BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

LC 67

In the Matter of	)
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PACIFICORP, dba PACIFIC POWER,	)
	)
2017 Integrated Resource Plan.	)
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COMMENTS OF THE

OREGON CITIZENS' UTILITY BOARD

CUB

EST. 1984

June 23, 2017

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I. INTRODUCTION

This is a tale of two Integrated Resource Plans ("IRPs"). First there was the IRP public process with a series of General Public Meetings from June 21, 2016 through March, 2017. Second, there is the IRP that was unveiled at the final General Public Meeting on March 2, 2017 and was filed with the Commission on April 4, 2017. The difference between the two IRPs is the major capital additions (wind repowering, new transmission infrastructure, and new wind resources in Wyoming) that are elements of the second IRP.

Below, CUB discusses its concerns with the IRP process, and discusses elements of the wind repowering, the new transmission infrastructure, and the Wyoming wind investment.

II. ROLE OF INTEGRATED RESOURCE PLANNING

CUB is concerned about the planning process used by PacifiCorp in its 2017 IRP. The major elements of the IRP action plan: wind repowering, and the transmission investment combined with the new Wyoming wind, did not appear until the final public meeting. The public and stakeholder engagement process went on for eight months without stakeholders even knowing the actual resource investments that the Company was considering. The public process essentially discussed resource portfolios and sensitivities, but not the elements of the action plan which were disclosed at the very last public input meeting. It is extremely difficult for stakeholders to adequately analyze an IRP in the public process—which is where the majority of input is considered—without transparency from the Company. CUB believes that this undermines the IRP stakeholder process and is not consistent with the mandated IRP process.

A. A Meaningful Public Process Is Required

Oregon takes IRP planning seriously. This makes a great deal of sense. Oregon is a vertically-integrated state, where we expect our electric utilities to be involved in generation, transmission, and distribution. Because this often involves capital investments that are then paid by ratepayers for *decades*, customers have a very real financial interest in ensuring that the best resources are considered and ultimately procured. In Oregon, "best" means the least cost, least risk principles that guide utility resource decision-making. A number of states have abandoned vertically-integrated utilities and, instead, rely on markets for generation and transmission. Beyond the distribution system, there is little long term commitment to specific investments--rendering long term planning is less important. While there has been some limited market development through RFPs for new resources and energy imbalance markets for sub-hourly balancing, Oregon utilities are still vertically integrated, and invest capital on assets that are expected to be used to serve customers for decades. For these reasons, protecting the integrity of the IRP process is critical to protecting customers.

And the public process is an important element of the IRP. Consider the following guidance provided by the Public Utility Commission of Oregon ("the Commission") in regards to IRPs:

> *Least-cost planning differs from traditional planning in three major respects. It requires integration of supply and demand side options. It requires consideration of other than internal costs to the utility in determining what is "least-cost." And it involves the Commission, the customers and the public prior to the making of resource decisions rather than after the fact.*[1]

> *Least-Cost Planning as mandated by this order will allow the public as well as the Commission to participate in the planning process at its earliest stages. Both may provide information as well as receive information. This broad participation at the beginning and at each decisive step of the planning process should enhance the quality of the information available to the decision-making utilty and lead to better resouce planning...Furthermore, the open and collaborative character of Least-Cost Planning may foster elevated confidence among those affected by the decisions and make the process more responsive to demonstrated needs.*[2]

> *Guideline 2: Procedural Requirements.*
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> *a. The public, which includes other utilities, should be allowed significant involvement in the preparation of the IRP. Involvement includes opportunities to contribute information and ideas, as well as to receive information. Parties must have an opportunity to make relevant inquires of the utility formulating the plan.*[3].

In order for a thorough and robust consideration of various portfolios and scenarios in a utility's IRP, an adequate stakeholder process—both before and after the IRP itself is filed—is essential.

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[1] *In The Matter Of The Investigation Into Least-cost Planning In Oregon*, OPUC Docket No. UM 180, Order No. 89-507 (May 20, 1989)at 3.
[2] *Id.*
[3] *In the Matter of PUBLIC UTILITY COMMISSION OF OREGON Investigation into Integrated Resource Planning Requirements*, OPUC Docket No. UM 1056, Order No. 07-047 (Feb.9, 2007), Appendix A Guideline 2 at 2.

B. *Major Elements of Action Appeared After Public Input Process*

In this IRP, the public was denied the opportunity to participate "at each decisive step of the planning process."[4] While stakeholders were considering a variety of portfolios[5]--a reference portfolio, a set of core case portfolios, a set of regional haze portfolios, and sensitivities related to CO_2--the Company was developing an alternative resource plan that was undisclosed to the parties.

PacifiCorp purchased wind-turbine-generator ("WTG") equipment in December 2016 to enable the wind repowering it proposes in this IRP.[6] At that point, after *six* months of Public Input Meetings, wind repowering had not been discussed as a resource and was not contained in any of the IRP portfolios. At the January Public Input Meeting, PacifiCorp did not disclose that it had purchased equipment and was pursuing a resource that had not been discussed, even though it had already purchased the WTG equipment. It was only in the final Public Input Meeting on March 2, 2017 that stakeholders were informed that PacifiCorp was considering wind repowering and a combination of new transmission and new Wyoming wind, that these were included in a portfolio that was being modeled, that this was the preferred portfolio, and that the Company would be pursuing this in its action plan.

CUB is concerned that PacifiCorp runs two planning processes. There is a public process that stakeholders are invited to participate in. Then there is a private process where the real planning is happening. Only after the private planning process reaches its conclusion, are its elements shared in the public process.

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[4] Order No 89-507, *supra* note 1, at 3.
[5] *See 2017 IRP Portfolio Summaires*, *Public Input Meeting 7*, PACIFICORP (Jan. 26-27, 2017), http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Integrated_Resource_Plan/2017_IRP/PacifiCorp_2017_IRP_PIM07_01-26-17_PortfolioSummaries.pdf.
[6] PacifiCorp 2017 Integrated Resource Plan (Apr. 4, 2017) at 3 [hereinafter PacifiCorp 2017 IRP].

CUB does not know when PacifiCorp started investigating the elements that are contained its action plan. We know they began investing money in those resources in December 2016, but assume that its investigation of these options began sometime before then. CUB does not know when the decision was made to pursue these investments, but CUB is positive that decisive steps were taken without customer involvement. This violates a directive that has existed since 1989.[7]

III. REPOWERING WIND TURBINES

PacifiCorp is proposing to repower 905 MW of existing wind resources by the end of 2020.[8] This will make these projects eligible for additional production tax credits ("PTC") and extends the life of the units from 2036 to 2050.[9]

CUB believes that the benefits that grow out of extending the life should be discounted. The 2036 end date relates to the original capital investment in turbines that are being replaced in this repowering. If the original investment is being abandoned early, then the same thing may happen to this investment. This repowering is driven by improvements in wind turbine technology and the PTC. Wind turbine technology will likely continue to improve and while the PTC is expected to disappear, other climate policies will likely be developed and some may be designed to incent wind development.

Even without considering the modeled benefits of extending the life of the wind turbines, the economic analysis supports the wind turbine repowering. Table 8.6 shows that the economic modeling shows benefits from repowering in all cases.[10]

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[7] Order No 89-507, *supra* note 1, at 3.
[8] PacifiCorp 2017 IRP at 205.
[9] *Id.*
[10] *Id.* at 206.

A. CUB's Recommendation.

CUB recommends that the Commission acknowledge Action Item 1a, Wind Repowering.

IV. NEW TRANSMISSION AND NEW WIND

CUB has much more difficulty recommending acknowledgement of the proposal to build new transmission from Aeolus to Bridger and invest in additional new wind turbines in Wyoming. CUB has several concerns with this proposal.

First, PacifiCorp combined it with the wind repowering (discussed above), thereby overstating the benefits. The sensitivity case that was used to examine this investment combined the Aeolus to Bridger new transmission which enable "900 MW of Wyoming wind additions in 2021,"[11] "as well as 905 MW of wind repowering represented in the OP-REP Wind Repower Sensitivity."[12] The results are mixed. Using the traditional 20-year IRP view, this investment only provides benefits in the future with high gas prices. To make this project look beneficial, PacifiCorp needed to artificially extend the planning life to 2050, creating a 33 year IRP view. This has the effect of bringing in the extended life benefits of the wind repowering and making the investment cost effective in the medium gas future. As stated above, CUB discounts the extended life benefit associated with these repowered wind turbines. Below are the cost/benefit tables from the IRP for the repowered wind and the repowered wind combined with the transmission investment and additional Wyoming Wind. With the exception of the high gas cases, the combined results are worse than the benefit from stand-alone Wind Repowering:

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[11] PacifiCorp 2017 IRP at 209.
[12] *Id.*

Cost/(Benefit) of Repowering Wind[13]

Table 8.6 - PVRR Cost/(Benefit) of OP-REP vs. OP-NT3

PVRR(d) Cost/(Benefit) ($ million)	System Optimizer	PaR Stochastic Mean					
	Mass B	Mass A			Mass B		
	Medium Gas	Low Gas	Medium Gas	High Gas	Low Gas	Medium Gas	High Gas
Change from OP-NT3 (2036)	($66)	($51)	($66)	($152)	($48)	($64)	($143)
Change from OP-NT3 (2050)	($412)	($340)	($387)	($639)	($333)	($381)	($609)

Cost/(Benefit) of Repowering Wind Combined with Transmission and New Wind[14]

Table 8.11 - PVRR Cost/(Benefit) of OP-GW4 vs. OP-NT3

PVRR(d) Cost/(Benefit) ($ million)	System Optimizer	PaR Stochastic Mean					
	Mass B	Mass A			Mass B		
	Medium Gas	Low Gas	Medium Gas	High Gas	Low Gas	Medium Gas	High Gas
Change from OP-NT3	$71	$309	$201	($315)	$310	$196	($310)
Change from OP-NT3 (2050)	($275)	$19	($119)	($803)	$26	($120)	($775)

Second, because this investment was excluded from the public process, there was never an opportunity to explore alternatives that might have been lower cost. The basis of this investment is not the need for new wind, but the benefit that adding PTC eligible wind brings. If this idea was explored in the public process before the decision to include it in the IRP action plan, other alternatives could have been examined. For example, rather than building transmission, the Company could have freed up existing transmission through the early closure of one of the Dave Johnston coal units. These units are expected to close in 2027.[15] However,

13 *Id.* at 206.
14 PacifiCorp 2017 IRP at 209.
15 *Id.* at 77.

throughout the public process, stakeholders did not know that the Company was looking for transmission solutions to enable Wyoming wind with eligibility for the full PTC.

Third, PacifiCorp is in a state of transition away from coal. The preferred portfolio reflects the early retirement of Craig Unit 1 in 2028, Jim Bridger Unit 1 in 2028, and Jim Bridger Unit 2 in 2032.[16] The IRP began with these units expected to close in 2034 (Craig) and 2037 (Bridger).[17] In addition to retirements at the Dave Johnston Units 1-4, retirements at Naughton Unit 1 and 2, Hayden, Craig Unit 2, and Huntington 1 and 2 are all anticipated in the IRP.[18] Much of PacifiCorp's current transmission was built to move coal power to it load centers. As the coal plants close, transmission is freed up for other uses, including delivering wind. CUB believes that before PacifiCorp commits to spending significant dollars on new transmission, it should identify how this transition away from coal will affect its transmission needs.

Fourth, while PacifiCorp's action plan calls for a RFP for the new wind resource in Wyoming, it does not propose a RFP for the new transmission project. Around the country, there are independent transmission companies who build transmission projects. RFPs for new transmission have been issued by RTOs and often have multiple bidders. Transmission projects, like power plants, are capital intensive. And just like power plants, there are now non-utility entities who will bid on transmission projects. And just like power plants, an RFP is a chance to compare the utility's self-build option to the market to ensure that the project is being acquired at a reasonable cost.

A. CUB Recommendation

CUB recommends that the Commission not acknowledge Action Item 1b, Wind Request for Proposals or Action Item 2a, Aeolus to Bridger Transmission.

[16] PacifiCorp 2017 IRP at 7.
[17] *Id.* at 77.
[18] *Id.* at 7.

V. ENERGY EFFCIENCY

PacifiCorp is proposing to reduce its expected procurement of energy efficiency due to "reduced loads and reduced costs for wholesale market power purchases and renewable resource alternatives."[19] CUB is concerned about this reduction.

Energy efficiency should be considered a resource, like supply side resources. It should be acquired to the extent that it is cost effective. While the volume of energy efficiency projected to be acquired will change due to changes in cost effectiveness, CUB is not sure that reduced loads, wholesale market prices, or renewable costs have a lot to do with the cost effectiveness.

A. Reduced Loads

A goal of energy efficiency is reducing load, so the utility can reduce the cost of meeting load. But should a utility that is not growing significantly reduce its energy efficiency? CUB thinks this is unlikely. Utilities dispatch resource based on market prices, not load. If the market price is below the cost of the utility's next incremental resource, the utility will buy from the market rather than use that resource. If the market price is above the cost of the utility's next incremental resource, the utility will generate from that resource and avoid the market purchase. Or, if it has enough resources to meet load, it will sell into the market. Either way, the dispatch of the resource is determined by whether it is above or below market. Energy efficiency does not change this dispatch logic. If a utility has diminished load due to energy efficiency, its short-term dispatch decisions relative to each power plant do not change.

In the long run, load reductions should not affect energy efficiency either. PacifiCorp has energy needs. PacifiCorp's IRP suggests that it will continue to need to acquire addition energy

[19] PacifiCorp 2017 IRP at 4.

to meet load, mostly in the form of front office transactions (FOTs) or market purchases. Energy efficiency can reduce this expense.

Generally new resources have a marginal cost that is greater than existing resources. Utility resources are front loaded – they cost the most during their early years and get less expensive as they are amortized. In addition, there are some resources like hydro that are low cost but not available for new power supply. In the long run energy efficiency allows more of the utility's resource mix to come from lower cost existing resources and avoid more expensive new resources.

B. Wholesale Prices

Wholesale prices, particularly short-term wholesale prices should not affect energy efficiency. The cost effectiveness of energy efficiency should be considered in the long-run. CUB remembers the lesson of the 90s. Short term market prices were low and, while utility IRPs were showing energy efficiency to be cost effective as a long term resource, utilities asked to be relieved of doing energy efficiency except in the case of lost opportunities. Lost opportunities are projects that have to happen now or the opportunity will disappear – for example a new home program becomes a lost opportunity once that home is built. Essentially the utilities argued that there were short term opportunities to purchase power from the wholesale market that was cheaper than efficiency, so let's put off the efficiency until prices increase then we will acquire the efficiency. The Commission agreed that energy efficiency programs could be delayed. Then the Western Power Crisis hit. Suddenly, market prices soared, and all that energy efficiency that had been left behind was cost effective, not in the long run, but in the short run. But the programs could not be ramped up in time and customers paid millions of dollars in costs that could have been avoided if we had implemented all cost effective energy efficiency in the 1990s.

C. Renewable Resources

Renewable resources have fallen in cost, but are not cheaper than efficiency. The Energy Trust of Oregon, for example, acquired energy efficiency in Oregon for a levelized cost of 2.6 cents per kwh in 2015, while renewable programs cost 3.8 cents for non-solar and 6.3 cents for solar.[20] CUB agrees that the cost of renewables is continuing to decline, but does not see this as having much effect on the cost effectiveness of energy efficiency.

D. CUB Recommendation.

PacifiCorp's reasons for reducing energy efficiency are not persuasive. CUB recommends that the Commission not acknowledge Action Item 4a, Class 2 DSM.

VI. CONCLUSION

CUB has reviewed the IRP and the Action Plan. With regards to the Action Plan, CUB recommends the following:

A. Acknowledgement

1. CUB recommends that the Commission acknowledge Action Item 1a, Wind Repowering

B. Non-Acknowledgement

1. CUB recommends that the Commission not acknowledge Action Item 1b, Wind Request for Proposals
2. CUB recommends that the Commission not acknowledge Action Item 2a, Aeolus to Bridger Transmission.

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[20], *2015 Annual Report to the Oregon Public Utility Commission & Energy Trust Board of Directors*, ENERGY TRUST OF OREGON at 28, 31 (Apr. 15, 2016), http://assets.energytrust.org/api/assets/reports/2015.Annual.Report.OPUC.with.NEEA.pdf.

3. CUB recommends that the Commission not acknowledge Action Item 4a, Class 2 DSM.

Dated this 23rd day of June, 2017.

Respectfully submitted,

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