

## BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

<b>IN THE MATTER OF THE PETITION OF          PACIFICORP DBA ROCKY MOUNTAIN          POWER FOR AN ORDER REVISING THE          WIND INTEGRATION RATE FOR WIND-          POWERED SMALL POWER GENERATION          QUALIFYING FACILITIES</b>	) ) ) ) ) ) )	<b>CASE NO. PAC-E-09-07</b>       <b>ORDER NO. 31021</b>
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On September 11, 2009, PacifiCorp dba Rocky Mountain Power (PacifiCorp; Company) filed a Petition with the Idaho Public Utilities Commission (Commission) for an Order increasing the published avoided cost wind integration rate from \$5.10 to \$9.96 per MWh. Published avoided cost rates are the purchase price paid to qualifying small power production facilities (QFs) for purchases of QF capacity and energy.<sup>1</sup> The proposed change would be applicable to purchases by PacifiCorp of electric power from wind-powered QFs except in those circumstances where the QF developer agrees in the power purchase agreement to deliver QF output to PacifiCorp on a firm hourly schedule. The Commission in this Order increases the published avoided cost wind integration rate for PacifiCorp from \$5.10 to \$6.50 per MWh.

### BACKGROUND

The Commission in Order No. 29839, Case No. IPC-E-05-22, found that the supply characteristics of wind generation and related integration costs could provide a basis for adjustment of the published avoided cost rates, an adjustment that may be different for each utility. In subsequent Order No. 30497 in Case No. PAC-E-07-07, the Commission approved a Settlement Stipulation which by its terms required PacifiCorp to file notice with the Commission of any changes to its wind integration costs as reflected in subsequent changes to its Integrated Resource Plan (IRP). Settlement Stipulation, Section III(a)(c)(d).

#### *History of Wind Integration Charges*

As related by Commission Staff in its comments filed in this case, the issue of wind integration costs first arose in 2005 when Idaho Power Company filed a petition with the Commission requesting a temporary suspension of Idaho Power's obligation under PURPA to

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<sup>1</sup> Reference Sections 201 and 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA) and the implementing regulations of the Federal Energy Regulatory Commission (FERC).

enter into new contracts with QFs pending an investigation of the impacts of adding substantial amounts of wind-powered generation projects to the utility's system. (IPC-E-05-22). Based on the record developed in that case, the Commission found reason to believe that wind generation presents operational integration costs to a utility different from other PURPA qualified resources. Further, the Commission found that the unique supply characteristics of wind generation and the related integration costs provide a basis for adjustment to the published avoided cost rates, a calculated figure that may be different for each regulated utility. Reference Order No. 29839.

Further proceedings in that docket were ordered to determine the appropriate amount of adjustment and the identification of what studies, if any, needed to be performed to provide such a number. PacifiCorp and Avista were directed to participate in those proceedings. In accordance with the Commission's directive, four workshops and one settlement meeting were conducted over the next six months to try to develop consensus on some of the issues. The parties were unsuccessful in reaching mutual agreement on interim settlement issues. No further meetings were scheduled pending completion of wind integration studies by the three utilities.

In early 2007, nearly two years after the original docket was opened, PacifiCorp, Idaho Power, and Avista completed their respective wind integration studies and filed petitions recommending utility-specific wind integration adjustments to the published avoided cost rates. In Case No. IPC-E-07-03, Idaho Power proposed a wind integration adjustment of \$10.72/MWh. Later, in a Report Addendum filed with the Commission, Idaho Power presented an updated wind integration cost of \$7.92/MWh. Avista filed a similar Petition in Case No. AVU-E-07-02 proposing a wind integration adjustment to published avoided cost rates of 12 percent; and for QFs agreeing to deliver output on a firm hourly schedule, a percentage reduction of 6 percent. PacifiCorp, in Case No. PAC-E-07-07, proposed a wind integration adjustment of \$5.04/MWh.

#### ***PacifiCorp's Settlement Stipulation***

In the wind integration cases for all three utilities, separate Settlement Stipulations were developed and submitted to the Commission for approval. The Settlement Stipulation approved for PacifiCorp in Order No. 30497 provided the following with regard to establishment of a wind integration charge:

##### **Settlement Stipulation ¶ 3**

- (a) [PacifiCorp's] published avoided-cost rates for Wind QFs will be adjusted to recognize an assumed cost of integrating the energy generated by Wind

QFs as a part of the Company's generating resource portfolio. The integration charge will be equivalent to the calculated cost of wind integration on a per MWh provided in the Company's most recent Commission-acknowledged Integrated Resource Plan (IRP) . . . the estimated cost of wind integration in the 2007 IRP . . . is \$5.10/MWh. [PacifiCorp] shall hereafter file notice with the Commission of any changes to its wind integration charge as reflected in subsequent changes to its IRP. The integration charge will remain fixed throughout the term of the contract and will be applied as a decrement to the applicable published rate.

The term "applicable published rate" means the applicable avoided-cost rate approved by the IPUC and updated periodically for purchases of power from QFs producing less than 10 aMW, for the relevant contract year and time period of energy generation.

- (c) [PacifiCorp] will review its expected cost of wind integration in light of the best available scientific data and actual operating experience. Expected wind integration cost information will be included in the Company's integrated resource planning (IRP) process in the same way that costs for other generating resources are included in the IRP.
- (d) [PacifiCorp] currently provides public input meetings for its IRP assumptions. Idaho wind developers will be notified as part of the public meeting process and can contribute their input at those meetings to discuss PacifiCorp's wind integration study and new data related to wind integration costs prior to the publishing of the Company's next (2009) IRP.

In accordance with the terms of the Settlement Stipulation, PacifiCorp has updated its study of wind integration costs as part of the development of its 2009 IRP. PacifiCorp submits as Exhibit A to its Petition an excerpt from the Company's 2009 IRP Appendix F – "Wind Integration Costs and Capacity Planning Contributions" in which PacifiCorp provides a description of the methodology used and the results derived from PacifiCorp's analysis of the wind integration cost issue. The Company's 2009 IRP wind integration cost analysis identifies its wind integration cost to be in the range of \$9.96 to \$11.85 per MWh depending on what assumption is used regarding the future cost of CO2 compliance.

PacifiCorp submits as Exhibit A to its Petition in this case, an excerpt from PacifiCorp's 2009 IRP Appendix F – "Wind Integration Costs and Capacity Planning Contributions" in which the Company provides a description of the methodology used and the

results derived from PacifiCorp's analysis of the wind integration cost issue. The Company concludes:

The wind integration cost results . . . range from \$9.96/MWh to \$11.85/MWh for PacifiCorp's system in 2009 dollars, depending on the CO<sub>2</sub> tax level scenario. The inter-hour wind results were developed by weighting the PACWest inter-hour wind costs by 30% (the PACWest MW share of the system total) and the PACEast wind costs by 70%, then adding the system wind reserves.

The Company's 2009 IRP wind integration cost analysis identifies its wind integration cost to be \$9.96 per MWh. The Company filed its 2009 IRP with the Commission on May 29, 2009 in Case No. PAC-E-09-06. A Notice of the Company's IRP filing was issued on June 24, 2009; the deadline for filing written comments was July 31, 2009. Commission Staff was the only party to file comments. On September 15, 2009, the Commission issued an acceptance and acknowledgement of the Company's 2009 IRP filing.

On September 23, 2009, the Commission issued a Notice of Petition and Modified Procedure in Case No. PAC-E-09-07. The deadline for filing written comments was October 30, 2009. Comments were filed by Commission Staff and the Renewable Northwest Project (RNP). Public comments filed urge caution and one contends that the increase requested by PacifiCorp may affect the viability of renewable wind project development in Idaho. On November 20, 2009, PacifiCorp filed reply comments.

#### **Commission Staff**

Rather than increasing the wind integration charge from \$5.10 per MWh to \$9.96 per MWh as proposed by the Company, Staff recommends that the wind integration charge be changed to \$6.50 per MWh to comport with the Commission-approved cap for Idaho Power and Avista. Staff is not suggesting that PacifiCorp's proposed wind integration cost is inaccurate. Staff notes in its comments that the \$9.96 is in the same general range as identified in Idaho Power's and Avista's wind integration studies. Moreover, more recent studies completed by Portland General Electric and BPA, Staff states, also computed wind integration costs in a range closer to those in PacifiCorp's recent study.

Staff believes that PacifiCorp's most recent wind integration study is probably more accurate than its initial study. Furthermore, Staff believes that actual wind integration costs are likely greater than the \$5.10 currently in place for PacifiCorp. At the same time, however, Staff

acknowledges that there is still much uncertainty about the results of various wind integration studies, that wind integration costs are likely different for each utility, and that the results of various wind integration studies are not necessarily comparable. In addition, Staff is aware that there are regional efforts underway that may eventually decrease wind integration costs, but conversely, that wind integration costs may increase as greater amounts of wind are added to utilities' systems.

Staff notes that throughout the development of its 2009 IRP, PacifiCorp conducted public input meetings just as it has done for past IRPs. However, Appendix F, the Company's wind integration cost study, was not discussed in any of the public input meetings because it was not completed until just before the IRP was finalized and submitted to the Commission for approval. Nonetheless, on August 31, 2009, three months after the IRP was filed with the Commission, PacifiCorp conducted a public meeting to describe its wind integration study and to accept comments from interested parties. All of the interested parties in Case No. PAC-E-07-07, the Company's initial wind integration docket, were invited to participate. Staff participated in the meeting by telephone, but notes that few of the parties in Case No. PAC-E-07-07 participated.

Several participants in the August 31, 2009 meeting, Staff notes, expressed concerns with some of the assumptions and analysis methods used by PacifiCorp in computing its wind integration costs. PacifiCorp, however, remained convinced that its assumptions were reasonable and its analysis accurate. The Company agreed, however, to reexamine its assumptions and analysis in future studies as more information becomes available and better analysis techniques are developed.

#### *Idaho Power's and Avista's Settlement Stipulations*

Although the Settlement Stipulations of Idaho Power and Avista in their respective wind integration cases were very similar to PacifiCorp's, Staff notes they differed on one key aspect. Unlike PacifiCorp's Stipulation that includes a fixed wind integration charge of \$5.10/MWh, Idaho Power's and Avista's Settlement Stipulations contain wind integration charges that are stated as a percentage of the published avoided cost rates. The percentage ranges from 7 percent to 9 percent and is based on three "tiers" representing levels of wind generation development on each utility's system. Most importantly, however, is the fact that Idaho Power's and Avista's wind integration charges are subject to a cap of \$6.50/MWh. Based

on the avoided cost rates currently in place, the wind integration charges for Idaho Power and Avista range from about \$4.30/MWh to the maximum cap of \$6.50 depending on details of the specific contract.

### **Renewable Northwest Project**

The Renewable Northwest Project (RNP) recommends denial of the Company's Petition, opposes Modified Procedure and recommends a hearing prior to any change in the Company's wind integration rate.

The analytical techniques used in PacifiCorp's study, RNP states, represent a radical departure from earlier Company studies, those of other northwest utilities, and studies across the U.S. and internationally. Flaws in the methodology, it contends, are relatively basic and the stated results should not be accepted as a serious approximation of the Company's wind integration costs. The most fundamental shortcoming in the Company's methodology, RNP contends, is that the variability and uncertainty introduced by wind is considered separately from the variability and uncertainty already on the power system due to load. The reason this is important, RNP states, is that the forecast errors in short-term (less than one hour) variability of wind and load are not normally correlated with one another. Every wind integration study of which RNP is aware, it states, has netted wind against load in deriving the reserve requirement, including PacifiCorp's previous analyses dating back to 2003, as well as the analyses of Idaho Power and Avista.

PacifiCorp's implicit assumption that the reserve requirement is independent of the load, RNP contends, would only hold if the load variability and uncertainty are small fractions of the wind variability and uncertainty. The Company, RNP contends, offers no information suggesting this is the case, and offers no basis at all for failing to net load and wind to determine reserve requirements.

### **PacifiCorp Reply**

The Company in its filed reply addresses only the comments of Staff. The Company's wind integration costs, it states, are reasonably within the range of the ones calculated by other entities and are based on analysis that is technically sound. PacifiCorp owns or is acquiring the output from 1,300 MW of wind resources currently online. The Company, while it continues to develop and refine its wind integration costs, should not, it contends, be prohibited from recovering prudently incurred costs to integrate wind on a day-ahead and hour-

ahead basis. The proposed \$9.96/MWh, it contends, is much more reflective of the Company's overall system integration [than the \$6.50 cap proposed by Staff] and is appropriate considering a much higher wind penetration rate than Avista or Idaho Power.

### **COMMISSION FINDINGS**

The Commission has reviewed and considered the filings of record in Case No. PAC-E-09-07 including the comments filed by Commission Staff and Renewable Northwest Project and the reply comments of PacifiCorp. We have reviewed the Company's 2008 IRP Appendix F – Wind Integration Cost Update. We have also reviewed our prior Order Nos. 29839 (Case No. IPC-E-05-22) and 30422 & 30497 (Case No. PAC-E-07-07) including the related Settlement Stipulation filed in that case. RNP contends that PacifiCorp's methodology is flawed and that a hearing is required. For reasons set forth below, we disagree. We continue to find it reasonable to process this case pursuant to Modified Procedure. IDAPA 31.01.01.204.

Our acceptance of the Stipulation in Case No. PAC-E-07-07 was conditioned on the continued close monitoring of integration costs by PacifiCorp. In Order No. 30497, we stated

PacifiCorp agrees to continue to review its wind integration study and update its study to include the results of available scientific data and actual operating experience. The Company is continuing to explore methodologies to confirm and quantify wind variability with respect to the need for operating reserves. In particular, sub-hourly data is being captured to test the impact of deviations within the hour. The Company proposes including a wind integration review in the Company's biennial Integrated Resource Plan. This Commission has continuing oversight and we expect PacifiCorp to provide wind integration analysis and results to the Commission separate from its biennial IRP filing. We expect the Company in conjunction with its IRP planning process to address wind integration as a discrete part of its plan and to extend participation to Commission Staff and the parties of record in Case No. PAC-E-07-07. Regional wind integration efforts, improvements in wind forecasting, regulatory changes and actual "hands-on" experience will all have an impact on the cost of integrating wind energy. The Commission is interested in the day-to-day mechanics of how wind is integrated into the Company's system; the day-to-day impact on scheduling; and the ramifications of the Area Control Error (ACE) Diversity Interchange sharing on integration costs. We expect annual review by the Company and proposed adjustments (up or down) when warranted. We expect the additional data provided will be very important to our continued support of a wind integration adjustment. As with variables in the underlying avoided-cost methodology, parties can petition the Commission at any time to open a docket to review and update wind integration costs if those costs are believed to be outdated or inaccurate.

Order No. 30497, pp. 12, 13.

In our Order No. 30497, we acknowledged that regional wind integration efforts have an impact on the cost of integrating wind energy. The Commission is aware of, monitors and awaits the results of the regional studies of the Western Electricity Coordinating Council's Variable Generation Subcommittee and the Wind Integration Study Team of Northern Tier Transmission Group (NTTG) and Columbia Grid, both of which efforts are exploring how best to broadly integrate increasing amounts of wind generation into the transmission grid. Additionally, we note that a Joint Initiative among NTTG, Columbia Grid, and West Connect is implementing operational transmission enhancements among voluntary western utility participants that will provide more flexibility for integrating intermittent and other resources. These products include Area Control Error Diversity Interchange (ADI), Dynamic System Scheduling (DSS), and Intra-Hour Transaction Accelerator Platform (I-TAP). PacifiCorp is actively involved in all of these efforts. PacifiCorp states that it continues to refine and expand its wind integration cost analysis. The Commission believes that these regional efforts may clarify wind integration operational and cost issues and should be taken into consideration and reflected in the Company's wind integration studies.

This Commission continues to find that the cost of wind integration for utilities is real and greater than zero. With the passage of time and increased understanding, studies continue to become more sophisticated. We believe a generic workshop may be helpful in the future when information is better, and greater consensus exists. RNP contends that a fatal flaw in the Company's study is its failure to integrate the variability and uncertainty associated with load and wind in deriving the reserve requirement. We see the RNP concern not as a fatal flaw but, instead, simply anecdotal evidence that there is no consensus methodology for calculation of wind integration costs. Modeling and assumptions will vary by utility. Although we are presented only with the Company's summary findings in its 2008 IRP Appendix F, we find no reason to discount the study in its entirety. PacifiCorp, we note, has launched efforts to develop a new wind integration study in concert with its next IRP. We encourage RNP to participate in that process. We expect the Company to be able to articulate why proposed changes to its methodology are rejected.



In this case, PacifiCorp seeks to raise the wind integration adjustment from \$5.10 to \$9.96 per MWh, the low end of its study spectrum. PacifiCorp notes that the summary results of its wind integration cost study were submitted as part of the Company's 2008 Integrated Resource Plan. The wind integration study is challenged by Renewable Northwest Project. RNP requests a hearing. This case is not an administratively economic forum (cost, time and effort) for analyzing the Company's wind integration methodology. We find a more appropriate forum is the Company's IRP process, a forum that is open to all stakeholders.

The Commission finds that the Company's inclusion of its Appendix F wind integration cost update as part of the 2008 IRP provides no tacit approval of same by this Commission. As PacifiCorp is aware, we only acknowledge IRP filings. We do not approve them or any part thereof. Without further development of a record, we cannot find that the magnitude of increase proposed by the Company is reasonable. Further, for reasons expressed above, we question whether developing further record in this docket will be a meaningful exercise.

We acknowledge that the Company has added wind resources, both actual and planned, since we established its existing wind integration rate and that its integration costs have likely increased. While we continue to believe that fundamental economic differences in avoided costs and wind integration costs exist for different utilities, we also believe a uniform balancing between companies is now necessary to avoid counterproductive incentives favoring one utility over another. We find Staff's compromise proposal in this case to be both reasonable and defensible. We accordingly find it reasonable to increase the published avoided cost integration rate for PacifiCorp from \$5.10 to \$6.50 per MWh, the maximum wind integration rate presently authorized for Idaho Power and Avista. We encourage PacifiCorp to continue to refine its wind integration cost analysis. We expect it to consider in its analysis and studies the results of regional efforts and studies.

#### **CONCLUSIONS OF LAW**

The Commission has jurisdiction over PacifiCorp dba Rocky Mountain Power, an electric utility, and the issues presented in Case No. PAC-E-09-07 pursuant to the authority and power granted it under Title 61 of the Idaho Code and the Public Utility Regulatory Policies Act of 1978 (PURPA).


The Commission has authority under PURPA and the implementing regulations of the Federal Energy Regulatory Commission (FERC) to set avoided costs, to order electric utilities to enter into fixed term obligations for the purchase of energy from qualified facilities (QFs) and to implement FERC rules.

### ORDER

In consideration of the foregoing and as more particularly described above, IT IS HEREBY ORDERED and the Commission hereby authorizes an increase in the published avoided cost wind integration rate for PacifiCorp dba Rocky Mountain Power from \$5.10 to \$6.50 per MWh.

THIS IS A FINAL ORDER. Any person interested in this Order may petition for reconsideration within twenty-one (21) days of the service date of this Order. Within seven (7) days after any person has petitioned for reconsideration, any other person may cross-petition for reconsideration. See *Idaho Code* § 61-626.

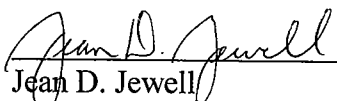
DONE by Order of the Idaho Public Utilities Commission at Boise, Idaho this 12<sup>th</sup> day of March 2010.

  
JIM D. KEMPTON, PRESIDENT

  
MARSHA H. SMITH, COMMISSIONER

  
MACK A. REDFORD, COMMISSIONER

ATTEST:

  
Jean D. Jewell  
Commission Secretary

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