the state of Wyoming."[11] PacifiCorp is already moving forward with its 2017 renewable RFP, which is limited to only accepting Wyoming resources.[12] PacifiCorp also links the need for Wyoming wind with the construction of the 140-mile, 500 kV Aeolus to Bridger transmission line that it has been trying to build for years.[13]

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9 PacifiCorp 2017 IRP at 2-3, 16-17.

10 PacifiCorp's IRP estimates that Wyoming wind resources have a 5 percentage point advantage over wind resources in Oregon, Washington and Idaho. PacifiCorp 2017 IRP at 120.

11 Id. at 2.

12 Re PacifiCorp dba Pacific Power Application for Approval of 2017 Request for Proposals, Oregon Docket No. UM 1845, Application at 1 (June 1, 2017).

13 See PacifiCorp 2017 IRP at 2-3, 17.

PacifiCorp has not provided sufficient analysis or support demonstrating that Wyoming wind, plus the required transmission construction, is the most reasonable resource option. PacifiCorp's 2017 IRP development process did not thoroughly analyze this approach, as it was introduced with the publication of its 2017 IRP. PacifiCorp filed its IRP on April 4, 2017, and PacifiCorp's last pre-IRP stakeholder meeting on March 2-3, 2017 proposed acquiring 428 MW of wind by 2021, including 128 MW of Idaho wind. That presentation contemplated an additional 1,030 MW of new wind and 1,157 MW of new solar capacity acquisitions (357 MW in the west and 800 MW in the east), but not until 2036.[14] Despite not adequately analyzing this option (significant and immediate investment in Wyoming wind and transmission) in the planning process, and initially keeping this information from stakeholders, PacifiCorp was actively acquiring wind turbines and locking up key sites along the transmission line for Company-owned wind generation projects to be built. The Commission should be highly skeptical of any proposals that were not fully studied in an IRP, especially when they may result in utility ownership of over 1,100 MW of new generation and the construction of a major new transmission line.

NIPPC is concerned that PacifiCorp may not be fully accounting for the costs and risks of the Aeolus to Bridger transmission line and additional upgrades to the Gateway West transmission plan. There may be insufficient transmission capacity from Bridger West to integrate the new wind capacity that PacifiCorp wishes to build in eastern Wyoming, even if the Aeolus/Bridger line is built. The transmission system west out of Bridger is constrained, and may not be able accommodate incremental power flows when

[14] PacifiCorp General Public Input Meeting 8 Presentation at 7.

the Jim Bridger plant is operating at full load. Consequently, building more transmission from the east to Jim Bridger eastward alone (i.e., the proposed transmission line from Bridger east to the proposed Aeolus substation) may not have the benefits that PacifiCorp claims because it may not relieve the Bridger West transmission constraint. At least at this time, PacifiCorp cannot justify building Gateway West in its entirety and has adopted a strategy to build a remote segment first, "justified" by building wind capacity interconnected to it. PacifiCorp will likely propose in its next IRP to build the next segment of Gateway West (Bridger to Populus) to relieve transmission constraints created by these new wind acquisitions.

PacifiCorp should be willing to acquire the best renewable resources, regardless of their location or whether they allow PacifiCorp to justify the construction of a new transmission line. The Aeolus to Bridger/Anticline transmission line should be considered part of the costs of new, large scale Wyoming wind generation that cannot serve PacifiCorp load without the transmission line. The costs of PacifiCorp's Wyoming wind plus the cost the Aeolus to Bridger transmission line should be compared to other renewable resource options in other locations (plus any associated incremental transmission needed to deliver that power to PacifiCorp's system). If the total all-in costs for renewable resources in Washington, Oregon or Utah with lower transmission costs and line losses are a better alternative, then they should be acquired and avoid the need to build potentially unnecessary transmission assets. In other words, Wyoming wind may be the least cost and least risk resource; however, Wyoming wind plus the construction of a new transmission line may not be.

NIPPC recommends that the Commission's acknowledgment letter to the Company specifically call out and refuse to recognize PacifiCorp's plan to exclude potentially lower cost and less risky non-Wyoming generation resources. The Commission should also refuse to allow or provide rate recovery for any resource acquisitions that do not fairly evaluate lower cost resources located outside of southeastern Wyoming. NIPPC emphasizes that southeastern Wyoming wind plus the Aeolus to Bridger transmission line may be the least cost and risk manner of acquiring renewable resources; however, that assumption should be proven, especially given that PacifiCorp has an incentive to bolster its long-standing proposal to construct Gateway West.

C. PacifiCorp Has Not Demonstrated that a Wind Only Resource Strategy Is Reasonable or the Least Cost-Risk for Customers

PacifiCorp should consider allowing all resource types to meet its renewable resource needs, and should not reject potentially lower cost renewable resources like solar, biomass, geothermal and renewable storage. PacifiCorp should be required to fairly consider the least cost mix of renewable energy supply resources that will meet its system demand and renewable portfolio standard requirements, and not ignore other potentially cost effective resource options.

PacifiCorp's IRP and its proposed renewable RFP focused solely upon wind generation to the exclusion of all other types of renewable electric generation resources. Given that PacifiCorp's preferred plan to acquire 1,100 MW of wind was not included or fully vetted in the IRP planning process, it is impossible to determine if it is reasonable to exclude potentially lower cost solar, biomass, renewable storage and geothermal resources. For example, PacifiCorp has twenty-four non-qualifying facility renewable resources, eighteen of which are wind generation located in Wyoming.[15]

It is unclear to NIPPC whether PacifiCorp has fairly analyzed the impact that adding over a thousand megawatts of the same type of generation in the same geographic area will have on the Company's operations and costs of integration. Further collocation of PacifiCorp's wind fleet (owned and contracted) may increase PacifiCorp's integration, regulation reserve and other costs. These additional costs should be accounted for in comparing PacifiCorp's Wyoming resources with other technologies and locations, including off-system power purchase agreements. In addition, PacifiCorp does not appear to have demonstrated that the risks and benefits associated with other resource types and a more diverse generation portfolio would be more beneficial to ratepayers.

NIPPC is resource agnostic and does not favor any particular type of technology. It is entirely possible that adding only southeastern Wyoming wind may be the least cost and least risk resource due to the potentially uniquely economic and fleeting opportunity presented by the intersection of wind technology gains and the PTC phase-out. This opportunity exists across the West, not just in Wyoming, and can only be confirmed as uniquely economic when compared with other combinations of technology and geography, as adjusted for risk, transmission, losses and other costs. In addition, PacifiCorp made a last-minute decision in its IRP to change its resource plans to increase its reliance upon a specific technology in a specific location, and postponed acquiring the more diverse resources that it originally considered in its planning process.

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15 See PacifiCorp Renewable Energy Sources, available at http://www.pacificorp.com/es/re.html.

In the end, PacifiCorp should not discriminate in favor of any particular resource but ensure that its renewable RFP is open to all renewable generation types to truly test the market. Therefore, the Commission should refuse to acknowledge PacifiCorp's plan to exclude potentially lower cost and less risky non-wind generation resources or wind farms in other states, and not allow rate recovery for any resources acquired in a process that does not allow all generation types an opportunity to fairly compete.

D. The Commission Should Not Acknowledge PacifiCorp's Proposed Repowering

PacifiCorp has refused to provide a transparent financial analysis that supports the Company's proposed repowering project.[16] PacifiCorp's proposal may be cost effective, but that is impossible to determine based on the information the Company has provided. In addition to not acknowledging the repowering, the Commission should require PacifiCorp to demonstrate the reasonableness of its repowering proposal by including its each resource proposed for repowering as a benchmark bid in its upcoming RFP to test its overall cost effectiveness. To be clear, NIPPC is not opposed to PacifiCorp moving forward with repowering (but without the blessing of acknowledgement), as long as the Company allows fair competition, which is part of demonstrating that the costs are reasonable.

PacifiCorp has simply refused to provide adequate analysis regarding the cost effectiveness of its repowering proposal.[17] PacifiCorp claims that repowering will increase the annual output of each repowered plant by 18-32% depending on the

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[16] See Attachment A (PacifiCorp Response to OPUC Data Request 49 and ICNU Data Request 9).

[17] Id.

project,[18] and claims that each project will result in a significant customer benefit. Repowering, however, is expensive and could have overall costs similar to building an entirely new plant.[19] This means that the costs to repower (potentially near 100%) could significantly outweigh those output benefits (14-32%) identified by PacifiCorp. If PacifiCorp is so confident that repowering is a good deal for ratepayers on every single plant it wants to repower, then the Company should show a detailed analysis supporting its proposal.

PacifiCorp should also verify that repowering is cost effective by bidding its repowering projects into a renewable RFP alongside greenfield wind projects. PacifiCorp should not invest $1 billion in new resource acquisition (repowering of existing plants) without going through a competitive process. If repowering is such a no-brainer as PacifiCorp represents, then there should be no jeopardy in putting these projects through the RFP bidding and evaluation process.

Finally, PGE also analyzed repowering its Biglow facility. PGE studies 10-30% increases in annual production (similar to PacifiCorp's estimated increased annual production) and reached the conclusion that repowering was not the least cost and risk option. PGE's summary of conclusions was that:

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18 PacifiCorp 2017 IRP at 205 ("Modern technology and longer blade lengths increase annual energy production by an estimated 14 to 32 percent, depending upon the project.")

19 PacifiCorp has not provided any capital cost information for repowering. However, to qualify for tax credits, the incremental capital cost of repowering must comprise 80% or more of the value of the repowered (i.e., new) plant, yet the <u>incremental</u> production value of a repowered plant in annual average megawatts is only a fraction of the production value of a new plant. PacifiCorp estimates the all-in capital cost of new Wyoming wind plant at $1,739,000 per installed MW. PacifiCorp 2017 IRP at 103. Eighty percent of this number is $1,391,200 per installed MW. PacifiCorp proposes repowering 905 MW of existing resources, which could cost in excess of $1 billion.

> Repowering would require a significant rate base investment relative to the magnitude of its contributions to meeting the capacity and REC needs identified in PGE's 2016 IRP. Additionally, compared to RPS Early Action, an investment in repowering brings little additional energy and a correspondingly smaller reduction to carbon emissions.
>
> In considering a Biglow repowering scenario, it is important to note that PGE would remove existing equipment that has roughly ten years of service, and likely little, if any, salvage value. The Company would need to recover the remaining undepreciated cost. At the end of 2016, the total remaining undepreciated cost for Biglow Canyon was approximately $450M.
>
> PGE does not recommend that RPS actions be decided purely on the basis of maximizing PTCs in isolation of other considerations. PGE does not find repowering to be a compelling alternative to Early Action.[20]

PacifiCorp should be required to perform a rigorous least cost-risk analysis in this IRP regarding the cost effectiveness of repowering, and test the economics of any repowering in a RFP.

IV. CONCLUSION

The Commission should recognize that PacifiCorp has a significant renewable resource need, but refuse to acknowledge the Company's plans to limit potential resource acquisitions to only Wyoming wind generation. All generation types and locations should have an opportunity to compete against PacifiCorp's preferred approach of building a transmission line to support new Company-owned generation. Finally, the Commission should not acknowledge PacifiCorp's repowering, and ensure that any potential repowered wind facilities are included as benchmark resources in an RFP.

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[20] Re PGE 2016 IRP, Docket No. LC 66, PGE Final Reply Comments at 21 (June 23, 2017).

Dated this 23rd day of June 2017.

Respectfully submitted,

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Attachment A

PacifiCorp Response to

OPUC Data Request 49 and ICNU Data Request 9

OPUC Data Request 49

Please provide standalone (Excel "RFP base model", including annual cash flow by source "summary" tab) valuation models for each of the following projects:

(a) The wind repower project.

(b) The new Wyoming wind and transmission project.

Response to OPUC Data Request 49

PacifiCorp objects to this request as unduly burdensome, not reasonably calculated to lead to the discovery of admissible evidence, and as requiring disclosure of information not prepared or maintained in the ordinary course of business or development of a special study. Without waiving these objections, PacifiCorp responds as follows:

(a) PacifiCorp is in the process of compiling regulatory filings in Idaho, Utah and Wyoming to support the wind repowering project. It plans to make these filings at the end of June 2017, and will therefore supplement its response to this data request at that time.

(b) PacifiCorp is in the process of compiling regulatory filings in Idaho, Utah and Wyoming to support the new Wyoming wind and transmission project. It plans to make these filings at the end of June 2017, and will therefore supplemental its response to this data request at that time.

ICNU Data Request 009

Reference the wind repowering proposal of the Company:

(a) Please provide an explanation for how the Company accounted for the unrecovered investments in wind plant that will be retired pursuant to the repowering proposal.

(b) Please state the period over which the Company amortized the unrecovered investment in retired wind plant in the economic analyses supporting its repowering proposal.

(c) Please state the interest rate assumed with respect to the unrecovered investment balances resulting from the repowering proposal.

(d) Please provide all work papers the Company used to analyze the amortization of unrecovered investment in wind plant retired as a result of the proposed repower project.

Response to ICNU Data Request 009

(a) The Company's evaluation of the wind-repowering project assumed the Company would fully recover the unrecovered investments in the retired wind plant and earn the authorized rate of return on the outstanding investment over the remainder of the 30-year depreciable life of the existing projects. Even accounting for the full recovery of the Company's investments in the retired wind plant, the wind-repowering project provides substantial customer benefits. The Company's evaluation of the wind-repowering project was based on the value of the increased generation and production tax credits resulting from repowering compared to the cost of repowering. This evaluation accounted for the benefit of extending the life of the wind turbine generators 30 years from the date of repowering and for changes in operating and capital costs over the 30-year life.

(b) Please refer to the Company's response to subpart (a) above.

(c) Please refer to the Company's response to subpart (a) above.

(d) Please refer to the Company's response to subpart (a) above.