BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

LC 67

In the Matter of)	
PACIFICORP dba PACIFIC POWER)	COMMENTS ON STAFF FINAL COMMENTS
2017 Integrated Resource Plan)	OF THE NW ENERGY COALITION
)	

I. Introduction

The NW Energy Coalition appreciates the opportunity to provide comments on the staff final comments in LC 67, PacifiCorp's Integrated Resource Plan.

At the core of the PacifiCorp 2017 IRP is a foundational opportunity to change direction in the Company's planning, resource mix and operational strategy. The economics of clean energy resources on both the supply and demand side now clearly outperform new conventional fossil fueled resources, and are becoming less than the production cost of existing resources, both on the market and within the PacifiCorp system. We are seeing the convergence of the least cost/least risk foundations of utility planning with the pursuit of clean energy.

PacifiCorp responded to this emerging opportunity late in the IRP process by proposing what it now calls Energy Vision 2020 – a complementary package of new wind and transmission resources, propelled by a one-time financing opportunity with the impending rapid decline of federal Production Tax Credits (PTC). Yet in proposing this new package and tentatively shifting

direction toward a clean energy strategy, PacifiCorp fell far short in both the breadth of approach and in transparency, as documented extensively by Staff and many parties.

More recently, however, the Company has begun showing more flexibility and responsiveness. The initial proposal for the New Wind RFP was modified to open up to resources connecting anywhere across the system, not just in Wyoming. And PacifiCorp has agreed to set up a parallel starter RFP for new solar in Utah providing all-in economic benefits to customers, while concurrently evaluating how solar bids interact with the economic analysis for the New Wind RFP[1].

As a result, our general recommendation for this IRP diverges in some significant ways from staff's current comments and recommendations, in that we support the time-limited opportunity for a major step forward on acquiring clean energy resources, while at the same time agreeing with staff that there is an immediate need for a more consistent, collaborative and transparent efforts in certain areas of the IRP analysis in order to devise a comprehensive clean energy strategy that is consistent with the least cost/least risk framework.

II. Summary of Recommendations

NWEC strongly supports the proposals for Repowering and the New Wind RFP as a major step in a new direction toward modernizing and decarbonizing the PacifiCorp resource mix. However, this step must not be taken in isolation from other necessary efforts, including enhanced development of energy efficiency, flexible demand resources and distributed generation; to a balanced approach to development of grid-connected renewable resources, including solar and other sources as well as wind; more optimized operation of the Company's resources meeting the needs of its customers and taking advantage of market opportunities; and crucially, thorough and balanced reassessment, phasedown and retirement of the coal fleet.

[1] Letter of PacifiCorp to Utah Public Service Commission, In the Matter of the Application of Rocky Mountain Power for Approval of Solicitation Process for Wind Resources, Docket No. 17-035-23, October 10, 2017.

In summary, NWEC recommends:

- Acknowledgment of the proposed repowering of about 1000 MW of existing wind facilities (Action Plan item 1a), referred to here as "Repowering."
- Conditional acknowledgment of the proposed RFP acquisition of up to 1270 MW of new wind resources (Action Plan item 1b), referred to here as the "New Wind RFP," along with parallel acquisition of a limited amount of new solar in Utah ("New Solar RFP"). Full acknowledgment should accompany successful completion of a broader transmission assessment as described in the next point.
- Non-acknowledgment at this time of the proposed new Aeolus-to-Bridger/Anticline transmission line and associated 230-kV Network Upgrades (Action Plan item 2a), referred to here as "Subsegment D2." Additionally, we recommend that the Commission allow PacifiCorp the opportunity to conduct further assessment of transmission needs and solutions relative to the New Wind RFP, to solicit review and comment by Staff and stakeholders, and then to provide, within a reasonable but time certain period, a revised action plan including transmission solutions. Those solutions could include a continued commitment to Subsegment D2, an alternative non-wires strategy, or a combination. Below we describe in more detail how the analysis could be accomplished. We believe this will provide the Commission with sufficient information to make an informed and confident decision on acknowledgment.
- Acknowledge the proposal for more comprehensive studies of coal fleet phaseout (Action Plan item 2c). However, NWEC encourages the Commission to provide guidance toward broadening this assessment to provide the foundation of a new clean energy and decarbonization strategy, not merely the retirement of individual units, following the "glide path" approach pioneered by the Commission in its PGE IRP acknowledgment (Order 17-386).
- Not acknowledging Action Plan Item 4a for energy efficiency until the Company revises and improves its methodology for evaluating Class 2 DSM in its IRP in a manner that ensures identification of all cost effective conservation throughout its system.
- Support staff's general comments and recommendations related to Distribution System Planning and Smart Grid. Additionally, encourage staff and the Commission to provide recommendations or a proposed action item that encourages more aggressive action by the Company in pursuing demand response resources (Class 1 DSM).

III. Discussion of Staff Comments

A. PacifiCorp's Proposed Resource Actions

1. *IRP Process and System Needs, Economic Opportunity, Risk*

Staff's comments go to great length discussing the role of the IRP process relative to the concepts of need, economic opportunity, and risk. In this area, we find some points of disagreement with the staff comments.

First, our second round of comments in this docket provide detailed objection to the IRP as merely a "new resource review." We will not repeat these comments here, but in summary, IRP's should be a broad, long-term, comprehensive system examination of least cost/least risk for customers. Staff seems to want to view the IRP as a resource replacement exercise, evaluating the value of one single resource to replace another, as evidenced by their discussion of wind as a replacement for front office transactions. What this logic fails to truly appreciate is the system nature of the utility business. In today's utility world, resources interact together to create a balanced system that serves customer needs. One to one energy replacement scenarios are a thing of the past. Considering energy and capacity needs, alongside reliability, means evaluating the system in its entirety and how the supply side, demand side, distribution and transmission elements interact to form to an efficient whole. Looked at in this context, need becomes inherently about the entire system, rather than one piece of the system.

Second, economic opportunities should be evaluated in an IRP, as long as they are considered in the context of the least cost/least risk approach to manage the system for customers. In this case, the current prices for renewable resources, combined with the value offered from expiring PTC's in the short term, make renewable resources a least cost resource option.

Additionally, staff outlines some specific risks that are associated with new investments generally, such as the possibility for cost overruns and consistently lower than expected energy prices. We agree that these risks are present for any resource decisions made by a utility – including decisions not to take action and rely on market for any given amount of system needs. From a larger perspective of need, however, as PacifiCorp's coal fleet transitions out of service,

the Company will need new, renewable resources, resources that also, incidentally, do not rely on fuel costs that are subject to market fluctuations in price. It is difficult to imagine that the renewable investments the Company is asking to make today will not be a more valuable asset tomorrow.

Lastly, to Staff's recommendations regarding a potential framework for consideration of Action Items 1a, 1b and 2a, NWEC reaffirms the value and scope of the IRP process in determining the least-cost, least-risk path forward, while leaving foundational questions of the appropriate balance division of risk between the Company and customers to the Commission's ratemaking and related processes.

2. Wind Repowering

NWEC discussed our support for the wind repowering action item in our initial comments in this docket and our support for this item remains constant. PacifiCorp's analysis of the economic benefit to customers from this action is compelling, and Staff has failed to provide substantive analysis in their comments to persuade us otherwise.

3. New Wind Resources and Transmission

The Coalition also disagrees with Staff regarding their objection to acknowledgement of the proposed acquisition of new renewable resources. The acquisition of new renewable resources within the time-limited opportunity provided by the phase-out of federal production tax credits (PTC) and investment tax credits (ITC), primarily aimed at wind and solar respectively is a billion dollar, use it or lose it, opportunity.

However, it is important that this acquisition be accomplished with appropriate mitigation for risk, comply with Commission IRP and competitive bidding guidelines, preserve system reliability, consider and balance factors enunciated by the Commission for Action Plan measures, and achieve net benefits for customers. While the interaction of a multitude of factors and the press of time make the determination complex, we believe there is a workable path forward.

In its acknowledgment of the PGE 2016 IRP, the Commission provided PGE an opportunity to revise its Action Plan to provide a more fully developed renewable resource acquisition. First, the Commission explained that renewable energy resources can have value but that PGE had not provided sufficient justification for a major new acquisition:

> We recognize that incrementally adding renewable energy resources over time may be a reasonable operational and cost-risk mitigating strategy to achieve this major system transformation. We also believe that near-term action to address long-term renewable energy obligations may be appropriate, provided that more attention is paid to balancing short- and long-term tradeoffs and to mitigating long-term risks. Based on the information and analysis provided in this docket, we conclude that PGE did not sufficiently demonstrate that the long-term cost savings it identified from near-term action were adequately balanced with the short-term rate impacts and long-term risks. [2]

However, the Commission was not content to dispose of the matter and close the door to an important, time-limited opportunity to acquire new resources with substantial value. The Commission continued:

> Even so, we recognize that expiring tax incentives represent a time-limited opportunity that could significantly benefit customers. Since the company must act soon to capture the full value of the expiring tax incentives, we offer PGE the opportunity to present a revised action item for our consideration. In developing this revised action item, PGE should ***more fully consider short-term impacts and long-term risks, including renewable resource portfolio diversity and alignment with near-term system needs, strategies for avoiding or mitigating front-loaded rate impacts, resource sizing that maintains long-term optionality, and other considerations*** raised in this order and parties' comments.[3]

While the Commission made clear that its decision related specifically to the PGE 2016 IRP Action Plan and did not establish permanent and broadly binding policy, the highlighted portion of the Order rightly and clearly enunciates a broad balancing approach for inclusion and acknowledgment of Action Plan items that is more comprehensive and oriented toward improving total system value than a narrow focus on incremental near-term need for energy and capacity alone.

[2] Order 17-386 at pp. 2-3.
[3] Ibid, emphasis added.

NWEC believes that this approach provides helpful context for the PacifiCorp IRP as well. While this IRP encompasses a different set of facts and circumstances, the Commission's balanced approach to risk and opportunity is a strong guide to decision making in a new and more complex era with fundamental changes emerging in technology, policy and markets. We apply that view here to the combined New Wind and Subsegment D2 proposed Action Plan items.

PacifiCorp's analysis has demonstrated a positive overall system and customer benefit from the Repowering and New Wind RFP. However, the Company asserts that the New Wind RFP resources cannot be integrated into the system without the Subsegment D2 new transmission.

NWEC agrees with staff in their recommendation not to acknowledge the new transmission D2 subsegment, however our rationale is based on the fact that PacifiCorp's lack of analysis in this area has not convinced us that the construction of this segment is absolutely necessary and least cost way to integrate the new renewable resources into the system.

It appears that much or all of the new wind could be physically added to the system in central Wyoming by the end of 2020 and qualify for the PTC. However, equally clearly, without changes to the transmission network the new wind would be highly constrained in operation and fall well short of achieving the net system value it should provide.

PacifiCorp has made a cogent case that Subsegment D2 would indeed address the transmission need, but has not yet shown that it is the sole method, nor necessarily the least cost and least risk approach. That requires additional assessment, which we believe can be completed in time to support final acknowledgment of both the New Wind RFP and a complementary transmission solution. There are two reasons to do so.

First, Staff and stakeholders, including NWEC, have raised a variety of questions about potential measures that could defer or eliminate the need for a new transmission line that would cost well over half a billion dollars. However, PacifiCorp's analysis does not yet provide sufficient information for assessing the potential availability and comparative costs and net value of non-transmission alternatives.

Second, a balanced assessment of both wires and non-wires solutions for the specific purposes of this IRP will establish an important precedent going forward. While the New Wind RFP is quite

large, it will provide only a basic first step toward modernizing and decarbonizing the system generation mix – perhaps 600 to 800 aMW of annual energy compared to the coal fleet output of 4000 aMW or more, not to mention other thermal resources.

As a result, other substantial new transmission investments may be needed to link the highest-value renewable energy generation areas to the existing transmission network and load centers. This poses capital misallocation risk if new transmission is not built in a timely way or in the right places, or if new transmission is built to access high-output renewables while lower output renewables elsewhere could use existing transmission capacity and provide better net system value.

NWEC therefore is recommending that the Commission not acknowledge the proposed Subsegment D2 at this time, and instead offer the opportunity for PacifiCorp to conduct a broader analysis of transmission expansion and non-transmission alternatives, and propose a revised Action Plan including an updated transmission solution relating to the New Wind RFP.

Given the urgency in addressing the transmission need to support the New Wind RFP, the revised assessment does not need to be exhaustively comprehensive. Rather, it should provide enough information for the Commission to make an informed and confident decision on acknowledgment of the proposed transmission solution.

The revised assessment could be completed in the next few months on a schedule proposed by the Company with input from Staff and parties and approved by the Commission. The process could include three phases as described below.

Phase 1: Identification of Non-Transmission Alternatives. The assessment should consider alternatives that could assist in deferring or eliminating the need for Subsegment D2, including but not limited to:

- Upgrades to the transmission network in central Wyoming to address current "weak grid" conditions, which also constrain the addition of new renewable resources. While PacifiCorp indicates that similar reliability reinforcement elements have been completed recently, it is not clear whether additional elements could be installed.
- Downward dispatch on a daily and seasonal basis of nearby coal units, particularly at the Dave Johnston and Jim Bridger facilities (perhaps enhanced by a fully optimized nodal

dispatch of in-system generation), could allow for a substantial amount of new wind until full coal unit retirements can be achieved. The coal reanalysis proposed by the Company in Action Plan item 2c, as supported and elaborated by Staff and numerous stakeholders, particularly the Sierra Club, can provide useful input even before that reanalysis is fully complete. A certain amount of wind curtailment may also be needed under a deferral approach, and that should also be quantified at a basic level.

- Deployment of the built-in grid support capabilities of the advanced wind turbines that will be acquired through the New Wind RFP, including voltage control, reactive power, fast frequency response and short circuit current.
- Shifting a portion of New Wind RFP resources to other areas in the PacifiCorp system with available transmission capacity. Even if wind elsewhere has less total output and lower PTC and REC value than central Wyoming, the net system value may be greater.

Phase 2: Net System Value Estimation. The identified non-transmission alternatives should be assessed for net system value, both separately and in complementary packages. For example, varying combinations of changing the dispatch pattern of the coal fleet, plus reinforcement elements in the central Wyoming transmission network, plus using the capabilities of advanced wind turbines for voltage support and other grid services, would provide a sense of how much "headroom" could be provided for new wind while deferring or not constructing Subsegment D2, and with what direct cost and net system value.

Phase 3: Revised Transmission Solution. From the first two phases, PacifiCorp could then prepare a revised approach, which might reaffirm the construction of Subsegment D2, the adoption of a non-transmission expansion package, or a combination. This revised approach would be reviewed by Staff and stakeholders, potentially be the subject of a Commissioner workshop, and then be submitted as part of a revised Action Plan for Commission acknowledgment.

4. Decarbonization

Going forward, it is crucial that a much stronger IRP process be connected effectively to outcomes that rapidly promote the shift to a more reliable, clean and affordable electric power

system serving PacifiCorp customers and advancing the clean energy, climate action and economic goals of Oregon. Customers of PacifiCorp (and other investor owned utilities in Oregon) have spoken loud and clear about their interests in making this shift.

This is a transformational agenda, and we believe the IRP construct, as now conducted in Oregon is fully capable of supporting the transformation, as long as it is not artificially limited in its scope and purpose.

While recognizing that there is not enough time remaining in the current IRP cycle to pivot fully to developing a transformational strategy, the first steps can certainly be taken in this IRP.

However, over the longer term, this conversation warrants more discussion around what steps are within the current authority of the Public Utility Commission and which may require additional/changes in authority. Staff presents some interesting thoughts to inform this discussion in their comments regarding utility planning for decarbonization and the NWEC looks forward to having these discussions in a more comprehensive venue that covers all utilities regulated by the PUC.

B. Comments on Staff's Recommended Coal Resource Actions

The NW Energy Coalition supports the staff recommendation calling for additional analysis of coal unit economics. In PacifiCorp's first round of comments in this docket, they characterized NW Energy Coalition as supportive of their coal analysis. Let us be clear, this is not accurate. The NW Energy Coalition fully supports concerns raised by Sierra Club and staff in this docket regarding the deficiencies in the coal analysis performed by PacifiCorp in this IRP. We agree with staff that, "PacifiCorp should assess the economics of its coal units to demonstrate whether keeping them online is truly part of an optimal least cost, least risk portfolio."[4] The NWEC urges key pieces of this analysis to take place immediately in the context of the transmission assessment recommended above. A full-scale analysis of the entire coal fleet should happen in this accelerated timeframe or as soon as practical, but definitely not beyond the March 30, 2018 date suggested by staff.

[4] Staff Final Comments, PacifiCorp 2017 Integrated Resource Plan, October 6, 2017, pp. 30.

C. Comments on Staff's Recommendations for Energy Efficiency/Class 2 DSM

The NWEC shares concerns discussed by Staff, and others (CUB, Sierra Club) related to energy efficiency/Class 2 DSM in this docket. PacifiCorp claims that it is identifying all cost effective conservation, however, Staff and other stakeholders think not. Due to the incremental nature of energy efficiency being a collective result of many small actions, there are many ways for energy efficiency potential studies to underestimate the amount of energy efficiency available. Staff has done an excellent job illustrating how this is the case for PacifiCorp historically and outlining potential reasons why this is likely the case for the 2017 IRP Class 2 DSM goals.

Despite these concerns, Staff is recommending acknowledgement of PacifiCorp's action plan item 4a for energy efficiency subject to modifications. The NWEC strongly considered this recommendation, but has decided that now is the time for the Commission to take a stronger stand on more accurate and effective forecasting of energy efficiency availability in PacifiCorp's entire service territory. Going forward, energy efficiency is a key resource for energy and capacity needs and can be used to avoid transmission and distribution upgrades if done aggressively and with precision. In moving to a decarbonized system, strong energy efficiency programs should be at the base of this strategy.

However, energy efficiency deficiencies are often overshadowed in the face of larger investments decisions. Consequently, while we strongly agree with the substance of the staff comments in this area, we disagree with the recommended Commission action. We recommend the Commission not acknowledge this action item in order to send a strong signal to PacifiCorp that they must immediately work to improve the conservation potential studies and related IRP analysis throughout their service territory. There is room to improve in Oregon, but even more critical is improvement in non-Oregon states where energy efficiency acquisition is lagging behind Oregon, causing Oregon ratepayers to subsidize the entire PacifiCorp system with our investments.

D. Distribution System Planning/Smart Grid

Staff raises important issues concerning how the Company is planning for grid modernization and linking its Smart Grid reports, existing distribution planning, IRP planning and dockets focused on locational value of distributed energy resources (DER).

NWEC agrees with Staff that PacifiCorp is not adequately planning and communicating these efforts, at a time when DER and distribution planning are poised to take on a rapidly emerging role to expand clean energy usage, improve operations, and build value for customers. It is particularly important to provide more accountability and public review for distribution planning as it takes on new roles in addition its traditional focus on sustaining and incrementally adding to the distribution system.

We strongly support the Staff suggestion that it is time to define and move forward on coordination between IRP and distribution system planning. A first phase might include workshops to review existing distribution system planning methods and models, and consider how side-by-side assumptions in the next planning cycle could be used to assess key developments, for example, a joint IRP/DSP scenario for rapid vehicle electrification.

On a related issue, PacifiCorp refers to what is generically called demand response (DR) as Class 1 DSM or direct load control. The Company did not provide a Class 1 DSM item in the proposed Action Plan, and Staff did not address this resource in their final comments.

There are some points worth staff and Commission consideration in the area of Class 1 DSM. First, the estimates for resource potential appear to be out of date. For example, the Preferred Portfolio (IRP Table 1.1) shows a total of only 365 MW of Class 1 DSM resources acquired in the 20-year planning period, beyond the relatively small Class 1 resource currently activated.

For example, the resource supply curves show a mere 58 MW and 108 MW summer residential air conditioning and water heating potential over 20 years for the east and west control areas, respectively (IRP Tables 6.11 and 6.12). Yet these demand segments play a key role in causing summer peak demand and offer a primary opportunity for peak mitigation. Air conditioning and water heating flexible demand potential could be much higher than the stated values.

In addition, the advent of AMI across the PacifiCorp service area opens up significantly expanded opportunities to build up Class 1 DSM and provide a full range of direct load control capabilities. This underscores Staff's concern that the Company has not provided any clear view

of how the more precise data from AMI will be used in resource planning, specifically in this instance Class 1 DSM resource potential.

Second, most of the planned Class 1 DSM acquisition in the Preferred Portfolio would be in 2028 (193 MW) and 2029 (140 MW), following substantial coal retirements in 2027. That provides a strong indication that this is a resource that can be acquired quickly.

Third, demand response generally can be applied to more than system coincident peak demand, and has role to play in managing variability from renewable energy generation as well as market conditions. NWEC believes that coal retirement should begin earlier, and so therefore Class 1 DSM should move ahead more quickly as well. But DR can also provide other system value ahead of coal retirements, including managing operating needs to support new renewable supply and downward dispatch of coal. And a greater amount of Class 1 DSM implemented now could provide immediate value in the Energy Imbalance Market.

For these reasons, NWEC suggests that the Staff including in their final memo a recommendation for Class 1 DSM such as including additional study of resource potential, and proposing a DR Review Committee and Testbed, similar to the staff recommendations in the PGE IRP.

Respectfully submitted this 30th day of October 2017,

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