

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

UM 1355

In the Matter of the

PUBLIC UTILITY COMMISSION OF  
OREGON

Investigation into Forecasting Forced Outage  
Rates for Electric Generating Units.

ORDER

**DISPOSITION: METHODOLOGY FOR CALCULATION OF FORCED  
OUTAGE RATES FOR COAL-FIRED GENERATING  
PLANTS ADOPTED; STIPULATIONS ADOPTED AS TO  
SPECIFIC UTILITIES, RELATED MATTERS;  
INVESTIGATION DOCKET CLOSED**

In this order, we establish the methods for calculating the forced outage rate (FOR) for electric generating plants owned by or operated under the direction of Portland General Electric Company (PGE), PacifiCorp, dba Pacific Power (Pacific Power) and Idaho Power Company (Idaho Power). We also address certain ratemaking aspects of forecasting outages and their use in regulatory proceedings as agreed upon by the parties in stipulations submitted to the Commission for approval.

**I. INTRODUCTION**

We opened this investigation to determine the appropriate methodology to forecast FORs for electric generating units. PGE, Pacific Power, Idaho Power, the Citizens' Utility Board of Oregon (CUB), and the Industrial Customers of Northwest Utilities (ICNU) all became parties to the proceeding. Numerous conferences were held, and all parties, as well as the staff of the Public Utility Commission of Oregon (Staff) filed testimony addressing the methods of calculating the rates for forced and planned outages of various categories of generating plants for ratemaking purposes.

During the course of the proceedings, the parties entered into settlement agreements. The settlement agreements for PGE and Idaho Power resolved all of the issues among the parties, including the treatment of forced outages of exceptionally long duration when calculating rates. The Pacific Power settlement settled all issues except for the methodology for calculating the FOR and for the application of the heat rate curve to determine the output of electric generating plants.

We evaluated the stipulations and found that they generally presented a reasonable resolution of the issues. We concluded, however, that the stipulated provisions adopted by the parties in the PGE and Idaho Power settlements regarding the treatment of extended outages could be improved upon and such improved methodology should be applied to Pacific Power's generating plants as well.

Accordingly, we notified the parties of our intention to adopt the stipulations settling all of the issues in the case relative to PGE and Idaho Power, subject to certain specific modifications, and to modify and insert additional language into the stipulation relative to Pacific Power. Specifically, in Order No. 09-479, we proposed the following language to establish the methodology for addressing extraordinary forced outages in the calculation of FORs for coal-fired generating facilities and for the regulatory treatment of outages caused by utility management's imprudence:

**FOR "Collar":** The Parties agree that for each year in which a coal fired unit's annual FOR falls outside the 10<sup>th</sup> or 90<sup>th</sup> percentile of comparable NERC<sup>1</sup> coal units, the methodology for calculating the forced outage rate shall be as set forth in Staff/200, Brown/8-15, except that, instead of adjusting the FOR to the 10<sup>th</sup> or 90<sup>th</sup> percentile values for the calendar year, the mean annual FOR from the unit's entire historical data shall be substituted. This methodology does not imply "imprudence," and it is not intended to be used to determine imprudence. If the Commission, however, finds that any plant outage is due to utility imprudence, the FOR for that calendar year would be replaced in the four-year rolling average by the historical mean annual FOR for the unit. Furthermore, for any determination of imprudence related to an outage made after a final order is issued in this docket, the FOR for the calendar year of the outage will not be included in the calculation of the historical mean annual FOR.

To allow the parties to respond to our proposal, we conducted additional proceedings that included further testimony and briefing by PGE, Pacific Power, Idaho Power, ICNU, and Staff. The parties only addressed the issue of the methodology for calculating FORs for coal-fired generating plants and the issue of "derating" the heat rate capacity curve of a generating plant due to forced outages.

During this second phase of proceedings, Idaho Power, CUB, and Staff submitted a stipulation resolving all issues related to this docket as applied to Idaho Power.<sup>2</sup> The parties explained that the stipulation included identical terms as the parties' stipulation filed during the first phase of proceedings, with the exception that the new stipulation

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<sup>1</sup> North American Electric Reliability Corporation.

<sup>2</sup> This Stipulation, executed by Idaho Power on September 3, 2010, replaces in its entirety the earlier stipulation executed September 1, 2009, mentioned previously.

includes a different Collar mechanism based on our proposed language. ICNU, while not a party to the stipulation, did not oppose it.

## II. DISCUSSION

Although this proceeding is a generic investigation into the forecasting of FORs for electric generating units, we are presented with three stipulations that propose, in varying degrees, differing resolutions for most or all of the issues identified for PGE, Pacific Power, and Idaho Power. The PGE Stipulation, attached as Appendix A, addresses all issues, including the calculation of the FOR for coal-fired generating plants. The Pacific Power Stipulation, attached as Appendix B, addresses all issues other than the calculation of the FOR for coal-fired generating plants, and the application of the heat rate curve to determine the output of generating plants. The Idaho Power Stipulation, attached as Appendix C, addresses all issues.

We begin our discussion with the disputed issues. Two primary contested issues remain. First, we address the proper methodology to calculate the FOR for coal-fired generating plants. Once we resolve this issue with respect to PGE and Pacific Power, we address this issue for Idaho Power and determine whether the Idaho Power Stipulation presents a consistent resolution. Second, we address the application of the heat rate curve to determine the output of generating plants—an issue disputed only with reference to Pacific Power. Finally, we examine the proposed resolution of uncontested issues presented in all three stipulations to determine whether the stipulations are reasonable and should be adopted.

### A. Calculation of the FOR for Coal-Fired Generating Plants

#### 1. *Parties' Positions*

Each of the parties to the proceedings have a different opinion as to the best methodology to apply to the utilities' respective coal-fired generating unit asset portfolios and their alternative preferences in the event that their proposed method did not prevail.

PGE asserted that all of the alternatives to the Commission's traditional four-year rolling average approach possessed no real advantage as to forecasting accuracy and would likely lead to wasteful disputes about the relevance and accuracy of historical data and multiple prudence reviews whenever the Commission forecasts outage rates. If the Commission chose not to continue its traditional method, PGE expressed its willingness to abide by the method outlined in Staff/200, Brown/8-15 the stipulating parties agreed to in the PGE Stipulation.<sup>3</sup>

Pacific Power also argued that the four-year rolling average, with a case-by-case analysis for extreme outages was "the most straightforward and durable method" and

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<sup>3</sup> (May 13, 2009);PGE's Reply Brief at 1-2, 7-8 (Sept 16, 2010).

that even ICNU conceded it produced the lowest sum-squared error, even when compared with a straight long-term average.<sup>4</sup> If the Commission chooses not to continue its traditional method, Pacific Power favored the collar mechanism proposed by the Commission in Order No. 09-479, which uses actual certifiable data and which Pacific Power is capable of implementing. Pacific Power asserted that it should be permitted to recreate historical data and that, contrary to ICNU's assertions, there are no demonstrable reasons to exclude particular data from the plant's historical averages.<sup>5</sup>

Idaho Power's position on the FOR calculation is reflected in its settlement agreement. Idaho Power adopted the language we proposed in Order No. 09-479, but applied it to a three-year rolling average, reflecting a time frame used in other jurisdictions. The stipulated settlement agreement also provides for acceptance of alternative Commission data sets within certain parameters, should the Commission choose to modify the Order No. 09-479 methodology.<sup>6</sup>

ICNU proposed that the FOR for ratemaking purposes should be the most recent four-year rolling average of annual FORs, with outliers (years where a plant's FOR falls outside the FOR Collar) replaced with the plant-specific 20-year historical average FOR adjusted so that any one outage is capped at 28 days. ICNU asserts that the statistical evidence demonstrates that this methodology will improve forecasting accuracy to a greater degree than the new proposal contained in Staff/400, Brown/2-8. ICNU generally agrees with Staff, however, that use of long term data without limitations, as we had proposed, presented practical difficulties.<sup>7</sup>

Upon review of the various positions put forward in the second phase of the proceedings, Staff concluded that the Commission should consider modifying its Order No. 09-479 methodology. Staff felt that modifications were necessary to address the problems PGE noted regarding the categorization of an outage in the distant past as forced or maintenance. Staff recommended adoption of the ICNU proposal for a plant-specific 20-year rolling average FOR as the replacement for identified extreme outage events. In the alternative, Staff asked the Commission to consider adopting the original Staff/200, Brown/8-15 proposal.<sup>8</sup>

CUB asserted that the original PGE Stipulation adopting Staff/200, Brown/8-15 and the methodology in the latest Idaho Power stipulated agreement provided reasonable FOR measures. However, CUB indicated that it also found the Commission's Order No. 09-479 methodology acceptable for both PGE and Pacific Power, but unsatisfactory when applied to

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<sup>4</sup> Pacific Power's Reply Brief at 1 (Sept 16, 2010).

<sup>5</sup> *Id.* at 3-4.

<sup>6</sup> Idaho Power Stipulation at 5-7 and Joint Explanatory Brief at 5-6.

<sup>7</sup> Second Reply Brief of ICNU at 4-7.

<sup>8</sup> Staff's Reply Brief at 2-3.

Idaho Power because it failed to account for Idaho Power's generating fleet's unique physical and operational conditions.<sup>9</sup>

2. *Commission Analysis and Resolution*

The evidentiary record supports including a method that will lessen the impact of extraordinarily lengthy forced outage events on the calculation of the forecasted rate. The methodology must balance often conflicting factors, such as the advantage of having a longer, larger data set and the reliability and interpretation of older records.

Having considered all of the evidence and the argument presented by the parties, we conclude as follows with regard to PGE and Pacific Power:

1. The utilities should develop plant-specific FORs for each coal-fired generating plant.
2. The FOR shall be the average of the FORs for the previous four years.
3. In the event that, in any one year, the FOR falls outside the 10<sup>th</sup> or 90<sup>th</sup> percentile for comparable NERC coal units, that year shall be declared an "outlier year."
4. When an outlier year occurs, the data for that year shall be discarded in calculating the respective four- or three-year rolling average.
5. For the outlier year, the discarded data point shall be replaced by the 20-year rolling average FOR, or, if the plant has been in service less than 20 years, the average FOR over the life of the plant. In calculating either historical average FOR, the length of any one forced outage shall be capped at 28 days.
6. In preparing the 20-year rolling average FOR, the utility must utilize only available direct data and shall submit an affidavit to the Commission to that effect. The utilities may not attempt to recreate data by seeking to analyze whether a particular outage was forced or maintenance-related.
7. If the Commission finds that any plant outage in the previous four years was due to utility imprudence, the FOR(s) for the year(s) of the outage shall be replaced in the four-year rolling average by the historical average FOR as determined in step 5 above. Further, for any determination of imprudence related to an outage occurring during the period of the historical average, the year(s) of the outage shall not be included in calculating the historical average FOR.

We make the same conclusions with regard to Idaho Power, with one exception. As noted above, the Idaho Power Stipulation adopted the Order No. 09-479

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<sup>9</sup> CUB's Reply Brief at 2-4.

language, but it applied it to a three-year rolling average, reflecting the time frame used in the state of Idaho. Paragraph 19 of the Idaho Power Stipulation also provides for acceptance of alternative Commission data sets within certain parameters, should this Commission choose to modify the Order No. 09-479 methodology.

We find that the adopted mechanism above is compliant with paragraph 19 of the Idaho Power Stipulation, and are willing to allow the use of a three-year rolling average for Idaho Power, rather than the four-year rolling average we apply to PGE and PacifiCorp. Based on these findings, we conclude that the proposed resolution of this issue in the Idaho Power Stipulation is reasonable and should be adopted.

## **B. Generating Unit Deration-Related Issues**

ICNU raised two further issues related to modeling forced outages in utility production cost models. The first issue is whether, when derating the capacity of a generating unit to reflect forced outages, it is appropriate to derate the entire operating range of the generating unit (*i.e.*, from minimum to maximum operating capacity), or only the maximum capacity of the unit. The second issue is whether it is appropriate to make a corresponding adjustment to the unit's heat rate curve (*i.e.*, from minimum to maximum operating capacity), or only the unit's heat rate at maximum operating capacity.

### **1. Capacity Deration**

#### *a. Positions of the Parties*

ICNU argues that realistic modeling of forced outages requires derating of the entire operating range of a generating unit from its minimum to its maximum operating capacity. Simply derating a unit's maximum capacity is not enough. According to ICNU, failing to derate the entire range of unit's operating capacity would overstate the expected value of the unit's capacity.<sup>10</sup> If in the production cost model the unit was operated at levels below its maximum capacity, then the model would overstate the unit's expected energy output.<sup>11</sup>

Pacific Power argues that derating a unit's minimum operating capacity could result in the model operating the unit at a level where in reality it would be physically impossible to operate the unit. Pacific Power's modeling of ICNU's proposal shows a small change in the modeled net variable power cost.<sup>12</sup>

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<sup>10</sup> ICNU/100 Falkenberg/50-53.

<sup>11</sup> ICNU/200 Falkenberg/9-11.

<sup>12</sup> PPL/405 Duvall/17.

*b. Commission Analysis and Resolution*

We are persuaded by ICNU's arguments. When modeling forced outages using the capacity deration approach, utilities are directed to derate a unit's capacity over its entire range of operation. This will result in the modeled output of the unit matching the output, given the unit's expected forced outage rate. We note that ICNU points out that the current deration approach to modeling forced outages is outdated and that there are more sophisticated methods of representing forced outages in production cost models.<sup>13</sup> We encourage the utilities, ICNU, CUB, and Staff to explore these modeling alternatives in future rate cases involving net variable power costs.

**2. Heat Rate Adjustment**

*a. Positions of the Parties*

ICNU argues that the deration approach to modeling a generating unit's forced outage rate requires a further modeling adjustment to the unit's heat rate curve. Simply adjusting the unit's heat rate at its derated maximum capacity is not enough. According to ICNU, failing to adjust the unit's entire heat rate curve could result in the model overstating the unit's fuel costs.<sup>14</sup> ICNU compares what it believes is PGE's correct decision to implement this adjustment in its MONET model to Pacific Power's failure to implement this adjustment in its GRID model.<sup>15</sup> ICNU concedes that PGE and Pacific Power use different heat rate methodologies in their production cost models.<sup>16</sup> ICNU also admits that partial forced outages, where a unit is forced to operate at a lower capacity and higher heat rate, complicate the implementation of this adjustment.<sup>17</sup> Nevertheless, ICNU argues that Pacific Power should be directed to adjust the entire heat rate curve of units modeled in GRID.

Pacific Power argues that ICNU's proposal has the unintended consequence of making each unit appear to be more efficient than it really is over its operating range. According to Pacific Power this would have the effect of artificially lowering its modeled net variable power costs. Pacific Power's modeling of ICNU's proposal shows a relatively large change in the modeled power costs.<sup>18</sup>

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<sup>13</sup> ICNU/100 Falkenberg/51.

<sup>14</sup> ICNU/100 Falkenberg/54.

<sup>15</sup> ICNU/200 Falkenberg/10-11.

<sup>16</sup> ICNU/200 Falkenberg/11.

<sup>17</sup> ICNU/100 Falkenberg/60.

<sup>18</sup> PPL/405 Duvall/19.

*b. Commission Analysis and Resolution*

We are persuaded by ICNU's arguments. Given the current deration approach to modeling forced outages, a corresponding adjustment to the unit's modeled heat rate curve is necessary. However, again we emphasize the lack of sophistication and realism associated with the deration approach. We are concerned that adjustment to the heat rate curve based on forced outage rates, may skew the reserve carrying logic in a production cost model and result in an unrealistic and suboptimal carrying of spinning reserves across generating units. We understand that Pacific Power is currently developing a new production cost model that may replace GRID in future regulatory proceedings. We encourage Pacific Power to work with ICNU, CUB and Staff to explore alternatives to this approach.

**C. Stipulated Settlements Regarding Related Company-Specific Issues**

*1. Issues Settled by Stipulation.*

Each of the electric utilities participating in the proceeding has unique generating asset portfolios to which the FOR principles are to be applied. In the course of settlement negotiations among the parties, as discussed below, portfolio-specific issues arose with respect to each company. Unlike the calculation of the FOR Collar and capacity heat rates as discussed above, these issues were all resolved through stipulation and are not disputed. We summarize these issues by each company-specific stipulation.

*a. The PGE Stipulation*

As noted above, PGE, CUB, ICNU, and Staff entered into a stipulation intended to resolve, all issues raised in this proceeding as they related to PGE. We have modified the stipulating parties' proposed resolution of the proper methodology to calculate the FOR for coal-fired generating plants. We now address the proposed resolution of the remaining issues, which are uncontested.

Paragraph 2 of the PGE Stipulation states that the calculation of the FOR for thermal generating units will be effected by modifications to the MONET power cost model, by the implementation of subparagraphs a.-f. Each of those subparagraphs describes the resolution by PGE, Staff, CUB, and ICNU of a PGE-specific issue, except subparagraph d, the FOR Collar mechanism we modified and resolved above.

In subparagraph a, the parties agreed to modifications in the application of the forced outage formulae applied to the Beaver plant units 1-7 and 8 to be addressed in a separate Commission docket. Subparagraph b requires PGE to include a Wind Availability Report with specific subject matter requirements as part of its Schedule 125 annual update filing and to assure that wind energy producing entities supplying PGE with power file similar reports.



In Subparagraph c, PGE agrees to supply the Commission with an estimate of the net variable power cost effect on the high load-low load hours split at the Boardman and Colstrip plants as an outboard calculation in an update filing. Subparagraph e reflects an agreement by the parties that the issue of planned maintenance outage forecasting methodology will be dealt with in a separate Commission docket. In subparagraph f, the parties agreed that PGE's calculations of forced outage rates provided equivalent results to the Staff's proposed three plant availability formulas.

*b. The Pacific Power Stipulation.*

Pacific Power, CUB, ICNU, and Staff entered into a partial stipulation of issues as they relate to Pacific Power. We summarize those agreements below.

Paragraph I of Appendix A "Partial Settlement Agreement", sets forth the agreement of the parties that, in calculating the FOR for thermal plants other than peaker plants, Pacific Power would continue to use the current EOR<sup>19</sup> methodology and that the calculations produce equivalent results to Staff's three plant availability formulas. Paragraph II of the agreement provides that Pacific Power will apply the EFOR-d<sup>20</sup> methodology to all Gadsby units and any new peaker plants and that Pacific Power will incorporate this change in docket UE 207 and in all future TAM filings.

Paragraph III addresses the application of the FOR to new plants and the use of the manufacturers' fleet data for the first two years before reverting to actual plant operating data. Pacific Power agrees to use the new formula in docket UE 207 and future TAM filings. Paragraph IV of the agreement provides for adjustments in the FOR for new capital investment in future filings if it can be shown that the investment will impact the FOR.

Paragraph V reflects an agreement by the parties to remove hydro generating unit forced outages from docket UE 207, although they may be included in future filings if Pacific Power can address modeling concerns. Paragraph VI of the agreement specifies that Pacific Power will provide reports containing specific measures on wind availability and that the reports will be provided at the project level using specified metering techniques. This section also provides for discovery of certain operating information.

*c. The Idaho Power Stipulation*

In addition to the issue relating to the FOR Collar for extreme forced or unplanned outages, the Idaho Power Stipulation<sup>21</sup> purports to settle all other issues raised in this proceeding with respect to Idaho Power.

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<sup>19</sup> EOR (Equivalent Outage Rate) = Equivalent Unplanned Outage Rate (EUOR) with Equivalent Planned Derate Hours (EDPH) added to the numerator, using the NERC definitions of EUOR and EDPH.

<sup>20</sup> Equivalent Forced Outage Rate (demand).

<sup>21</sup> Idaho Power Stipulation filed by Idaho Power, Staff, and CUB (Sept 7, 2010).

In Paragraph 16 of the Stipulation, the parties agree that Idaho Power will continue to use the methodology to calculate its outage rates for thermal plants as it has done in its recent Annual Power Cost Update filings, subject to the modifications contained in the stipulation. In paragraph 17, the stipulating parties agree to the continued use of a three-year historical rolling average to determine the FOR for thermal plants, in light of the administrative efficiency of using similar time frames for plants serving territories in Idaho. The Idaho Power does not model forced outage rates for peaker and hydro electric plants and the parties agree to use the current methodology.

Paragraph 20 provides that Idaho Power may continue to forecast planned maintenance outages but that CUB and Staff may challenge the validity of those forecasts in future proceedings. In paragraph 21, the parties agree the FOR for new plants will be based on the manufacturer's warranty for the first two years and that actual data will be used thereafter. In paragraph 22, the Idaho Power and Staff agreed to work together to implement a heavy load-light load split of maintenance hours when designing the annual power cost adjustment mechanism.

Paragraph 23 provides that Idaho Power will file Wind Availability Reports concurrent with the company's annual operations reports and specifies the relevant data to be included. Idaho Power reserves the right in paragraph 24 of the stipulation, to offer an alternative FOR methodology to the Commission in the context of a general rate case or other power cost filing. However, any such filing will clearly indicate that the company is seeking an alternative methodology which will be subject to Commission approval.

## *2. Commission Analysis and Resolution.*

We have reviewed each of the stipulations and the parties' joint testimony, exhibits, and briefs in support of the stipulations. We find the terms of the stipulations and their joint resolution are supported by good and sufficient evidence to conclude that the terms and conditions contained in the stipulations satisfy our goals in this proceeding, are reasonable, and are in the public interest. The stipulations should be adopted.

### III. ORDER

IT IS ORDERED that:

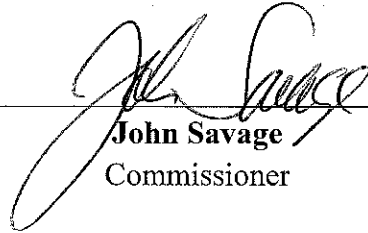
1. The stipulation filed by Portland General Electric Company, the Staff of the Public Utility Commission of Oregon, the Citizens' Utility Board of Oregon, and the Industrial Customers of Northwest Utilities, except as to Paragraph 2, subparagraph d as specified in this order, is adopted and attached hereto as Appendix A entitled "Stipulation Regarding All Issues for PGE" referred to as the PGE Stipulation in this order.
2. The stipulation filed by Pacific Power, dba Pacific Power, the Staff of the Public Utility Commission of Oregon, the Citizens' Utility Board of Oregon, and the Industrial Customers of Northwest Utilities, is adopted in its entirety and attached hereto as Appendix B entitled "Partial Stipulation" and referred to as the Pacific Power Stipulation in this order.
3. The stipulation filed by Idaho Power Company, the Staff of the Public Utility Commission of Oregon and the Citizens' Utility Board of Oregon is adopted in its entirety and attached hereto as Appendix C entitled and referred to in this order as the Idaho Power Stipulation.
4. The methodology described in section II, A. 2. of this order shall applied to the calculation of the Forced Outage Rate (FOR) for coal-fired electric generating plants owned by or operated under the direction of Portland General Electric Company and PacifiCorp, dba, Pacific Power, for all general rate cases, annual power cost updates, and other power cost related proceedings before this Commission
5. The methodology described in section II, B. 1 and 2 of this order shall be applied to the calculation of the plant capacity deration and heat rate adjustment for PacifiCorp, dba Pacific Power.

6. Portland General Electric Company, PacifiCorp dba Pacific Power, and Idaho Power Company shall provide such information and perform such other acts as may be necessary to be in compliance with the terms of their respective stipulations and with this order.

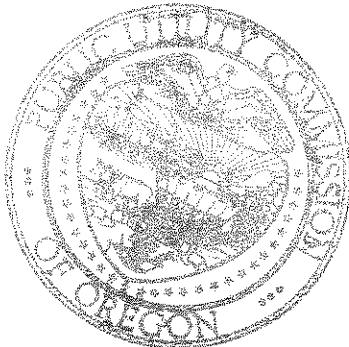
Made, entered and effective OCT 22 2010.



**Ray Baum**  
Chairman



**John Savage**  
Commissioner



**Susan K. Ackerman** *JA*  
Commissioner

A party may request rehearing or reconsideration of this order pursuant to ORS 756.561. A request for rehearing or reconsideration must be filed with the Commission within 60 days of the date of service of this order. The request must comply with the requirements in OAR 860-014-0095. A copy of any such request must also be served on each party to the proceeding as provided by OAR 860-013-0070(2). A party may appeal this order by filing a petition for review with the Court of Appeals in compliance with ORS 183.480-183.484.

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON  
UM 1355**

INVESTIGATION INTO FORECASTING FORCED OUTAGE RATES FOR ELECTRIC GENERATING UNITS	) ) )	<b>STIPULATION REGARDING ALL ISSUES FOR PGE</b>
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This Stipulation (“Stipulation”) is among Portland General Electric Company (“PGE”), Staff of the Public Utility Commission of Oregon (“Staff”), the Citizens’ Utility Board of Oregon, and the Industrial Customers of Northwest Utilities (collectively, the “Stipulating Parties”).

### I. INTRODUCTION

This docket was initiated to address issues regarding forced outage rate forecasting in ratemaking for electric utilities in Oregon. All of the Stipulating Parties filed testimony. Several workshops have been held, including a workshop with the Commissioners. The parties have also exchanged data requests and responses. The Stipulating Parties have reached agreement settling, with respect to PGE, all issues raised in this proceeding as set forth below. By entering into this Stipulation, the Stipulating Parties do not agree that the resolution of the issues set forth below for PGE is appropriate for any other utility.

The Parties request that the Commission issue an order adopting this Stipulation.

### II. TERMS OF STIPULATION

1. This Stipulation is entered to settle all issues in this docket with respect to PGE.
2. For purposes of forecasting forced outage rates for PGE thermal generating

units, the following modifications will be made to PGE's Monet power cost model:

- a. **EFORd for Beaver Plant:** The Stipulating Parties agree that, even though the Commission may not yet have issued its Order in UM 1355 based upon this Stipulation, beginning in UE 208, the EFORd concept should be applied to Beaver Units 1-7 and Unit 8. The Stipulating Parties agree that the standard NERC EFORd formula is not directly applicable to Beaver 1-7, in their current configuration and operation, and agree that a proxy should be used. The Stipulating Parties agree that the proxy formula will be to remove Forced Maintenance Hours from the derivation of the FOR. The Stipulating Parties agree that the calculation for Beaver Unit 8 will be modified similarly to Units 1-7. The Stipulating Parties further agree that this formula will be revisited in the event that Beaver plant operations change significantly.
- b. **Wind Availability:** PGE agrees to provide the following wind data annually for its owned resource (Biglow Canyon) as part of its Minimum Filing Requirements (MFRs) in its Schedule 125 Annual Update Tariff filings:
- monthly projected and actual energy and capacity factor,
  - energy and capacity factor variance, and
  - wind availability as reported by the operator (with an operator definition of availability).
- PGE agrees to request this same information from the operators of the Vansycle and Klondike wind farms, and from any future operator that sells wind energy to PGE under a purchased power agreement.
- c. **High-Load and Low-Load Hours Split:** PGE agrees that, even though the Commission may not yet have issued its Order in this docket based

upon this Stipulation, for the 2010 AUT (Docket UE-208), it will include an estimate of the NVPC effect of Boardman's and Colstrip's high-load and low-load MOH split as an outboard calculation in an update filing, which will reduce power costs. For future AUTs, PGE will similarly include a NVPC estimate as an outboard calculation with the initial filing. To minimize the resources required, after the initial filing, no further updates to the outboard calculation will be made. PGE will continue working with Parties to incorporate this as an enhancement in Monet. Until it does so, PGE will use the outboard calculation.

- d. **FOR "Collar":** The Stipulating Parties agree that the Forced Outage Rate collar method using the 10<sup>th</sup> and 90<sup>th</sup> percentile figures of comparable NERC coal units results in an acceptable proxy for a unit's FOR, should that unit's annual FOR fall outside the 10<sup>th</sup> or 90<sup>th</sup> percentile. The percentiles will be based on the distribution of the merged NERC data for the most recently available four-year period. This methodology does not imply "imprudence," and it is not intended to be used in the future to determine imprudence. The Parties agree that, even though the Commission may not yet have issued its Order in this docket based upon this Stipulation, the FOR collar methodology will be included in the 2010 AUT (Docket UE-208) update filing and only applies to coal plants. The Stipulating Parties agree that, should the NERC sample change significantly, the efficacy of the collar will be revisited.
- e. **PMO Forecasting:** The Stipulating Parties agree that the issue of planned maintenance outage methodology for PGE will be dealt with in Docket UE 208, PGE's currently pending Annual Update Tariff proceeding. The

Stipulating Parties also agree that, with respect to PGE, this issue will not be addressed further in UM 1355.

- f. **Staff's Three Plant Availability Formulas (POF, FOR, MOR):** The Stipulating Parties agree that PGE's calculations can be used provided PGE demonstrates that these calculations are mathematically equivalent to Staff's proposed three plant availability formulas.
- g. **Global Settlement of all issues in UM 1355:** The Stipulating Parties agree that this settlement resolves all issues in UM 1355 for PGE, but not for any other utility.

3. The Stipulating Parties recommend and request that the Commission approve the modeling adjustments described above as appropriate and reasonable resolutions of these issues for PGE.

4. The Stipulating Parties agree that this Stipulation is in the public interest and will result in rates that are fair, just and reasonable.

5. The Stipulating Parties agree that this Stipulation represents a compromise in the positions of the parties. As such, conduct, statements, and documents disclosed in the negotiation of this Stipulation shall not be admissible as evidence in this or any other proceeding. Except as provided in this Stipulation, the Stipulating Parties agree that they will not cite this Stipulation as precedent in any other proceeding other than a proceeding to enforce the terms of this Stipulation. Nothing in this paragraph precludes a party from stating as a factual matter what the parties agreed to in this Stipulation.

6. If this Stipulation is challenged by any other party to this proceeding, or any other party seeks a resolution that is inconsistent with the terms of this Stipulation, the Stipulating Parties reserve the right to cross-examine witnesses and put in such evidence as



they deem appropriate to respond fully to the issues presented, including the right to raise issues that are incorporated in the settlements embodied in this Stipulation.

Notwithstanding this reservation of rights, the Stipulating Parties agree that they will continue to support the Commission's adoption of the terms of this Stipulation.

7. If the Commission rejects all or any material part of this Stipulation, or adds any material condition to any final order which is not contemplated by this Stipulation, each Stipulating Party reserves the right to withdraw from this Stipulation upon written notice to the Commission and the other Stipulating Parties within five (5) business days of service of the final order that rejects this Stipulation or adds such material condition.

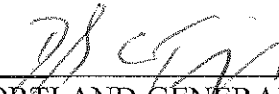
Nothing in this paragraph provides any Stipulating Party the right to withdraw from this Stipulation as a result of the Commission's resolution of issues that this Stipulation does not resolve.

8. This Stipulation will be offered into the record in this proceeding as evidence pursuant to OAR § 860-14-0085. The Stipulating Parties agree to support this Stipulation throughout this proceeding and in any appeal, and recommend that the Commission issue an order adopting the settlements contained herein. The Stipulating Parties also agree to cooperate in drafting and submitting the explanatory brief or written testimony required by OAR § 860-14-0085(4).

9. By entering into this Stipulation, no Stipulating Party shall be deemed to have approved, admitted or consented to the facts, principles, methods or theories employed by any other Stipulating Party in arriving at the terms of this Stipulation. Except as provided in this Stipulation, no Stipulating Party shall be deemed to have agreed that any provision of this Stipulation is appropriate for resolving issues in any other proceeding.

10. This Stipulation may be signed in any number of counterparts, each of which will be an original for all purposes, but all of which taken together will constitute one and the same agreement.

DATED this <sup>18<sup>th</sup></sup> day of August, 2009.

  
\_\_\_\_\_  
PORTLAND GENERAL ELECTRIC  
COMPANY

\_\_\_\_\_  
STAFF OF THE PUBLIC UTILITY  
COMMISSION OF OREGON

\_\_\_\_\_  
CITIZENS' UTILITY BOARD  
OF OREGON

\_\_\_\_\_  
INDUSTRIAL CUSTOMERS OF  
NORTHWEST UTILITIES

10. This Stipulation may be signed in any number of counterparts, each of which will be an original for all purposes, but all of which taken together will constitute one and the same agreement.

DATED this 17<sup>th</sup> day of August, 2009.

\_\_\_\_\_  
PORTLAND GENERAL ELECTRIC  
COMPANY



\_\_\_\_\_  
STAFF OF THE PUBLIC UTILITY  
COMMISSION OF OREGON

\_\_\_\_\_  
CITIZENS' UTILITY BOARD  
OF OREGON

\_\_\_\_\_  
INDUSTRIAL CUSTOMERS OF  
NORTHWEST UTILITIES

10. This Stipulation may be signed in any number of counterparts, each of which will be an original for all purposes, but all of which taken together will constitute one and the same agreement.

DATED this 17<sup>th</sup> day of August, 2009.

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PORTLAND GENERAL ELECTRIC  
COMPANY

---

STAFF OF THE PUBLIC UTILITY  
COMMISSION OF OREGON



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CITIZENS' UTILITY BOARD  
OF OREGON

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INDUSTRIAL CUSTOMERS OF  
NORTHWEST UTILITIES

10. This Stipulation may be signed in any number of counterparts, each of which will be an original for all purposes, but all of which taken together will constitute one and the same agreement.

DATED this     day of August, 2009.

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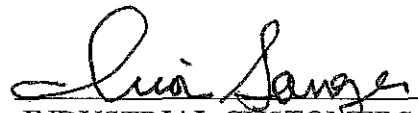
PORTLAND GENERAL ELECTRIC  
COMPANY

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STAFF OF THE PUBLIC UTILITY  
COMMISSION OF OREGON

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CITIZENS' UTILITY BOARD  
OF OREGON

  
INDUSTRIAL CUSTOMERS OF  
NORTHWEST UTILITIES

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**UM 1355**

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In the Matter of  
THE PUBLIC UTILITY COMMISSION  
OF OREGON,  
Investigation into Forecasting Forced Outage  
Rates for Electric Generating Units.

**PARTIAL STIPULATION**

9 This Partial Stipulation is entered into for the purpose of resolving the issues among  
10 the parties to this Partial Stipulation related to the methodology to be used by PacifiCorp (or  
11 the "Company") to forecast its forced outage rates for electric generating units.

**PARTIES**

12  
13 1. The parties to this Partial Stipulation are PacifiCorp, Staff of the Public Utility  
14 Commission of Oregon ("Staff"), the Citizens' Utility Board ("CUB"), and the Industrial  
15 Customers of Northwest Utilities ("ICNU") (together, the "Parties").

**BACKGROUND**

16  
17 2. In Order No. 07-015 in Docket UE 180, the Public Utility Commission of  
18 Oregon ("Commission") ordered the opening of a new generic docket to evaluate the  
19 accuracy of the Commission's method for forecasting forced outages.<sup>1</sup> On November 2,  
20 2007, the Commission opened this docket to review the appropriate methodology for  
21 determining the forced outage rate for generating plants.

22 3. Pursuant to the Administrative Law Judge Allan Arlow's Prehearing  
23 Conference Report and Ruling issued on November 13, 2008, and Ruling modifying the  
24 schedule on February 20, 2009, the Parties filed Opening Testimony on April 7, 2009. The  
25

26 <sup>1</sup> *Re. Portland General Electric Co. Request for General Rate Revision, Docket UE 180, Order No. 07-015 at 15, 55 (Jan. 12, 2007).*

1 Parties filed Reply Testimony on May 13, 2009. Thereafter, the parties to this docket  
2 convened two settlement conferences held on June 18 and June 23, 2009. All parties to the  
3 docket participated in the settlement conferences.

4 4. Following the settlement conferences, an additional Prehearing Conference  
5 was held on June 29, 2009. Pursuant to the ALJ's Prehearing Conference Report of July 6,  
6 2009, PacifiCorp filed Supplemental Testimony on July 24, 2009. Staff and ICNU filed  
7 Supplemental Reply Testimony on August 13, 2009.

#### 8 **AGREEMENT**

9 5. The Parties agree that this Stipulation and the Partial Settlement Agreement  
10 ("Agreement"), attached hereto as Appendix A, will govern the Company's future outage  
11 calculations for all thermal plants. The Agreement also governs adjustments to the Company's  
12 forced outage rates resulting from new capital investments and future wind availability reporting  
13 requirements. Nothing in this Agreement or this Stipulation prevents any Party, including the  
14 Company, from advocating in a future general rate case or other proceeding that these  
15 agreements or calculations should be revised based upon new information.

16 6. The Parties agree to litigate the following issues in Docket UE 207, the  
17 Company's 2010 Transition Adjustment Mechanism ("TAM") proceeding: non-outage related  
18 ramping adjustments and planned maintenance outages.<sup>2</sup> The Parties agree that PacifiCorp will  
19 continue to use a four-year average for modeling planned outages. The Parties do not agree on  
20 how to model PacifiCorp's planned outage schedule using a four-year average. The Parties  
21 agree that all testimony in UM 1355 on these issues shall be included in the record in UE 207.  
22 The Parties agree to litigate the following issues in UM 1355: excluding extreme events/outliers  
23 for coal units to increase forecast accuracy and heat rate curve-minimum deration.

24 7. The Parties agree to submit this Partial Stipulation to the Commission and  
25 request that the Commission approve the Partial Stipulation as presented.

26 \_\_\_\_\_  
<sup>2</sup> Heat rate curve-minimum deration is a proposed adjustment in UE 207 as well.

1           8.       This Partial Stipulation will be offered into the record of this proceeding as  
2 evidence pursuant to OAR 860-014-0085. The Parties agree to support this Partial Stipulation  
3 throughout this proceeding and any appeal, (if necessary) provide witnesses to sponsor this  
4 Partial Stipulation at the hearing, and recommend that the Commission issue an order adopting  
5 the settlements contained herein.

6           9.       If this Partial Stipulation is challenged by any other party to this proceeding, the  
7 Parties agree that they will continue to support the Commission's adoption of the terms of this  
8 Partial Stipulation. The Parties agree to cooperate in cross-examination and put on such a case  
9 as they deem appropriate to respond fully to the issues presented, which may include raising  
10 issues that are incorporated in the settlements embodied in this Partial Stipulation.

11          10.       The Parties have negotiated this Partial Stipulation as an integrated document. If  
12 the Commission rejects all or any material portion of this Partial Stipulation or imposes  
13 additional material conditions in approving this Partial Stipulation, any Party disadvantaged by  
14 such action shall have the rights provided in OAR 860-014-0085 and shall be entitled to seek  
15 reconsideration or appeal of the Commission's Order.

16          11.       By entering into this Partial Stipulation, no Party shall be deemed to have  
17 approved, admitted, or consented to the facts, principles, methods, or theories employed by any  
18 other Party in arriving at the terms of this Partial Stipulation, other than those specifically  
19 identified in the body of this Partial Stipulation.

20          12.       This Partial Stipulation may be executed in counterparts and each signed  
21 counterpart shall constitute an original document.

22          This Partial Stipulation is entered into by each party on the date entered below such Party's  
23 signature.

24    ***Signature page follows.***

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PACIFICORP

STAFF

By: Andrea Kelly

By: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

CUB

ICNU

By: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_


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PACIFICORP

STAFF

By: \_\_\_\_\_

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Date: 9/4/9 \_\_\_\_\_

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PACIFICORP

STAFF

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Date: \_\_\_\_\_

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CUB

ICNU

By: 

By: \_\_\_\_\_

Date: 9-4-09

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PACIFICORP

STAFF

By: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

CUB

ICNU

By: \_\_\_\_\_

By: *Qui Lange*

Date: \_\_\_\_\_

Date: 9/4/9

## Appendix A

**Partial Settlement Agreement in UM 1355**

- I. **Calculating forced outage rates on thermal plants other than peaker plants.** The Parties agree that PacifiCorp will continue to use EOR (Equivalent Outage Rate=Equivalent Unplanned Outage Rate (EUOR) with Equivalent Planned Derate Hours (EPDH) added to the numerator, using the NERC definitions of EUOR and EPDH) and derive outage rates using the Commission's traditional four-year historical average approach, modeled on a weekday/weekend basis. This produces a result that is equivalent to Staff's formulas described in Staff's UM 1355 testimony; *i.e.*, FOR, MOR, and POF. This calculation is set forth in Exhibit A. The Parties agree that PacifiCorp will incorporate weekday/weekend modeling of outage rates in its UE 207 filing and in future TAM filings.
- II. **Calculating forced outage rates on peaker plants.** The Parties agree that PacifiCorp will apply EFOR-d to all Gadsby units and to any new peaker plants, as defined by Revised Protocol. The Parties agree that PacifiCorp will incorporate this change in its UE 207 filing and in future TAM filings.
- III. **Calculating forced outage rate for new plant.** The Parties agree that PacifiCorp will use the manufacturer's model specific fleet availability average to set the forced outage rate for the first two years. Thereafter, PacifiCorp will phase in actual operating data over four years, using a weighted average of the actual operating data and the manufacturer's model specific fleet availability average (excluding the first year of actual operating data). PacifiCorp did not file in this approach in UE 207, so a change to the filing is required for implementation. The Parties agree that PacifiCorp will use this approach in this and future TAM filings.
- IV. **Adjustments to forced outage rate for new capital investment.** Beginning with PacifiCorp's 2011 TAM, the Parties agree that they may propose an adjustment in the forced outage rate, either an increase or a decrease, if: (1) a specific capital investment will result in a change in unit availability; and (2) the forced outage rate is adjusted on a going forward basis to avoid a double-count of the actual increase or decrease in the rate.
- V. **Calculating hydro availability.** PacifiCorp agrees to remove hydro forced outages from UE 207. The Parties agree that PacifiCorp may include the issue in future TAM proceedings, irrespective of whether the TAM is filed as a part of or concurrently with a general rate case or filed on a stand-alone basis. PacifiCorp agrees to attempt to address the modeling concerns raised in this docket in future filings.
- VI. **Wind availability reporting.**

The Parties agree that, concurrent with its annual results of operations report beginning in 2010 and for a period of at least 5 years, PacifiCorp will provide an annual report on wind availability to the Parties. If the Parties determine that the report is useful and the need for it has not been superseded by other reporting, PacifiCorp agrees to continue to provide the report beyond the initial five-year period. The annual report shall consist of: (1) projected energy by month for the wind resource (MWh); (2) projected capacity factor by month for

the wind resource (%);(3) actual energy by month for the wind resource (MWh); (4) actual capacity factor by month for the wind resource (%); (5) energy variance by month (MWh) for the wind resource; (6) capacity factor variance by month (%) for the wind resource; and (7) wind resource availability by month as reported by the operator, along with the operator's specific definition of "availability." The information will be provided for each wind resource at the project level and will be measured via the revenue quality meter associated with the large generator interconnection agreement applicable to the wind resource. PacifiCorp agrees that Parties may seek discovery of this information at the turbine level and, subject to information availability and under the normal rules of discovery, PacifiCorp agrees to provide such information.

## Exhibit A to UM 1355 Partial Settlement

**EQUATION:**

$$EOR = \frac{FOH + EFDH + MOH + EMDH + EPDH}{FOH + MOH + SH + Synchronous Hrs + Pumping Hrs + EFDHRS + EMDHRS} \times 100$$

Where:

FOH = Forced outage hours

EFDH = Equivalent forced derated hours

MOH = Maintenance outage hours

EMDH = Equivalent maintenance derated hours

EPDH = Equivalent planned derated hours

EFDHRS = Equivalent forced derated hours during reserve shutdowns

EMDHRS = Equivalent maintenance derated hours during reserve shutdowns

**EXAMPLE:**Weekday Hours

FOH = 172 hours

SH = 6048 hours

EFDH = 43 hours

Synchronous Hrs = 0 hours

MOH = 68 hours

Pumping Hrs = 0 hours

EMDH = 2 hours

EFDHRS = 0 hours

EPDH = 0.6 hours

EMDHRS = 0 hours

$$EOR = \frac{172 + 43 + 68 + 2 + 0.6}{172 + 68 + 6048 + 0 + 0 + 0 + 0} \times 100$$

$$EOR = 4.54$$

Weekend Hours

FOH = 0.8 hours

SH = 2407 hours

EFDH = 11 hours

Synchronous Hrs = 0 hours

MOH = 88 hours

Pumping Hrs = 0 hours

EMDH = 1 hours

EFDHRS = 0 hours

EPDH = 0.2 hours

EMDHRS = 0 hours

$$EOR = \frac{0.8 + 11 + 88 + 1 + 0.2}{0.8 + 88 + 2407 + 0 + 0 + 0 + 0} \times 100$$

$$EOR = 4.05$$

\*PacifiCorp does not currently report, and will not report Synchronous Hrs, Pumping Hrs, EFDHRS and EMDHRS in future EOR calculations absent a change in circumstances. PacifiCorp will notify the Parties in the event it starts to report Synchronous Hrs, Pumping Hrs, EFDHRS and EMDHRS in its EOR calculations.

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**UM 1355**

In the Matter of  
THE PUBLIC UTILITY COMMISSION  
OF OREGON,  
Investigation into Forecasting Forced Outage  
Rates for Electric Generating Units.

**IDAHO POWER STIPULATION**

This Stipulation resolves all issues among the parties to this Stipulation related to the methodology to be used by Idaho Power Company ("Idaho Power" or the "Company") to forecast its forced outage rates. This Stipulation includes identical terms as the Company's September 1, 2009, Stipulation in this docket, with the exception that this Stipulation includes a different collar mechanism.

**PARTIES**

1. The parties to this Stipulation are Idaho Power, Staff of the Public Utility Commission of Oregon ("Staff"), and the Citizens' Utility Board ("CUB") (together, the "Parties"). The Industrial Customers of Northwest Utilities ("ICNU") is not a party to this Stipulation, although ICNU does not oppose the Stipulation.

**BACKGROUND**

2. In Order No. 07-015 in Docket UE 180, the Public Utility Commission of Oregon ("Commission") ordered the opening of a new generic docket to evaluate the accuracy of the utilities' methods for forecasting forced outages.<sup>1</sup> Forced outages are instances where a utility's generating plant is unavailable for generation.<sup>2</sup> Generally, there

<sup>1</sup> *Re. Portland General Electric Co. Request for General Rate Revision*, Docket UE 180, Order No. 07-015 at 15, 55 (Jan. 12, 2007).

<sup>2</sup> *Re. Public Utility Comm'n of Oregon Investigation into Forecasting Forced Outage Rates for Electric Generating Unit*, Docket UM 1355, Staff/100, Brown/2 (Apr. 7, 2009).



1 are three types of outages: (1) forced outages that require an immediate generator shut-  
 2 down; (2) maintenance outages that are scheduled less than a year in advance; and (3)  
 3 planned outages that are scheduled more than one year out.<sup>3</sup> The forced outage rate is a  
 4 measure of the availability of a utility's generating plants and expressed as the proportion  
 5 of the forced outage hours to the total hours the plant is available for generation.<sup>4</sup>

6 3. For the purposes of this Stipulation and the Brief filed concurrently, the term  
 7 "outage rates" will be used generically, to cover all three types of outages, unless  
 8 abbreviated as FOR, in which it will refer specifically to the forced outage rate, as opposed  
 9 to a maintenance outage rate or planned outage rate.

10 4. On November 2, 2007, the Commission opened this docket to review the  
 11 appropriate methodology for determining the forced outages rate for generating plants.<sup>5</sup>

12 5. The parties to this docket convened two settlement conferences held on  
 13 June 18 and June 23, 2009. All parties to the docket participated in the conferences.

14 6. On September 1, 2009, the Parties entered into an agreement and filed a  
 15 Stipulation (hereinafter, "First Stipulation"). That comprehensive settlement resolved all  
 16 issues in this docket and included the adoption of Staff's proposed collar mechanism.<sup>6</sup>

17 7. On October 7, 2009, the Commission issued a Notice of Intent to Modify  
 18 Stipulations and Establish Rate Calculation.<sup>7</sup> The Notice reflected the Commission's intent  
 19 to adopt the terms of the First Stipulation, subject to a modification of the collar

20

21

<sup>3</sup> *Id.*

22 <sup>4</sup> *Id.* at Staff/100, Brown/5.

23 <sup>5</sup> *Re. Portland General Electric Co. Request for General Rate Revision*, Docket UE 180, Order No. 07-015 at 55 (Jan. 12, 2007).

24 <sup>6</sup> *See Re. Public Utility Comm'n of Oregon Investigation into Forecasting Forced Outage Rates for Electric Generating Unit*, Docket UM 1355, Idaho Power Stipulation at ¶ 5.c. (Sept. 1, 2009). Staff's collar mechanism is set forth at Staff/200, Brown/8-15.

25 <sup>7</sup> *Re. Public Utility Comm'n of Oregon Investigation into Forecasting Forced Outage Rates for Electric Generating Unit*, Docket UM 1355, Notice of Intent to Modify Stipulations and Establish Rate Calculation (Oct. 7, 2009) (hereinafter, "Notice").

26

1 mechanism.<sup>8</sup> In place of the collar mechanism reflected in the First Stipulation, the  
 2 Commission modified Paragraph 5.c. and replaced its language with the following:

3           **“FOR “Collar”:** The Parties agree that for each year in which  
 4 a coal fired unit’s annual FOR falls outside the 10<sup>th</sup> or 90<sup>th</sup>  
 5 percentile of comparable NERC coal units, the methodology  
 6 for calculating the forced outage rate shall be as set forth in  
 7 Staff/200, Brown 8-15, except that, instead of adjusting the  
 8 FOR to the 10<sup>th</sup> or 90<sup>th</sup> percentile values for the calendar  
 9 year, the mean annual FOR from the unit’s entire historical  
 10 data shall be substituted. This methodology does not imply  
 11 ‘imprudence,’ and it is not intended to be used to determine  
 12 imprudence. If the Commission, however, finds that any  
 13 plant outage is due to utility imprudence, the FOR for that  
 14 calendar year would be replaced in the four-year rolling  
 15 average by the historical mean annual FOR for the unit.  
 16 Furthermore, for any determination of imprudence related to  
 17 an outage made after a final order is issued in this docket, the  
 18 FOR for the calendar year of the outage will not be included  
 19 in the calculation of the historical mean annual FOR.”<sup>9</sup>

12           8. Although the Notice was not an “order,” the Commission made clear that it  
 13 intended the Notice to trigger the provisions of Paragraph 10 of the First Stipulation that  
 14 allowed a party to withdraw from the agreement pursuant to OAR 860-014-0085.

15           9. Thus, on October 19, 2009, Idaho Power filed a Request for Approval of  
 16 Stipulation or Additional Proceedings.<sup>10</sup> Idaho Power requested the Commission  
 17 reconsider its decision and approve the First Stipulation as filed. In the event the  
 18 Commission did not so, the Company intended to exercise its rights under OAR 860-014-  
 19 0085(6) and the terms of the First Stipulation and seek additional proceedings.

20           10. The Commission then issued Order No. 09-479 on December 7, 2009.<sup>11</sup>  
 21 This order clarified the Notice in two ways. *First*, the Commission clarified that in the event  
 22 a utility lacks a “unit’s entire historical data,” the utility must make its best efforts to locate or

23 <sup>8</sup> *Id.* at 1-2.

24 <sup>9</sup> Notice at 3.

25 <sup>10</sup> *Re. Public Utility Comm’n of Oregon Investigation into Forecasting Forced Outage Rates for Electric  
 26 Generating Unit, Docket UM 1355, Request for Approval of Stipulation or Additional Proceedings (Oct.  
 19, 2009).*

<sup>11</sup> *Re. Public Utility Comm’n of Oregon Investigation into Forecasting Forced Outage Rates for Electric  
 Generating Unit, Docket UM 1355, Order No. 09-479 (Dec. 7, 2009).*

1 recreate the outage data of the plant. If the utility cannot reasonably locate or recreate the  
 2 data, it "shall use all of the historical data that is has been able to obtain through its best  
 3 efforts and accompany the data by a declaration to that effect."<sup>12</sup> *Second*, Order No. 09-  
 4 479 clarified the use of the outside-the-collar historical data in the calculation of the  
 5 historical mean, noting that:

6 "the actual data for the outside-the-collar forced outage year  
 7 will not be used in the computation of the FOR four-year  
 8 moving average, it will (if not due to imprudence) become  
 9 part of the historical data set that will be utilized in  
 10 subsequent outside-the-collar FOR calculations. Years with  
 11 outages due to imprudence will be excluded from all  
 12 calculations."<sup>13</sup>

11 Order No. 09-479 also stated that "parties may file additional testimony and cross-examine  
 12 witnesses on issues related to the FOR collar for coal plants outlined in the Notice, to the  
 13 extent they can show there are new facts that are in dispute."<sup>14</sup>

14 11. Pursuant to Order No. 09-479, on January 7, 2010, the Commission  
 15 convened a Prehearing Conference to establish a procedural schedule for the docket in  
 16 light of the Commission's Notice and Order No. 09-479. On January 22, 2010,  
 17 Administrative Law Judge Allan J. Arlow issued a Ruling that allowed parties to file motions  
 18 seeking the right to file additional testimony.<sup>15</sup>

19 12. On January 29, 2010, Idaho Power filed a Motion for Additional Testimony  
 20 seeking leave to file testimony responding to new issues of fact arising subsequent to the  
 21 submission of reply and supplemental testimony.<sup>16</sup>

22

23 <sup>12</sup> *Id.* at 3.

24 <sup>13</sup> *Id.*

25 <sup>14</sup> *Id.* at 4.

26 <sup>15</sup> *Re. Public Utility Comm'n of Oregon Investigation into Forecasting Forced Outage Rates for Electric  
 Generating Unit*, Docket UM 1355, Ruling (Jan. 22, 2010).

<sup>16</sup> *Re. Public Utility Comm'n of Oregon Investigation into Forecasting Forced Outage Rates for Electric  
 Generating Unit*, Docket UM 1355, Idaho Power's Motion for Additional Testimony (Jan. 29, 2010).

1 13. In Order No. 10-157, issued by the Commission on April 26, 2010, the  
2 Commission granted Idaho Power's motion in part.<sup>17</sup> The Commission authorized Idaho  
3 Power to file testimony addressing ICNU's proposed modifications to Staff's collar  
4 mechanism, which was included in the First Stipulation.

5 14. On June 25, 2010, another Prehearing Conference was convened to  
6 establish a schedule for the filing of new testimony and related issues.

7 15. Idaho Power filed testimony on July 16, 2010.

8 **AGREEMENT**

9 16. The Parties agree that Idaho Power will continue to calculate its outage  
10 rates for thermal generating units using the methodology that Idaho Power uses in its  
11 Annual Power Cost Update filings, such as Docket UE 214, and currently in its filings  
12 before the Idaho Public Utilities Commission, subject to the modifications contained in this  
13 Stipulation.

14 17. **Calculating Forced Outage Rates.** The Parties agree that Idaho Power  
15 will continue to use the North American Electric Reliability Corporation ("NERC") formulas  
16 based upon a three-year historical average for calculating the forced outage rate ("FOR")  
17 for all thermal plants. Use of the three-year average creates administrative efficiencies for  
18 Idaho Power as that is the average used to calculate the FOR for the Company's Idaho  
19 service territory. Idaho Power does not model forced outages for its hydroelectric and  
20 peaker plants, and the Parties agree that Idaho Power will continue this current  
21 methodology.

22 18. **Exclusion of Extreme Events for Coal Units.** The Parties agree that for  
23 each year in which a coal fired unit's annual FOR falls outside the 10<sup>th</sup> or 90<sup>th</sup> percentile of  
24 comparable NERC coal units, the methodology for calculating the FOR shall be as set forth  
25

26 <sup>17</sup> *Re. Public Utility Comm'n of Oregon Investigation into Forecasting Forced Outage Rates for Electric  
Generating Unit*, Docket UM 1355, Order No. 10-157 (Apr. 26, 2010).

1 in Staff/200, Brown/8-15, except that, instead of adjusting the FOR to the 10<sup>th</sup> or 90<sup>th</sup>  
2 percentile values for the calendar year, the mean annual FOR from the unit's entire  
3 historical data shall be substituted. This methodology does not imply "imprudence," and it  
4 is not intended to be used to determine imprudence. If the Commission, however, finds  
5 that any plant outage is due to utility imprudence, the FOR for that calendar year would be  
6 replaced in the three-year rolling average by the historical mean annual FOR for the unit.  
7 Furthermore, for any determination of imprudence related to an outage made after a final  
8 order is issued in this docket, the FOR for the calendar year of the outage will not be  
9 included in the calculation of the historical mean annual FOR. Nothing in this provision  
10 modifies Idaho Power's continued use of a three-year rolling average.

11           a.       In the event that Idaho Power cannot reasonably locate or recreate  
12 the forced outage data for a unit's entire history, it will use all of the historical data that it  
13 has been able to obtain through its best efforts and accompany the data by a declaration to  
14 that effect.

15           b.       When calculating the mean annual FOR for the unit's entire history,  
16 the actual data for an outside-the-collar forced outage year will (if not due to imprudence)  
17 become part of the historical data set that will be utilized in subsequent outside-the-collar  
18 FOR calculations, unless otherwise decided by the Commission in its adopted collar  
19 mechanism. Years with outages due to imprudence will be excluded from all calculations,  
20 including both the three-year rolling average and the historical mean.

21       19.       In the event that the Commission adopts a different collar mechanism, the  
22 Parties agree that Idaho Power will be subject to that collar mechanism as long as that  
23 collar falls within the following parameters:

24           a.       The collar must apply only when a coal fired unit's annual FOR falls  
25 outside the 10<sup>th</sup> or 90<sup>th</sup> percentile of comparable NERC coal units, as set forth in Staff/200,  
26 Brown/8-15 or outside the 10<sup>th</sup> or 90<sup>th</sup> percentile of unit historical data (*i.e.* the mechanism

1 must include the same benchmarks/collar boundary values used in the mechanism  
2 proposed by the Commission, Staff, ICNU, and supported by PGE<sup>18</sup>).

3           b.       The collar must adjust a unit's annual FOR falling outside the 10<sup>th</sup> or  
4 90<sup>th</sup> percentile of comparable NERC coal units to either:

5                   i.   the 10<sup>th</sup> or 90<sup>th</sup> percentile values for the calendar year (*i.e.* Staff's  
6                   proposed replacement values); or

7                   ii. an average value based upon the actual historical operating data  
8                   for the particular unit (*i.e.* the Commission and ICNU replacement  
9                   values). Thus, the replacement value must be based upon a  
10                  historical average but the Commission may determine the  
11                  appropriate length of time to use in calculating that average (*e.g.*  
12                  life of the plant, 20 years, 10 years, etc.).

13           c.       The collar methodology does not imply "imprudence," and it is not  
14 intended to be used to determine imprudence. For any year that includes an imprudent  
15 outage the FOR for that calendar year would be replaced in the three-year rolling average  
16 by a value determined according to the Commission's adopted method for replacing  
17 excluded outages, as outlined in subparagraph (b) above. Again, the Parties agree that  
18 any length of time used to calculate the historical average is acceptable as long as it is  
19 based on actual historical operating data, and exclusion of outlier values within the  
20 historical data set will be determined by the Commission in its adoption of a collar  
21 mechanism.

22           20.       **Planned Maintenance Outage Forecasting.** The Parties agree that Idaho  
23 Power may continue to forecast its planned outages. However, Staff and CUB retain the  
24 right to challenge future planned maintenance outage forecasts as not being representative  
25 of future outages.

26 <sup>18</sup> See PGE/300, Tinker-Weitzel/16, II. 1-2.

1           21.     **Calculating FOR for New Plants.** The Parties agree that Idaho Power will  
2 use the manufacturer/project guarantee relevant to a new plant for the first two years of  
3 operation when calculating the FOR. Actual operating data will be used after the first two  
4 years of operation.

5           22.     **Heavy Load/Light Load.** The Parties agree that Idaho Power will work with  
6 Staff to explore the Company's potential ability to implement a Heavy Load Hour and Light  
7 Load Hour split of maintenance hours for purposes of its annual power cost adjustment  
8 mechanism.

9           23.     **Wind Availability Reporting.** The Parties agree that, concurrent with its  
10 annual results of operations report beginning with the 2010 report, Idaho Power will provide  
11 an annual report on wind resources in Idaho Power's resource portfolio. The report will  
12 contain:

- 13                   a.     Projected energy by month for the wind resource (MWh);  
14                   b.     Projected capacity factor by month for the wind resource (%);  
15                   c.     Actual energy by month for the wind resource (MWh);  
16                   d.     Actual capacity factor by month for the wind resource (%); and  
17                   e.     Energy variance by month (MWh) for the wind resource.

18           In addition, to the extent that such information is made available to Idaho Power,  
19 Idaho Power will include in the annual report information as to the capacity factor variance  
20 by month as reported by the operator, along with the operator's specific definition of  
21 "availability." The information will be provided for each wind resource at the project level  
22 and will be measured via the revenue quality meter associated with the large generator  
23 interconnection agreement applicable to the wind resource.

24           24.     Idaho Power reserves the right to employ a different methodology for  
25 calculating outages rates in the context of a general rate case or other power cost filing.  
26 However, in conjunction with such filing, Idaho Power will clearly state that it is seeking a

1 modification to its methodology for calculating forced outage rates and will provide  
2 testimony to support its proposed changes. Any such changes will be subject to  
3 Commission approval.

4 25. The Parties agree to submit this Stipulation to the Commission and request  
5 that the Commission approve the Stipulation as presented. The Parties agree that the  
6 rates resulting from the adopted methodology are sufficient, fair, just, and reasonable.

7 26. This Stipulation will be offered into the record of this proceeding as evidence  
8 pursuant to OAR 860-014-0085. The Parties agree to support this Stipulation throughout  
9 this proceeding and any appeal, provide witnesses (if necessary) to sponsor this Stipulation  
10 at the hearing, and recommend that the Commission issue an Order adopting the  
11 settlement contained herein.

12 27. If this Stipulation is challenged by any other party to this proceeding, the  
13 Parties agree that they will continue to support the Commission's adoption of the terms of  
14 this Stipulation. The Parties agree to cooperate in cross-examination and put on such a  
15 case as they deem appropriate to respond fully to the issues presented, which may include  
16 raising issues that are incorporated in the settlements embodied in this Stipulation.

17 28. The Parties have negotiated this Stipulation as an integrated document. If  
18 the Commission rejects all or any material portion of this Stipulation or imposes material  
19 additional conditions in approving this Stipulation, any Party disadvantaged by such action  
20 shall have the rights provided in OAR 860-014-0085 and shall be entitled to seek  
21 reconsideration or appeal of the Commission's Order.

22 29. By entering into this Stipulation, no Party shall be deemed to have  
23 approved, admitted, or consented to the facts, principles, methods, or theories employed  
24 by any other Party in arriving at the terms of this Stipulation, other than those specifically  
25 identified in this Stipulation, including attachments. No Party shall be deemed to have  
26



1 agreed that any provision of this Stipulation is appropriate for resolving issues in any other  
2 proceeding, except as specifically identified in this Stipulation.

3 30. This Stipulation may be executed in counterparts and each signed  
4 counterpart shall constitute an original document.


5 This Stipulation is entered into by each Party on the date entered below such  
6 Party's signature.

**SIGNATURE PAGE FOLLOWS**

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8 STAFF

IDAHO POWER

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10 By:  \_\_\_\_\_

By: \_\_\_\_\_

11 Date: 9/2/10 \_\_\_\_\_

Date: \_\_\_\_\_

12 CUB

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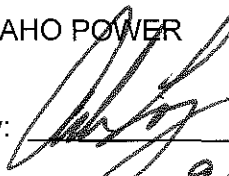
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