**BEFORE THE PUBLIC UTILITY COMMISSION**
**OF OREGON**

**LC 57**

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| In the Matter of<br><br>PACIFICORP, dba PACIFIC POWER<br><br>2013 Integrated Resource Plan | Opening Comments of Renewable Northwest Project |

Renewable Northwest Project ("RNP") appreciates the opportunity to comment on PacifiCorp's 2013 Integrated Resource Plan ("IRP").

RNP urges the Oregon Public Utility Commission ("OPUC" or "Commission") to caution PacifiCorp against using outdated federal policy assumptions to support significant spending on its legacy coal fleet and, at the same time, putting the brakes on accelerated energy efficiency and low-cost, risk-reducing renewable energy investments. Rather than acknowledging more new coal investments, the Commission should require PacifiCorp to consider how an alternative action plan for meeting customer energy needs could avoid risks associated with increasing $CO_2$ 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. The Commission should expect PacifiCorp exhibit similar leadership on energy supply.

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

Acknowledging this IRP would give PacifiCorp a green light to make long-term investments at four coal units, side-step the strong economic performance of demand side resources, and delay the acquisition of new clean energy resources until 2022. 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 today's low prices to provide customers with low cost, risk-reducing energy supply. We urge the Commission to direct the Company to reconsider its strategy for serving Oregon customers in light of recently announced federal $CO_2$ regulations that will be more stringent than the base case $CO_2$ forecast used in this IRP.

The IRP's assumed $CO_2$ price has a considerable influence on PacifiCorp's resource decisions. PacifiCorp finalized its base $CO_2$ assumption in fall of 2012. In recognition that future regulation addressing carbon dioxide emissions may take many different forms, PacifiCorp chose to use a $CO_2$ price as a proxy to capture all costs of future regulatory compliance. The $CO_2$ price proxy is meant to capture the possibility of carbon regulation through a tax, a cap and trade program, or emission performance standards (2013 IRP, Volume I , page 167). In the fall of 2012, PacifiCorp settled on its final $CO_2$ price, then citing the 2010 collapse of federal energy legislation and the lack of federal action as its primary rationale for assuming base case $CO_2$ prices beginning in 2022. The base case $CO_2$ price was set at a level that would induce utilities and other power producers to switch from coal

to gas fired generation (2013 IRP, Volume I, pages 167 & 170). The fall 2012 $CO_2$ 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 $CO_2$ 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 $CO_2$. 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 strong 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* $CO_2$ price, rather than the base $CO_2$ assumption. With increased clarity that carbon will be regulated sooner and in a more restrictive manner, the Commission can use higher $CO_2$ assumptions to scrutinize whether the Company should invest in expensive pollution control investments at all. If coal investments do not survive that scrutiny, and the Commission

sees significant risks to ratepayers from following the action plan under high $CO_2$ assumptions, then the action plan items related to coal should not be acknowledged.

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.

RNP recommends that the Commission communicate to the Company that it expects PacifiCorp to protect its customers from the risks of a coal-heavy portfolio within a quickly changing $CO_2$ 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 (effective load carrying capability) analysis, measured renewables' 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 renewables with capacity deliveries only during the summer peak, even though the performance of candidate portfolios is measured by their resources' ability to meet capacity demands for the entire year (2013 IRP, Volume 1, pages 197, 220; Volume II Appendix L page 281).

The majority of PacifiCorp's expected energy not served occurs outside the peak load month of July. These energy-not-served events are the result of random combinations when load may be higher than anticipated, units may experience unexpected outages or hydro conditions may be low. Analysis of PacifiCorp's response to RNP Data Request No. 4 reveals that 62 percent of the preferred portfolio's energy-not-served occurs outside of the peak month of July (Attachment A). Renewable resources help reduce energy-not-served events by generating during periods of unexpected capacity shortfalls that occur both during the system peak and at other times throughout the year.

System Optimizer does not credit renewable resources for reducing annual energy-not-served because the resources' assumed capacity value only considers generation at the times of peak load. The result is to credit renewable resources with less capacity value,

which makes portfolios with renewable resource appear more expensive due to additional capacity resources added by System Optimizer. If renewable portfolios were to be screened by subsequent energy-not-served analysis, the additional capacity additions would be shown to be partially redundant.

During the workshop process, stakeholders and the Company discussed the capacity value of renewable resources, without reaching agreement. We recommend that the Commission ask the Company to provide a scenario in the next IRP that measures the capacity value of renewables using the ELCC methodology. The scenario will demonstrate how renewables' assumed capacity value affects portfolio costs and portfolio supply reliability.

*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 percent capacity factor. This

is consistent with information revealed in Avista's Washington rate case, where a PPA expected to achieve a 39.5 percent capacity factor.[1] The mismatch with PacifiCorp's 29 percent capacity factor assumption 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*

[1] *Washington Utilities and Transportation Commission v. Avista Corporation d/b/a Avista Utilities*, Docket Nos. UE-120436 et al., Testimony (Redacted) of David Nightingale for Commission Staff, page 22 lines 15-19, *available at* http://www.wutc.wa.gov/rms2.nsf/177d98baa5918c7388256a550064a61e/364425d313a0d2f388257a7e007b5180!OpenDocument.

RNP recommends two practice improvements to IRPs that would 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 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.

We recommend that PacifiCorp broaden the focus of its integration study to better achieve the objectives of the Commission's required flexibility study. With PacifiCorp's strong foundation in intrahour analysis and experience modeling 15-minute scheduling

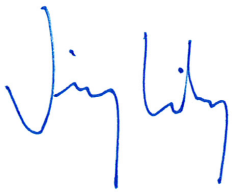
and EIM behavior, PacifiCorp is well positioned for the next IRP to provide a more generalized look at flexibility needs and the most cost-effective ways of meeting those needs.

## Conclusion

PacifiCorp's investments in existing coal plants are risky for ratepayers, and that risk is increasing in the face of quickly changing regulatory requirements. Before the Commission gives a green light to 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 should demand to see additional analysis that accounts for new policy realities. PacifiCorp's leadership on transmission should provide it with a model for better leadership on energy supply and efficiency.

Respectfully submitted this 22nd day of August, 2013.

RENEWABLE NORTHWEST PROJECT



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Jimmy Lindsay
Regulatory Analysis Manager
jimmy@rnp.org

# RNP Attachment A, page 1
# LC 57 - RNP Opening Comments

**RNP Data Request 4**

Please provide all tables and figures from Appendix L in electronic spreadsheet format.

**Response to RNP Data Request 4**

Please refer to Attachment RNP 4.

RNP Attachment A, page 2

Attachment RNP 4 to PacifiCorp's Response to RNP Data Request No. 4 contains four Excel files. Tab EG2a_C07 of the document titled "2013IRP Study_EG1_EG2 LOLP Package.xlsx" documents the energy not served for PacifiCorp's preferred portfolio.

The spreadsheet at Table EG2a_C07 tallies the expected energy not served from 100 iterations of the Planning and Risk model. The MWhs of expected energy not served is recorded for alternating months (*i.e.*, January 13, March 13, May 13, July 13, September 13, November 13, January 14, March 14 . . .) during the entire 20-year planning horizon.

RNP calculated what proportion of the expected MWhs of energy not served occurred in months other than July. RNP's calculation summed the energy not served results for all 100 iterations for each recorded month of the planning horizon. Then, totals for like months (all Januarys, all Marches, *etc.*) were summed. The proportion of energy not served occurring in months other than July (62%) was calculated from the results presented below.

| Month | ENS | Proportion |
|---|---|---|
| January | 14309.33 | 30% |
| March | 1284.81 | 3% |
| May | 4779.75 | 10% |
| July | 17785.9 | 38% |
| September | 5934.06 | 13% |
| November | 3105.13 | 7% |

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I served the OPENING COMMENTS OF RENEWABLE NORTHWEST PROJECT upon the following parties on the service list for LC 57, via electronic mail, on August 22, 2013:

RENEWABLE NORTHWEST PROJECT

By: __*/s/ Jimmy Lindsay*_____
Jimmy Lindsay
jimmy@rnp.org

| | | |
|---|---|---|
| **W** | ***OREGON DEPARTMENT OF ENERGY** | |
| | KACIA BROCKMAN **(C)**<br>SENIOR ENERGY POLICY ANALYST | 625 MARION ST NE<br>SALEM OR 97301-3737<br>kacia.brockman@state.or.us |
| **W** | ***OREGON DEPARTMENT OF JUSTICE** | |
| | RENEE M FRANCE **(C)**<br>SENIOR ASSISTANT ATTORNEY GENERAL | NATURAL RESOURCES SECTION<br>1162 COURT ST NE<br>SALEM OR 97301-4096<br>renee.m.france@doj.state.or.us |
| **W** | **CITIZENS' UTILITY BOARD OF OREGON** | |
| | OPUC DOCKETS | 610 SW BROADWAY, STE 400<br>PORTLAND OR 97205<br>dockets@oregoncub.org |
| | ROBERT JENKS **(C)** | 610 SW BROADWAY, STE 400<br>PORTLAND OR 97205<br>bob@oregoncub.org |
| | G. CATRIONA MCCRACKEN **(C)** | 610 SW BROADWAY, STE 400<br>PORTLAND OR 97205<br>catriona@oregoncub.org |
| **W** | **DAVISON VAN CLEVE** | |
| | IRION A SANGER **(C)** | 333 SW TAYLOR - STE 400<br>PORTLAND OR 97204<br>ias@dvclaw.com |
| **W** | **IDAHO POWER COMPANY** | |
| | REGULATORY DOCKETS | PO BOX 70<br>BOISE ID 83707-0070<br>dockets@idahopower.com |
| | LISA D NORDSTROM **(C)** | PO BOX 70<br>BOISE ID 83707-0070<br>lnordstrom@idahopower.com |
| **W** | **MCDOWELL RACKNER & GIBSON PC** | |
| | LISA F RACKNER **(C)** | 419 SW 11TH AVE., SUITE 400<br>PORTLAND OR 97205<br>dockets@mcd-law.com |
| **W** | **NATURAL RESOURCES DEFENSE COUNCIL** | |
| | RALPH CAVANAGH | 111 SUTTER ST FL 20<br>SAN FRANCISCO CA 94104<br>rcavanagh@nrdc.org |
| **W** | **NATURAL RESOURCES DEFENSE COUNIL** | |
| | ANGUS DUNCAN **(C)** | 2373 NW JOHNSON ST<br>PORTLAND OR 97210<br>angusduncan@b-e-f.org |
| **W** | **NW ENERGY COALITION** | |
| | WENDY GERLITZ **(C)** | 1205 SE FLAVEL<br>PORTLAND OR 97202<br>wendy@nwenergy.org |
| | FRED HEUTTE **(C)** | PO BOX 40308<br>PORTLAND OR 97240-0308<br>fred@nwenergy.org |
| **W** | **OREGON DEPARTMENT OF ENERGY** | |

| | | |
|---|---|---|
| | PHILIP H CARVER | 625 MARION ST NE STE 1<br>SALEM OR 97301-3742<br>phil.carver@state.or.us |
| **W** | **PACIFIC POWER** | |
| | MARY WIENCKE | 825 NE MULTNOMAH ST, STE 1800<br>PORTLAND OR 97232-2149<br>mary.wiencke@pacificorp.com |
| **W** | **PACIFICORP, DBA PACIFIC POWER** | |
| | OREGON DOCKETS | 825 NE MULTNOMAH ST, STE 2000<br>PORTLAND OR 97232<br>oregondockets@pacificorp.com |
| **W** | **PORTLAND GENERAL ELECTRIC** | |
| | PATRICK G HAGER | 121 SW SALMON ST 1WTC0702<br>PORTLAND OR 97204<br>pge.opuc.filings@pgn.com;<br>patrick.hager@pgn.com |
| | BRIAN KUEHNE | 121 SW SALMON STREET 3WTC BR06<br>PORTLAND OR 97204<br>brian.kuehne@pgn.com |
| | V. DENISE SAUNDERS | 121 SW SALMON ST 1WTC1301<br>PORTLAND OR 97204<br>denise.saunders@pgn.com |
| **W** | **PUBLIC UTILITY COMMISSION OF OREGON** | |
| | JULIET JOHNSON **(C)** | PO BOX 2148<br>SALEM OR 97308-2148<br>juliet.johnson@state.or.us |
| **W** | **PUC STAFF--DEPARTMENT OF JUSTICE** | |
| | JASON W JONES **(C)** | BUSINESS ACTIVITIES SECTION<br>1162 COURT ST NE<br>SALEM OR 97301-4096<br>jason.w.jones@state.or.us |
| **W** | **REGULATORY & COGENERATION SERVICES INC** | |
| | DONALD W SCHOENBECK | 900 WASHINGTON ST STE 780<br>VANCOUVER WA 98660-3455<br>dws@r-c-s-inc.com |
| **W** | **RENEWABLE NORTHWEST PROJECT** | |
| | RNP DOCKETS | 421 SW 6TH AVE., STE. 1125<br>PORTLAND OR 97204<br>dockets@rnp.org |
| | MEGAN WALSETH DECKER **(C)** | 421 SW 6TH AVE #1125<br>PORTLAND OR 97204-1629<br>megan@rnp.org |
| **W** | **SIERRA CLUB ENVIRONMENTAL LAW PROGRAM** | |
| | TRAVIS RITCHIE **(C)** | 85 SECOND STREET, 2ND FL<br>SAN FRANCISCO CA 94105<br>travis.ritchie@sierraclub.org |
| **W** | **SIERRA CLUB LAW PROGRAM** | |
| | DEREK NELSON **(C)** | 85 SECOND STREET, 2ND FL<br>SAN FRANCISCO CA 94105<br>derek.nelson@sierraclub.org |
| | GLORIA D SMITH **(C)** | 85 SECOND STREET<br>SAN FRANCISCO CA 94105<br>gloria.smith@sierraclub.org |