McDowell & Rackner PC

ADAM LOWNEY
Direct (503) 595-3926
adam@mcd-law.com

September 16, 2009

VIA ELECTRONIC FILING AND U.S. MAIL

PUC Filing Center
Public Utility Commission of Oregon
PO Box 2148
Salem, OR 97308-2148

Re: Docket No. UM 1355

Enclosed for filing in the above-referenced docket are an original and five copies of PacifiCorp's Opening Brief.

A copy of this filing has been served on all parties to this proceeding as indicated on the attached certificate of service.

Very truly yours,

Adam Lowney

cc: Service List

CERTIFICATE OF SERVICE

I hereby certify that I served a true and correct copy of the foregoing document in Docket UM 1355 on the following named person(s) on the date indicated below by email and first-class mail addressed to said person(s) at his or her last-known address(es) indicated below.

Michael Weirich
Department Of Justice
1162 Court St NE
Salem, OR 97301-4096
michael.weirich@state.or.us

Kelcey Brown
Public Utility Commission of Oregon
PO Box 2148
Salem, OR 97301
Kelcey.brown@state.or.us

Melinda J. Davison
Davison Van Cleve P C
333 SW Taylor- Ste 400
Portland, OR 97204
mail@dvclaw.com

Randall J. Falkenberg
RFI Consulting, Inc
PMB 362
8343 Roswell Rd
Sandy Springs, GA 30350
consultrfi@aol.com

Patrick Hager
Rates and Regulatory Affairs
Portland General Electric
121 SW Salmon St 1WTC0702
Portland, OR 97204
pge.opuc.filings@pgn.com

Douglas Tingey
Portland General Electric
121 SW Salmon 1WTC1301
Portland, OR 97204
doug.tingey@pgn.com

Catriona McCracken
Citizens' Utility Board of Oregon
catriona@oregoncub.org

OPUC Dockets
Citizens Utility Board Of Oregon
dockets@oreqoncub.orq

Robert Jenks
Citizens' Utility Board Of Oregon
bob@oreqoncub.org

Gordon Feighner
Citizens' Utility Board of Oregon
Gordon@oregoncub.org

Lisa Nordstrom
Idaho Power Company
lnordstrom@idahopower.com

Barton Kline
Idaho Power Company
bkline@idahopower.com

Gregory Said
Idaho Power Company
gsaid@idahopower.com

Christa Bearry
Idaho Power Company
cbearry@idahopower.com

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

Scott Wright
Idaho Power Company
swright@idahopower.com

Tim Tatum
Idaho Power Company
ttatum@idahopower.com

Wendy McIndoo
McDowell & Rackner
wendy@mcd-law.com

Lisa Rackner
McDowell & Rackner
lisa@mcd-law.com

DATED: September 16, 2009

Adam Lowney

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

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.

PACIFICORP'S OPENING BRIEF

Pursuant to Administrative Law Judge ("ALJ") Allan Arlow's Ruling on August 20, 2009, PacifiCorp d/b/a Pacific Power ("PacifiCorp" or the "Company") submits this Opening Brief to the Public Utility Commission of Oregon ("Commission").

I. INTRODUCTION

The purpose of this proceeding is to establish a methodology for forecasting forced outage rates for electric generating plants. On September 4, 2009, PacifiCorp, Staff of the Public Utility Commission ("Staff"), the Citizens' Utility Board ("CUB"), and the Industrial Customers of Northwest Utilities ("ICNU") (together, the "Parties") submitted a Partial Stipulation that resolved most of the issues in this docket with respect to PacifiCorp.

Two issues in this case remain unresolved as applied to PacifiCorp: (1) the appropriate method for excluding extreme events/outliers from the forced outage rate forecast for coal units to increase forecast accuracy; and (2) whether PacifiCorp should change its long-time practice of modeling the actual heat rate curves and actual minimum capacity of its generating units when the maximum capacity of the generating unit is de-rated to reflect the loss of availability associated with outages.

PacifiCorp proposes to address extreme events in its outage rate forecasting using the approach the Commission applied to PacifiCorp in UE 191: excluding outage events in excess of 28 days from the calculation of forced outage and replacing the excluded outage

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

hours with like hours from the time period which immediately preceded the outage. This approach ensures that only extreme events are excluded from the calculation, corrects for those exclusions using actual unit data from the time immediately prior to the outage, is clear and predictable in its application, and suits PacifiCorp's status as the only electric utility in Oregon without a Power Cost Adjustment Mechanism ("PCAM"). Alternatively, PacifiCorp has proposed a benchmarking mechanism based upon the actual operating data of its plants, excluding outage results that are more than two standard deviations from the mean.

Staff's proposal for addressing extreme events utilizes a benchmark based upon generic industry data to forecast future outages. Staff designed this benchmark method because of concerns about limiting potential double-recovery for forced outages under a PCAM, concerns that are inapplicable to PacifiCorp. Given the large number of coal units in PacifiCorp's plant fleet and the diversity of these plants, Staff's benchmark mechanism would apply regularly and very asymmetrically to PacifiCorp, unfairly inflating plant availability and decreasing PacifiCorp's net power costs. The cost recovery disallowance implicit in this mechanism operates as a performance-based ratemaking mechanism or automatic prudence disallowance, neither of which are proper in this context.

In its Reply testimony to PacifiCorp's Supplemental testimony, ICNU proposed for the first time that the Commission adopt a benchmark to exclude extreme events. ICNU's benchmark will cause an even greater and unbalanced departure from actual forced outage rates than Staff's benchmark, by definition excluding 20 percent of all outages as "extreme." Additionally, ICNU should have presented its proposal in Supplemental testimony as PacifiCorp did. By proposing a new mechanism in its Reply testimony, ICNU unfairly precluded other parties from fully analyzing and responding to its new proposal.

Although the purpose of the docket is to address forecasting forced outages, ICNU also proposed modeling adjustments to the heat rate curve and minimum unit capacity based upon the calculated forced outage rates. The Company has always modeled its heat rate

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

curve and minimum unit capacity based upon actual data. ICNU's proposal to artificially adjust the heat rate curve and minimum unit capacity constitutes a significant departure from past practices. The proposal is not warranted by or causally connected to the adjustment PacifiCorp has always made to a unit's maximum capacity to reflect the unit outage rate.

With respect to each of these issues, PacifiCorp's proposals are more in line with Commission precedent and policy. Therefore, the Commission should reject Staff's and ICNU's proposals for excluding extreme events and ICNU's proposed heat rate curve and minimum capacity adjustments.

II. BACKGROUND

The Commission uses a "forced outage rate"—the proportion of the hours a generator is unavailable due to outages to the total hours the unit is in service—as an input in setting a utility's test period power costs. *See Re Portland General Electric Co. Request for General Rate Revision*, Docket UE 180, Order No. 07-015 at 13 (Jan. 12, 2007) ("Order No. 07-015"). Since1984, the Commission has used a four-year rolling average of a particular unit's actual outages to calculate its normalized availability. *Id.*

In Docket UE 180, Staff and intervenors questioned the continued application of the historical four-year rolling average method to PGE. *Id.* at 13-15. At issue was how to account for an extreme outage in the historical four-year rolling average. *Id.* Staff, ICNU, and CUB all proposed that the Commission exclude extreme events using industry data from the North American Electric Reliability Corporation ("NERC") to establish a "normal" outage rate. *See Re Portland General Electric Co. Request for General Rate Revision*, Docket UE 180, Staff Opening Brief at 4 (Nov. 20, 2006); *Re Portland General Electric Co. Request for General Rate Revision*, Docket UE 180, Opening Brief of ICNU at 31 (Nov. 17, 2006); *Re Portland General Electric Co. Request for General Rate Revision*, Docket UE 180, CUB Opening Brief at 33 (Nov. 17, 2006).

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

The Commission rejected these proposals noting, "We continue to believe that past performance is the best indicator of a plant's future outage rate." Order No. 07-015 at 15. Rather than using industry wide data to determine a normalized outage rate, the Commission excluded hours related to the extreme outage from the traditional calculation of forced outage rates. *Id.*

After rejecting the use of NERC data, the Commission ordered the opening of a new generic docket to review and evaluate the Commission's method for forecasting forced outages. *Id.* at 15 and 55. The Commission opened this proceeding on November 2, 2007.

Thereafter, in UE 191—PacifiCorp's 2008 Transition Adjustment Mechanism ("TAM") docket—the Commission again addressed the exclusion of extreme outages from the forced outage rate. The outage at issue in UE 191 was related to a manufacturer's error and ICNU proposed to exclude this outage from the historic four-year average. *See PacifiCorp 2008 Transition Adjustment Mechanism*, Docket UE 191, Order No. 07-446 at 19-21 (Oct. 17, 2007) ("Order No. 07-446"). While the Commission rejected ICNU's adjustment, it noted that an outage of five to seven weeks was anomalous and "raised issues regarding its inclusion in normalized rates." *Id.* at 21. The Commission found that a "28-day period is a reasonable limit on the length of the outage" and adjusted the outage rate by removing outage days in excess of this limit. *Id.*

In this docket, the parties filed opening testimony on April 7, 2009, and reply testimony on May 13, 2009. The Commission convened a workshop on May 28, 2009. Thereafter, PacifiCorp, Staff, ICNU, and CUB reached a Partial Stipulation that resolved most of the issues in the case as to PacifiCorp. On the unresolved issues, the Commission granted PacifiCorp's request to file supplemental testimony. The other parties, including ICNU, objected to PacifiCorp's request and no other party sought permission to file supplemental testimony. On August 13, 2009, Staff and ICNU filed testimony in reply to PacifiCorp's

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

Supplemental testimony; in this Reply testimony, ICNU for the first time presented its own benchmark mechanism.

Each of the three utilities in this case resolved most or all of the issues in this docket by stipulation. *See* Idaho Power Stipulation: UM 1355 (Sept. 1, 2009) *and* Stipulation Regarding All Issues For PGE (Aug. 19, 2009). The stipulations are customized to fit the particular circumstances of the utility and do not adopt a single, uniform approach to the underlying issues. For example, Idaho Power will use a three-year historical average to calculate the forced outage rate while PGE and PacifiCorp will use a four-year average. Additionally, both PGE and Idaho Power will continue to forecast planned maintenance, while PacifiCorp agreed to continue to use a four-year average for planned maintenance.

III. ARGUMENT

A. PacifiCorp's Proposals for Excluding Extreme Events Most Accurately Reflect Commission Precedent and Policy.

1. PacifiCorp's Proposal to Exclude Extreme Events Using a 28-Day Cap.

PacifiCorp's basic proposal for excluding extreme events is straightforward, uses each generating unit's actual past outages, and is based on the Commission's finding in Order No. 07-446 that 28 days is a reasonable limit on the length of an outage. If an outage exceeds 28 days, each day from day 29 to the end of the event is removed from the calculation. PPL/405, Duvall/13, ll. 17-21. Because the past performance is the best indicator of future performance, the excluded days are replaced with the same number of days immediately preceding the event. *Id.* Only a small number of PacifiCorp outages actually exceed 28 days. ICNU/100, Falkenberg/10, ll. 7-9. Thus, this method identifies true outliers and accounts for them in a method consistent with Commission precedent.

PacifiCorp's proposal addresses extreme events in a manner that is measured and predictable. This is important because PacifiCorp does not have a PCAM allowing it to recover the difference between the forecast net power costs and the actual net power costs.

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

PacifiCorp's only method of cost recovery for an extreme event excluded from the forced outage rate is through a request for deferred accounting. *See* Staff/100, Brown/20, ll. 17-20. The 28-day cap has a predictable application to extreme events which permits PacifiCorp to seek deferred accounting where appropriate in a timely manner. This is in contrast to benchmark methods which, depending on various circumstances, may or may not apply to exclude a particular extreme event from the forced outage rate. This uncertainty makes it impractical to use deferred accounting since it is not known if a deferral is necessary until is too late. Thus, the Company would have no method of recovering prudently incurred costs associated with extreme events under benchmark-type proposals.

2. PacifiCorp's Alternative Benchmark Mechanism.

PacifiCorp believes that its 28-day outage cap effectively and comprehensively addresses the extreme outage issue. If the Commission decides that adoption of a benchmark is necessary to address the extreme outage issue, however, PacifiCorp has developed a proposal that relies upon actual plant data and applies it in a tailored and fair manner.

PacifiCorp's proposed benchmark first removes outages over 28 days, similar to its basic proposal. PacifiCorp's proposal then calculates the mean Equivalent Outage Rate ("EOR") for each generating unit based upon the most recent annual data for up to 20 years. PPL/405, Duvall/14, ll. 7-9; Exhibit PPL/105. If the calculated forced outage rate falls outside plus or minus two standard deviations from the mean of the unit's EOR, then the forced outage rate is replaced with the value of the mean plus or minus two standard deviations. Exhibit PPL/105.

PacifiCorp's benchmark proposal uses actual plant data to determine the forced outage rate when an extreme event occurs. By comparing a unit's performance in a particular year to its historical performance, PacifiCorp's proposal takes into account the unique characteristics of each unit and effectively limits the application of the benchmark to truly

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

extreme events—not regular occurrences that happen to fall outside a national average. PacifiCorp's method conforms to the Commission's clearly announced policy that past performance is the best indicator of future outages. The method also conforms to previous Commission precedent by limiting forced outages to 28 days. *See* Order No. 07-446 at 21.

PacifiCorp has a significant amount of historical data for its plants, obviating the need for an industry benchmark. PacifiCorp has 20 years of data available for 19 of its 26 coal plants. *See* Staff Response to PacifiCorp Data Request 4.8 (Staff admitted PacifiCorp has 20 years of data for 19 of its 26 plants). For the jointly owned plants, it has approximately 10 years of data. PPL/405, Duvall/14, ll. 15-17.

PacifiCorp's benchmark proposal also ensures that only truly extreme events are excluded because it removes outages in excess of 28 days and uses a plant's past performance to determine if an outage is in fact an anomaly. PPL/102, Godfrey/10, ll. 12-16. Thus, the benchmark only applies when a plant's performance in a particular year deviates significantly from its actual past performance. PPL/102, Godfrey/10, ll. 10-12. PacifiCorp analyzed the application of its proposal to its actual plant data and demonstrated that its proposal works as intended to exclude extreme events. PPL/405, Duvall/14, ll. 20-23.

PacifiCorp's benchmark proposal also uses a statistically meaningful measure of extreme events by use of a confidence level consisting of plus or minus two standard deviations from the mean to determine whether a particular event is truly an outlier. PPL/102, Godfrey/10, ll. 3-4 ("A standard deviation is commonly used to measure confidence in statistical conclusions.") *and* PGE/200, Niman-Hager-Tinker/22, ll. 3-6 (standard statistical tests typically use two or three standard deviations from the mean). Using two standard deviations, PacifiCorp's method identifies outliers as any event occurring outside the 95th percentile. This method is not arbitrary but is based upon sound, standard statistical analysis. PacifiCorp's method also identifies outliers relative to the actual plant's historical mean, not to generic industry data.

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

B. The Commission Should Reject Application of Staff's Benchmark Proposal to PacifiCorp Because It is Unwarranted and Deviates From Commission Precedent.

Staff's benchmark proposal uses an industry benchmark to determine if an extreme event occurred and if so, replaces the outage rate with a value derived from the same industry data. Staff/100, Brown/20, ll. 3-8. The benchmark proposed by Staff is based upon information provided by utilities to NERC. Staff/100, Brown/18, ll. 17-20. Whenever a coal unit's single year forced outage rate exceeds the 90th percentile of NERC data for the four-year average of coal units of the same general size range, the unit's annual forced outage value is replaced by the 90th percentile value. Staff/100, Brown/20, ll. 3-8. Staff proposes that the same adjustment apply whenever the reported forced outage rate is lower than the 10th percentile. Staff/100, Brown/20, ll. 12-14.

Because PacifiCorp has a large and diverse fleet of coal plants, the application of Staff's benchmark to PacifiCorp is both material and problematic for all the reasons discussed below.

1. Staff Failed to Demonstrate that Application of its Benchmark to PacifiCorp is Warranted.

The Commission opened this docket to address concerns raised by the parties in PGE's UE 180 general rate case. *See* Order No. 07-015 at 15. PacifiCorp's forced outage method was not at issue in that proceeding and the Commission has never found that PacifiCorp's forced outage rate understates coal unit availability because of extreme events. Moreover, as is apparent from the record in the Company's most recent net power cost filing, UE 207, the Company's net power cost model (GRID) already significantly overstates coal generation (i.e. availability) as compared to the actual four-year average. *See* Docket UE 207, PPL/111, Duvall/11, ll. 21-22 ("the Company consistently models more coal generation in its normalized NPC than it actually generated"); PPL/112 (attached as Exhibit A). The fact that GRID models far more coal generation than PacifiCorp actually has undermines any

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

suggestion that PacifiCorp's forced outage rate understates coal unit availability. Adoption of Staff's benchmark mechanism would artificially increase coal unit availability and serve to further exacerbate the overstatement of coal generation in PacifiCorp's net power cost modeling.

Staff's benchmark mechanism was designed to address the potential over-recovery of forced outages costs through a PCAM. Staff/200, Brown/12, ll. 8-10; *see also* ICNU/300, Falkenberg/2, ll. 20-21 (Staff's method was appropriate for PGE largely because it has a PCAM.) PacifiCorp does not have a PCAM and Staff has never provided any evidence as to why a benchmark mechanism is necessary for PacifiCorp despite this fact. PPL/405, Duvall/9, ll. 8-14. While PGE and Idaho Power both stipulated to application of Staff's benchmark mechanism, it is notable that both companies have PCAMs. Additionally, PacifiCorp has significantly more generating units that would fall under Staff's benchmark proposal. PPL/405, Duvall/9, ll. 19-20 (PacifiCorp has 26 units, PGE has 3).

2. Staff's Benchmark Mechanism is Less Accurate than PacifiCorp's.

In its testimony, Staff used a Root Mean Squared Error test to argue that its benchmark method is more accurate than PacifiCorp's proposed mechanism. Staff/300, Brown/4, ll. 4-5. Staff's corrected testimony stated that its proposal showed a 19 percent increase in accuracy, while PacifiCorp's only showed an 18 percent increase. Staff's Errata Testimony Staff/300, Brown/4, ll. 15-16. This is hardly a meaningful difference, even under the Staff's interpretation of its analysis. But, the results of Staff's analysis actually show that PacifiCorp's benchmark is more accurate. Staff admitted that PacifiCorp's method demonstrated less deviation between the forecast and actual results than did Staff's. Staff Response to PacifiCorp Data Request 4.6. Staff argued that PacifiCorp's method included additional variables—maintenance outages—that Staff's method excludes. Staff Response to PacifiCorp Data Request 4.6. While Staff argued that because PacifiCorp's method forecasts more types of outages it is reasonable that it should be more accurate, this is an illogical

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

conclusion. Forecasting an additional unknown variable should not increase the accuracy of the forecast; PacifiCorp's method is more accurate and it is more accurate while including more outages in its forecasting.

3. Staff's Proposal Does Not Use Actual Plant Data.

The Commission has long recognized that a plant's historical performance is the best indicator of future performance. Order No. 07-015 at 15. Staff expressly endorsed this view in its testimony. Staff/100, Brown/2, ll. 7-9 ("...the historical performance of the generating unit is the best predictor of what will occur in the future"). Nonetheless, Staff's benchmark mechanism ignores historical performance in favor of an assumption that NERC industry data is the best indicator of future performance. As Staff explained, the purpose of its benchmark is to determine whether a particular unit experienced an outage that is abnormal "compared to all other industry units." Staff/200, Brown/10, ll. 8-10. Staff's method is not meant to determine if the particular outage was abnormal compared to the actual historical performance of the unit. Thus, Staff's proposal is not only a departure from Commission precedent but is also inconsistent with its own testimony. Staff's proposal also means that the benchmark may apply even for a prudently operated unit that because of its age or operational characteristics consistently falls outside the NERC industry average.

Even ICNU criticized Staff's proposal on this basis, noting that the "use of unit specific data is likely to be more useful if the primary goal is forecast accuracy improvement." ICNU/300, Falkenberg/2, ll. 12-13; *see also* ICNU/300, Falkenberg/2, ll. 14-15 ("Unit specific data should provide better forecasts of future performance than industry averages."); ICNU/300, Falkenberg/3, ll. 9-10 ("historical plant data is more appropriate for PacifiCorp"). ICNU observed that the use of the NERC data is more appropriate if the Commission is setting minimum performance standards. ICNU/300, Falkenberg/2, ll. 13-14. The purpose of this docket and the Commission's explicit goal is to develop the most accurate forecast—not

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

to establish minimum performance standards. Order No. 07-015 at 15. Staff's proposal deviates from Commission policy.

4. Staff's Proposal Excludes More Than Just Extreme Events.

The Commission opened this docket specifically to address how to account for extreme events in a utility's forced outage calculations. Order No. 07-015 at 15. Staff failed to demonstrate that its method actually addresses this issue and excludes only extreme events. By definition, an extreme event is one that is unusual or an anomaly. *See* Order No. 07-015 at 15 (an extreme outage is an anomaly); Staff/100, Brown/3, ll. 2-3 (an extreme outage is an event that is not normal). If such events occur regularly, they are by definition normal and should be included in the forecast of future outages for a particular unit. Thus, any method to exclude extreme outages must ensure that it does not exclude recurring outages.

Here, Staff acknowledged this principle and indicated that its proposal would only affect a plant's forced outage rate once or twice in the life of the plant. Commission Workshop Tr. 59-60. Staff, however, provided no basis for this assessment, instead indicating that it was "intuitive." PPL/406, Duvall/2. Later in discovery, Staff admitted that its upper benchmark mechanism applied 16 percent of the time in the PacifiCorp data set it reviewed and that all outage events excluded by the Staff benchmark were "outliers." Staff Response to PacifiCorp Data Request 4.9(b). Staff also admitted that its lower benchmark applied only 1 percent of the time. Staff Response to PacifiCorp Data Request 4.7.

Staff failed to verify that its method would actually serve its fundamental purpose, which is to exclude events that are anomalies and unlikely to occur in a future test period. Staff's benchmark mechanism would regularly exclude PacifiCorp's actual plant data and replace it with NERC data. PPL/102, Godfrey/8, ll. 10-12. Systematically excluding the actual historical data for PacifiCorp's plants does not increase the accuracy of future forecasting. Staff's proposal, therefore, fails to address the core issue in this docket.

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

5. Staff's Proposal Has Numerous Technical Deficiencies.

a. The NERC Data Is Non-Comparable.

Staff's method relies entirely on the assumption that generic NERC data is somehow more reliable for forecasting than the actual historical data of the generating unit. A major flaw in this assumption is the fact that the units that comprise the NERC data pool are not necessarily comparable to PacifiCorp's units. PPL/102, Godfrey/1, l. 22 – Godrey/2, l. 3. Staff's proposal limits the NERC data on coal units only by general size range. Staff has alleged that size alone is sufficient to establish comparability and there is no need to take other factors into account, such as the unit's age, operational characteristics and design features, and the capacity factor at which the unit operates. PPL/102, Godfrey/2, ll. 6-19. In addition to these concerns, PGE correctly noted that Staff's proposal fails to account for the fuel source. PGE/200, Niman-Hager-Tinker/23, ll. 8-18.

Each omission makes the data less comparable because PacifiCorp's fleet is assessed against a generic data pool that may or may not accurately represent the type of unit at issue. PPL/102, Godfrey/2, ll. 17-19. Staff even acknowledged that one reason coal plants are treated differently from gas plants is because "coal plants tend to be built somewhat uniquely." Commission Workshop Tr. 68, ll. 9-10. That is precisely why PacifiCorp—consistent with Commission precedent—advocates the use of actual historical data to identify and exclude extreme events.

Like PGE and PacifiCorp, ICNU questioned the use of industry data to identify and exclude extreme outages. ICNU/100, Falkenberg/11, ll. 8-10 ("In this case, industry data may not be particularly useful."); ICNU/100, Falkenberg/11, ll. 12-13 ("it would be rather difficult to establish an 'industry standard' for the frequency of extreme events"). Rather, ICNU supports the underlying principles of PacifiCorp's proposal because "the most reasonable approach" to

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

excluding extreme outages would be to assume that the resource was operating in its normal pattern absent the event.[1] ICNU/100, Falkenberg/11, ll. 16-18.

Staff argued that it failed to account for these additional characteristics because to do so would have limited the size of the NERC data sample. Staff/300, Brown/10, ll. 18-22. The size of the data set, however, is not the only consideration. If the data set is large only because generating units that are not comparable to PacifiCorp's units are included, then its accuracy is suspect. Staff also argued that a selective peer group, one that takes into account additional characteristics, is only appropriate for benchmarking performance goals and not for forecasting. Staff/300, Brown/10, ll. 5-11. However, Staff's benchmark method is a performance-based method because if PacifiCorp's units fail to perform better than 10 percent of industry units, PacifiCorp is prohibited from recovering its actual forced outage costs.

NERC itself also warns against limiting the selection of a peer group for benchmarking purposes based only on the size and fuel type of the plant because to do so may result in conclusions that are "invalid and misleading." PPL/102, Godfrey/3, ll. 8-28 quoting http://www.nerc.com/page.php?cid=4|43|44; PGE/200, Niman-Hager-Tinker/23, ll. 16-18 ("NERC advised against the approach for which Staff continues to advocate as being overly simplistic for purposes of benchmarking"). Staff argued that the data is reliable and in support of its statement quotes a general NERC statement about the quality of the reported data. Staff/300, Brown/8, ll. 18-22. Importantly, however, the NERC statement quoted by Staff does not state that the data is reliable and appropriate for a *benchmarking* proposal such as that proposed by Staff.

---

[1] While itself critical of the use of industry data, ICNU also argued that PacifiCorp relied on NERC data in the past and therefore it cannot now allege that the data is unreliable. ICNU/300,Falkenberg/4, ll. 1-9. However, the instances cited by ICNU where the Company relied on NERC data involve performance measurements used in prudence reviews on a total fleet basis. ICNU/300,Falkenberg/4, ll. 1-9. ICNU cited no instance where the Company relied on NERC data to increase the accuracy of the outage forecasts and that is the issue in this docket. *See* ICNU's Response to PacifiCorp Data Request 1.2. ICNU's testimony fails to address the deficiencies with the NERC data as Staff uses it in this docket.

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

Another problem with the NERC data is its unreliability caused by the reporting process. Staff's proposed NERC data is self-reported by utilities and is never audited or verified by a third party. PPL/102, Godfrey/3, ll. 30-31. As PGE argued, there is also no convention adopted uniformly by utilities for reporting outages. PGE/200, Niman-Hager-Tinker/23, ll. 4-6; *see also* PPL/102, Godfrey/3, l. 30 – Godfrey/4, l. 2. Thus, each utility may report outages in a different manner, may exclude certain outages from its reporting, or may calculate outages in a different manner from that used by PacifiCorp. All of these discrepancies will appear in the NERC data and will be used to measure the performance of PacifiCorp's generators even though the NERC data may be calculated in a different manner.

PacifiCorp's proposal avoids all of these issues because it bases its analysis on actual plant data. Staff argues that because PacifiCorp's data set—its actual plant performance data—is a smaller data set than the NERC data, it is unreliable. *See* Staff/300, Brown/16, l. 19 – Brown/17, l. 17. Even though the PacifiCorp data is more limited, its quality is substantially greater because it is based on each unit's actual performance. The Commission has long recognized that this data is the best indicator of future performance even though it has always been a smaller data set than national industry averages.

b. The Use of the 90th and 10th Percentiles Is Arbitrary.

Staff provided little statistical basis for its proposed use of the 90th and 10th percentiles of NERC data as a benchmark and provided no evidence that the use of these percentages serves as a proper filter of extreme events. PGE/200, Niman-Hager-Tinker/14, ll. 15-18; PPL/102, Godfrey/5, ll. 6-12. Rather than adopting a mathematically significant benchmark, Staff instead adopted the 90th percentile by visually inspecting a graph of NERC outage data. Commission Workshop Tr. 56, ll. 22-24. Moreover, because Staff's percentages are not linked to a statistically significant interval, under its proposal, 20 percent of all outages reported to NERC qualify as "extreme events."

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

c. Staff's Proposal Mismatches Four-Year NERC Average with One-Year of Unit Performance.

Staff's proposal calculates the NERC benchmark using a four-year average and if an extreme event occurs in a single year, replaces that single year with the NERC four-year average. Staff/100, Brown/19, ll. 12-15. The result of this mismatch is that the benchmark will apply more frequently and thus more years will contain "extreme events." PPL/103, Godfrey/2. Staff attempts to justify this mismatch on the basis that the data set is skewed toward the upper end. In other words, Staff applied the mismatched approach to ensure that its mechanism applied more regularly. *See* PPL/103, Godfrey/2 and PPL/103, Godfrey/1. This is inconsistent with Staff's stated purpose of eliminating outliers and its assurances of limited application of the mechanism (once or twice in the life of a plant).

While PacifiCorp's benchmark mechanism follows the same basic design of Staff's mechanism, the mismatch is much less of a problem in PacifiCorp's benchmark proposal because the use of actual plant data (as opposed to industry data) moderates the application of the benchmark mechanism. Both proposals could be easily modified to compare four-year averages only, however, eliminating mismatched single-year to four-year comparisons.

5. Staff's Proposal for Excluding Extreme Events Results in Performance-Based Ratemaking.

Performance-based ratemaking occurs when the Commission determines the amount a utility can recover based on whether the utility's actual performance meets a particular performance benchmark. Staff/300, Brown/13, ll. 2-4. Generally, the Commission sets utility rates based upon the cost-of-service method whereby the utility's actual costs—if prudently incurred—are recovered in rates. *See* ORS 757.210(2)-(4) (unless a utility petitions for an alternative form of regulation plan, the Commission uses cost-of-service rate regulation). The Commission does not base cost recovery on specific performance standards established by

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

benchmarking the utility's performance to an industry average. *See* PPL/405, Duvall/12, ll. 4-17.

Staff's proposal is performance-based ratemaking because PacifiCorp is authorized to recover its net power costs only if its forced outage rate is less than the 90th percentile of forced outages as determined using NERC industry data.[2] PPL/405, Duvall/12, ll. 7-11. If PacifiCorp's forced outage rate exceeds an industry benchmark, then the actual outage is reduced to the industry benchmark and PacifiCorp is precluded from recovering its costs even if they are prudently incurred. In practice, as argued above, Staff's benchmark method would apply regularly to PacifiCorp's generating units thus imputing a higher level of plant availability. PPL/405, Duvall/10, ll. 8-10. Because PacifiCorp cannot recover the difference between the actual outage rate and Staff's imputed rate, Staff's method creates a permanent disallowance when PacifiCorp fails to meet the performance standard. PPL/405, Duvall/10, ll. 13-14.

ICNU acknowledges that the underlying purpose of a benchmark using industry data is to adopt minimum performance standards. ICNU/300, Falkenberg/2, ll. 12-14 (NERC data "is certainly more appropriate for establishing a minimum performance requirement"). However, ICNU argued that these performance standards are a reasonable goal only in the case of PGE because it has a PCAM. *See* ICNU/300, Falkenberg/1, ll. 11-13; ICNU/300, Falkenberg/2, ll. 20-21.

Staff argued that the Commission regularly uses industry benchmarks to determine the reasonableness of a utility's actions. Staff/100, Brown/18, ll. 8-13. That is true, however, only in the context of prudence determinations; Staff provided no examples of benchmarks outside of that context. *See* PPL/405, Duvall/11, ll. 8-11; Staff/100, Brown/18, ll. 8-13.

---

[2] This argument is true related to the 10th percentile also, but as discussed above, it is highly unlikely that PacifiCorp's actual outage calculation will be less than the 10th percentile of NERC data.

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

Staff also argued that its benchmark is not performance-base ratemaking because it is intended to improve the accuracy of the outage forecast. Staff/300, Brown/13, ll. 6-8. The intent of the method is irrelevant, however, if the result is that PacifiCorp is only allowed to recover costs if it satisfies the performance benchmarks of reducing its forced outages below the 90th percentile of NERC data. In any event, use of industry data, rather than unit-specific data is a hallmark of performance-based ratemaking.

6. Staff's Benchmark Amounts to an Improper, Automatic Prudence Determination.

Staff's proposal allows the Commission to make a prudence determination based upon the outcome of PacifiCorp's performance—in violation of Commission precedent regarding the standards for prudence reviews. *Re PacifiCorp,* Docket UM 995, Order No. 02-469 at 4, 218 P.U.R.4th 465, 468 (July 18, 2002) (Commission's prudence standard does not focus on the outcome of a utility's decision). In determining the prudence of a utility's actions, the Commission examines the objective reasonableness of the utility's decision based upon information available at the time of the decision. *See Matter of Portland General Electric Application for Annual Adjustment to Schedule 125 under the terms of the Resource Valuation Method*, Docket UE 139, Order No. 02-772 at 11 (Oct. 30, 2002). Simple operator error does not constitute imprudence; rather, imprudence requires management failure. *See* Order No. 07-446 at 20.

Here, Staff's benchmark method functions as a prudence review that improperly focuses on the outcome to determine the prudence of PacifiCorp's plant operation. Rather than allowing the Company to recover its actual forced outage costs, Staff's method allows recovery of only those costs that are objectively reasonable (i.e. prudent) when compared to a predetermined industry benchmark. PPL/405, Duvall/10, ll. 16-23; Staff/100, Brown/18, ll. 3-7 (the Commission should use the NERC outage information as an objective benchmark to determine if the forced outage rate is reasonable).

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

The purpose of excluding extreme events is to better forecast future outage rates. Staff's benchmark mechanism is an automatic prudence review, not a forecasting tool. *See* PPL/405, Duvall/10, ll. 16-23. Generally, the Commission uses benchmarking (i.e. comparing the performance of a particular unit to industry standards) in prudence determinations and not forecasting. PPL/405, Duvall/11, ll. 8-11 *and* Staff/100, Brown/18, ll. 8-13 (it is common practice to use benchmarking as a test of reasonableness for purposes of prudence reviews). When asked, Staff was unable to provide any Commission order using a benchmark to adjust a cost forecast. PPL/405, Duvall/11, l. 22 – Duvall/12, l.3.

C. The Commission Should Reject ICNU's Proposal for Excluding Extreme Events Because it Creates a Larger Adjustment to Actual Data and Excludes More Than Just Extreme Events.

Although ICNU endorsed the 28-day cap proposed by PacifiCorp, ICNU has also proposed adoption of a "90/Mean" benchmark to exclude actual forced outage rate data. ICNU/300, Falkenberg/5, n. 4; Falkenberg/13, ll. 6-7. Importantly, ICNU's benchmark proposal appeared for the first time in its final Reply testimony precluding other parties from filing responsive testimony. ICNU should have joined in PacifiCorp's request to file supplemental testimony (instead of opposing PaciCorp's request) if it intended to make a new proposal in this docket. Considering that ICNU's proposal constitutes a substantial departure from Commission precedent and proposes an entirely new method for excluding extreme outages, the Commission should reject it on the basis that the proposal is not properly developed in the record.

In addition to the lack of a substantive record with respect to the proposal, ICNU's methodology also suffers from significant technical failings. ICNU's proposal uses PacifiCorp unit specific data, excludes any event outside the 90th and 10th percentiles, and replaces those values with the 20-year average value for each unit. ICNU/300, Falkenberg/13, ll. 7-9. The key component of ICNU's proposal involves the replacement of the extreme event with the

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

average, not the 90th percentile of NERC data as proposed by Staff nor replacement by the mean plus two standard deviations as proposed by PacifiCorp. ICNU/300, Falkenberg/13, ll. 14-15.

Because ICNU's method involves replacement of all extreme outages with the 20-year mean value, it adjusts actual outage rates by significantly greater levels than either proposal from Staff or PacifiCorp. *See* ICNU/300, Falkenberg/11, ll. 1-10. This therefore deviates from the Commission precedent because it alters the actual historical data more than PacifiCorp's proposal.

ICNU's proposal also excludes substantially more outages than either Staff's or PacifiCorp's proposal. Under the ICNU proposal, 20 percent of all actual annual outage rates are by definition "extreme" and thus eliminated from the overall historical average calculation. ICNU/300, Falkenberg/13, ll. 7-9. In other words, under ICNU's proposal one out of every five years of actual outage data, regardless of how far it deviates from a historical average, is by definition an outlier and must be excluded. Despite ICNU's recognition that PacifiCorp's own data shows it experienced outages in excess of 28 days only rarely, ICNU advocates that 20percent of all actual forced outage data be replaced as extreme events. ICNU/100, Falkenberg/10, ll. 7-9.

ICNU's method is problematic also because it replaces all excluded data with the 20-year mean and that gives undue weight to the 20-year average rather than the four-year average used by the Commission effectively since 1984. Because this mean will replace one out of every five years of actual outage data, it's reasonable to assume that going forward the historical average used to replace excluded outages—and the four-year average used to forecast outages—is going to skew the forced outage forecast in favor of older outage data. This results in a deviation from Commission precedent because the historical four-year average is skewed by the 20-year average giving undue weight to "generally irrelevant experience from history long past." Staff/102, Brown/4 (Commission adopted four-year

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

historical average because recent plant experience tends to better forecast plant operation in the next year). In essence, ICNU's proposal slowly replaces the four-year historical average with today's 20-year historical average.

D. The Commission Should Reject ICNU's Heat Rate Deration and Minimum Generation Adjustments as Unprecedented and Unwarranted.

In this case, ICNU proposed adjustments to the manner in which PacifiCorp models its heat rate curve and the minimum generating capacity of its generating units. ICNU/100, Falkenberg/55, ll. 11-18. These adjustments are significant. For example, in PacifiCorp's 2010 TAM, they would reduce system net power costs by approximately $4.5 million. *See* Docket UE 207, ICNU/200, Falkenberg/2 (attached as Exhibit B). In supplemental Reply testimony, Staff testified in support of ICNU's adjustment for the first time. Staff/300, Brown/19 ll. 10-13; Staff/300, Brown/20, ll. 9-13. PacifiCorp has always modeled its heat curve and minimum generation using actual performance data of its generating units. ICNU's proposal to make adjustments to the actual data inputs for PacifiCorp's heat rate curve and its minimum generating level are at odds with, or irrelevant to, the underlying purpose of this docket, which is to more accurately forecast future forced outages. *See* Order 07-015 at 13-15. ICNU's proposal to adjust minimum capacity levels also increases overall unit availability—even though PacifiCorp consistently overstates its unit availability in its GRID modeling. *See* Docket UE 207, PPL/111, Duvall/11, ll. 21-22 ("the Company consistently models more coal generation in its normalized NPC than it actually generated"); PPL/112.

ICNU claims that PacifiCorp should adjust its heat rate curve and minimum generating levels because PacifiCorp reduces the maximum capacity of its units to account for the reduction in generation availability associated with outages. ICNU's argument is that since PacifiCorp makes one adjustment, it should make a series of additional adjustments, reducing all points along the actual heat rate curve (i.e. "shrinking the heat rate curve") and reducing the actual minimum capacity of the units. The adjustment that PacifiCorp makes to

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

the maximum generation of the unit is logically connected to the unit's outage rate. The additional adjustments to actual data that ICNU proposes, however, lack this same logic. ICNU's adjustments propose unjustified deviations from actual data and should be rejected.

ICNU's arguments in support of these adjustments have shifted and changed. None of the arguments support the adjustment:

1. ICNU argued that these adjustments are modeled by PGE in MONET. Staff repeats this same claim, which is the only reason Staff cites for supporting ICNU's adjustments.

As discussed above, the PGE and Idaho Power Stipulations and the PacifiCorp Partial Stipulation executed by Staff and ICNU propose different approaches to outage rate modeling for each of the utilities. This is appropriate because the utilities have different cost-recovery mechanisms, generation fleets and power cost models. PGE commented on this issue at the Commission workshop:

> "I don't see anything wrong with different utilities using different methods for forced outage rates or planned maintenance or whatever. We have vastly different power cost models. We used 1A, which is basically we build in Excel, and we use Visual Basic, and PacifiCorp uses GRID. And I don't know what—how that model is built, but it's not—it's not built like 1A, and so it works differently.' Commission Workshop Tr. 80-81.

As PacifiCorp has previously testified, PacifiCorp understands that PGE does not model heat rate curves in MONET. *See* Docket UE 199, PPL/106, Duvall/28, ll. 7-8. While ICNU and Staff have avoided this issue in their testimony and data request responses, the fact that PGE does not even use heat rate curves in its net power cost model shows that any analogy to PGE's approach here is inapplicable.

2. ICNU claimed that these adjustments are "well accepted in the community of production cost modeling experts." ICNU/100, Falkenberg/55, ll. 21-24. Other than PGE (which does not model heat rate curves), ICNU has not pointed to a single example of

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

another Commission adopting this approach for PacifiCorp or any other utility. PacifiCorp has followed its approach to de-rating the maximum capacity of a unit to reflect outages, without changing its actual heat rate curves or actual minimum generation levels for more than 25 years. ICNU raised the issue in Oregon for the first time ever last year in UE 199 as one of its several dozen technical modeling adjustments. Since that time, ICNU's witness Mr. Falkenberg has raised the issue only sporadically. These facts belie the assertion that these adjustments represent some kind of industry standard.

3. ICNU also argued that PacifiCorp makes these same adjustments for jointly owned plants. ICNU/100, Falkenberg/56, ll. 3-5. PacifiCorp has consistently demonstrated that this assertion is simply incorrect. PPL/405, Duvall/16, l. 17 – Duvall/17, l. 2.

4. ICNU has argued that if this adjustment is not made, a situation may arise where a unit's maximum capacity is less than its minimum capacity. PPL/400, Duvall/14, ll. 5-8. However, the situation posed by ICNU (which was based upon one month in an annual outage rate and could not recur because PacifiCorp no longer uses monthly outage rates) is a mathematic impossibility because it assumes annual outages rates that have never occurred in PacifiCorp's fleet. PPL/400, Duvall/14, ll. 14-15.

ICNU's proposal de-rates the unit's minimum generating capacity—thus modeling the unit as able to generate at physically impossible levels. PPL/400, Duvall/13, ll. 11-13. Although the Company regularly de-rates a unit's maximum capacity to model outage rates, it does not logically follow that the minimum capacity should be likewise de-rated. The purpose in de-rating the maximum is to reflect periods when the unit is not producing and this has nothing to do with de-rating the minimum. PPL/400, Duvall/16, ll. 5-8. Rather, by de-rating the minimum to below the unit's actual minimum capacity, ICNU's proposal artificially increases the operational range of a unit and incorrectly reduces net power costs. PPL/400, Duvall/16, ll. 12-14.

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

5. ICNU argued that the Company's approach understates unit efficiency at the de-rated maximum. The only time when the de-rate adjustment to the heat coefficients may be theoretically applicable is when the unit is dispatched at its de-rated maximum capacity. But, the de-rated maximum is still at a relatively efficient level and may in fact be overstated because of the impact of partial outages. *See* PPL/400, Duvall/15, l. 23 – Duvall/16, l. 1. When the unit is dispatched at a level below its maximum capacity, GRID has made the optimal decision to dispatch that unit at a lower and less efficient generation level whether it has been de-rated or not.

ICNU does not limit its proposal to adjust the heat rate curve to a single adjustment at the top of the curve, which would result in a relatively small change in NPC. Because ICNU shrinks all of the points along the curve, the result is that the generating units are modeled at a higher than actual efficiency levels. PPL/400, Duvall/13, ll. 9-11. This means that ICNU's adjustment to the heat rate curve is lower than the actual unit heat rates derived from historic operating data. PPL/404, Duvall/1 – Duvall/2. ICNU never disputed that its adjustment would cause this deviation from actual plant data.

Additionally, in actual operations, a unit can be de-rated to any level between its minimum and maximum capacities. PPL/400, Duvall/16, ll. 1-2. Shrinking the heat rate curve has a significant effect in the model because units are frequently dispatched at below their maximum capacity—where the deviation between the actual heat rates and ICNU's proposed heat rates are greatest. PPL/400, Duvall/15, ll. 18-20. Thus, ICNU's proposal understates the heat rate and therefore understates power costs. PPL/400, Duvall/15, ll. 18-20.

Moreover, Staff explained its support of ICNU's adjustment stating that the Company "should be required to adjust the heat rate curve so that it produces the same heat consumption at the derated maximum and minimum capacities as the unit would actually experience in normal operations." Staff's Response to PacifiCorp Data Request 6.3. This is precisely how PacifiCorp models the heat rate curve—it reflects the actual heat rate at the de-

McDowell & Rackner PC
520 SW Sixth Avenue, Suite 830
Portland, OR 97204

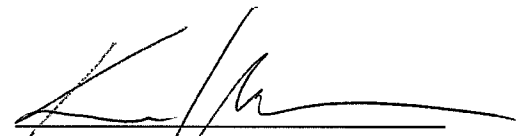
rated maximum and minimum. On the other hand, ICNU's proposal modifies the heat rate curve to deviate from actual data. Although Staff claims to support ICNU's proposed adjustments, its position in favor of reflecting actual heat rates supports PacifiCorp's current methodology.

IV. CONCLUSION

PacifiCorp recommends that the Commission adopt PacifiCorp's 28-day cap for excluding extreme events from the forced outage rate calculation. It is a straightforward method that is consistent with Commission precedent, policy, and Oregon law, and reflects prudent utility practice. If the Commission decides to adopt a benchmark, it should adopt PacifiCorp's proposal because it relies on actual unit data and excludes only extreme events. PacifiCorp also recommends that the Commission reject ICNU's heat rate curve and minimum capacity adjustments because they depart from Commission precedent and lead to a further departure from the use of actual unit data to determine net power costs.

DATED: September 16, 2009

McDowell & Rackner PC



Katherine McDowell
Attorneys for PacifiCorp

PACIFICORP

Michelle R. Mishoe
Pacific Power
Legal Counsel
Suite 1800
825 NE Multnomah Street
Portland, OR 97232-2135

Docket UM 1355

PACIFICORP'S
OPENING BRIEF

Exhibit A

September 16, 2009

Docket No. UE-207
Exhibit PPL/111
Witness: Gregory N. Duvall

BEFORE THE PUBLIC UTILITY COMMISSION

OF THE STATE OF OREGON

PACIFICORP

Sur-surrebuttal Testimony of Gregory N. Duvall

September 2009

testified against the market caps in Wyoming and selectively cited to materials filed at the Wyoming Commission in his testimony in this case. It is inconsistent for him to fail to acknowledge that I followed the Wyoming Commission' s approach when I conducted my analysis.

Q. Why is the level of coal generation important in setting NPC?

A. The variable cost of coal generation in the Company' s portfolio is nearly always substantially lower than market prices included in GRID. The higher the level of coal generation included in NPC, the lower NPC will be. Including an unreasonably high level of coal generation will artificially decrease power costs.

Q. Is the level of coal generation impacted by changes in load as asserted by Mr. Falkenberg and Ms. Brown?

A. No. The Company' s coal generation is not correlated to load as Mr. Falkenberg and Ms. Brown suggest. Since 2000, the Company' s loads have grown substantially, while its coal generation levels have not. As shown in PPL/112, the Company' s most recent 12-month average of coal generation is less than the 12-month average ending in February 2000.

Q. Both Mr. Falkenberg and Ms. Brown assert that the Company' s four-year averages are dated and argue that more recent 12-month comparisons should be used instead. How do the Company' s and Mr. Falkenberg' s proposed levels of coal generation compare with recent actual generation?

A. As shown in PPL/112, the Company consistently models more coal generation in its normalized NPC than it actually generated. Mr. Falkenberg' s proposal to remove the market caps increases this overstatement in coal generation, resulting

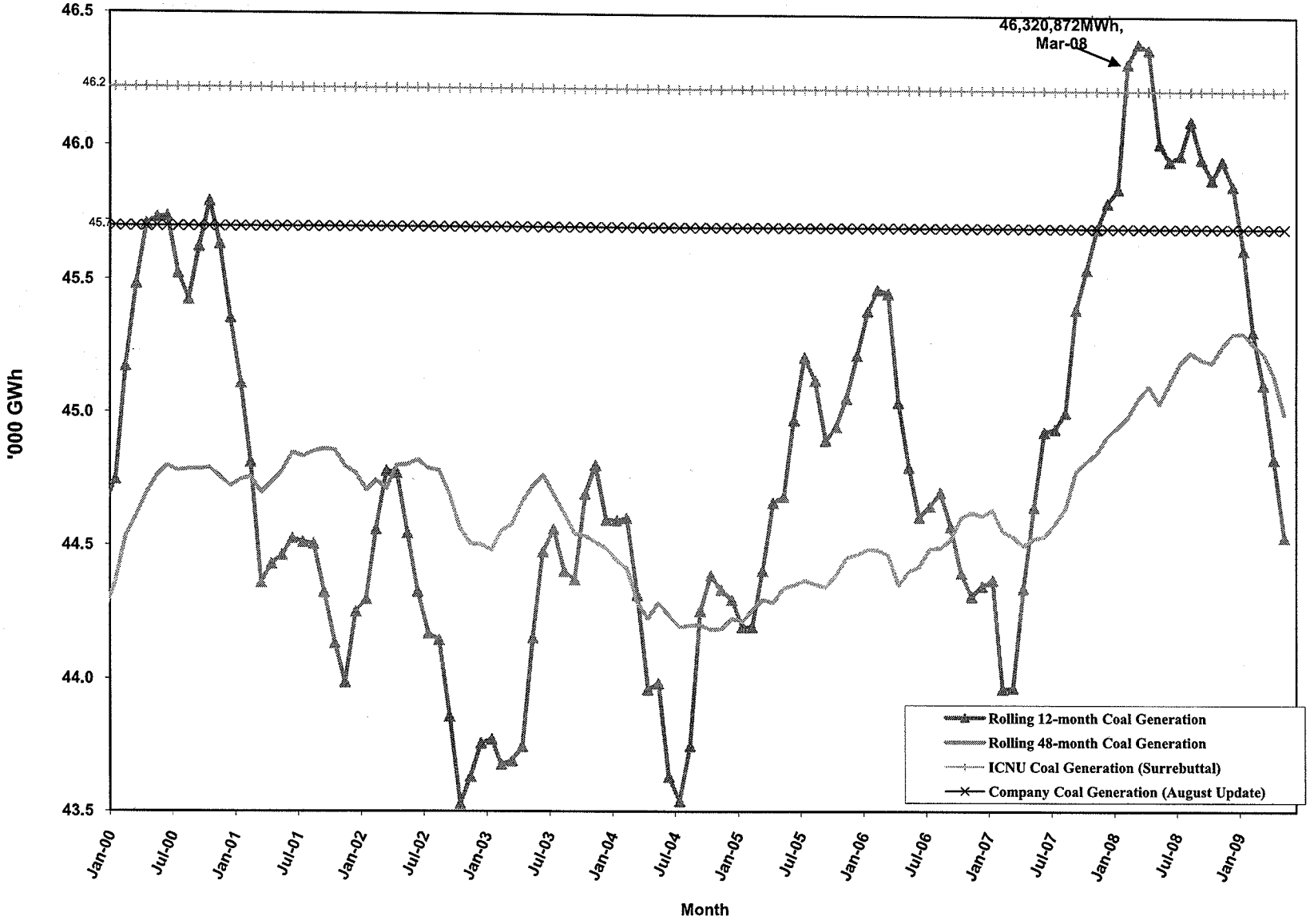


Exhibit PPL/112
Duvall/1

Docket UM 1355

PACIFICORP'S OPENING BRIEF

Exhibit B

September 16, 2009

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UE 207

In the Matter of	)
	)
PACIFIC POWER & LIGHT	)
(dba PACIFICORP)	)
	)
2010 Transition Adjustment Mechanism	)
	)

SURREBUTTAL TESTIMONY OF

RANDALL J. FALKENBERG

ON BEHALF OF

THE INDUSTRIAL CUSTOMERS OF NORTHWEST UTILITIES

REDACTED VERSION

August 25, 2009

Table 1
Summary of Recommended Adjustments - $

	Total Company	Est. Oregon Jurisdiction
	SE	25.00%
	SG	26.88%
I. GRID (Net Variable Power Cost Issues)		
PacifiCorp Request NPC	1,095,399,869	$272,397,235
A. GRID Market Caps		
A.1a GRID Market Caps	(9,874,705)	(2,561,449)
B. GRID Commitment Logic Error		
B.1a Correct Improper Screens	(2,191,824)	(568,548)
B.2a Changed Start Costs	(1,385,031)	(359,270)
B.3a Start Up Fuel Energy Value	(5,461,541)	(1,416,697)
C. Long Term Contract Modling		
C.1a Call Option Sales Contracts	(4,378,535)	(1,135,770)
C.2a Biomass	(654,987)	(169,900)
C.3a Morgan Stanley Call Options	(3,057,000)	(792,971)
C.4a GP Camas	(895,753)	(232,354)
D. Hydro Modeling		
D.1a Hydro Input Corrections	(4,581,496)	(1,188,417)
E. New Resource Modeling		
E.1a Chehalis Modeling	(1,556,321)	(403,702)
F. Transmission Modeling		
F.1a Cal ISO Fees	(11,175,680)	(2,898,916)
F.2a Non Firm Transmission	(1,009,227)	(261,788)
F.3a STF Transmission Link Test Year Synchronization	(5,231,991)	(1,357,152)
F.4a Other Transmission Adjustments	(860,240)	(223,142)
G. Other NVPC Adjustments		
G.2a Thermal Generator Performance Inputs	(518,472)	(134,489)
G.3a Other Wind Resource Contracts	(383,454)	(99,466)
G.4 Staff Coal and Other Hydro	(24,046,241)	(6,237,475)
H. UM 1355 and Other Outage Rate Modeling Issues		
H.1a Planned Outage Schedule	(2,989,301)	(775,410)
H.3a Ramping	(545,865)	(141,595)
H.4a Minimum Loading and Deration	(4,517,880)	(1,171,915)
H.5a Combined Cycle Plant Outage Rates	0	0
I. Corrections		
I.1a Huntington Coal Error	(19,290,071)	(5,003,748)
Subtotal NVPC Adjustments -	(104,605,615)	(27,134,174)
Allowed - Final GRID Result*	990,794,254	245,263,061

Q. PLEASE IDENTIFY THE ADJUSTMENTS WHERE ICNU AND THE COMPANY ARE NOW IN AGREEMENT.

A. Exhibit ICNU/201 shows my original Exhibit ICNU/108, but with indications of the current level of agreement in the Company and ICNU position. I am satisfied with the Company's implementation of the following adjustments: B.6 (Remove Start Up Operating & Maintenance ("O&M")); E.18 (Chehalis Modeling); E.19