

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

LC 57

In the Matter of
PACIFICORP, dba PACIFIC POWER
2013 Integrated Resource Plan

Final Comments of Renewable
Northwest Project

RNP appreciates the opportunity to submit these Final Comments on PacifiCorp’s Integrated Resource Plan (IRP). The majority of parties’ opening comments focused on the folly of investing in legacy coal assets, rather than converting or retiring the aging facilities. RNP observes that investing in three coal units is not reasonable under scenarios with low natural gas costs and/or stringent CO₂ regulation. The reasonableness of the coal investments under base case forecasts is difficult to determine given a lack of analysis exploring how these investments may be deferred or avoided with alternative compliance proposals. With respect to the action items specifically requested for acknowledgement in PacifiCorp’s Reply Comments, RNP recommends the Commission acknowledge action items 8a and 9c pertaining to the natural gas conversion of Naughton 3 and the development of the Sigurd to Red Butte transmission line. RNP recommends the Commission not acknowledge action item 8b and 8c pertaining to the pollution control investments at Hunter1 and Jim Bridger 3 and 4.

Oregon Knows That Successive Regulations Will Continue to Stress Coal Assets

There is broad agreement between Staff, CUB, Sierra Club, NWEA, and RNP that the analysis presented so far is not extensive enough to justify expensive coal investments at a time when policy continues to direct utilities to lower carbon emissions. PacifiCorp and other parties disagree as to whether the Company's planned investment is reasonable without additional analysis. Indeed, it is difficult to infer what the absent analysis may reveal about proposed Action Items 8b & 8c. For that reason, RNP believes it is appropriate to begin by stepping back and emphasizing those findings with which we are certain.

We know that the base case CO₂ cost assumptions do not contemplate the federal CO₂ regulation articulated in the Administration's June Presidential Memorandum. We also know that the likelihood and cost of restrictive regulations on carbon intensive resource has increased since the Company's IRP was finalized. With this new information, the Commission can review the reasonableness of PacifiCorp's proposed action plan under the high CO₂ cost assumptions rather than the base case cost assumptions used to justify the proposed resource strategy.

PacifiCorp and RNP agree that the base case CO₂ assumptions do not include the cost of complying with EPA's upcoming 111(d) rule making; the IRP's CO₂ assumptions were finalized well before President Obama announced his regulation of carbon emissions at existing and modified facilities. However, PacifiCorp and RNP disagree as to whether the likelihood and cost of CO₂ regulation has increased with the issuance of the Memorandum. PacifiCorp argues that because the

stringency of the regulations have not yet been identified, there is no way this important change can be incorporated into the review of this IRP. On Page 18 of its Reply Comments, PacifiCorp lays out this logic:

The June 2013 Presidential Memorandum did not detail how EPA will approach CO₂ regulation or what the resulting standards, regulations, or guidelines will ultimately entail for existing resources. Parties raising the Presidential Memorandum as an issue in this IRP docket have argued that its very existence indicates that CO₂ price assumptions should be higher and start sooner. But, absent any information on how EPA intends to proceed with its rule-making process, and without any information on how individual states will propose to implement those regulations through a SIP, there is currently no means to develop a specific CO₂ price assumption that accurately reflect potential CO₂ regulation.

Without disagreeing that the EPA's ultimate rules remain unfinished, RNP finds this argument to be unsatisfying. Simply because federal rules have not entered the federal register does not imply that no meaning can be made of the proposed rulemaking. The very existence of the proposed rules indicates that CO₂ regulations will be more restrictive than previously assumed; indeed, the proposed regulations are driven by the objective to limit carbon emissions from existing facilities. The President of United States has ordered the rulemaking process to begin and there exists a timeline establishing certain action. This pivotal undertaking merits a change in PacifiCorp's forecast of CO₂ regulation. RNP believes it is no more reasonable to assume that the cost and likelihood of CO₂ regulations will stay constant as it is to assume that the cost and likelihood of CO₂ regulation has fallen since the issuance of the Presidential Memorandum. Federal and state policy will continue to limit the cost efficacy of continued coal operation. RNP believes that

denying this trend in policy is foolhardy, and a risky proposition that saddles ratepayers with costly upgrades at aging coal units.

The precise cost of upcoming CO₂ regulation has always been uncertain. CO₂ emissions can be regulated through many different policies, not all of which include a specific dollar per ton CO₂ emission figure. For that very reason, PacifiCorp includes a range of CO₂ forecasts, which costs reflect wide-ranging policy mechanisms. Including many different CO₂ scenarios in the IRP enables the Commission to identify how the Company's resource portfolio is affected by different CO₂ regulations and how the Company's actions should change if CO₂ regulation differ from the base case forecast. The inclusion of multiple gas and CO₂ forecasts allows the IRP to continue as a useful planning document after its issuance. If CO₂ regulation trends in a more restrictive direction, IRP results associated with a higher CO₂ forecast can be used to inform updated resource strategy considerations. As noted in PacifiCorp's Reply Comments at footnote 11, RNP does believe the range of carbon forecasts used in the IRP is reasonable. However, the specific base case forecast used to justify action items 8b and 8c is no longer a reasonable assumption. Instead, those investments should be reviewed by the Commission under the high CO₂ scenario.

In its Reply Comments, PacifiCorp seeks to assuage the Commission that, "given the timeline set forth in the Presidential Memorandum, the Company will have multiple opportunities to re-evaluate its CO₂ price assumptions before and

after the issuance of proposed regulations in June 2014.” (PacifiCorp Reply Comments, Page 19). Prudent utility business practice will always include the re-evaluation of its CO₂ price assumptions. But the Company has chosen not to re-evaluate its CO₂ price assumptions in this IRP before investing hundreds of millions of dollars at Jim Bridger and Hunter.

IRP Coal Upgrade Analysis Must Be Enhanced

While much can be gleaned about PacifiCorp’s appropriate resource strategy by reviewing the reasonableness of the action plan under the high CO₂ assumption, there remain considerable limitations in the provided analysis. RNP strongly supports Staff’s opening comments which list the ways in which PacifiCorp’s IRP coal upgrade analysis can be expanded.

In particular, RNP agrees that the reasonableness of coal plant investments should not be determined through an IRP Update. The expected investments are too expensive and too important to future resource strategy to be reviewed within the limited process associated with an IRP Update. Instead, coal plants with required upgrades over the next five years need to be considered collectively and immediately. In addition to the analysis provided in Confidential Volume III, future IRP analysis should include trigger analyses demonstrating at what gas price and CO₂ cost investments at legacy coal units have no system costs or benefits. If System Optimizer is unable to perform this task efficiently, then other analytic tools are required.

RNP believes that the best way to incorporate this analysis is to extend the IRP process. PacifiCorp has argued that the IRP does not provide the necessary process due to the difference in timing between the IRP's two-year cycle and the schedule associated with Company negotiations and investment decisions. If the Commission agrees with the Company that Staff's proposed supplementary analysis cannot be included in this IRP, then RNP supports an additional investigative docket. Thoroughly reviewing coal investments before those investments greatly increase the facilities' expected life is in the best interest of ratepayers, shareholders, and society itself.

Future IRPs Must Better Test for New Renewable Resources

Subsequent IRPs, IRP Updates, and the investigative docket should include updated capacity factors and capacity values for renewable resources. As described in RNP's Opening Comments, wind turbine technology advancements have materially improved wind resources' capacity factors in equivalent wind regimes. In PacifiCorp's reply comments, the Company defends its use of a 29% western wind capacity factor as "based on historical operating data." (PacifiCorp Reply Comments page 74). Historical operating data cannot capture advancements associated with new technology. Indeed, PacifiCorp "acknowledges that future IRPs should continue to take into consideration the energy capture capability associated with then-current wind turbine generator designs; taking into consideration the applicability of a design relative to local and wind regimes." (PacifiCorp Reply Comments, Page 76). If the Company intends to follow this recommendation, then it must break from

using historical wind resources as a measurement for future western wind capacity factor and procure modern data to support its assumptions regarding new western wind resources.

Subsequent studies must also update renewable resources' capacity value. In our Opening Comments, RNP argued that inaccurate capacity value assumptions contributed to the decreased selection of renewable resources. RNP provided evidence that the capacity value methodology used by the Company excluded the majority of the reliability benefits provided by renewable resources. To correct for this error, RNP recommended to the Commission that the Company be directed to use the effective load carrying capability (ELCC) methodology in step with best national practices. RNP strongly supports Staff's recommendation to compare the capacity contributions using peak load carrying capability, and the more accurate metric of effective load carrying capability. RNP also points out that the Utah Public Service Commission has ordered the Company to perform a sensitivity case using capacity values for solar and wind resources based on the ELCC analysis consistent with those determined in an August 16, 2013 Order from that Commission. In that Order, the Utah Commission found it reasonable for the utility to assume wind resources had a 20.5 percent capacity value and solar resources had a 64 and 84 percent capacity value for fixed and tracking systems respectively (compared to the 4.2 percent value assumed for wind and 13.6 percent value assumed for solar in the Company IRP). (Utah Public Service Commission, Order on Phase II Issues, Docket No. 12-035-100, Page 30 (August 16, 2013)).

Lastly, in an effort to streamline future IRP studies, and to avoid misunderstanding regarding the need for additional analysis, RNP proposes that PacifiCorp perform a trigger point analysis for new renewable resources in its next IRP. The Company committed to providing a renewable resource trigger point analysis as a part of this IRP, but ultimately abandoned that effort. RNP proposes that the next IRP include trigger point analyses that identify the levelized cost of energy for wind and solar resources required to promote their selection in System Optimizer. The analysis should be performed using capacity values associated with the effective load carrying capability methodology, and also with the Company's peak load capacity contribution methodology. The analysis should be performed for three gas scenarios, all with reference CO₂ forecasts. Additional stochastic analysis is not required for this particular trigger point analysis. RNP encourages the Commission to consider directing the Company to perform this important analysis or to suggest that the Company collaborate with RNP to determine the requested results.

Conclusion

PacifiCorp's investments in existing coal plants are risky for ratepayers, and the reasonableness of those investments must be reviewed in light of upcoming CO₂ regulation. RNP recommends that the Commission not acknowledge the proposed pollution control investments at Hunter and Bridger. Additional coal units require thorough analysis that cannot wait until PacifiCorp's next IRP. Those investments

should be incorporated by extending this process, or as part of an additional investigative docket. In the following IRP, RNP recommends that PacifiCorp perform the necessary renewable resource trigger point analysis. RNP looks forward to participating in further review of the Company's proposed investments.

Respectfully submitted this 10th day of January,
2014.

RENEWABLE NORTHWEST PROJECT



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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I served the FINAL COMMENTS OF RENEWABLE NORTHWEST PROJECT upon the following parties on the service list for LC 57, via electronic mail, on January 10, 2014:

RENEWABLE NORTHWEST PROJECT

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