

# Davison Van Cleve PC

Attorneys at Law

TEL (503) 241-7242 • FAX (503) 241-8160 • mail@dvclaw.com  
Suite 400  
333 SW Taylor  
Portland, OR 97204

September 24, 2009

*Via Electronic and US Mail*

Public Utility Commission  
Attn: Filing Center  
550 Capitol St. NE #215  
P.O. Box 2148  
Salem OR 97308-2148

Re: In the Matter of PUBLIC UTILITY COMMISSION OF OREGON Investigation  
into Forecasting Forced Outage Rates for Electric Generating Units  
**Docket No. UM 1355**

Dear Filing Center:

Enclosed please find the original Reply Brief on behalf of the Industrial  
Customers of Northwest Utilities in the above-referenced docket.

Thank you for your assistance.

Sincerely,

/s/ Brendan E. Levenick  
Brendan E. Levenick

Enclosures

cc: Service List

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I have this day served the foregoing Reply Brief on behalf of the of the Industrial Customers of Northwest Utilities upon the parties, on the service list, by causing the same to be deposited in the U.S. Mail, postage-prepaid, and via electronic mail where paper service has been waived.

Dated at Portland, Oregon, this 24th day of September, 2009.

Sincerely,

/s/ Brendan E. Levenick

Brendan E. Levenick

**CITIZEN'S UTILITY BOARD OF OREGON (W)**

G. CATRIONA MCCrackEN (C)  
OPUC DOCKETS  
GORDON FEIGNER  
ROBERT JENKS (C)  
610 SW BROADWAY - STE 308  
PORTLAND OR 97205  
catriona@oregoncub.org  
dockets@oregoncub.org  
gordon@oregoncub.org  
bob@oregoncub.org

**DEPARTMENT OF JUSTICE**

MICHAEL T WEIRICH (C)  
REGULATED UTILITY & BUSINESS SECTION  
1162 COURT ST NE  
SALEM OR 97301-4096  
michael.weirich@doj.state.or.us

**IDAHO POWER COMPANY (W)**

CHRISTA BEARRY  
BARTON L KLINE  
LISA D NORDSTROM (C)  
GREGORY W SAID (C)  
TIM TATUM  
SCOTT WRIGHT (C)  
PO BOX 70  
BOISE ID 83707-0070  
cbearry@idahopower.com  
bkline@idahopower.com  
lnordstrom@idahopower.com  
gsaid@idahopower.com  
ttatum@idahopower.com  
swright@idahopower.com

**MCDOWELL & RACKNER PC (W)**

WENDY MCINDOO (C)  
LISA F RACKNER (C)  
520 SW 6TH AVE STE 830  
PORTLAND OR 97204  
wendy@mcd-law.com  
lisa@mcd-law.com

**PACIFIC POWER & LIGHT (W)**

MICHELLE R MISHOE (C)  
825 NE MULTNOMAH STE 1800  
PORTLAND OR 97232  
michelle.mishoe@pacificorp.com

**PACIFICORP OREGON DOCKETS (W)**

OREGON DOCKETS  
825 NE MULTNOMAH ST  
STE 2000  
PORTLAND OR 97232  
oregondockets@pacificorp.com

**PORTLAND GENERAL ELECTRIC**  
RATES & REGULATORY AFFAIRS - OPUC FILINGS  
121 SW SALMON ST 1WTC-0702  
PORTLAND OR 97204  
pge.opuc.filings@pgn.com

**PORTLAND GENERAL ELECTRIC**  
DOUGLAS C TINGEY  
121 SW SALMON 1WTC13  
PORTLAND OR 97204  
doug.tingey@pgn.com

**PUBLIC UTILITY COMMISSION OF OREGON**  
KELCEY BROWN  
PO BOX 2148  
SALEM OR 97301  
kelcey.brown@state.or.us

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**UM 1355**

In the Matter of	)	
	)	REPLY BRIEF OF THE INDUSTRIAL
THE PUBLIC UTILITY COMMISSION OF	)	CUSTOMERS OF NORTHWEST
OREGON	)	UTILITIES
	)	
Investigation into Forecasting Forced Outage	)	
<u>Rates for Electric Generating Units.</u>	)	

**I. INTRODUCTION**

Pursuant to the Administrative Law Judge’s (“ALJ”) August 20, 2009 Ruling, the Industrial Customers of Northwest Utilities (“ICNU”) submits this Reply Brief in the Oregon Public Utility Commission’s (the “Commission” or “OPUC”) investigation into forecasting forced outage rates for electric generating units. The Commission should adopt ICNU’s minimum loading and heat rates proposals because they are necessary to properly apply outage rates in PacifiCorp’s (or the “Company”) power cost model. In addition, the Commission should adopt ICNU’s forced outage rate collar because it most accurately normalizes outage rates to forecast conditions which are reasonably expected to occur.

While the remaining forced outage issues in this proceeding are admittedly complex, they are important to ensure that PacifiCorp’s power costs are accurately forecasted. PacifiCorp’s approach in its Opening Brief appears intended to maximize the confusion surrounding these complicated issues by raising misleading, inaccurate and irrelevant arguments. The Commission should not be distracted by this approach, but

should instead carefully analyze whether the Company's forced outage modeling approach is reasonable, supported by the evidence and accurate. In contrast, Staff's Opening Brief does an excellent job of demonstrating that PacifiCorp's myriad of criticisms regarding the collar mechanism are unfounded and unpersuasive.

## II. ARGUMENT

### 1. ICNU's Proposed Collar Methodology Is Not Untimely

PacifiCorp repeatedly highlights the fact that ICNU's proposed collar methodology was raised in ICNU's supplemental reply testimony. PacifiCorp Brief at 2, 5, 18-19. PacifiCorp strongly argued in favor of allowing supplemental testimony because the Company did not address all the relevant issues during the original procedural schedule and the Company wanted to propose its own collar methodology. PacifiCorp won its argument to extend the schedule to allow for two additional rounds of testimony, but now wants this extension to be limited to only its criticisms of Staff's collar and its own ineffectual collar.<sup>1/</sup>

ICNU raised its own alternative collar methodology at the appropriate time in the schedule in response to the Company's collar proposal, which is based on the premise that only a limited number of extreme outages should be removed and replaced with nearly equally as extreme outages. ICNU/300, Falkenberg/1, 6-7, 13-14. ICNU's proposal builds upon the best elements of both the Staff and PacifiCorp proposals, and

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<sup>1/</sup> PacifiCorp's position on when it is appropriate to raise alternative adjustments appears to change depending on whether it is the Company or another party which raises an alternative adjustment. In Docket No. UE 191, the Commission adopted an alternative trading margin adjustment proposed by the Company at hearing in an exhibit and oral surrebuttal testimony. See Re PacifiCorp, Docket No. UE 191, Order No. 07-446 at 10-11 (Oct. 17, 2007).

modifies them to replace extreme outages with normal outages. ICNU/300, Falkenberg/7, 13. ICNU's proposal produces the most accurate prediction of outage rates, and the Company had sufficient opportunity to review, conduct discovery and analyze ICNU's proposal.<sup>2/</sup>

## **2. PacifiCorp Continues to Oppose Any Collar Mechanism**

PacifiCorp's fundamental position is that the Commission should not adopt a collar, but the forced outage rate should include all outages except those longer than 28 days. This will have very limited impact upon PacifiCorp and will not remove many extreme outages. See ICNU/100, Falkenberg/10. Although ICNU believes that all extreme outage rates (including outage rates that are increased because of long outages) should be excluded from the outage rate, PacifiCorp's changed position is curious. PacifiCorp's rebuttal testimony disagreed with ICNU's proposal to remove long, 28 day outages because the "removal of lengthy outages appears only to create an incentive for shorter, but more frequent and perhaps more costly, outages." PPL/101, Godfrey/3. PacifiCorp apparently has changed its position and now believes that extreme outages should be removed from the outage rate, but it seeks to define "extreme" so narrowly as to make any changes almost inconsequential.

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<sup>2/</sup> Including subparts, PacifiCorp submitted about forty data requests on ICNU's supplemental reply testimony, and the Company declined to cross examine ICNU's witness, Randall Falkenberg. In addition, PacifiCorp has not hesitated to request additional time and opportunity to submit testimony, or to attempt to limit the scope of this proceeding. PacifiCorp appears to prefer to take on the procedural appropriateness of ICNU's proposals rather than address the merits.

### **3. PacifiCorp's Collar Is Not More Accurate Than Staff's or ICNU's**

PacifiCorp claims that its proposed collar would more accurately reflect forced outage rates than ICNU's or Staff's collars. PacifiCorp Brief at 9-11, 18-20. While Staff's Opening Brief specifically rebuts most of PacifiCorp's technical arguments, PacifiCorp's claims also defy common sense. All parties have agreed that PacifiCorp will use a four year average to estimate its forced outage rates. PacifiCorp Partial Stipulation at 2. PacifiCorp's collar would allow the four-year period to assume that PacifiCorp will experience extreme outages that actually only occur once every nineteen years. ICNU/300, Falkenberg/9-10. Since these outages are not likely to actually occur during the four year period in which rates are in effect, PacifiCorp's proposal will always overestimate the number and cost of its forced outages. In contrast, both the ICNU and Staff proposals do a better job of ensuring that the four year period is based on normalized conditions which are likely to occur. Id. at Falkenberg/6-14.

### **4. The ICNU and Staff Collars Are Not "Minimum Performance Standards"**

PacifiCorp distorts and mischaracterizes ICNU's testimony in claiming that ICNU "acknowledges" that the purpose of the collar is to adopt a minimum performance standard, which would only be reasonable if PacifiCorp had a power cost adjustment mechanism ("PCAM"). PacifiCorp Brief at 16, lines 14-19. Mr. Falkenberg testified that there two potential purposes for a collar: 1) minimum performance standards; and 2) to improve forced outage accuracy. ICNU/300, Falkenberg/1-2. Mr. Falkenberg acknowledged that using the collar as a minimum performance standard is reasonable for a utility that has a PCAM, but he also testified that the Staff proposal is not

a minimum performance standard. Id. The record shows that the purpose of the ICNU, Staff and PacifiCorp collars are not to implement a minimum performance standard, but to improve forced outage accuracy. Id.

## **5. The Collars Are Not a Prudence Disallowance**

PacifiCorp alleges that a collar will result in an automatic and improper prudence review, and prevent PacifiCorp from recovering its prudently incurred costs. PacifiCorp Brief at 17-18. The collar does not review the reasonableness of PacifiCorp's past outages, but instead seeks to improve the accuracy of forced outage rates that will be used to set future power costs. Staff/300, Brown/13-15. Instead of reviewing the reasonableness of past costs, the collar is designed to normalize outage rates by excluding abnormal data. Id.; ICNU/300, Falkenberg/1, 6-7, 13; Staff/300, Brown/6-8.

Normalization of forecasted costs is a standard and well-accepted ratemaking principle. Leonard Saul Goodman, The Process of Ratemaking, Vol. I 470-71 (1998). The Commission should not succumb to PacifiCorp's efforts to confuse these two very different regulatory principles.

## **6. PacifiCorp's GRID Model Does Not Overstate Coal Generation**

PacifiCorp justifies its positions on both the collar and minimum capacity/heat rates issues based on the claim that the GRID model allegedly overstates the amount of coal generation. PacifiCorp Brief at 8, 20. PacifiCorp's argument appears to be that the Commission should not adopt ICNU's and Staff's forced outage proposals because GRID allegedly has an entirely separate error. PacifiCorp made similar arguments in its recent transition adjustment mechanism ("TAM") arguing that the



Commission should reject ICNU's proposals because GRID overestimates coal generation. UE 207, PPL/104, Duvall/4. The Commission should review the collar mechanism and the minimum capacity/heat rate issues upon their own merits, and not reject them because of vague and unsupported claims about different modeling problems in GRID.

Nevertheless, PacifiCorp's GRID model does not actually overstate coal generation. PacifiCorp's claim about overstating coal generation is based on an incorrect baseline period, understated actual coal generation, the failure to account for system changes and load growth, and an inaccurate characterization of the evidence. UE 207, ICNU/200, Falkenberg/7-13; UE 207, Staff/300, Brown/13-14. In fact, Staff demonstrated "that the GRID model underestimates actual [coal] generation as compared to more recent time periods." UE 207, Staff/300, Brown/14. PacifiCorp's arguments are also curious because GRID is a "homemade" power cost model that PacifiCorp frequently proposes changes in order to correct alleged failures and increase net power costs. The fact that PacifiCorp has not even identified the root cause of why the model allegedly overstates coal generation, or proposed any revisions to correct GRID, casts doubt upon the legitimacy of this alleged error.

**7. PacifiCorp Has Not "Always" Inaccurately Modeled Minimum Capacities and Heat Rates**

PacifiCorp claims that it has "always" calculated its minimum capacity and heat rates in essentially the same manner and that ICNU has only recently raised these issues. PacifiCorp Brief at 20, 22. PacifiCorp provides no citation for this claim,

probably because it is an inaccurate statement in which there is no evidentiary support. The absurdity of the Company's position is confirmed by the fact that until recently, PacifiCorp used an entirely different power cost model (PD-Mac), which was a monthly energy model that did not even model heat rate curves or minimum capacity. PacifiCorp has also used a variety of power cost models for a variety of purposes over the past decades, and the Company has produced no evidence regarding how any of those models addressed the issues in this proceeding. Finally, even if the Company had "always" modeled minimum capacity and heat rates erroneously, there is no reason why these errors should not be corrected now.<sup>3/</sup>

At the heart of the Company's argument is a view that, if parties do not discover an incorrect power modeling practice when the error is first included in the model, then parties should not be able to correct that error in a future proceeding. GRID is an extremely complex "homemade" power cost model in which it is not possible to identify all errors during one rate proceeding, especially the truncated TAM proceedings. In addition, the impact or ability to uncover many GRID modeling errors changes under different conditions. Regardless of how the Company previously modeled minimum capacity and heat rate, this is the first proceeding in which these issues have not settled and have been presented to this Commission for resolution.

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<sup>3/</sup> Even the Company admits that certain long-standing errors in GRID should be corrected when they are finally identified. For example, PacifiCorp agrees that GRID has a long-standing problem with the uneconomic dispatch of gas-fired resources, which needs to be corrected. See UE 207, PPL/100, Duvall/13-14; UE 207, ICNU/100, Falkenberg/4.

## 8. ICNU's Heat Rate Adjustment Is More Accurate than the GRID Model

PacifiCorp argues that ICNU's heat rate adjustment results in lower heat rates than actual operations. PacifiCorp Brief at 23. PacifiCorp claims that "ICNU never disputed that its adjustment would cause this deviation from actual plant data." Id. Contrary to PacifiCorp's claims, ICNU squarely addressed PacifiCorp's arguments on this very issue and the evidence shows ICNU's proposal "improves the system average heat rate results as compared to the current method modeled in GRID." ICNU/100, Falkenberg/61.

Mr. Falkenberg testified that GRID "consistently overpredicts the heat rates of gas units, and the minimum loading and heat rate adjustment really enhances, rather than diminishes, the overall accuracy of heat rates results simulated in GRID." Id. at Falkenberg/60 (emphasis in original). Mr. Falkenberg based his conclusions upon a comparison of actual data with both ICNU's proposal and the GRID model results, which identified ICNU's proposal as being closer to actual data than GRID. Id. at Falkenberg/61. PacifiCorp's Brief appears to ignore that its own witness recognized that ICNU's proposal was based on a comparison of both the ICNU and GRID model results to actual results. PPL/400, Duvall/17. In fact, Mr. Duvall claimed that a comparison of actual data is "relatively meaningless" and contradicts the Company's claims in its Brief. Id. at Duvall/16. Actual data is actually very meaningful and supports ICNU's proposal, which would require PacifiCorp "to adjust the heat rate curve of its thermal facilities 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/300, Brown/18, citing ICNU/100, Falkenberg/55.

**9. The Commission Should Reject PacifiCorp’s Unsupported and Inaccurate Characterization of How the Heat Rate Curve Is Modeled**

PacifiCorp argues that GRID models the heat rate curve as reflecting the actual heat rate at the derated minimum and maximum capacities, and that ICNU’s proposal changes the heat rate curve so that the heat rate curve deviates from actual data. PacifiCorp Brief at 23-24. PacifiCorp’s Brief does not cite any evidence for these claims, likely because they are not true nor supported by the record.<sup>4/</sup> PacifiCorp’s Brief creates unnecessary confusion and distorts how its power model actually operates.

Contrary to the Company’s assertion, the heat rate curve in GRID does not reflect the actual heat rate at the derated minimum and maximum capacities. Staff witness Kelcey Brown testified that the GRID model shows the heat rate as being less efficient than it actually is when the model derates the maximum capacity of a unit.

Staff/300, Brown/19. Ms. Brown explained that:

When PacifiCorp’s model derates the maximum capacity of the unit, (i.e. 600 MW to 540 MW) the corresponding heat rate indicates the plant is less efficient than it actually is at the operating maximum, and creates an unrealistic scenario in the GRID model.

Id. PacifiCorp did not challenge this fact. Essentially, the record shows that GRID does not reflect the actual heat rate when the model derates generator units.

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<sup>4/</sup> The only analysis in the PacifiCorp testimony that even appears potentially relevant to this argument is the chart on page 19 of Mr. Duvall’s third round of testimony. PPL/400, Duvall/19. However, this is a figure that applies to only one coal plant, not to all units, and the accuracy of Mr. Duvall’s information is disputed. ICNU/300, Falkenberg/16.

Similarly, PacifiCorp is incorrect in its unsupported claim that ICNU's proposal changes the heat rate curve so that the heat rate deviates from actual data. Errata Confidential Exhibit ICNU/303 demonstrates that ICNU's proposal maintains the correct heat rate curve and ensures that the actual heat rate curve (when applied to the underated capacity) and adjusted heat rate curve (when applied to the derated capacity) produce the same average heat rate ("AHR"). Page 1 of this exhibit shows that, for each generation unit, the actual curve AHR at the minimum capacity is exactly the same as the AHR based on the adjusted curve at the derated minimum capacity under ICNU's proposal. Page 2 of this exhibit shows that, for each generation unit, the same relationship holds true for AHR at the underated and derated maximum capacity. Page 3 shows the same information for the mid-point actual and derated capacities. This exhibit demonstrates the equivalence of the PGE method (which models a number of fixed points on the heat rate curve) and the ICNU methodology (which adjusts the heat rate curve). This is explained in detail by Mr. Falkenberg. ICNU/200 Falkenberg/11. Therefore, ICNU's proposal corrects the GRID models' failure to adjust the heat rate curve in order to ensure that each generator unit produces the same heat rate consumption at the derated maximum and minimum capacity as the unit would experience in actual operations.

**10. ICNU's Minimum Capacity and Heat Rate Proposals Represent Standard Industry Practice**

In briefing, PacifiCorp disputes Mr. Falkenberg's testimony that the ICNU minimum capacity and heat rate adjustments are based on standard industry practices. PacifiCorp Brief at 21-22. PacifiCorp does not cite any testimony disputing Mr.

Falkenberg's claim or his reference to another power cost witness stating that Mr. Falkenberg's method is well-accepted in the community of production cost experts. See ICNU/100, Falkenberg/55. It appears that the Company did not address this issue in their own testimony. Similarly, the Company did not conduct any discovery nor did they cross examine Mr. Falkenberg on this issue. The Commission should provide little credence to PacifiCorp's tactic of ignoring an issue until briefing and then making arguments which are not supported by any evidence in the record.

### **III. CONCLUSION**

The Commission should ignore PacifiCorp's efforts to confuse the complex issues in this proceeding by focusing on procedural issues and making numerous unsupported claims which are contradicted by the evidentiary record. Instead, the Commission should: 1) adopt ICNU's proposed collar to more accurately model forced outages by removing those extreme outages which are unlikely to reoccur with outages which are likely to occur during the rate period; and 2) require PacifiCorp to revise its forced outage rate methodology to properly model the heat rate and derate the minimum capacity. These changes are well-supported by the record and will better ensure that the Company's power cost model does not inflate power costs by overestimating the amount of thermal generation produced in GRID.

Dated this 24th day of September, 2009.

DAVISON VAN CLEVE, P.C.

/s/ Irion A. Sanger

Irion A. Sanger

333 S.W. Taylor, Suite 400

Portland, OR 97204

(503) 241-7242 telephone

(503) 241-8160 facsimile

ias@dvclaw.com

Of Attorneys for Industrial Customers of Northwest  
Utilities