

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

LC 47

In the Matter of)	REPLY COMMENTS
)	OF THE RENEWABLE
PACIFICORP, dba PACIFIC POWER)	NORTHWEST PROJECT
)	AND THE CITIZENS'
2008 Integrated Resource Plan)	UTILITY BOARD

The Renewable Northwest Project (RNP) and the Citizens' Utility Board (CUB) jointly submit these Reply Comments on PacifiCorp's 2008 Integrated Resource Plan.

Overview

Our overall impression of PacifiCorp's planning effort remains the same: that the Company's methodological sophistication and dedication in most areas of the IRP are appreciated. But we continue to have concerns with some of the analysis as detailed below. These Reply Comments track the issues of our Opening Comments – wind integration, greenhouse gas emissions and coal plant analysis. We also add brief comments about the Company's transmission analysis of Energy Gateway.

I. Wind Integration Analysis

We reiterate our recommendation from Opening Comments that the Commission should not acknowledge PacifiCorp's wind integration cost study and instead direct the Company to complete a new study within three months of the close of the docket. We lay out below why this is a reasonable request. Alternatively, we recommend that the Commission require the Company to rely on its previous wind integration cost of \$5.10/MWh from its 2007 IRP until a new study is completed.

PacifiCorp is to be commended for having one of the highest penetration levels of wind on its system in the Northwest; we believe it has a corresponding obligation to have a reasonable and defensible wind integration cost analysis.

We appreciate that Staff shares "significant concerns with regard to PacifiCorp's wind integration study," [Staff Final Comments, p. 2] and we support their recommendation that PacifiCorp provide "a wind integration study that has been vetted by key regional stakeholders through a public participation process. [Staff Final Comments, p. 5]. However, we believe that the deficiencies with the study can and should be addressed in a more timely basis than that proposed by Staff. Staff recommends that the Company provide the study as part of the 2008 IRP update. According to IRP Guideline 3(f), the annual update on the IRP "is due on or before the

acknowledgement order anniversary date.” [OPUC Order No. 07-002]. While the acknowledgement date of this 2008 IRP is unknown, it is likely to be sometime in spring 2010, meaning the updated wind integration cost study could feasibly be delayed until the spring of 2011. We believe that is simply too long to await an improved study.

RNP and CUB’s Opening Comments raised seven specific concerns with the wind integration study, six of which involved technical shortcomings of the study. The six were, in brief:

1. Failure to account for load variability in determining reserve requirements.
2. Over-representation of correlation among wind projects.
3. Inaccurate assumption that all wind balancing entails market transaction costs.
4. Systematic over-statement of market transactions by “rounding up” balancing needs.
5. Using out-year costs as proxy for costs throughout the study.
6. Overstatement of wind scheduling errors.

PacifiCorp’s response comments do not fully respond to these concerns, only mentioning the first three of the six issues. The Company is in apparent agreement with the first,¹ does not materially address the second, and supplies an internally inconsistent argument for the third. With respect to the latter, PacifiCorp states that its units are optimized to current market conditions and “are either operating at full available load or are being backed off to maintain the appropriate level of operating reserves...” [PacifiCorp Response to Party Comments, p. 15]. Even given this as fact, the fully loaded units should be able to reduce generation at times of additional wind generation without incurring a market transaction cost. Notwithstanding that, the argument incorrectly assumes that wind imbalances never counteract market transactions for load.

It might be argued that PacifiCorp’s over-statements of wind integration costs are minimal, but to PacifiCorp’s credit, they offer no such argument. The errors cited above would likely reduce PacifiCorp’s cost estimate by more than a factor of two. PacifiCorp argues against addressing the errors cited by RNP and CUB because the effect of not taking into account transmission constraints and wind ramping events “could more than offset cost reductions” that these fixes represent. [PacifiCorp Response to Party Comments, p. 15]. It is unclear how transmission constraints would increase reserve requirements or their costs. Wind ramping events on the east side are likely overstated in PacifiCorp’s analysis due to the scaling methodology used to represent new wind projects. PacifiCorp provided no guidance on how these two factors could increase their wind integration cost estimate.

¹ “PacifiCorp does not dispute the contention that incorporating load variability into the cost analysis framework affects estimated reserve costs...” PacifiCorp Response to Oregon Party Comments, November 3, 2009, p. 15.

While we understand that it is possible to devise a complex study constituting a “major undertaking for the Company,” we disagree with the Company that revising the study to remove the major errors represents a complex or time-consuming effort. [PacifiCorp Response to Party Comments, p. 15]. The defects in PacifiCorp’s present analysis could be quickly and effectively addressed by taking the following specific actions:

1. Incorporate load variability in the computation of reserve requirements. PacifiCorp has previously suggested that it does not have load data needed to perform the analysis. [Response to RNP Data Request 3, Exhibit 1]. This data is either available to the Company or can be approximated using standard statistical methods based on hourly or even daily load data that the Company presumably collects for billing purposes.
2. Use time shifting methods to represent data from eastern projects. This is a simple procedure PacifiCorp used in previous wind integration studies that can be calibrated such that the correlations from new projects roughly approximate that among existing projects.
3. Apply market transaction costs to an appropriate fraction of the wind imbalances—at a minimum, the offsetting imbalances for load should be taken into account. This can be as simple as a spreadsheet operation once load data is available.
4. The Company should round off, and not up, the market transaction quantities.
5. Wind integration costs should be taken as the average of the wind integration costs at the beginning and end of the study period, or else a single wind integration cost should be used representing an average of the wind development over the study horizon.
6. Wind schedules should be based on persistence forecasts taken to be actual generation levels no more than 45 minutes prior to the beginning of the operating hour.

Although the changes cited above would require PacifiCorp to retrace the steps taken in its original analysis, they represent modest additional work. Given that the workbooks have all been set up for the original study, going through the analysis again should take less time. This is why we believe a revised study could be accomplished in a matter of months, instead of more than a year as permitted by Staff’s recommendation.

RNP and CUB raised one additional issue in Opening Comments about the wind integration study, related to its ratemaking implications. Staff includes a footnote stating that they do not believe that the “existing wind integration study is reasonable for use in other ratemaking proceedings.” [Staff Final Comments, p. 3]. We appreciate and support that belief. However, an IRP docket can not direct the results of rate-setting in a TAM. For this reason, again, we urge the Commission to direct the Company to fix its analysis soon so that correct wind integration numbers can be relied upon in the TAM.

Another alternative is to not allow the Company to rely on the 2008 IRP wind integration analysis, but instead return to its previous costs of \$5.10/MWh from its 2007 IRP.

Finally, RNP has raised concerns about the regional implications of PacifiCorp's wind integration costs. We note that in September 2009, PacifiCorp (dba Rocky Mountain Power) filed a request with the Idaho Public Utilities Commission for an Order requesting an increase of their published avoided cost wind integration rate from \$5.10 to \$9.96 per MWh.² The Company is permitted by an earlier IPUC Order to tie its avoided cost rate to the wind integration cost within the IRP. A decision is still pending in this docket but Idaho Commission Staff has recommended that the Commission approve a charge of \$6.50/MWh instead of the higher rate requested by the Company. Staff's number is not based on analysis specific to Rocky Mountain Power, but it is closer to what has been approved for other utilities in Idaho.³

II. Greenhouse Gas Emissions

RNP and CUB urge the Commission to direct certain improvements to the greenhouse gas emissions analysis for the next IRP. In light of the overarching importance of reducing carbon emissions, PacifiCorp should be directed to include carbon dioxide emissions levels as a specific and important risk factor. That the present study omits this, while including a carbon emissions cost risk (essentially risk associated with carbon cost uncertainty) effectively penalizes portfolios designed to reduce carbon emissions, without recognizing the risk effects associated with actually reducing emissions. We agree with the Northwest Energy Coalition (NVEC) that this process deserves a new paradigm designed to capture least cost portfolios that reduce carbon emissions. We also agree with NVEC that PacifiCorp's scoring system places inappropriate emphasis on insignificant cost differences among portfolios.

We support Staff's recommendation that the Company develop a more "comprehensive inclusion of a hard-cap emissions standard and emission reduction plans, which includes the evaluation of the effect of the closure of coal facilities." [Staff Final Comments, p. 15-16]. We note this is the second time Staff has recommended such an analysis. In OPUC Order No. 08-232, the Commission directed the Company to consider either the impact of "forced early retirement of existing coal plants, or retrofits necessary to reduce their CO2 emissions, under stringent carbon regulation scenarios."

Currently, PacifiCorp has suggested that its IRP cannot model the closure of coal plants. Instead, carbon regulatory costs are modeled and, when made high enough, cause a reduction in dispatch of coal and a corresponding reduction in carbon emissions. This tells us that a certain level of carbon regulatory costs will cause a certain level of emissions reductions. However, this does not tell us the least cost approach to obtaining that level of carbon reduction. For example, our modeling could show that a \$50 per ton

² Idaho Public Utilities Commission Case No. PAC-E-09-07
www.puc.idaho.gov/internet/cases/summary/PACE0907.html

³ <http://www.puc.idaho.gov/internet/cases/elec/PAC/PACE0907/staff/20091030COMMENTS.PDF>

carbon cost would lead to a 10% reduction in carbon emissions, but not indicate the least cost approach to reduce these emissions.

In testimony to the U.S. House Subcommittee on Energy and Environment last June, David Sokol, Chairman on MidAmerican Energy Holdings Company, proposed an alternative compliance mechanism for the Waxman-Markey Cap-and-Trade bill that would allow utilities to work with state regulatory commissions and plan for reductions in emissions. He argued that emissions reductions can be done much more cheaply by avoiding carbon regulatory costs and instead focusing on investments that actually reduce emissions.⁴ PacifiCorp should be required to demonstrate the validity of its Chairman's testimony. If there are less costly ways to reduce emissions by specific levels, let's model those alternatives.

III. Transmission

RNP and CUB are supportive of the holistic transmission cost-benefit analysis of Energy Gateway that the Company performed and submitted in response to a Staff Data Request [Confidential Attachment B for PacifiCorp's Response to Staff Data Request No. 32, Summary of Energy Gateway Financial Analysis, November 19, 2009]. We appreciate that the Company's analysis includes a wide range of the many benefits of increasing transmission capacity (net present value power cost savings, reliability benefits, resource optionality, reduced congestion, increased access to markets, increased reserve sharing capability, meeting RPS requirements, capital avoidance from building wind energy projects in superior locations.).

There is an additional benefit of building new transmission capacity related to capital avoidance—decreased wind integration costs associated with accessing a more diverse wind regime. We also note that the many benefits of building new transmission capacity will accrue to Oregon over the entire useful life of the asset, which is much longer than the 20-year time horizon used in the Company's IRP and transmission financial analysis. RNP and CUB support Staff's recommendation for additional analysis of transmission options in future IRP cycles but also suggests that the impact on wind integration costs and the longer life-span be taken into account in future analysis. [Staff Final Comments, p. 17].

Conclusion

We support many of the Staff recommendations as noted above related to improved greenhouse gas emissions analysis, transmission analysis and a revised wind integration analysis vetted by regional stakeholders. However, we urge the Commission to require PacifiCorp to revise its wind integration analysis within three months of the close of this docket, as opposed to providing it as part of the IRP Update. Alternatively, we request that the Commission require the Company to rely on its previous wind integration cost of \$5.10/MWh from the 2007 IRP until a new study is completed.

⁴ http://www.midamerican.com/include/pdf/060909_sokol_testimony.pdf

DATED this 7th day of January, 2010.

RENEWABLE NORTHWEST PROJECT

By: /s/ Ann English Gravatt
Ann English Gravatt

By: /s/ Ken Dragoon
Ken Dragoon

THE CITIZENS' UTILITY BOARD

By: /s/ Bob Jenks
Bob Jenks

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RNP Data Request 3

Please provide PacifiCorp load and wind data for the historical periods over which the wind integration analysis was performed. (Appendix F, page 271, last paragraph).

Response to RNP Data Request 3

Please refer to Confidential Attachment RNP 3 -1 for the 10-minute wind generation data used for estimation of intra-hour reserve costs. Please refer to Confidential Attachment RNP 3 -2 for hourly load data for 2008. Hourly load data for 2009 has not been finalized. Confidential information is provided subject to the terms and conditions of the protective order in this proceeding.

Please refer to Confidential Attachments RNP 3 -(1-2) on the enclosed CD.

CERTIFICATE OF SERVICE

I hereby certify that I served the foregoing **REPLY COMMENTS OF THE RENEWABLE NORTHWEST PROJECT AND THE CITIZENS' UTILITY BOARD** on the following persons on January 7, 2010, by hand-delivering, faxing, e-mailing, or mailing (as indicated below) to each a copy thereof, and if mailed, contained in a sealed envelope, with postage paid, addressed to said attorneys at the last known address of each shown below and deposited in the post office on said day at Portland, Oregon:

Michael T. Weirich
michael.weirich@doj.state.or.us
Department of Justice
Regulated Utility & Business Section
1162 Court Street N.E.
Salem, Oregon 97301-4096

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

PacifiCorp Oregon Dockets
oregondockets@pacificorp.com
825 N.E. Multnomah, Suite 2000
Portland, Oregon 97232

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Jordan A. White
jordan.white@pacificorp.com
Pacific Power & Light
825 N.E. Multnomah, Suite 1800
Portland, Oregon 97232

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Pete Warnken
pete.warnken@pacificorp.com
PacifiCorp
825 N.E. Multnomah, Suite 600
Portland, Oregon 97232

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Ann English Gravatt
ann@rnp.org
Cameron Yourkowski
cameron@rnp.org
Renewable Northwest Project
917 S.W. Oak, Suite 303
Portland, Oregon 97205

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Kelcey Brown
kelcey.brown@state.or.us
Public Utility Commission of Oregon
P.O. Box 2148
Salem, Oregon 97308-2148

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Janet Prewitt
janet.prewitt@doj.state.or.us
Assistant AG
Natural Resources Section
1162 Court Street N.E.
Salem, Oregon 97301-4096

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Vijay A. Satyal
vijay.a.satyal@state.or.us
Senior Policy Analyst
Oregon Dept. of Energy
625 Marion Street N.E.
Salem, Oregon 97301

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

G. Catriona McCracken
catriona@oregoncub.org
Citizen's Utility Board of Oregon
610 S.W. Broadway, Suite 308
Portland, Oregon 97205

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Gordon Feighner
gordon@oregoncub.org
Citizen's Utility Board of Oregon
610 S.W. Broadway, Suite 308
Portland, Oregon 97205

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Robert Jenks
bob@oregoncub.org
Citizen's Utility Board of Oregon
610 S.W. Broadway, Suite 308
Portland, Oregon 97205

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Irion Sanger, Esq.
las@dvclaw.com
Davison Van Cleve
333 S.W. Taylor, Suite 400
Portland, Oregon 97204

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Michael Early
mearly@icnu.org
ICNU
333 S.W. Taylor, Suite 400
Portland, Oregon 97204

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Steven Weiss
steve@nwenergy.org
Northwest Energy Coalition
4422 Oregon Trail Court N.E.
Salem, Oregon 97305

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Robin Straughan
robin.straughan@state.or.us
Oregon Dept. of Energy
625 Marion Street N.E.
Salem, Oregon 97301-3742

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Patrick G. Hager
patrick.hager@pgn.com
Portland General Electric
121 S.W. Salmon, 1WTC0702
Portland, Oregon 97204

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

V. Denise Saunders
denise.saunders@pgn.com
Portland General Electric
121 S.W. Salmon, 1WTC1301
Portland, Oregon 97204

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Brian Kuehne
brian.kuehne@pgn.com
Portland General Electric
121 S.W. Salmon, 3WTCBR06
Portland, Oregon 97204

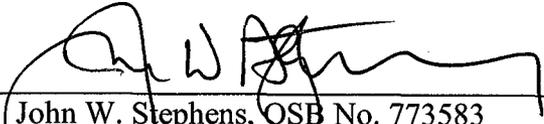
- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

Rates & Regulatory Affairs
pge.opuc.filings@pgn.com
Portland General Electric
121 S.W. Salmon, 1WTC0702
Portland, Oregon 97204

- by hand-delivery
- by facsimile
- by first class mail
- by e-mail

DATED this 7th day of January, 2010.

ESLER STEPHENS & BUCKLEY

By: 

John W. Stephens, OSB No. 773583
stephens@eslerstephens.com
Of Attorneys for Renewable Northwest Project