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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,

Katherine McDowell

cc: Service List

1 **CERTIFICATE OF SERVICE**

2 I hereby certify that I served a true and correct copy of the foregoing document in
3 Docket UM 1355 on the following named person(s) on the date indicated below by email
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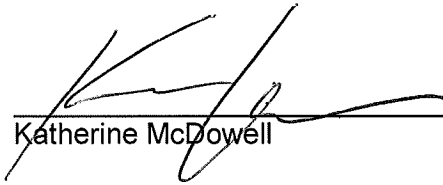
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**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

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 rulings in this phase of the docket, 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 Commission initiated this docket to establish a methodology for forecasting forced outage rates for electric generating plants. The focus of this phase of the docket is the method used to identify and account for extreme or outlier outages in the calculation of the forced outage rate (FOR) for thermal generation resources.¹

PacifiCorp proposes that the Commission continue its long-standing practice and use a four-year rolling average to calculate FOR and address extreme outages on a case-by-case basis. While theories and methodologies developed in this docket could inform this case-by-case analysis, the record demonstrates the challenges of developing a new, one-

¹ On September 4, 2009, PacifiCorp, Staff of the Public Utility Commission, the Citizens' Utility Board, and the Industrial Customers of Northwest Utilities submitted a Partial Stipulation that resolved most of the issues in this docket with respect to PacifiCorp. The only issues left unresolved by that Partial Stipulation were the appropriate method for addressing extreme events in the forced outage forecasts for coal plants and issues involving the heat rate curve-minimum deration. The heat rate curve-minimum deration issue was submitted to the Commission after full briefing. It was not addressed by the Commission in subsequent orders in this docket relating to the collar mechanism. Therefore, this issue is not addressed in this brief.

1 size-fits-all methodology for addressing extreme outages. Because all of the methodologies
2 proposed in this case are overbroad and encompass more than just the extreme outages
3 they are designed to normalize, adoption of any of them could bias the forecast produced
4 by the four-year rolling average. The continued use of a four-year rolling average coupled
5 with a case-by-case analysis of extreme outages is the most straightforward and durable
6 resolution of this docket.

7 If the Commission decides to adopt a uniform methodology for excluding extreme
8 outages, the most workable option for PacifiCorp now is the Commission's collar
9 mechanism, as set forth in Order No. 09-479. The mechanism relies on unit-specific
10 historical data for the actual forecast, which is a general approach that PacifiCorp has
11 supported throughout this docket. Unlike alternative proposals submitted by Staff and
12 ICNU, the Commission's collar mechanism has now been studied, vetted and clarified.
13 This makes possible the immediate implementation of the Commission's collar mechanism
14 in PacifiCorp's 2011 Transition Adjustment Mechanism (TAM). It also increases the
15 likelihood that the mechanism will be durable and non-controversial in its application.

16 II. BACKGROUND

17 The FOR—the proportion of the hours a generator is unavailable due to forced
18 outages to the total hours the unit is in service—is an input used in setting a utility's test
19 period power costs. *See Re Portland General Electric Co. Request for General Rate*
20 *Revision*, Docket UE 180, Order No. 07-015 at 13 (Jan. 12, 2007) (Order No. 07-015). A
21 "forced outage" is an "unplanned failure of a generating unit." *Id.* at 13. Since 1984, the
22 Commission has used a four-year rolling average of a particular unit's actual outages to
23 calculate its normalized availability. *Id.* This method produces a normalized FOR by
24 averaging out variations in plant outage rates. *Id.*

25 This docket arose in response to issues raised by parties in Docket UE 180, a PGE
26 general rate case. Order No. 07-015 at 13-15. At issue in that docket was the treatment of

1 an extreme outage in the four-year rolling average. Rejecting the position advocated by
2 Staff, CUB, and ICNU—all of whom proposed the use of NERC averages to forecast
3 FOR—the Commission found that “past performance is the best indicator of a plant’s future
4 outage rate.” Order No. 07-015 at 15. Rather than using industry data to determine a
5 normalized outage rate, the Commission excluded hours related to the extreme outage
6 from the traditional calculation of forced outage rates. *Id.* The Commission “adhere[d] to its
7 long-standing practice of using actual plant outage rates to predict future activity of that
8 plant.” *Id.* at 15.

9 In Order No. 07-015 the Commission also ordered the opening of a new generic
10 docket to review and evaluate the Commission’s method for forecasting forced outages. *Id.*
11 at 15 and 55. The Commission opened this proceeding on November 2, 2007.

12 On September 4, 2009, PacifiCorp, Staff, CUB, and ICNU submitted a Partial
13 Stipulation that resolved most of the issues in this docket with respect to PacifiCorp. The
14 only remaining issues for PacifiCorp were: (1) the appropriate method for excluding
15 extreme events/outliers from the forced outage rate forecast for coal units to increase
16 forecast accuracy; and (2) ICNU’s proposed adjustments related to the heat rate curve and
17 minimum deration.

18 On October 7, 2009, the Commission issued its Notice of Intent to Modify
19 Stipulations and Establish Rate Calculation. *Re Public Utility Commission of Oregon*
20 *Investigation Into Forecasting Forced Outage Rates for Electric Generating Units*, Docket
21 UM 1355, Notice of Intent to Modify Stipulations and Establish Rate Calculation (Oct. 7,
22 2009) (Notice). In that Notice, the Commission concluded that PacifiCorp’s Partial
23 Stipulation was reasonable and in the public interest except that it did not include a collar
24 mechanism. Notice at 3. The Commission also rejected each of the proposed collar
25 mechanisms and proposed its own approach. This collar mechanism uses data from the
26 NERC to determine the FOR for the 90th and 10th percentile of comparable coal units.

1 These values then become the boundary values that determine if a particular event or
2 outage is an outlier. The outlier values are replaced for purposes of determining a utility's
3 net power costs with the mean annual FOR derived from the unit's entire historical data.
4 The Commission indicated that it would approve PacifiCorp's Partial Stipulation if it adopted
5 the Commission's proposed collar mechanism. The Commission gave the parties ten days
6 to analyze and either accept or reject the new collar proposal. Notice at 5.

7 PacifiCorp did not accept the addition of the Commission's proposed collar
8 mechanism to its Partial Stipulation because it lacked full development in the record. *Re*
9 *Public Utility Commission of Oregon Investigation Into Forecasting Forced Outage Rates for*
10 *Electric Generating Units*, Docket UM 1355, PacifiCorp's Rejection of Proposed Addition to
11 Partial Stipulation and Request for Additional Proceedings (Oct. 19, 2009). Similarly,
12 Portland General Electric (PGE) and Idaho Power Company (Idaho Power) did not accept
13 the Commission's proposed collar mechanism.

14 In response to concerns raised by the parties, the Commission issued Order No.
15 09-479 and offered two key clarifications of its proposed collar mechanism. *Re Public*
16 *Utility Commission of Oregon Investigation Into Forecasting Forced Outage Rates for*
17 *Electric Generating Units*, Docket UM 1355, Order No. 09-479 (Dec. 7, 2009) (Order No.
18 09-479). First, responding to concerns related to the availability of historical data, the
19 Commission stated that if "the utility cannot reasonably locate or recreate the [forced
20 outage] data, the utility shall use all of the historical data that is has been able to obtain
21 through its best efforts." Order No. 09-479 at 3.

22 Second, the Commission stated that actual data falling outside the collar (*i.e.*
23 extreme events) "will become a part of the historical data set that will be utilized in
24 subsequent outside-the-collar FOR calculations." *Id.* Thus, the Commission rejected
25 proposals, such as that made by ICNU, to exclude outliers from the historical data before
26 that data was used as a replacement value in a collar mechanism. *See e.g.* ICNU/300,

1 Falkenberg/5, ll. 18-19 (all outages in excess of 28 days should be removed before the 20-
2 year historical average is calculated). The Commission also called for the additional
3 proceedings requested by parties in response to the Notice.

4 On January 22, 2010, ALJ Arlow issued a ruling requiring parties seeking the right to
5 file additional testimony to file motions setting forth the new facts that party intended to
6 show. *Re Public Utility Commission of Oregon Investigation Into Forecasting Forced*
7 *Outage Rates for Electric Generating Units*, Docket UM 1355, Ruling at 2-3 (Jan. 22, 2010).
8 On January 29, 2010, PacifiCorp filed its motion. *Re Public Utility Commission of Oregon*
9 *Investigation Into Forecasting Forced Outage Rates for Electric Generating Units*, Docket
10 UM 1355, PacifiCorp's Motion to File Additional Testimony (Jan. 29, 2010). PacifiCorp
11 sought to develop the record and specifically analyze in its testimony the impact of ICNU's
12 proposed collar mechanism, to which it had never been able to file responsive testimony, as
13 well as the Commission's collar mechanism. The Company's goal was to ensure a full
14 development of the record with respect to the new proposals set forth by ICNU and the
15 Commission.

16 The Commission denied PacifiCorp's motion, but allowed both PGE and Idaho
17 Power to file testimony. *Re Public Utility Commission of Oregon Investigation Into*
18 *Forecasting Forced Outage Rates for Electric Generating Units*, Docket UM 1355, Order
19 No. 10-157 (Apr. 26, 2010). PGE and Idaho Power filed testimony on July 16, 2010, and
20 Staff and ICNU file reply testimony on August 13, 2010. The Commission allowed
21 PacifiCorp to respond at hearing to Staff's new collar mechanism, proposed for the first time
22 in Staff's reply testimony. *Re Public Utility Commission of Oregon Investigation Into*
23 *Forecasting Forced Outage Rates for Electric Generating Units*, Docket UM 1355, Ruling at
24 3 (Aug. 19, 2010). The Commission also recognized PacifiCorp's right to participate in the
25 briefing in this phase of the docket.

26

1 **III. ARGUMENT**

2 **A. The Commission Should Use a Four-Year Rolling Average and Address**
3 **Extreme Outages on a Case-By-Case Basis.**

4 The Commission's goal in this docket is the adoption of a forecasting methodology
5 that is the most accurately predictive of actual forced outage rates. See Notice at 3; Order
6 No. 07-015 at 15 ("we seek the most accurate forecast of forced outages"). The use of a
7 four-year rolling average to determine the FOR remains the best and most accurately
8 predictive forecast. See Order No. 07-015 at 13 (Commission originally adopted four-year
9 rolling average because it was "sufficient to average out variations"); Staff/102, Brown/4
10 (Commission adopted four-year historical average because recent plant experience tends
11 to better forecast plant operation in the next year); ICNU/400, Falkenberg/16, II. 10-11
12 (statistical analysis found that "the four-year moving average produces the lowest sum-
13 squared error" even when compared with the use of a straight long-term average);
14 PGE/100, Tinker-Hager/13, II. 2-5 (4-year rolling average yielded the lowest error value
15 when compared with 1- to 6-year rolling averages).

16 This methodology has worked well since 1984 and, in the limited circumstances
17 where the Commission has addressed an outage deemed "extreme," its case-by-case
18 analysis successfully accounted for the outage in the normalized FOR calculation. See
19 e.g. Order No. 07-015; *PacifiCorp 2008 Transition Adjustment Mechanism*, Docket UE 191,
20 Order No. 07-446 at 19-21 (Oct. 17, 2007) (using a 28-day cap on an extended outage and
21 removing outage days in excess of 28 days). In contrast, the collar mechanisms proposed
22 in this docket "over-correct" for extreme outages and bias the forecast. See PGE/300,
23 Tinker-Weitzel/13, I. 14 - /14, I. 2 ("Both strategies [Staff's and ICNU's mechanisms] appear
24 to under-forecast forced outage rates, with the bias greater for [ICNU's] approach.").

25 Using a four-year average and case-by-case analysis of extreme outages also
26 removes practical problems related to the use of NERC data, including the fact that NERC

1 data lags the actual plant data against which it is compared. For example, PacifiCorp's
2 2011 TAM, Docket UE 216, was filed in March 2010. Its FOR was calculated using a four-
3 year average ending June 2009. The most recently available NERC data, however, is from
4 calendar year 2008. Thus, under any proposal that uses NERC data, there will be a
5 mismatch between the most recent outage data used in the Company's filings and the most
6 recent available NERC data which would be used to define and potentially replace extreme
7 outages. Using the four-year rolling average with a case-specific analysis of extreme
8 outages eliminates this concern because the Company's actual historical data is not
9 benchmarked against a lagging industry average.

10 **B. If the Commission Adopts a Collar Mechanism, It Should Use the Mechanism**
11 **Proposed in Order No. 09-479.**

12 If the Commission decides to adopt a collar mechanism, it should adopt the
13 mechanism set forth in Order No. 09-479. This position is in accord with Staff's final
14 recommendation in this case. Tr. 12, ll. 6-9 (Staff's primary recommendation is adoption of
15 Commission's collar); Staff/400, Brown/2, ll. 7-8 (there is "no compelling reason for the
16 Commission to alter its decision in Order No. 09-479.") PacifiCorp recommends the
17 adoption of this collar because it is now the most well developed proposal, PacifiCorp can
18 implement this proposal in its 2011 TAM proceeding, and this collar uses actual plant
19 historical data to determine replacement values.

20 **1. PacifiCorp Can Timely Implement the Commission's Collar.**

21 As part of the settlement in this year's TAM proceeding, the Company agreed to
22 implement the Commission's decision in this docket in its November 1, 2010, indicative
23 filing. *See Re PacifiCorp's 2011 Transition Adjustment Mechanism*, Docket UE 216,
24 Stipulation at 4-5 (July 7, 2010). Because of the short time frame between the expected
25 order in this docket and the November 1 TAM filing (approximately two weeks), PacifiCorp
26

1 faces a significant implementation challenge. This implementation challenge is magnified
2 by the large number of plants in PacifiCorp's fleet.

3 Because the Company has now had nearly one year to analyze and understand the
4 Commission's collar, PacifiCorp is confident it can implement it in the 2011 TAM. Tr. 48, ll.
5 9-13. Any material change to the Commission's collar, however, may make it difficult or
6 impossible for PacifiCorp to incorporate the outcome of this docket in the 2011 TAM. Tr.
7 47, ll. 12-23.

8 **2. PacifiCorp Supports the Use of Actual Plant Data to Set Replacement**
9 **Values.**

10 The Commission's collar utilizes actual operating data from each plant in
11 determining replacement values for those excluded by the collar. PacifiCorp has supported
12 the use of actual plant data instead of NERC data for determining replacement values. *See*
13 *Re Public Utility Commission of Oregon Investigation Into Forecasting Forced Outage*
14 *Rates for Electric Generating Units*, Docket UM 1355, PacifiCorp Opening Brief at 6 (Sept.
15 16, 2009) (Opening Brief). PacifiCorp has extensive historical data for each of its plants, so
16 the Commission's proposal is workable for PacifiCorp. *See* Staff Response to PacifiCorp
17 Data Request 4.8 (Staff admitted PacifiCorp has 20 years of data for 19 of its 26 plants); Tr.
18 13, ll. 18-21; Tr. 18, ll. 9-11.

19 The Commission has recognized that a plant's historical performance is the best
20 indicator of future performance. Order No. 07-015 at 15. Staff's testimony also expressly
21 stated that "the historical performance of the generating unit is the best predictor of what
22 will occur in the future." Staff/100, Brown/2, ll. 7-9. Likewise, ICNU noted that the "use of
23 unit specific data is likely to be more useful if the primary goal is forecast accuracy
24 improvement." ICNU/300, Falkenberg/2, ll. 12-13; *see also* ICNU/300, Falkenberg/2, ll. 14-
25 15 ("Unit specific data should provide better forecasts of future performance than industry
26

1 averages.”); ICNU/300, Falkenberg/3, ll. 9-10 (“historical plant data is more appropriate for
2 PacifiCorp”).

3 The use of historical plant data as the replacement value in the collar mechanism,
4 rather than NERC data as Staff originally proposed, is consistent with cost-of-service rates.
5 As discussed at length in PacifiCorp’s Opening Brief, the use of NERC data is consistent
6 with performance based ratemaking, not cost-of-service ratemaking. See Opening Brief at
7 15-17. Like the Company, ICNU also addressed this issue and acknowledges that that the
8 underlying purpose of a benchmark using industry data is to adopt minimum performance
9 standards. ICNU/300, Falkenberg/2, ll. 12-14 (NERC data “is certainly more appropriate for
10 establishing a minimum performance requirement”). These concerns, however, are
11 eliminated if the replacement value used in the collar mechanism is based on actual
12 historical plant data.

13 **C. The Commission Should Reject Staff’s Alternative Collar Mechanism.**

14 Staff’s alternative collar mechanism, proposed for the first time in its reply testimony
15 in this phase of the docket,² uses the NERC 90/10 boundary values but replaces the
16 excluded outage rates with a “ten-year rolling average, excluding outliers.” Staff/400,
17 Brown/2, ll. 8-12. This new proposal is undeveloped in the record,³ poses serious
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19 ² Not unlike ICNU in the first phase of this docket, Staff offered a new collar proposal in
20 its reply testimony that exceeded the scope of the testimony to which it was replying. *Re Public*
21 *Utility Commission of Oregon Investigation Into Forecasting Forced Outage Rates for Electric*
22 *Generating Units*, Docket UM 1355, Ruling at 3 (Aug. 19, 2010) (Staff’s proposal “goes beyond
23 the scope of PGE’s testimony”). PacifiCorp renews its procedural objections to consideration of
24 this proposal. These objections are stated in PacifiCorp’s Response in Support of PGE’s
25 Motion to Strike. *Re Public Utility Commission of Oregon Investigation Into Forecasting Forced*
26 *Outage Rates for Electric Generating Units*, Docket UM 1355, PacifiCorp’s Response In Support
of PGE’s Motion to Strike (Aug. 19, 2010).

24 ³ Staff admitted at hearing that: (1) it had no work papers supporting its new proposal,
25 Tr. 10, ll. 4-15; (2) it had performed no analysis of this proposal other than what was included in
26 its testimony, *Id.*; (3) it had not modeled this proposal to understand how it would be
implemented or how its application would affect the FOR calculations, Tr. 11, ll. 5-12; Tr. 25, ll.
2-3; and (4) it had performed no analysis to conclude that its new proposal resulted in a more

(continued...)

1 implementation concerns, and includes elements (*i.e.*, the exclusion of outliers from the
2 historical average) that the Commission has already rejected in Order No. 09-479.
3 Because of the timing of the proposal, its lack of clarity, and its unknown impact, it is likely
4 that adoption of this method will not durably resolve the issues in this case. Tr. 48, ll. 3-8.

5 Staff's testified that it proposed this new method specifically to address Idaho
6 Power's concerns about the availability and use of historic data for coal-fired units. Tr. 10,
7 ll. 19-20; Staff/400, Brown/13, ll. 12-15. Idaho Power has now entered into a Stipulation
8 with Staff to resolve its issues. *Re Public Utility Commission of Oregon Investigation Into*
9 *Forecasting Forced Outage Rates for Electric Generating Units*, Docket UM 1355, Idaho
10 Power Stipulation (Sept. 3, 2010); Tr. 14, ll. 5-7. Because PacifiCorp has not raised
11 concerns about availability and use of historic plant data, there is no justification for
12 applying Staff's alternative proposal to it. Tr. 13, ll. 18-21; Tr. 18, ll. 9-11.

13 The lack of development in the record, coupled with Staff presenting its proposal so
14 late in this docket, raises real implementation concerns for the Company. As noted,
15 PacifiCorp's Stipulation in UE 216 calls for the implementation of the Commission's
16 decision in this case in the Company's November update. Tr. 47, ll. 15-21. Implementation
17 of the Staff alternative proposal will be difficult if not impossible because Staff's testimony
18 lacks sufficient detail to explain how its proposal would actually work. Tr. 47, ll. 4-8; Tr. 48,
19 l. 14 – 49, l. 8.

20 While it is not difficult to compute a rolling ten-year average, Staff's alternative
21 proposal also excludes outliers from this average. Tr. 19, ll. 17-20. As explained by Staff
22 for the first time at the hearing, this means that if the ten-year average includes an outlier,
23 then that outlier value is replaced for purposes of the ten-year average by the ten-year

24 _____
25 accurately predictive forecast, although Staff admitted this was the Commission's goal. Tr. 26, l.
26 21 – 27, l. 2; Tr. 27, ll. 20-24.

1 average immediately preceding the outlier year. Tr. 20, ll. 9-11; Tr. 23, ll. 9-11. Moreover,
2 if that ten-year average in the ten years preceding the outlier also includes an outlier, then
3 this process is repeated, over and over. Tr. 21, ll. 8-18. This creates a problematic iterative
4 effect.

5 As Staff's analysis concluded, using the NERC 90/10 boundary values will result in
6 outliers occurring approximately 17 percent of the time—or about one in every six years.
7 Staff Response to PacifiCorp Data Request 4.9(b) (upper limit applied to PacifiCorp data
8 set 16 percent of the time); Staff Response to PacifiCorp Data Request 4.7 (lower limit
9 applied 1 percent of the time). In other words, it is likely that every ten year period will
10 include an outlier meaning that Staff's proposal could produce an endless cycle of
11 excluding and replacing outliers. Thus, Staff's proposal as presented appears unworkable.
12 While Staff testified that the proposal operated similarly to PacifiCorp's proposals in this
13 docket, PacifiCorp has never proposed to exclude outliers from the historic average in this
14 iterative manner.

15 Additionally, the exclusion of outliers from the historical average used as a
16 replacement value was explicitly rejected by the Commission in Order No. 09-479. Order
17 No. 09-479 at 3; Tr. 25, ll. 19-21 (Staff admits Commission rejected exclusion of outliers
18 from long-run historical averages). In that order, the Commission clearly stated that outlier
19 outage rates should be included in the historical average. Order No. 09-479 at 3. When
20 the Commission made this decision, it had before it ICNU's proposal which used a 28-day
21 outage cap to effectively remove outlier outage rates from the 20-year historical average
22 used as a replacement value. See ICNU/300, Falkenberg/5, n. 4; Falkenberg/13, ll. 6-7.
23 Thus, the Commission considered and rejected this method.

24 Staff proposed the exclusion of outliers because many plants lack long-term
25 averages ("histories greater than 10-15 years") and therefore Staff claims the inclusion of
26 outliers in the FOR average calculation is problematic. Staff/400, Brown/7, ll. 8-10.

1 Because PacifiCorp has over 20 years of data for the majority of its plants, this concern is
2 inapplicable to it. See Staff Response to PacifiCorp Data Request 4.8 (Staff admitted
3 PacifiCorp has 20 years of data for 19 of its 26 plants). The Commission rejected this
4 aspect of Staff's new methodology in Order No. 09-479 and, as Staff noted, there is no
5 compelling reason to alter that decision now. Staff/400, Brown/2, ll. 7-8.

6 **D. The Commission Should Again Reject ICNU's Collar Mechanism.**

7 ICNU's proposed collar mechanism was rejected by the Commission in Order No.
8 09-479 and subsequent testimony identified additional methodological flaws. Therefore, the
9 Commission should again reject ICNU's proposal.

10 **1. ICNU's Collar Deviates From the Commission's Collar.**

11 In Order No. 09-479 the Commission's collar rejected the ICNU methodology in
12 several important ways. First, the Commission rejected ICNU's collar boundary value
13 methodology, which defined one in five annual outage rates as "extreme." ICNU/300,
14 Falkenberg/13, ll. 7-9 (the highest and lowest 10 percent of outages defined as outliers);
15 Order No. 09-479 at 1 (uses the NERC 90/10 boundary values).

16 Second, the Commission adopted a replacement value that used the life of the plant
17 average FOR, rather than the 20-year average proposed by ICNU. ICNU/300,
18 Falkenberg/13, ll. 7-9; Order No. 09-479 at 3. Nothing in the record suggests that a 20-year
19 average produces a more accurate forecast and therefore the Commission's conclusion in
20 Order No. 09-479 that the lifetime average is more accurately predictive has not been
21 contradicted.

22 Third, in Order No. 09-479 the Commission explicitly rejected the exclusion of
23 outliers from the historical average used to replace outlier values. Order No. 09-479 at 3.
24 ICNU's method, however, uses a 28-day outage cap to effectively exclude outlier outages
25 from its 20-year historical average. ICNU/400, Falkenberg/33, ll. 12-15; Tr. 24, ll. 4-7 (Staff
26 describes 28-day cap as comparable to exclusion of outliers). Thus, not only does ICNU's

1 collar include a different historical period, but more importantly it also alters that historical
2 average in a material and significant manner, which the Commission explicitly rejected.
3 Excluding outliers as proposed by ICNU is also unnecessary when the replacement value is
4 a long-term historical average. Tr. 25, ll. 21-24; Tr. 26, ll. 18-20. Although ICNU's
5 testimony implies that PacifiCorp supports the use of the 28-day cap, its support was limited
6 to the inclusion of the cap in PacifiCorp's collar proposal. See ICNU/400, Falkenberg/33, ll.
7 12-15. In the context of the Commission's collar, such a cap should not be adopted.

8 **2. ICNU's Method Contains Significant Flaws.**

9 The record developed since the last round of briefing further undermines ICNU's
10 collar mechanism. When the Commission first rejected ICNU's collar in Order No. 09-479
11 the record contained no testimony analyzing and criticizing the ICNU proposal. Now,
12 however, that is not the case and that testimony identified several methodological errors
13 associated with ICNU's proposal. PGE/300, Tinker-Weitzel/1, l. 22 - /2, l. 1 (ICNU's
14 "analysis suffers from at least two serious methodological errors, one of which is a fatal
15 error that renders his analysis meaningless."). The ICNU method's "fatal flaw," as identified
16 by PGE, involves its use of future data to replace excluded outages in the four-year rolling
17 average. PGE/300, Tinker-Weitzel/3, ll. 5-16. Staff concurred with PGE and concluded
18 that future data should not be used in forecasting and that ICNU's method "seems counter-
19 intuitive." Staff/400, Brown/9, l. 16 - /10, l. 2 (ICNU's use of future information is
20 unreasonable).

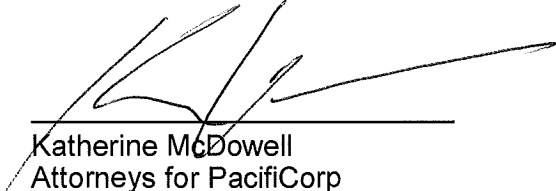
21 Even when these methodological errors were corrected, PGE concluded that
22 ICNU's method had a bias that "under-forecast forced outage rates." PGE/300, Tinker-
23 Weitzel/13, ll. 14-16. In light of Order No. 09-479 and the testimony filed thereafter,
24 PacifiCorp agrees with Staff when it concluded that no party has produced compelling
25 evidence for the Commission to alter its decision in Order No. 09-479. Staff/400, Brown/2,
26 ll. 7-8. Thus, the Commission should again reject ICNU's proposal.

1 **IV. CONCLUSION**

2 PacifiCorp recommends that the Commission continue using its four-year rolling
3 average and address outlier outages on a case-by-case basis. This will ensure that the
4 unique events surrounding each extreme outage are considered and that the use of a collar
5 mechanism will not arbitrarily drive down FOR, especially because there is no evidence that
6 PacifiCorp's FOR is overstated. If the Commission chooses to adopt a collar mechanism,
7 PacifiCorp agrees with Staff that there is no compelling reason for the Commission to alter
8 its decision in Order No. 09-479. The Commission's collar mechanism relies upon actual
9 historical data and is sufficiently developed and straightforward to be implemented in the
10 2011 TAM.

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14 DATED: September 8, 2010.

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