



**Renewable
Northwest
Project**

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BY EMAIL (to records@utc.wa.gov)

Steven V. King
Executive Director and Secretary
Washington Utilities and Transportation Commission
P.O. Box 47250
Olympia, WA 98504-7250

**Re: UE-120416
Renewable Northwest Project's Comments on PacifiCorp's 2013 Integrated
Resource Plan**

Dear Mr. King:

Renewable Northwest Project (RNP) appreciates the opportunity to comment on PacifiCorp's 2013 Integrated Resource Plan (IRP). As a longtime northwest renewable energy advocacy group, we have participated regularly in PacifiCorp's IRP process.

RNP urges the Washington Utilities and Transportation Commission (Commission) to caution PacifiCorp against using outdated federal policy assumptions to support significant spending on its legacy coal fleet and, at the same time, putting the brakes on low-cost, risk-reducing renewable energy investments and accelerated energy efficiency. The Commission should advise PacifiCorp to strongly consider how an alternative action plan for meeting customer energy needs could avoid risks associated with increasing CO₂ regulation.

Although RNP and PacifiCorp ultimately disagree on important elements of the Company's 2013 IRP, RNP wishes to commend PacifiCorp for a robust public process. RNP appreciated the opportunity to comment throughout the workshop phase and thanks Company staff for their responses to our questions. We also wish to encourage the Commission to support the important advances that PacifiCorp is making in the areas of transmission and integration, particularly in developing an Energy Imbalance Market. Ideally, PacifiCorp would show the same leadership on energy supply.

PacifiCorp is Investing in Energy Supply for the Past, Not the Future

Approving this IRP gives PacifiCorp a green light to make long-term investments at four coal units—including two in the West Control Area—and to delay the acquisition

of new clean energy resources until 2022—despite PacifiCorp’s need for additional renewable resources to meet Washington’s I-937. We urge the Commission to direct the Company to reconsider its strategy for serving Washington customers in light of recently announced federal CO₂ regulations that will be more stringent than the base case CO₂ forecast used in this IRP. For PacifiCorp’s coal upgrades to be in the best interest of ratepayers, the underlying coal units must continue to operate for decades to come; it’s simply too risky to make these investments based on conservative assumptions about future carbon regulation. Compounding the risks is PacifiCorp’s plan to cease significant investment in renewable resources, just as other utilities are taking advantage of current low prices as a low cost, risk-reducing energy supply.

The IRP’s assumed CO₂ price has a considerable influence on PacifiCorp’s resource decisions. PacifiCorp finalized its base CO₂ assumption in fall of 2012. In recognition that future regulation addressing carbon dioxide emissions may take many different forms, PacifiCorp chose to use a CO₂ price as a proxy to capture all costs of future regulatory compliance. The CO₂ price proxy is meant to capture the possibility of carbon regulation through a tax, a cap and trade program, or emission performance standards (Volume I, pg. 167). In the fall of 2012, PacifiCorp settled on its final CO₂ price, then citing the 2010 collapse of federal energy legislation and the lack of federal action as its primary rationale for assuming base case CO₂ prices beginning in 2022. The base case CO₂ price was set at a level that would induce utilities and other power producers to switch from coal to gas fired generation (Pages 167 & 170 Volume I). The fall 2012 CO₂ price assumptions were retained for the final IRP.

Since fall 2012, the landscape of federal energy policy has shifted further than any time in the last five years. The President and his administration have revealed that CO₂ emissions will be regulated sooner and at a higher present value than PacifiCorp had expected. In June of this year, President Obama unveiled his administration’s approach. The president has order EPA to develop regulations to limit carbon emissions from modified (*i.e.*, upgraded) power plants within one year, and to finalize greenhouse gas emission restrictions for existing power plants. The regulations will add costs to the operation of coal units, and may not allow these facilities to operate at today’s level of output. Importantly, PacifiCorp’s action plan is at odds with the Administration’s recently announced climate initiative.

In contrast to PacifiCorp, other utilities are planning for an energy future compatible with pending regulation and in the best long-term interest of their ratepayers. MidAmerican Energy has announced that it will add an additional 1,050 MW of wind resources in Iowa by 2015, lowering the utility’s carbon emissions by 10.3 percent. NV Energy, slated for acquisition by MidAmerican, is planning to retire 800 MW of coal resources to be replaced with 350 MW of wind resources and additional natural gas. Xcel Energy has also just announced the acquisition of another 2,000 MW of wind capacity, arguing that adding wind resources today creates long-term value for its ratepayers. PacifiCorp’s resource strategy stands in sharp contrast to that of its utility peers (and, strangely, to MidAmerican’s other affiliate subsidiaries). Both strategies cannot be right; PacifiCorp’s strategy of investment in coal resources and the suspension of renewables acquisition is becoming increasingly isolated, and now directly runs counter to the federal Administration’s policy objectives and plans.

PacifiCorp also has underestimated the costs of complying with Wyoming's regional haze program that regulates emissions other than CO₂. When evaluating the pollution control investments required on its coal facilities, PacifiCorp tried to capture a range of compliance uncertainties by including scenarios with expected regional haze requirements and scenarios with more stringent regional haze requirements. However, EPA's 2013 proposed rule on Wyoming's regional haze program reveals that even PacifiCorp's more stringent scenario assumed less expensive compliance costs than the EPA will likely require. The result is an IRP action plan that assumes that retrofitting old coal units is less expensive than we now know it to be.

In these dynamic policy circumstances, it is admittedly difficult for utilities to pinpoint future regulatory costs at the point in time when decisions must be made. This is exactly why IRPs provide a *range* of assumptions, and why rigorous IRP review and direction from the Commission is so important. In its review of the IRP, the Commission can take advantage of recent clarifications of federal energy policy. RNP recommends that the Commission review the IRP and action plan with an eye toward the reasonableness of the preferred portfolio and action plan investment decisions under the *high* CO₂ price, rather than the base CO₂ assumption. With increased clarity that carbon will be regulated sooner and in a more restrictive manner, the Commission can use higher CO₂ assumptions to scrutinize whether the Company should invest in expensive pollution control investments at all. If the Commission sees significant risks to ratepayers from following this course, then explaining this to the Company in advance is critical to avoid expensive mistakes that harm our environment and our health.

Utilities throughout the West have seen the writing on the wall and are negotiating with stakeholders and air regulators for the early retirement of coal units. Portland General Electric negotiated an early retirement of its Boardman coal plant. NV Energy negotiated an agreement with state policy makers and stakeholders to close some of its largest coal units, as did the owners of the coal facility in Centralia. Recently, the shared owners of the Navajo Generating Station decided to shutter one of its three units. Utilities all around PacifiCorp are taking ownership of the transition away from coal; PacifiCorp apparently is not. While the IRP does not advertise this fact, over half of PacifiCorp's capacity need is still served by coal-fired generation.

PacifiCorp's Washington ratepayers are not immune to the risks associated with coal. We recommend that the Commission communicate to the Company that it expects PacifiCorp to protect its customers from the risks of a coal-heavy portfolio amidst a quickly changing CO₂ regulatory environment. Particularly with the precipitous drop in the costs of diverse replacement generation, making long-term bets on PacifiCorp's expansive coal portfolio is a questionable strategy. At minimum, showing greater enthusiasm for risk-reducing portfolio strategies like accelerated energy efficiency and continued renewable energy investment could provide some protection.

PacifiCorp's IRP Discounts the Energy Resources of the Future

Accelerating Energy Efficiency Saves Customers Money

The IRP's highest performing portfolio featured accelerated energy efficiency and the use of cheaper gas peaking units rather than large combined cycle units. The results clearly demonstrate that accelerating the acquisition of energy efficiency throughout the PacifiCorp's service territory saves ratepayers money and reduces their exposure to volatility in the natural gas and wholesale power market. Despite this strong performance, the efficiency-heavy portfolio was not selected as the preferred portfolio. The Company argues that, because it is not confident these energy efficiency measures can be accelerated, it would prefer to not plan on accelerating their acquisition. PacifiCorp did not provide evidence that the energy efficiency measures could not be accelerated.

It is very encouraging that this IRP confirms that energy efficiency is the least cost and least risk resource; PacifiCorp should be doing everything it can to accelerate and implement these measures. RNP recommends that the Commission communicate to PacifiCorp that it expects definitive and quantifiable actions to be taken to implement an aggressive energy efficiency program. Not doing so leaves money on the table for ratepayers.

Assumptions Depress Renewable Resource Selection

The 2013 IRP includes a series of inaccurate assumptions for renewable resources that contribute to the limited selection of wind and solar resources in the preferred portfolio. The most problematic of these is how the 2013 IRP measures renewable resources' contribution to the portfolio capacity needs. Renewables are further disadvantaged by low capacity factors assumed for western wind resources and overestimated costs for utility scale solar and wind resources. After describing these issues, RNP offers two possible ways to improve future IRPs in light of these continuing disagreements.

Capacity Value

The 2013 IRP uses a new methodology to measure how renewable resources contribute to portfolio capacity needs. In past IRPs, PacifiCorp had used a sophisticated methodology in step with national best practices. This method, known as ELCC, measured renewable's capacity contributions whenever the resource was able to prevent an outage, known as an "energy not served" event. In this IRP, PacifiCorp uses a simpler but less accurate methodology that simply considers the likelihood that renewables will be generating during the 'super-peak' period. The result is to credit renewable resources with less capacity value, which makes portfolios with renewable resource appear more expensive due to excess capacity resources. We recommend that the Commission ask the Company to consider using multiple capacity evaluation methodologies, in an effort to demonstrate the effect of this assumption to its stakeholders and to the Commission staff.

Wind Capacity Factors

New turbine technologies offer materially improved capacity factors in less robust wind regimes. Lawrence Berkeley National Labs, 2012 Wind Technologies Report, at viii (“Controlling for [offsetting factors] . . . shows that turbine design changes are driving capacity factors higher for projects located in fixed wind resource regimes.”) PacifiCorp’s 2013 IRP, however, retains the same 29% capacity factor (2013 IRP, Table 6.1) for west-side wind resources as it did in its 2011 IRP (2011 IRP, Table 6.2). This is apparently based on the historical output of PacifiCorp’s western wind resources. During IRP development, PacifiCorp informed stakeholders that it would not accept third party, publicly available estimates of improved capacity factors. Rather, PacifiCorp said it would consider revising its numbers only based on proprietary, site-specific data. While there is no transparency as to what numbers PacifiCorp received, if any, Portland General Electric announced that a new Washington wind project that is expected to achieve a 37% capacity factor. The mismatch with PacifiCorp’s assumptions is striking.

Solar and Wind Costs

Stakeholder feedback during IRP development caused PacifiCorp to make modest improvements to its solar PV cost assumptions. Rather than using the standard assumption that costs would rise over the planning period, PacifiCorp essentially held the price of solar PV constant in real terms. This is an improvement over PacifiCorp’s initial proposal, but still stands at odds with industry expectations for continued decline in solar costs. The comments of NW Energy Coalition provide more detailed analysis on solar costs, which RNP supports.

Nor do capital cost assumptions for wind resources match the prices available in the market today. PacifiCorp’s assumption of \$2,365/kW for Washington wind is more than 15 percent higher than the publicly announced price for PGE’s recent acquisition of a Washington wind resource (\$1,947-\$2,003/kW, based on \$520-535 million divided by 267 MW). As indicated above, many utilities are finding the market for wind today to provide excellent deals; PacifiCorp does not allow its model to capture today’s prices.

Possible Improvements to Renewable Resource Assumptions

RNP recommends two practice improvements to improve stakeholder confidence that PacifiCorp’s modeling results accurately capture the performance and price of renewable resources. First, if PacifiCorp will accept only proprietary data related to capacity values and prices, it should make available a list of dates and subjects of its meetings with market participants so that stakeholders have some way to cross-check the information. Where PacifiCorp’s assumptions are at odds with published studies, this is of particular importance.

Second, PacifiCorp should produce sensitivities or trigger point analyses to show what effect its assumptions have on selection of renewable resources. PacifiCorp originally offered this sensitivity for the 2013 IRP, but it was ultimately eliminated. The only sensitivity that could be a proxy for improved performance and reduced cost of

wind resources is the one that extends the PTC, but this extended PTC assumption lasts only until 2019. The significant pickup in renewable resources in the PTC sensitivity (Figures 8.37 and 8.38) shows that the preferred portfolio could change its selection of renewables significantly with different performance assumptions. For future IRPs, more specific sensitivities that match stakeholder expectations of renewable resource prices should be retained in the analysis.

PacifiCorp's Unbundled REC Compliance Strategy for I-937 Needs Another Look

With more realistic assumptions for today's renewable resource prices and performance, PacifiCorp's strategy for compliance with I-937 might change. In addition, with the passage of SB 5400, PacifiCorp may be permitted to reach to extremely low-cost Wyoming wind to satisfy I-937 and provide system energy at a long-term stable price. As Xcel Energy's CEO recently put it, "Wind is cheaper than I can buy a 20-year gas strip right now; I can add wind and save customers money." By using actual renewable energy resources to comply with I-937 and meet load growth, customers may gain portfolio stability and insulation from risk over time. PacifiCorp likely has missed the window to pick up low cost, PTC-supported Washington wind in the near term. Nonetheless, the Commission should direct PacifiCorp to perform in its next IRP another analysis of what benefits a physical compliance strategy could produce for customers, given more realistic resource inputs and the new geographic eligibility options.

PacifiCorp's IRP Made Great Headway in Modeling Transmission Resources

The Energy Gateway transmission analysis was a focus of this year's IRP. The scope of the transmission analysis, compared to last year's IRP, was greatly expanded. Multiple transmission topologies were modeled for each scenario and a new System Benefits Tool was designed to capture transmission benefits that the System Optimizer and Planning and Risk models cannot measure. Together these methodological improvements allowed the Company to quantify the costs and benefits of proposed transmission lines better than any other regional utility, and RNP commends PacifiCorp for their ingenuity on this analysis.

The methodological improvements were ambitious and increased the IRP's complexity, but RNP considers the results impressive. Stakeholders generally expressed some concern about how to measure the "customer and regulatory benefits" in the System Benefit Tool. RNP agrees with the Company that the tool is preliminary and there remains considerable flexibility as to how these benefits should be measured. In the intervening year, PacifiCorp should work with stakeholders and Commission staff to identify a robust methodology to capture this important segment of transmission benefits. RNP recommends that the Commission allow that discussion to develop regionally, and allow room for this important new transmission benefit analysis to improve even further.

In addition to its transmission modeling advances, PacifiCorp has taken an important leadership step by proposing an Energy Imbalance Market that can be functioning and beginning to demonstrate benefits to the region by 2015. PacifiCorp's


leadership may help the region move more quickly toward a broader EIM that improves reliability and efficient dispatch of resources for all participants. In addition, PacifiCorp's EIM will allow the Company to integrate more variable energy resources more efficiently. RNP appreciates PacifiCorp's action item to study the EIM's effects on integration in the next iteration of its integration study.

Conclusion

PacifiCorp's IRP provides the Commission with a good opportunity to communicate to the Company that investments in existing coal plants are risky for ratepayers. This risk is increasing in the face of quickly changing regulatory requirements. Before PacifiCorp can justify a resource strategy so different from other utilities around the country, which are taking ownership of the transition from coal and finding value in accelerated energy efficiency and continued addition of renewable resources, the Commission needs to see additional analysis that accounts for new policy realities. PacifiCorp should extend its leadership on transmission into the realm of energy supply.

Thank you for the opportunity to comment on PacifiCorp's 2013 Integrated Resource Plan.

Respectfully Submitted,



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