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March 11, 2014

Public Utility Commission of Oregon
Filing Center
3930 Fairview Industrial Dr. SE
Salem, OR 97302-1166

Re: In the Matter of PACIFICORP, dba PACIFIC POWER, 2013 Integrated Resource Plan
Docket LC 57 – PROPOSED ORDER

Dear Filing Center:

Attached is a Proposed Order regarding Docket LC 57 submitted by Stephanie Andrus
for Jason W. Jones.

Sincerely,

Neoma Lane
Legal Secretary
Business Activities Section

NAL:nal
Attachment
cc: Service List

CERTIFICATE OF SERVICE

I certify that on March 11, 2014, I served the foregoing Proposed Order upon the parties in this proceeding by electronic mail only, as all parties waived paper service.

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Neoma Lane
Legal Secretary
Department of Justice / General Counsel
Business Activities Section

ORDER NO.

ENTERED

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

LC 57

In the Matter of

PACIFICORP, dba PACIFIC POWER

2013 Integrated Resource Plan.

ORDER

DISPOSITION: PLAN ACKNOWLEDGED IN PART; PLAN
ACKNOWLEDGED WITH MODIFICATIONS IN PART; PLAN NOT
ACKNOWLEDGED IN PART; REVISED AND NEW ACTION ITEMS
REQUIRED.

I. INTRODUCTION

PacifiCorp is a public utility in Oregon that is subject to the jurisdiction of the Public Utility Commission of Oregon (Commission) and the Commission's integrated resource planning requirements. PacifiCorp's 2011 Revised Integrated Resource Plan was acknowledged with exceptions and guidance for the next Integrated Resource Plan (IRP) in Order No. 12-082, which was entered on March 9, 2012. PacifiCorp now seeks acknowledgment of its 2013 IRP.

The Commission requires that regulated energy utilities prepare and file integrated resource plans within two years of acknowledgment of the energy utility's last plan. The Commission requires that the energy utility: (1) evaluate resources on a consistent and comparable basis; (2) consider risk and uncertainty; (3) make the primary goal of the process selecting a portfolio of resources with the best combination of expected costs and associated risks and uncertainties for the utility and its customers; and (4) create an action plan that is consistent with the long-range public interest as expressed in Oregon and federal energy policies.

The Commission acknowledges integrated resource plan action items that satisfy the procedural and substantive requirements as outlined in Order No. 07-002 and that are deemed reasonable at the time of acknowledgment.¹ Acknowledgment is based upon the information presented to the Commission at the time of acknowledgment and it does not constitute a determination of future rate-making treatment.

¹ See Order No. 07-002, as corrected by Order No. 07-047 (Docket UM 1056).

In this order, we will first discuss the parties' positions and our resolution of the main issues raised in PacifiCorp's 2013 IRP (2013 IRP), which are: a new process outside of the IRP process for considering environmental investments in coal-fired generating units, environmental investments in coal-fired generating units, demand-side management (DSM), renewable energy, transmission, and modeling assumptions and methods. Finally, we will conclude with a discussion of the other issues in the 2013 IRP.

II. DISCUSSION AND RESOLUTION

ISSUES RELATED TO COAL INVESTMENTS

1. Parties' comments on a separate coal analysis

PacifiCorp proposes a separate coal analysis docket, but states that additional work is required before a specific modeling framework can be established. PacifiCorp claims that the separate docket would not seek pre-approval, but rather operate akin to the current IRP process for coal analysis. If the Commission adopts PacifiCorp's proposal, it will schedule a series of workshops to establish the analytical framework, type of information it will provide and procedural schedule to allow for Commission acknowledgement findings. Finally, PacifiCorp would propose to bring the Cholla 4 investment decision to the Commission in the newly created separate coal analysis docket in 2014.

The Citizens' Utility Board of Oregon (CUB) proposes a general analytical framework for coal plant analysis going forward, but does not explicitly comment on PacifiCorp's proposed separate coal analysis docket. The Industrial Customers of the Northwest Utilities (ICNU) is opposed to the Commission using a separate coal analysis docket to acknowledge coal plant investment decisions, but agrees that the Commission could direct PacifiCorp to continue to provide information, analysis, and comments through a separate docket. Furthermore, ICNU contends that if the Commission is considering a new process it should open a generic proceeding to revisit the IRP guidelines and that it would be inappropriate to make a radical transformation in how IRPs are reviewed in the final stages of comments in this proceeding.

Renewable Northwest Project (RNP) is supportive of a separate coal analysis docket if additional analysis cannot be included in this IRP. RNP prefers to extend the IRP process, but if it is not extended RNP supports a separate coal analysis docket. The Northwest Energy Coalition (NVEC) is skeptical that a separate docket would result in adequate analysis, but notes that a separate coal analysis docket would be worth exploring. If a separate coal analysis docket is pursued, NVEC requests that PacifiCorp be required to provide an updated screening tool and timelines and key decision points for expected alternative options. The Sierra Club conditionally supports a separate coal investment docket with many caveats, including the attributes and requirements that the

analysis and process should contain. Sierra Club further argues that there are issues with the sharing and use of confidential information and suggests several proposals on the treatment of confidential information, including confidentiality agreements that would allow for the continued possession of workpapers past the closure of the relevant rate case.

Staff initially supported a separate coal analysis docket for situations where the timing of investments does not align with the standard IRP schedule. However, based upon further discussion with PacifiCorp and the timing of pollution control requirements in the recent Wyoming Federal Implementation Plan (FIP), Staff no longer has timing concerns related to coal investments, except for Cholla 4.

Staff contends that there is value in viewing individual resource decisions in the larger context of a portfolio of resources. As a result, Staff believes it is most appropriate to review all coal investment decisions within the parameters of the IRP process and not through a separate coal analysis docket.

Because of the timing of Cholla 4, Staff continues to support an alternative proceeding to review that investment decision prior to the 2015 IRP. Because Staff would limit the alternative proceeding to Cholla 4, Staff proposes that PacifiCorp bring that investment decision to the Commission through a Special IRP Update.

Commission resolution of separate coal analysis docket

We appreciate PacifiCorp's proposal and the parties' interest in a separate coal analysis docket. We also appreciate the concerns some parties have raised about the separate process. As this IRP process has developed, it has become clear to us that the only coal investment decision that cannot be processed in this regular IRP proceeding is Cholla 4. We continue to believe that the IRP process is the appropriate forum for a robust and timely review of coal investment decisions. In section 3 of this Order, we discuss our expectations and plans to create a more robust and timely coal analysis in future IRPs. This is based upon our position that the appropriate remedy for insufficient coal analysis in this proceeding is new expectations and requirements for future IRPs, not the creation of separate proceedings outside of the IRP process.

We do agree that Cholla 4 creates a timing issue and should be considered outside of the normal IRP process. While we are inclined to avoid separate proceedings outside of the IRP process, we make an exception in this instance and, as discussed in section 4d below, require PacifiCorp to file a Special 2013 IRP Update on Cholla 4. We note that this special update on Cholla 4 is separate and distinct from the IRP Update.

2. Parties' comments related to the timeliness of requesting acknowledgement of coal investments

The Sierra Club argues that projects that are in active construction should be considered in a rate recovery proceeding not in a planning resource proceeding. Staff contends that an integrated resource process must include a robust analysis in a timely fashion. Staff generally states that PacifiCorp should bring investment decisions to the Commission with sufficient time for stakeholders to evaluate the results prior to key investments being made that act to limit viable options going forward. In limited circumstances where the timing of the investments does not fit within the IRP process, PacifiCorp's IRP should explain why the construction was begun without review in an IRP, including the analysis and consideration of available alternatives that was performed before construction began.

ICNU notes that the goal of an IRP is to seek acknowledgment of a utility's plans to meet expected loads based upon its expected costs, risks and uncertainties, but not to acknowledge what a utility is already constructing. On that basis, ICNU recommends that the Commission not acknowledge the Sigurd to Red Butte transmission line.

Commission resolution of timeliness concerns related to acknowledgement of coal investments

The integrated resource planning proceedings are, as its name suggests, proceedings about resource planning. We share Staff's and the parties' concerns that coal investment decisions are not being brought forth in a timely manner for planning purposes and acknowledgment. In section 3 of this Order, we establish a process for creating a more robust and timely analysis of coal investment decisions. We state that we will generally require PacifiCorp to bring us investment decisions and request acknowledgment before the investment decision is made and substantially completed. In addition, we add the following action items for future IRPs:

- PacifiCorp will provide documentation of timelines and key decision points for expected pollution control options.
- PacifiCorp will provide tables detailing major planned expenditures with estimated costs in each year for each plant, under different modeled scenarios.
- Beginning in the third quarter of 2014, PacifiCorp will appear before the Commission and make quarterly updates on coal plan compliance requirements, legal proceedings, pollution control investments, and other major capital expenditures on its coal plants.

3. Parties' comments on PacifiCorp's coal analysis

NWEC argues that PacifiCorp continues to underestimate the costs and risks of continued reliance on coal generation and contends that the 2013 IRP fails to comply with IRP guidelines 4g and 8a. NWEC further argues that Staff's proposed analysis combined with sufficiently stringent environmental compliance and carbon price scenarios would likely capture the range of options necessary for an adequate analysis of coal investments. Finally, NWEC states its frustration with the system optimizer model, noting it had been pleased with the screening tool provided in conjunction with the 2011 IRP.

CUB expressed concerns that the breadth of possibilities evaluated was too narrow and more possibilities should have been modeled. CUB also expressed concerns regarding the mismatch of useful lives of pollution upgrades and the plants on which those upgrades would be installed. In addition, CUB notes the threshold it believes the Environmental Protection Agency (EPA) uses to evaluate the cost-effectiveness of new pollution control requirements and argues that PacifiCorp only considers scenarios that do not result in the finding a scenario that is both plausible and low cost. As a remedy, CUB suggests that PacifiCorp should investigate whether or not there is also a scenario that is least cost by looking at the low end of the range of cost-effectiveness and the high end of the remaining life of the plant. CUB contends that this scenario could then be discussed with the EPA. In its final comments, CUB provides a proposed analytic framework for coal analysis going forward. Finally, in supplemental comments, CUB requests that the Commission require PacifiCorp to update its original and supplemental LC 57 filings to include an analysis of both Wyodak and Dave Johnston because Wyodak requires action and Dave Johnston requires potential action by 2019.

RNP argues that there continue to be considerable limitations on the coal analysis PacifiCorp provided in this IRP. RNP supports Staff's efforts to expand the coal analysis and argues that coal plants with required upgrades over the next five years need to be considered collectively and immediately. RNP also argues that future IRP analysis should include trigger analysis and, if necessary, tools other than the System Optimizer should be employed.

PacifiCorp asserts that completing preliminary analysis of prospective environmental investments must be based on reasonably likely compliance alternatives that are consistent with current rules. PacifiCorp argues that providing premature analysis does not provide meaningful information to support a specific resource action for which it would seek acknowledgement. It indicates final EPA actions that are new and binding will be thoroughly reviewed and analyzed in future filings. In its final comments in discussing a separate coal analysis proceeding, PacifiCorp recognizes that parties desire it to consider more flexible compliance alternatives and transmission implications for

specific investments decisions as well as more transparency on model inputs/outputs and scenario definition.

Staff proposed four specific types of analysis that it would like to see going forward, which are described as an inter-temporal analysis, fleet analysis, technology tradeoff analysis, and impact of alternatives on transmission. Staff included the details of these types of analysis in Staff's recommended new action item 8f in Appendix B to its final comments.

Although PacifiCorp indicated that a separate coal analysis docket would allow parties to develop and explore parameters for coal analysis, Staff contends that the development of these parameters is important regardless of whether or not there is a separate coal analysis docket.

Commission resolution of issues related to PacifiCorp's coal analysis

We appreciate the additional coal analysis that PacifiCorp provided in this proceeding and we also appreciate PacifiCorp's willingness to establish a separate proceeding that would develop and explore new parameters for coal analysis. We also agree with the parties and Staff that, on a going forward basis, improvements should and must be made to PacifiCorp's coal analysis. As previously stated and except for Cholla 4, we do not see timing concerns with including improved coal analysis in future IRPs versus a separate proceeding. As a result, we conclude that the existing IRP process is the appropriate place to develop and explore future coal analysis.

At this stage, we conclude it is premature to detail specific coal analysis that will be required in the future, but instead require several workshops, at least one of which we will attend, to be held within the next six months to determine the parameters of future coal analysis in future IRPs. While we do not prescribe the required coal analysis in this Order, we note that we appreciate Staff's proposed analysis in Staff recommended new action item 8f in Appendix B of its final comments and believe that - instead of beginning the workshops from scratch - stakeholders, PacifiCorp and Staff should employ Staff's proposed analysis as a straw proposal entering into the workshops to follow this Order. After the workshops are employed to refine the specific coal analysis that will be required in the future, Staff will bring its final recommendations to us in a public meeting at which time PacifiCorp and the stakeholders will have an opportunity to comment on the final proposed coal analysis before we adopted the requirements for future IRPs.

4. Environmental investments in coal-fired generating units

A. The 2013 IRP proposes the following actions for Naughton Unit 3 (Action Item 8a).

- Continue permitting and development efforts in support of the Naughton Unit 3 natural gas conversion project. The permit application requesting

operation on coal through year-end 2017 is currently under review by the Wyoming Department of Environmental Quality, Air Quality Division.

- Issue a request for proposal to procure gas transportation for the Naughton plant as required to support compliance with the conversion date that will be established during the permitting process.
- Issue an RFP for engineering, procurement, and construction of the Naughton Unit 3 natural gas retrofit as required to support compliance with the conversion date that will be established during the permitting process.

Parties' positions

The Sierra Club does not object to acknowledgment of action item 8a and Renewable Northwest Project recommends acknowledgment. Staff also recommends acknowledging action item 8a, but proposes an addition to the action item that would require PacifiCorp to analyze Naughton 3 alternatives in the 2015 IRP and propose an appropriate action item. PacifiCorp does not support Staff's addition to the action item, but states that it will update the Commission and participants on the status of the Naughton Unit 3 gas conversion project in the 2015 IRP.

Staff responded that it agrees that gas conversion in 2018 would likely be more cost effective than gas conversion in 2015, but contends that does not mean that there are no other viable options and the Company should reconsider the option of a shutdown with updated gas, load, carbon, and energy price expectations. Staff notes that the models show that Naughton Unit 3 is minimally dispatched where it is assumed to convert to gas in 2015 and that changes to load forecasts and gas prices between the time the 2013 and 2015 IRP are developed may impact the economics of the proposed gas conversion.

Commission decision on action item 8a

We acknowledge action item 8a, with modification. While we agree that PacifiCorp should continue permitting and seeking requests for proposals for the gas conversion in 2018, we also agree with Staff that it is appropriate to reevaluate the gas conversion versus shutdown decision in the 2015 IRP, when we have more recent load forecasts and gas prices. We modify action item 8a by adding the following action item:

- Evaluate the Naughton Unit 3 investment decision in the 2015 IRP with updated analysis, including the option of shutdown versus conversion.

B. The 2013 IRP proposes the following actions for Hunter Unit 1 (Action Item 8b).

- Complete installation of the baghouse conversion and low NOX burner compliance projects at Hunter Unit 1 as required by the end of 2014.

Parties' positions

The Sierra Club opposes acknowledgment of the 8b action item for many reasons. First, it argues that the baghouse and low NOX burner (LNB) are not yet required because the EPA has not made a final Best Available Retrofit Technology (BART) determination for Utah. Second, PacifiCorp's 2012 investment decision was premature and did not take into account future expenses, including a Selective Catalytic Reduction (SCR) expense. Third, the IRP's modeling results do not return robust results to support this action item. Finally, it asserts that acknowledgment is akin to a finding of prudent planning and PacifiCorp has not shown this was prudent planning. RNP also does not support acknowledgement because it believes that investing in coal-fired generating units is unreasonable under scenarios with low natural gas costs or stringent CO₂ regulation, or both, in addition to the lack of analysis regarding alternative compliance opportunities. CUB argues that PacifiCorp's early retirement analysis is flawed and, without a better analysis, it is unclear whether phasing out the plants would be cost effective. CUB concludes that this flawed analysis means that PacifiCorp did not meet its burden of proof and that there is insufficient evidence upon which to base an acknowledgment. Staff's final comments argued that Hunter 1 was not mentioned in the 2011 IRP and now PacifiCorp is asking the Commission to acknowledge an investment decision that is already underway and substantially complete.

In relation to Sierra Club's comments, PacifiCorp states that the Utah DEQ confirmed in a letter that the requirements of the Hunter 1 baghouse and LNB are enforceable under Utah law, even if the EPA has not made its determination. PacifiCorp responds to RNP by arguing that the Hunter 1 financial analysis included in Confidential Volume III of the 2013 IRP shows that the baghouse and LNB are the lowest cost alternative when high CO₂ prices starting in 2018 are assumed. PacifiCorp further argues that its analysis supports investment in the baghouse and LNB as the lowest cost alternative, even when high CO₂ prices are assumed and even when future SCR costs are accelerated to 2018. PacifiCorp responds to Staff's concerns by asserting that the investments are not yet in service, the planned service date is within the planning period for the IRP, and that nothing in the IRP guidelines prohibits acknowledgment of a project that is substantially complete.

The final Staff report notes that the baghouse project is approximately 50 percent complete and the LNB is approximately 20 percent complete. The Staff report further

notes that PacifiCorp would have difficulty in reversing its investment decision. Staff continues to argue that PacifiCorp should have included this action item in the 2011 IRP.

Commission decision on action item 8b

We decline to acknowledge action item 8b because PacifiCorp failed to bring us Hunter 1 investments in its 2011 IRP and now the investment decisions are substantially complete. As we discuss in this Order, we will require workshops to establish parameters and requirements for future coal analysis and will expect PacifiCorp to provide adequate analysis when it seeks cost recovery of these projects.

We agree with Staff that energy utilities that desire acknowledgment of an investment decision should request acknowledgment before the investment decision is made and before the required project is substantially completed. PacifiCorp has put us in a difficult position by requesting we acknowledge something for the first time that is already substantially complete and are not willing to grant acknowledgement of an item that should have been presented in the 2011 IRP.

C. The 2013 IRP proposes the following actions for Jim Bridger Units 3 and 4 (Action Item 8c).

- Complete installation of selective catalytic reduction (SCR) compliance projects at Jim Bridger Unit 3 and Jim Bridger Unit 4 as required by the end of 2015 and 2016, respectively.

Parties' positions

The Sierra Club does not support acknowledgment of action item 8c because the projects are already under construction and notes that it participated in two dockets in other states and it did not find the analysis satisfactory at that time. Sierra Club also argues there is evidence that PacifiCorp could realize transmission cost savings if the plants were closed. Sierra Club is concerned that PacifiCorp's decision is related to its requirement to collect sufficient remediation funds to close Bridger Surface Mine, which it supported by claiming that PacifiCorp's analysis of the retirement of these two plants assumes an immediate closure of the surface mine. This shifts the remediation costs into the near future instead of the assumed plant closure date, which allows PacifiCorp to realize a higher net present value. Finally, Sierra Club also argues that the base carbon price forecast was too small to capture the risks of impending federal regulations.

RNP does not support acknowledgment because it does not believe investing in coal units is reasonable under scenarios with low natural gas costs or stringent CO₂ regulation, or both, and the lack of analysis regarding alternative compliance proposals. The Northwest Energy Coalition (NVEC) does not support acknowledgment of any action items related

to coal investments because it argues PacifiCorp underestimates the cost of risk of continued reliance on coal and fails to analyze several coal units that should have been evaluated in the 2013 IRP, and that this IRP fails to comply with guidelines 4g and 8a. CUB argues that PacifiCorp's early retirement analysis is flawed and, without a better analysis, it is unclear whether phasing out the plants would be cost effective. CUB concludes that this flawed analysis means that PacifiCorp did not meet its burden of proof and that there is insufficient evidence upon which to base an acknowledgment.

PacifiCorp argues that its analysis was comprehensive and covered viable compliance alternatives across a range of natural gas and CO₂ assumptions. PacifiCorp notes that it performed phase-out scenarios assuming operation without SCR investment through 2020 and 2021 and also, at Staff's request, through 2022 and 2023. Further, PacifiCorp asserts it analyzed a wide range of CO₂ price scenarios in the portfolio development process, which included costs to comply with prospective future regulations of various types. In response to RNP, PacifiCorp argues that its analysis supports the SCR investments as the lowest cost alternative even when high CO₂ prices are paired with either base case or high natural gas prices.

In response to Sierra Club's transmission savings argument, PacifiCorp argues that the Windstar to Populus Energy Gateway transmission decision was independent of these decisions and that there are other benefits to the transmission project, such as reliability, increased access to wind and other resources and efficient use of the system. Related to Sierra Club's remediation cost recovery, PacifiCorp contends that each compliance alternative is uniquely developed and that the assumed reclamation costs are consistent with the expected changes if the SCRs are not installed.

Staff recommends acknowledgment of action item 8c. While Staff believes that there are deficiencies in PacifiCorp's analysis, Staff also recognizes the importance of the Bridger facility to PacifiCorp's system. Staff further notes that Bridger provides important ancillary services to the system, including voltage and frequency regulation and response as well as energy imbalance correction and operating reserves to the balancing authorities. As discussed in other sections of this Order, Staff recommends process and analytical requirements in the future that will provide a better analysis than performed in this instance.

Commission decision on action item 8c

We acknowledge action item 8c. In doing so, we note that other parts of this Order will require better alternative compliance analysis and more process engagement from PacifiCorp. We agree with the opposing parties that the analysis could and should have been better for Jim Bridger Units 3 and 4. However, we also agree with Staff that, considering the information we have at the time of this acknowledgment, we find that a better alternative compliance or fleet analysis is more likely to affect other plants than

Jim Bridger Units 3 and 4. As a result of the information we have at this time, we acknowledge action item 8c, but expect future analysis to include appropriate fleet and alternative compliance analysis.

D. The 2013 IRP proposes the following actions for Cholla Unit 4 (Action Item 8d).

- Continue to evaluate alternative compliance strategies that will meet Regional Haze compliance obligations, related to the U.S. Environmental Protection Agency's Federal Implementation Plan requirements to install SCR equipment at Cholla Unit 4. Provide an update of the Cholla Unit 4 analysis regarding compliance alternatives in a Special 2013 IRP Update.

Parties' positions

The Sierra Club argues that PacifiCorp's analysis demonstrates that Cholla 4 is non-economic by 2025 and in the base scenario it is non-economic by 2017 in a low gas/high CO₂ scenario. As a result, Sierra Club contends it would be unlikely to pay for its SCR over a reasonable amortization period. Because Sierra Club believes a rigorous analysis would not support the SCR retrofit, it recommends that the Commission establish a date within the next four months for PacifiCorp to file more analysis.

Staff argues that Cholla 4 is one of the most expensive of PacifiCorp's coal plants and that in four of the core cases modeled for this IRP and in one sensitivity case, the model demonstrates that Cholla 4 should shutdown in 2017. Staff also stated fundamental concerns that the timing of the SCR investment and the fact that no analysis on Cholla 4 was included in this IRP made it impossible to analyze the investment. Because of these issues, Staff recommended modifications to action item 8d.

PacifiCorp indicates that it will provide an update on Cholla 4 in the 2013 IRP Update and recommends acknowledgment of action item 8d.

Commission decision on action item 8d

We do not believe that the IRP Update is the appropriate forum for considerations of investment decisions such as Cholla 4 and we expect PacifiCorp to bring us these decisions in a timely manner in the future. However, because of the timing of this investment decision it is of the utmost importance that we review it sooner than the next IRP. With no ideal options to choose from, we acknowledge action item 8d, with modifications. These modifications establish a Special IRP Update, separate and distinct from the IRP Update, which will be filed no later than six months following the final order in this proceeding. The modified action item 8d is:

- Continue to evaluate alternative compliance strategies that will meet Regional Haze compliance obligations, related to the U.S. Environmental Protection Agency's Federal Implementation Plan requirements to install SCR equipment at Cholla Unit 4. Provide analysis of the Cholla Unit 4 compliance alternatives in a Special IRP Update within six months of the final order in LC 57 and well enough in advance to allow for all viable pollution control alternatives to be adequately considered and pursued.

E. Staff's proposed actions for Craig and Hayden (Action Item 8e).

- Within three months of the order in this proceeding, PacifiCorp will schedule and hold a confidential technical workshop to review existing analysis on planned Craig and Hayden environmental investments.

SCR technology is planned to be installed at Craig and Hayden between 2015 and 2017, but the 2013 IRP does not include an action items related to these investments. The Sierra Club argues that the fact that these units are operated by other parties does not relieve PacifiCorp of its responsibility to ensure economic usefulness and that PacifiCorp should be required to immediately produce an economic analysis of them. Staff noted that the Commission has ruled that a minority ownership in a plant still requires that the utility analyze the possible costs of environmental regulations.

PacifiCorp indicated a willingness to review with the Commission and participants the existing analysis on the planned Craig and Hayden environmental investments, through a technical workshop to be held in the next three months. Staff is amenable to PacifiCorp's proposal and, therefore, proposes the additional of action item 8f.

Commission decision on proposed action item 8e

We adopt Staff's proposed action item 8e. Although we will not know the quality of the existing analysis of Craig and Hayden, we agree it is important to review and discuss it soon. Once the parties and the Commission are able to review and discuss the analysis, we will have a better idea of the appropriate treatment of those environmental investments.

F. The Staff proposed actions on Wyodak (Action Item 8f).

- For the 2015 IRP the following inter-temporal and fleet trade-off analysis related to the SCR requirement on Wyodak will be used as a frame of reference:

<u>Inter-temporal Scenarios</u>				
	<u>EPA requirement</u>	<u>Time 1</u>	<u>Time 2</u>	<u>Time 3</u>
<u>Wyodak Plant Action</u>	<u>SCR Retrofit</u>	<u>SNCR Retrofit / early retirement</u>	<u>Gas Conversion</u>	<u>Retirement</u>
<u>Timeline</u>	<u>2019</u>	<u>2019 / 2030</u>	<u>2022</u>	<u>2027</u>

<u>Fleet Trade-Off Scenarios</u>					
	<u>EPA requirement</u>	<u>Fleet 1</u>	<u>Fleet 2</u>	<u>Fleet 3</u>	<u>Fleet 4</u>
<u>Wyodak</u>	<u>SCR Retrofit in 2019</u>	<u>No Action</u>	<u>No Action</u>	<u>No Action</u>	<u>No Action</u>
<u>Dave Johnston Units 1 & 2</u>	<u>No Action</u>	<u>Retirement in 2027</u>	<u>No Action</u>	<u>Gas Conversion in 2022</u>	<u>No Action</u>
<u>Dave Johnston Unit 4</u>	<u>No Action</u>	<u>No Action</u>	<u>Retirement in 2027</u>	<u>No Action</u>	<u>Gas Conversion in 2022</u>

- The timing and options will be finalized with stakeholders at the workshops for the 2015 IRP.
- This analysis will include considerations for the necessity of Gateway West with reduced capacity in eastern Wyoming.
- Several workshops will be held, at least one with the Commissioners, to refine the list of specific fleet analysis to be performed in the IRP. Staff will bring its final recommendations to the Commission at a public meeting and PacifiCorp and stakeholders will have an opportunity to comment on the final recommendations at that time.

Parties' positions

In supplemental final comments, both CUB and the Sierra Club noted that the final Federal Implementation Plan (FIP) in Wyoming requires the SCR equipment to be installed by 2019. PacifiCorp does not agree that this analysis should be provided in a separate coal proceeding, but proposes that it be included in the 2015 IRP. Staff supports inclusion of the Wyodak analysis in the 2015 IRP, but clarifies that there should be some guidance around the type of analysis required. As the second action item bullet reflects, these parameters for analysis will be discussed in future workshops over the next six months to determine the requirements of analysis in the 2015 IRP, including the analysis for Wyodak.

Commission decision on proposed 8f action items

We agree that the correct approach for the investment in a SCR for Wyodak by 2019 is to include a robust analysis in the 2015 IRP rather than in a separate coal investment proceeding. We also agree that it is important to establish expectations for the type of analysis we require in the 2015 IRP. Consistent with our decision on the coal analysis expected in the 2015 IRP, we conclude that Staff's suggested frame of reference is an appropriate starting point for stakeholders and the Commission to consider in the workshops over the next six months. We adopt the proposed 8e action items with the caveat that Staff's proposed analysis will be the starting point for discussions about analyzing the SCR investment at Wyodak, but that the workshops in the next six months may modify Staff's proposed framework.

G. Staff's proposed actions on carbon risk (Action Item 8g).

RNP states that PacifiCorp's base case CO₂ cost assumptions did not contemplate the federal CO₂ regulations articulated in President Obama's June 2013 Memorandum and that the resulting 111(d) rulemaking process merits a change in PacifiCorp's CO₂ regulation forecast. RNP asserts that the range of carbon forecasts is reasonable, but that the base case forecast used to justify action items 8b and 8c are no longer reasonable assumptions and that those investments should instead be reviewed under the high CO₂ scenario.

The Oregon Department of Energy (ODOE) argues that this IRP does not comply with IRP guideline 8a and Order No. 08-339. ODOE recommends that PacifiCorp be instructed to analyze the Oregon 2015 CO₂ reduction goal applied to the United States or the Cancun Agreement, whichever is more restrictive. In addition, ODOE asserts that action items that might be subject to additional risk if a higher range of possible carbon policies are used should be carefully scrutinized. Finally, ODOE requests that PacifiCorp

be instructed that “credible proposals by governing entities” include adopted plans and actions by other democratically-elected sovereign states.

The Natural Resources Defense Council (NRDC) argues that it does not appear PacifiCorp revised its expectations regarding federal CO₂ regulation despite the June 2013 Presidential Memorandum. As a result, NRDC asserts that PacifiCorp’s analysis and conclusion are flawed and the proposed investments may result in significant future stranded costs.

PacifiCorp responds by arguing that despite the 2013 Presidential Memorandum there remains tremendous uncertainty about the costs of future regulations of CO₂ emissions. PacifiCorp contends that without more information from the EPA and individual states, there currently are no means to develop a specific CO₂ price assumption to reflect potential regulation. For these reasons, PacifiCorp asserts its CO₂ assumptions remain reasonable and states that it will reevaluate these assumptions in the 2015 IRP.

Staff states that it recognizes that PacifiCorp’s IRP was developed and submitted prior to the 2013 Presidential Memorandum. While PacifiCorp’s IRP contains carbon prices that begin later and are lower than some estimates, Staff concludes that the IRP analysis and results are not fundamentally flawed due to the range of carbon prices used and the way the prices were applied to the analysis.

Staff identified three potential forms that 111(d) carbon regulation could take, such as state-by-state compliance requirements with and without regional cooperation and regional and national targets. With changing requirements, including those that the EPA is set to issue in June 2014, PacifiCorp should work with Staff and stakeholders to discuss and review plans for future analysis related to 111(d) regulations. Staff recommends a new action item to provide a process to review and discuss 111(d) requirements.

Commission resolution of comments on carbon risk

We understand that the 2013 Presidential Memorandum was issued after PacifiCorp developed and submitted its IRP. We also agree that, at this time, carbon price is an appropriate approach. We agree with Staff that recent developments demand more engagement on the approach for carbon risk and, therefore, adopt a new action item under 8g, which is:

- Prior to the end of 2014, PacifiCorp will work with IRP participants to explore options for how it plans to model and perform analysis in the 2015 IRP related to what is known about the requirements of 111(d).

H. Staff’s proposed actions on the screening tool (Action Item 8h).

Parties' comments

Staff noted concerns related to the transparency and accessibility of the System Optimizer. Staff appreciates PacifiCorp's statement that they are working towards improving the transparency of the inputs and outputs of the System Optimizer and believes it will be an improvement. In addition, Staff recommends a new action item 8h that will require PacifiCorp to provide an updated version of the screening tool, similar to the tool provided in the 2011 IRP Update. NWECA also commented that it was pleased with the 2011 screening tool and would like to see an updated screening tool provided in the future. Sierra Club recognizes that the screening tool is not perfect, but it is a transparent mechanism of that assists in review of particular investment strategies.

Commission resolution of new action item 8h related to the screening tool

We appreciate PacifiCorp's continuing efforts to improve the transparency of the inputs and outputs of the System Optimizer and look forward to improved transparency. We conclude that the past screening tool was useful and that it would be useful to have an updated screening tool. We adopt Staff proposed new action item 8g, which is:

- As part of the 2015, 2017, and 2019 IRP, PacifiCorp will provide an updated version of the screening tool spreadsheet model that was provided to participants in the 2011 IRP Update.

DEMAND SIDE MANAGEMENT1. Class 2 Demand Side Management (DSM)

Class 2 DSM includes typical types of energy efficiency. Action item 7a relates to the acquisition of 1,425 - 1,876 GWh of cost-effective Class 2 DSM by the end of 2015. By the end of 2017, the action item includes the acquisition of 2,034 - 3,180 of GWh cost-effective Class 2 DSM. Action item 7a includes specific actions wherein PacifiCorp plans to achieve those goals.

Parties' comments

CUB argues that the Commission should not acknowledge the DSM section of the IRP. CUB contends that the Energy Trust of Oregon's (ETO) operation of Oregon's DSM programs make Oregon DSM programs more aggressive than other states in which PacifiCorp administers its own programs. CUB believes that PacifiCorp can consider more ETO-comparable programs in other states and improve DSM.

CUB argues that PacifiCorp is proposing action items that may accelerate DSM, but it remains unclear what effects that accelerated DSM would have on the chosen scenario because accelerated DSM is not included in the preferred portfolio. CUB notes that even

PacifiCorp admits that cases EC1-C15 and EG2-C15 yield the highest-ranking risk-adjusted net PVRR, but it is concerned that PacifiCorp did not prioritize these portfolios because of PacifiCorp's claim that it did not have strong evidence to demonstrate the true acquisition costs or that it was unsure of whether or not the revised ramp rate assumptions would be achievable. Finally, CUB noted frustration that PacifiCorp ignores the fact that it has historically achieved more efficiency than forecasted and fails to use that fact to pursue accelerated DSM through this IRP.

NWEC argues that PacifiCorp's targets in states other than Oregon are too low and that the action items for Class 2 DSM should not be acknowledged, or that the targets should be increased prior to acknowledgment. NWEC points to the accelerated DSM case EG2-C15's ranking as the least cost, least risk portfolio and argues that the targets in this action plan should be established at levels included in that case.

NWEC, in addition to Staff and CUB, also stated concerns that Oregon ratepayers are funding higher levels of DSM 2 relative to other states that results in Oregon subsidizing other states by paying for supply-side system costs in equal measure. NWEC offered specific recommendations that the Commission should require the targets of the accelerated DSM case to be achieved, along with reporting and filing requirements regarding DSM targets.

ICNU recommends that in lieu of not acknowledging the current action item targets, the Commission could acknowledge the accelerated DSM case as part of an overall portfolio and require PacifiCorp to report its achieved conservation, as well as discrepancies between its target and actual conservation.

Sierra Club states that PacifiCorp's DSM modeling methodology is innovative and has advantages, but argues that it yields questionable results. Specifically, it notes that the model selects a declining amount of incremental DSM each year from 2013 to 2032. Sierra Club suggests that this does not seem accurate as it believes few states would claim that they are currently at the peak of their energy efficiency potential, which does not suggest that energy efficiency will only decline going forward.

PacifiCorp did not select the accelerated DSM case because it claims that cost assumptions associated with accelerated DSM are uncertain, the ramp rates were untested and Combine Cycle Combustion Turbines were not allowed to be selected in this portfolio. PacifiCorp disagrees that Oregon customers are funding higher levels of energy efficiency than other states and suggests that the participants are ignoring the contributions of load management investments, not considering market transformation savings, and failing to recognize differences in facts such as average energy use per customer and age of homes. In relation to the next potential conservation study, PacifiCorp states that it will review the scope of the study with Staff, but it is too late for input on scope and that the study will be used to develop an implementation plan for

DSM 2 resources selected in the 2015 IRP. PacifiCorp also agreed to provide biannual updates on the status of DSM acquisition goals in 2014 and 2015. PacifiCorp notes that there are many factors that contribute to declining DSM potentials and that the Energy Trust's potential assessments also show declining DSM over time. Nonetheless, PacifiCorp argues that new potential assessments are conducted every two years so the parties should not be overly concerned with declining numbers beyond the action plan period.

Staff states that it is its understanding that PacifiCorp is expected to achieve conservation higher than the low end of the range and potentially up to the high end of the range. Staff states its expectation that PacifiCorp should aggressively pursue accelerated DSM in all states. In addition, Staff stated concerns that PacifiCorp had exhibited a pattern of delay and cancelling DSM programs that were part of previously acknowledged action items. Staff also requests biannual updates on DSM activities outside of Oregon and updates on opportunities negotiated with special contract customers.

Staff's understanding is that the next potential conservation study will be generic and not specific to PacifiCorp's service territory and, therefore, does not believe it will be meaningful. Staff recommends requiring an implementation study be performed for its service territory outside of Oregon to use in the next IRP. For clarity purposes, Staff also recommends that in future IRPs PacifiCorp provide consistent DSM acquisition targets in both Gwh and MW for each year in the planning period, by state. Finally, Staff recommends acknowledgment of action item 7a with four additions to the action plan.

Commission resolution of 7a action items

The Commission appreciates the comments and the concerns of the parties and Staff related to Class 2 DSM. While we acknowledge action item 7a, we also adopt Staff's four additions to the action item. The four additions to the 7a action items are as follows:

- Provide twice yearly updates on the status of DSM IRP acquisition goals to the Commission in 2014 and 2015. Summarize where efforts have deviated from previously agreed upon action items and report on progress toward specific DSM targets for all states other than Oregon. As part of these updates, provide information on progress in exploring energy efficiency opportunities with special contract customers in the next round of contract negotiations.
- Include in the 2014 conservation potential study an Implementation Plan specific to PacifiCorp's service territory for all states other than Oregon that quantifies how much Class 2 DSM programs can be accelerated and how much it will cost to accelerate acquisition.

- In the 2015 IRP and in quarterly updates report back on the status of negotiating energy efficiency projects with special contract customers.
- Going forward, in future IRPs, PacifiCorp will provide yearly Class 1 and Class 2 DSM acquisition targets in both Gwh and MW for each year in the planning period, by state.

2. Class 1 DSM

PacifiCorp defines Class 1 DSM programs as those in which capacity savings occur as a result of active company control or advanced scheduling, such as dispatchable demand response and irrigation programs. The preferred portfolio does not include any Class 1 DSM until 2027, by which time more than 400 MW of gas plant and 650 MW of new wind are added. In this IRP, PacifiCorp has no action items related to Class 1 DSM.

Parties' comments

NWEC and ODOE argue that the Commission should encourage PacifiCorp to increase the amount and sophistication of its overall analysis regarding demand response and other load control tools in the next IRP to evaluate the potential to reduce energy costs over the long-term.

ODOE suggests that PacifiCorp should conduct more detailed analysis of DSM opportunities in future IRPs consistent with IRP guideline 7. ODOE notes that PacifiCorp's 2011 IRP included a commitment to acquire at least 140 MW of Class 1 DSM by 2013 and implement a commercial curtailment project if cost-effective, but that this IRP does not contain any Class 1 DSM until 2027 and that the commercial curtailment plan was cancelled due to a revised load forecast. Going forward, ODOE recommends PacifiCorp pursue a Class 1 DSM pilot in Oregon and at least one other state before filing its next IRP, but it does not suggest a capacity target for the pilot project. Instead, ODOE argues that the current proposal to have no Class 1 DSM over the next decade, in conjunction with no plan to evaluate these resources further, is insufficient.

NWEC questions PacifiCorp's analysis regarding a west-side Class 1 DSM irrigation control program and requests closer scrutiny of the analysis and underlying model assumptions in the 2013 IRP that lead to what seems to them to be an undervaluing of Class 1 DSM in this IRP. Finally, it contends that the capacity-oriented selections should be analyzed more fully.

PacifiCorp claims ODOE does not identify the deficiencies in PacifiCorp's consideration of Class 1 DSM and notes that a range of products are developed in resource potential

studies and used as inputs for portfolio modeling. Additionally, PacifiCorp does not support a Class 1 DSM pilot project.

Commission comments on Class 1 DSM

We appreciate the participant comments on Class 1 DSM. In this IRP, there are no requested action items so acknowledgment is not required. We do urge PacifiCorp to continue to work with stakeholders and Staff to better understand the Class 1 DSM analysis and look for ways to improve it in the next IRP. At this time, we do not request PacifiCorp to perform a DSM 1 pilot project.

RENEWABLE RESOURCES

PacifiCorp proposes five action items related to renewable resources, plus two action items specifically related to distributed generation. The action items 1a, 1e, 2a, and 2b are business as usual activities and do not require acknowledgment.

A. The 2013 IRP proposed action item 1b for renewable portfolio standards.

Action item 1b requests acknowledgment to use unbundled renewable energy credits (RECs) to comply with the Renewable Portfolio Standard (RPS) through an annual request for proposals (RFP) process. PacifiCorp claims that it is lower cost to meet RPS requirements through the acquisition of RECs than building new renewable resources.

Parties' comments

Staff recognizes PacifiCorp's efforts to meet RPS requirements through the lowest cost manner, but felt that PacifiCorp should have projected the costs associated with those RECs. As a result of this gap, Staff recommended acknowledgment of action item 1b with the requirement that in the future REC prices be incorporated into portfolio analysis and that a forecasted range of REC prices be included in the IRP update and next IRP.

PacifiCorp responded that publishing the REC price projection in the IRP could influence prices when it sells or purchases RECs in the market to the harm of customers. Instead, it proposed to continue to monitor REC prices and consider upper limits of future REC prices in the context of state specific RPS rules when evaluating compliance alternatives for a given state RPS program. Staff understands the difficulty and risks of developing and publishing the forward market price curves for RECs and it supports acknowledgement of action item 1b without modification.

Commission resolution of action item 1b for renewable portfolio standards

We acknowledge action item 1b.

B. The 2013 IRP proposed action item 1c regarding REC optimization.

Action item 1c involves issuing reverse RFP's on a quarterly basis to sell RECs not required to meet state RPS requirements.

Parties' comments

Staff initially argued that this action item should not be acknowledged because it conflicted with the Multi-State Process (MSP) objective to acquire bundled RECs from other PacifiCorp jurisdictions. PacifiCorp responded that this issue is better suited for the MSP process and that until an agreement amongst the states is in place, it should continue to implement action item 1c. Staff now views this as a business as usual action item that does not require acknowledgement, but states that it will pursue the issue through the MSP process.

Commission comments on action item 1c

We agree that this is not an action item that needs acknowledgement and that it should be addressed in the MSP process.

C. The 2013 IRP proposed action item 1d relating to solar.

This action item seeks acknowledgement to issue an RFP to obtain Oregon solar photovoltaic resources to meet the small solar compliance obligations of Oregon House Bill 3039.

Parties' comments

Staff comments that the ETO is providing incentive dollars to this project and that Staff's review demonstrates that the project appears to be beneficial to ratepayers. As such, Staff supports acknowledgement.

Commission resolution on action item 1d

We acknowledge action item 1d.

D. The 2013 IRP proposed action item 1e on renewables capacity contribution.

Action item 1e involves tracking and reporting the statistics used to calculate capacity contribution from wind resources and available solar information as a means of testing the validity of the peak load carrying capability (PLCC) method.

Parties' comments

RNP argues that subsequent proceedings should include updated capacity factors and values for renewable resources. RNP proposes that the Commission direct PacifiCorp to use the effective load carrying capacity (ELCC) methodology and supports Staff's recommendation to compare the capacity contributions using PLCC and ELCC. RNP

also proposes a trigger point analysis for new renewable resources in the next IRP, which would identify the levelized cost of energy for wind and solar resources required to promote their selection in the System Optimizer.

NWEC raised concerns regarding the cost of photovoltaic solar used in this IRP and were unconvinced by PacifiCorp's response that PacifiCorp's consultant Cadmus based these costs upon the best information available.

Although PacifiCorp did not respond to NWEC's arguments related to costs of photovoltaic solar, it did state that it would consider both the Staff and RNP recommendation to compare the capacity contributions to wind and solar resources between alternative methods and RNP's trigger point analysis.

Staff argues that action item 1e is not the type of action item that requires acknowledgement, but supports and encourages PacifiCorp and the participants to work together during the 2015 IRP input process to further develop and discuss these proposals.

Commission comment on action item 1e

We agree that this is the type of action item that does not require acknowledgment. We believe that the 2015 IRP input process is the appropriate forum to discuss these issues and appreciate PacifiCorp's, the stakeholders' and Staff's interest in discussing and providing more information on these issues in that process.

TRANSMISSION

1. The 2013 IRP proposed action item 9a on transmission analysis and the system benefits tool.

Parties' comments

In response to CUB's concerns, PacifiCorp has agreed to separate customer and regulatory benefits in the System Benefits Tool (SBT) so that those categories will not be included in the cost-benefit ratio calculations. While this resolves CUB's primary concern, it expects PacifiCorp to continue to work collaboratively with the parties on its plans for calculating system benefits going forward.

Staff states that it appreciates the SBT will continue to improve and evolve over time with additional participant input. Staff, however, notes that action item 9a is not a specific resource action and it does not, therefore, require acknowledgment.

Commission comment on action item 9a

We agree with Staff that proposed action item 9a describes future processes and analysis to be completed. As such, acknowledgment of action item 9a is inappropriate. However, we do support the objectives of action item 9a, which are to review the SBT and complete additional analysis of Energy Gateway West Segment D that evaluates the staging implementation of Segment D by sub-segment. In addition, action item 9a provides that, in preparation for the 2015 IRP, the SBT will be refined for the Energy Gateway Segment D and SBT analysis will be performed for additional Energy Gateway segments.

2. The 2013 IRP proposed action item 9b related to permitting actions.

This action item relates to permitting actions for Populus to Windstar (Segment D), Populus to Hemingway (Segment E), Aeolus to Mona (Segment F), and West of Hemingway (Segment F).

Parties' comments

Staff notes that although PacifiCorp provided a preliminary SBT analysis to quantify the benefits of Segment D, it will be making changes to the SBT. For segments E, F, and H, Staff understands that there will be uncertainty in developing these segments until it is closer to their anticipated in-service dates. However, Staff contends that such uncertainty should not hinder PacifiCorp's exploration of these projects in light of the preliminary benefits of these segments. As a result, Staff recommends acknowledgement of action item 9b with modifications.

The Sierra Club relies on its experience in two Certificate of Public Need and Convenience dockets in other states and its participation in this IRP to argue that it remains unclear why PacifiCorp intends to permit and construct additional transmission in Wyoming. It notes that the 2013 IRP concludes that cost effective resources were decreased from 2,100 MW to 650 MW, with no new wind until 2024. In spite of these changed forecasts, PacifiCorp continues to move forward with permitting for transmission. Sierra Club argues that neither the 2011 IRP nor the 2013 IRP establish a compelling reason for the expenditure of billions of dollars in transmission between existing sources. In general, Sierra Club opposes new transmission into eastern Wyoming until PacifiCorp demonstrates a commitment to acquire renewable resources in that region.

PacifiCorp does not oppose Staff's proposed modification to action item 9b and states that it will continue to refine the SBT in preparation for the 2015 IRP, but notes that there may be limitations on the analysis that can be performed at the time of the next IRP. Nonetheless, PacifiCorp notes that the in-service dates for segments D, E, F, and H are

several years in the future. In response to the Sierra Club, PacifiCorp clarifies that it is not requesting acknowledgement of the Energy Gateway Projects, but only the near-term permitting activities required to maintain options for moving forward.

Commission resolution of action item 9b

We acknowledge action item 9b, modified as follows:

- Continue permitting Segments D, E, F and H until PacifiCorp files its 2015 IRP, at which time a SBT analysis for these segments will be performed.

3. The 2013 IRP proposed action item 9c related to Sigurd-to-Red Butte.

PacifiCorp seeks acknowledgement for completing construction of the Sigurd-to-Red Butte (S2RB) transmission line. PacifiCorp originally sought acknowledgment in the 2011 IRP. The Commission did not acknowledge the line at that time, but instead created a new action item 10.

Parties' comments

ICNU notes concerns have been raised in Oregon regarding whether or not PacifiCorp's transmission plans adequately account for expected future conditions and concerns have been raised in Washington regarding whether or not PacifiCorp is focused on building transmission rather than other alternatives, such as smart grid technology. ICNU argues that PacifiCorp has already begun construction of this transmission line and suggests that the Commission can avoid disputes regarding this issue by declining to acknowledge the line on the basis that PacifiCorp has already decided to build it and has begun construction of the transmission line without required input and consideration in the IRP. Sierra Club takes no position and does not contest action item 9c.

Staff and RNP recommend acknowledgment of action item 9c. Staff argues that the primary beneficiaries of the line are PacifiCorp's network transmission customers and their loads in southwest Utah. As a result, Staff contends that the allocation of costs should be commensurate with the benefits received by each network transmission customer or state. This allocation of costs should be addressed in an appropriate forum, such as the MSP process or general rate case proceeding, or both.

Commission resolution of action item 9c

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MODELING ASSUMPTIONS AND METHODS

Staff asserts that PacifiCorp's modeling could use improvements in four main areas, which are: (1) the diversity of portfolios created through the System Optimizer; (2) the natural gas input into the PaR model biases the analysis in favor of coal; (3) the PaR is not varying coal, CO₂, or other environmental compliance costs stochastically, which mutes risk and biases the model towards coal-heavy portfolios; and (4) stochastic treatment of system loads are favoring overbuilt analysis.

NWEC argues that the current IRP modeling framework does not capture the full diversity of the risk hedging value of clean energy resources. NWEC notes that some utilities are beginning to invest in clean energy resources above regulatory requirements in order to hedge against gas price volatility. NWEC argues that it is prudent to rely less on gas going forward because of its volatility and long-term price trends. NWEC wants PacifiCorp to review and improve its methodology for including natural gas price uncertainty and risk into the IRP modeling for its next IRP.

ODOE requests that the Commission order PacifiCorp to conduct a stochastic capacity credit study using 8,760 hours of data per year.

PacifiCorp held a modeling process improvement workshop in September of 2013 consistent with action item 11a. PacifiCorp indicates that it is currently considering comments and it is looking at ways to achieve a wider range of portfolio diversity and ways to accommodate more risk analysis using the PaR model. In addition, PacifiCorp states its intention to update its stochastic parameters for the 2015 IRP and plans to have a workshop to discuss stochastic modeling as part of the 2015 IRP public process, as well as evaluating methods to develop capacity contribution assumptions for renewable resources.

PacifiCorp does not support ODOE's recommendation for a stochastic capacity credit study and is considering methods developed to approximate reliability-based methods, such as the ELCC. PacifiCorp suggests that ODOE's recommendation may be overly prescriptive and prevent alternatives that achieve the intended result in a way that requires less data and computation.

Commission comments on modeling assumptions and methods

Although the comments on modeling assumptions and methods do not require acknowledgement from us, we appreciate the continued efforts of PacifiCorp, the parties and Staff to improve the modeling assumptions and methods used in building the IRP.

We believe that the 2015 IRP public process can be used to improve modeling assumptions and methods, which will also improve the quality of the IRP analysis.

WATER ISSUES· ENERGY STORAGE· RISK METRIC· LOAD FORECAST

Parties' comments on water issues

NRDC relies on a United States Department of Energy Report that identified power system vulnerabilities to climate change phenomenon, including water availability, heat and drought, particularly in the southwestern United States where PacifiCorp's system is interconnected. NRDC argues these factors were not considered in PacifiCorp's analysis and raise questions about customer risk for investment decisions that may result in significant future stranded costs.

ODOE argues that PacifiCorp included the costs associated with one significant federal rulemaking (cooling water intakes), but not another (new industry toxic discharge guidelines) and makes two specific recommendations related to water.

PacifiCorp asserts that securing reliable sources of water has been part of its historical development of power generating resources. It notes that as thermal plants are retired or converted to natural gas, there will be a considerable reduction in the need for water. PacifiCorp suggests that the 2015 IRP public process will be used to determine the form of any water supply risk assessments that should be performed. Staff agrees with PacifiCorp that participants should bring these issues to the 2015 IRP public process.

Parties' comments on energy storage

ODOE recommends that PacifiCorp's IRP action plan include an energy storage pilot and requests that the Commission direct PacifiCorp to provide more comprehensive treatment of energy storage in future IRPs. ODOE notes that the 2011 IRP action plan included a commitment from PacifiCorp on an energy storage demonstration project in Utah that was later cancelled and that this IRP does not recommend further action on energy storage. Finally, ODOE recognizes that PacifiCorp commissioned a 2011 study to develop a current catalog of commercially available and emerging energy storage technologies and those results were incorporated into the System Optimizer model, but suggests that future IRPs should offer a more comprehensive treatment of energy storage.

PacifiCorp responds that it opposes ODOE's recommendation to implement an energy storage pilot in Oregon. However, it notes that its model allows for energy storage to be selected and that the results of the 2013 IRP do not support an energy storage pilot. PacifiCorp commits to continuing to update the cost and performance assumptions and assess energy storage in future IRPs.

Staff's comments noted that in the 2011 IRP the Commission supported PacifiCorp's energy storage demonstration project in Utah. In addition, Staff encouraged ODOE to participate in the 2015 IRP public process and offer specific suggestions related to energy storage.

Parties' comments on risk metric

Staff argues that the risk metric should be the upper tail mean PVRR alone, rather than the upper tail mean PVRR minus the mean PVRR. In support of its position, Staff cites to Order 08-232, which states that "[w]e direct the Company to rank portfolios according to these metrics [95th percentile and upper-tail [mean] PVRR] in the next IRP."

In response, PacifiCorp asserts that the use of Staff's approach would not have altered the outcome of the initial screening process for the 2013 IRP. PacifiCorp further recommends addressing Staff's concern by including a discussion of the risk metric in the 2015 public process.

Staff is not convinced that changing the risk metric would not have altered the outcome of the initial screening process for the 2013 IRP. Nonetheless, Staff is agreeable to PacifiCorp's recommendation that this issue be discussed in the 2015 IRP public process.

Parties' comments on load forecast for net metering and direct access loads

Staff expressed concern that PacifiCorp's modeling may not adequately account for future load reductions due to net metering. PacifiCorp believes that its forecast methodology accurately anticipates net metering growth, but states that it looks forward to working through the issue in the 2015 IRP. Staff intends to engage PacifiCorp on this issue in the 2015 IRP public process.

Related to direct access loads, Staff described a risk factor that impacts PacifiCorp's planned load obligation as the potential loss of retail loads to direct access in Oregon. Staff contends that PacifiCorp's assumption of zero long-term direct access loads is not reasonable.

ICNU agrees with Staff and elaborates by explaining that in Docket No. UE 267 the Commission is considering a five-year opt-out program in which direct access customers can opt-out from cost of service rates on a permanent or long-term basis.

PacifiCorp responds that it is currently unable to forecast which customers will choose the direct access five-year opt-out program. It further indicates that it will evaluate whether its planning assumption should be modified after a final order is issued in Docket No. UE 267.

ORDER NO.

Staff notes that PacifiCorp has forecasted direct access participation at zero participation, which is in conflict with Oregon's legislative effort to increase competition and efficiency of the wholesale electricity market. Staff argues that PacifiCorp needs to ensure that its load forecasts for the 2015 IRP take into account the outcome of Docket No. UE 267.

Commission comments on water issues, energy storage, risk metric, and load forecasts

We appreciate the parties' comments on these issues and agree with Staff that they are appropriately discussed and debated in the 2015 IRP public process. We further agree that PacifiCorp will need to take the outcome of Docket No. UE 267 into account when it prepares and provides its 2015 IRP.

ORDER

IT IS SO ORDERED that:

Made, entered and effective _____

Susan K. Ackerman
Chair

John Savage
Commissioner

Stephen M. Bloom
Commissioner