### BEFORE THE PUBLIC UTILITY COMMISSION

# **OF OREGON**

# UE 264

OF OREGON'S POST-HEARING RESPONSE BRIEF

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- 2 Pursuant to Administrative Law Judge ("ALJ") Shani Pines' Ruling Memorandum,
- 3 issued August 23, 2013 adopting a sequential briefing schedule, the Citizens' Utility Board of
- 4 Oregon ("CUB") hereby submits its Post-hearing Response Brief to the Oregon Public Utility
- 5 Commission ("Commission" or "OPUC").

#### 6 II. FACTUAL BACKGROUND

- 7 The factual background for this matter was detailed in CUB's Pre-hearing memorandum
- 8 and will not be further addressed here.

#### 9 III. LEGAL STANDARD OF REVIEW

- 10 The burden of proof in this docket must be carried by PacifiCorp. PacifiCorp must prove
- that its requested rate increase is "fair, just and reasonable." ORS 757.210(1). Indeed, "[t]he 11
- 12 Commission may not authorize a rate or schedule of rates that is not fair, just and reasonable."
- 13 ORS 757.201(1); Pac. Nw. Bell Tel. Co., 21 Or. App. At 213.

The extent of the burden carried by the Company has been clarified by the Commission

2 in various Orders. Today's standard holds that the burden of proof and persuasion is borne by

- 3 the Company throughout the proceeding and does not shift to any other party. Re PGE, Docket
- 4 No. UE 228, Order No. 11-432 at 3 (Nov. 2, 2011). For the Commission to rule in its favor,
- 5 PacifiCorp must provide the Commission with sufficient evidence in this docket to prove that its
- 6 requested rate increase is fair, just and reasonable.

### IV. ARGUMENT

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In its pre-hearing memorandum the Company stated, "this case already reflects a decrease in NPC, and the parties' proposed adjustments to further enlarge this decrease are

meritless." While CUB appreciates that the current numbers may show a slight decrease - there

are still more updates to come (November 8 and 15, 2013) and the updates which have already

arrived have narrowed the original decrease - the fact that the Company says there is a decrease

does not mean it would be appropriate for the parties to stop examining the Company's filing to

ensure that costs placed on customers are reasonable. Greg Duvall's Reply Testimony contained

15 a laundry list of "NPC CORRECTIONS AND UPDATES" which flowed in both directions.

And the Company's response to ICNU Data Request 1.5 shows that the Company also failed to

conduct appropriate analysis of its change to the wind modeling prior to filing testimony.<sup>2</sup>

Clearly the Company can and does make mistakes in its calculations, and omits to do necessary

analysis. Such mistakes and omissions need to be pointed out and corrected - pursuant to ORS

<sup>&</sup>lt;sup>1</sup> PacifiCorp's Pre-hearing Memorandum at 2 lines 19-20.

<sup>&</sup>lt;sup>2</sup> UE 264 CUB Exhibit 103. "The Company has not prepared a study quantifying the impact of this modeling change on this case . . . ." While the Company did ultimately advise of the impact of the modeling change on this case it did not do so until the filing of the Reply Testimony of Greg Duvall (PAC/500 Duvall/12 lines 12-17) which prohibited CUB's being able to analyze those numbers.

757.201(1), "[t]he Commission may not authorize a rate or schedule of rates that is not fair, just and reasonable."

### A. The Renewable Portfolio Standard

PacifiCorp cites to ORS 469A.120(1) which states, that with some exceptions, prudently incurred costs associated with compliance with a renewable portfolio standard are recoverable in rates.<sup>3</sup> CUB accepts this fact, however, CUB notes that forecasted costs have to be appropriately modeled before they can be found to be prudent. There is not a disagreement over whether prudently incurred wind integration costs should be recoverable. There is a disagreement over how to model and forecast those costs into a future test year. CUB has a problem with PacifiCorp's proposed modeling which uses only one year's worth of data which may or may not be representative of the test year.

### B. Inclusion of costs in the TAM versus the PCAM

In both its Pre-Hearing memorandum, and in its Opening Brief, the Company questions how Staff, ICNU and CUB could have argued in the 2012 GRC that a PCAM was unnecessary to facilitate PacifiCorp's recovery of wind integration, firming and shaping costs because PacifiCorp could recover them in the TAM and yet now in the TAM argue that PacifiCorp's requested wind shaping costs are inappropriate. Speaking only for CUB, CUB would not be objecting to any prudently incurred costs if the proposed method for calculating them made sense and was accurately carried out. The problem is that the Company's newly proposed

<sup>3</sup> UE 264 PacifiCorp's Confidential Opening Brief – REDACTED at 3 at FN. 13.

<sup>&</sup>lt;sup>4</sup> PacifiCorp's Prehearing Memorandum at 6 lines 19-21 and at 7 line 1; PacifiCorp's Opening Brief at 8 FN.35.

1 methodology may not produce accurate results.<sup>5</sup> Although 2011 may be the most recent year

with the largest data set, choosing it to reflect future generation is not the best approach. CUB

agrees with Staff's recommendation that the Company needs to utilize a much larger dataset in

determining a normalized wind profile.<sup>7</sup>

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# C. PacifiCorp's Claim that Staff and Intervenors Have Not Provided Evidence

# Invalidating PacifiCorp's Use of a Single Year of Data for Wind Shape

7 The extent to which the burden of proof must be carried by the Company has been

clarified by the Commission in various Orders. Today's standard holds that the burden of proof

and persuasion is borne by the Company throughout the proceeding and does not shift to any

other party. Re PGE, Docket No. UE 228, Order No. 11-432 at 3 (Nov. 2, 2011). For the

Commission to rule in its favor, PacifiCorp must provide the Commission with sufficient

evidence in this docket to prove that its requested rate increase is fair, just and reasonable. It is

not the Staff and Intervenors' burden to provide evidence invalidating PacifiCorp's use of a

single year of data for wind Shape. Without more data, it is difficult for Staff, CUB and ICNU to

prove that 2011 is not representative of the future, but without that data, it is impossible for

PacifiCorp to prove that 2011 is representative of the future. The simple truth is that we do not

know whether 2011 is a typical year or an outlier. We don't know if using it will make our

18 forecast more accurate or less accurate.

<sup>&</sup>lt;sup>5</sup> CUB's pre-hearing Memorandum at 4 lines 19-20 and at 5 lines 1-9 citing to UE 264 CUB/100 Jenks-Hanhan/5 fn. 12 See CUB Exhibit 103, PacifiCorp's response to ICNU Data Request 1.5.

<sup>&</sup>lt;sup>6</sup> UE 264 CUB/100 Jenks-Hanhan/6 lines 1-2; UE 264 Joint Staff/100 Crider-Ordonez/13 lines 9-10; UE 264 ICNU/100 Deen 2 at lines 26-29.

<sup>&</sup>lt;sup>7</sup> UE 264 Joint Staff/100 Crider-Ordonez/13 lines 10-18.

### D. The need for a larger data set

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- Notwithstanding the above, Staff and the Intervenors have in fact provided evidence in
- 3 the form of testimony and studies which do invalidate PacifiCorp's use of a single year of data
- 4 for wind shape. As Staff stated in its Prehearing Brief,
- 5 [t]he TAM requires a normalized view of wind generation, so the issue is not how
- 6 wind generation changes hour to hour on the same day, but how hourly data from
- 7 one calendar date changes from year to year. In other words, it is the annual and
- 8 multi-year fluctuations that are relevant when estimating a normalized wind. The
- 9 Company's use of a single year of data provides no information about long term
- standard deviations around the mean.<sup>8</sup>
- 11 CUB's review of the Long-Term Wind Power Variability. Y. H. Wan. Technical Report,
- 12 NREL/TP-5500-53637<sup>9</sup> produces some findings contrary to those of PacifiCorp. First, Mr. Wan
- picked those four specific wind plants "because the data quality is better for longer periods at
- these locations." Clearly Mr. Wan believed that access to data over a period of years was
- essential to a wind study. He used six to ten years of data depending on the chosen plant. Second,
- none of Mr. Wan's plants were in the west. Third, Mr. Wan found, looking at one plant over a
- ten year period that "[t]he annual production at this plant ranges from a low of 82% of the
- average to a high of 113% of the average. The inter-annual variation is relatively large; the
- 19 highest production year produced 38% more energy than the lowest production years during this
- 20 period."<sup>11</sup> Fourth, that traces only arose where the plants were close in proximity (although there

http://www.nrel.gov/docs/fy12osti/53637.pdf.

<sup>&</sup>lt;sup>8</sup> Staff's Prehearing Brief at 8 lines 2-7.

<sup>&</sup>lt;sup>10</sup> http://www.nrel.gov/docs/fy12osti/53637.pdf at 1 Section 2 Data Sources – at one of the plants he had ten years of data. Overall his smallest data set included six years of information.

<sup>11</sup> http://www.nrel.gov/docs/fy12osti/53637.pdf at 2 Section 3 Inter-Annual Variability of Wind Power.

were diurnal and seasonal patterns across wider geographical ranges). 12 Fifth, "[f]or the same

2 month, the changes from one year to the next could also be significant. For example production

during February 2002 was more than twice the production during February 2010." However,

sixth, in terms of "Shorter-Term Variations" this study found that while "[w]ind production at

these four WPPs has shown significant inter-annual variation and distinguished seasonal and

diurnal patterns, but the shorter term behavior of wind power was fairly consistent."<sup>14</sup>

But Mr. Wan's sixth finding does not prove that what PacifiCorp is proposing to do in this docket is appropriate. PacifiCorp is asking this Commission to base its rate recovery on the results from one year's worth of data. Even Mr. Wan felt that a large data set for each plant was necessary (6-10 years). And, as John Crider testified, "[t]he Company's use of a single year of

data provides no information about long term standard deviations around the mean." The

bottom line here is that it does not matter what PacifiCorp's COV study showed because that

study has nothing to do with demonstrating whether a data set is large enough. A one year study

cannot provide the needed information to make a determination about wind shapes for

PacifiCorp's western plants from year to year in the future and for associated cost recovery for

PacifiCorp's plants. Mr. Wan's study is the only third party study cited by both sides and for

varying propositions – wind modeling is in its infancy.

# **D.** Modeling of Wind is still in its infancy

CUB agrees with Staff that wind modeling for determining power costs is still in a state

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http://www.nrel.gov/docs/fy12osti/53637.pdf at 3 Section 3 Inter-Annual Variability of Wind Power; see also 4 Section 4 Monthly Variability of Wind Energy, and at 7; and also Section 6 Summary and Conclusions. http://www.nrel.gov/docs/fy12osti/53637.pdf at 4 Section 4 Monthly Variability of Wind Energy.

<sup>14</sup> http://www.nrel.gov/docs/fy12osti/53637.pdf at 9 Section 5 Shorter-Term Variations; and at 12 Section 6 Summary and Conclusions.

<sup>&</sup>lt;sup>15</sup> Staff's Prehearing Brief at 8 lines 2-7.

- of development. It would therefore be prudent to <u>not</u> make any changes to the current method of
- 2 modeling wind until appropriate changes can be determined through further cooperative study
- 3 which includes all parties to the wind issues. 16 As a consequence, CUB further agrees that
- 4 PacifiCorp's request for NPC costs should be reduced by \$1.10 million in Oregon allocated
- 5 NPC.

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### F. Comparisons to modeling for hydro

CUB is not the first to compare wind modeling to hydro modeling. In the "Summary and Conclusions" section of his study, Mr. Wan found that "[t]he climate and regional weather patterns will be reflected in the longer-term performance of WPPs. In this respect, wind power is similar to hydropower, especially run-of-the-river type, in that there are high energy production (wet) years and low energy production (dry) years. The available data show that during the highest production year, total wind energy from the same WPP can be almost 40% higher than the annual production of the lowest production year."<sup>17</sup> This is the point that CUB was trying to make in its Prehearing Brief. While we don't have 50 years of wind data today, the need for several years of data to ensure that we are truly modeling normal weather is as true of wind as it is of hydro-power. A minimum of three years of data seems reasonable to CUB.

# G. The Company Has Stated Its Willingness to Meet with Parties to Discuss Wind, Coal and Hydro Issues

In its Opening Brief PacifiCorp states that it is "open to continued study, discussion, and refinement of its wind modeling, but that this process should not further delay effectuation of the

UE 264 - Citizens' Utility Board of Oregon's Post-Hearing Response Brief

<sup>&</sup>lt;sup>16</sup> Staff's Prehearing Brief at 8 lines 23-24 and at 9 lines 1-3.

<sup>&</sup>lt;sup>17</sup> http://www.nrel.gov/docs/fy12osti/53637.pdf at 12 Section 6 Summary and Conclusions.

<sup>&</sup>lt;sup>18</sup> UE 264 CUB's Pre-hearing Memorandum at 6 lines 7-10.

1 policies underlying ORS 469.120(1) through approval of the Company's approach to wind

2 shaping in the 2014 TAM." As discussed above effectuation of that statute requires finding an

appropriate means to model costs so that the Commission can find that the resulting rates are

fair, just and reasonable – "[t]he Commission may not authorize a rate or schedule of rates that is

not fair, just and reasonable". ORS 757.201(1); Pac. Nw. Bell Tel. Co., 21 Or. App. At 213. All

parties are supportive of recovering wind integration costs. The difference in opinion is how to

model these costs. Because PacifiCorp has failed to demonstrate that its proposed changes in

methodology for modeling wind integration costs is an improvement in forecasting these costs, it

is instead inappropriately accusing other parties of opposing recovery of wind integration costs.

In addition, given that the majority of parties<sup>20</sup> who closely follow wind issues are not in fact

intervenors in this UE 264 docket this seems like a strange place for the Commission to consider

approving a wide ranging methodological change for wind. It would in fact seem much more

appropriate – especially when PacifiCorp has failed to prove its case for adoption of such a

methodological change – to deny the change in this docket and direct PacifiCorp to engage in the

Staff suggested studies and discussions to refine wind modeling.

CUB also notes that the company expressed a willingness to meet with Parties on the issue of PacifiCorp's coal supply arrangements with its affiliate mines. While CUB is willing to agree to participate in such discussions, CUB requests that any future discussions occur within the confines of a formal investigatory docket with a stated goal. Prior affiliate coal mine discussions have simply evaporated into the ether due to the pressure on all sides of other

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<sup>&</sup>lt;sup>19</sup> UE 264 PacifiCorp's Opening Brief at 9 lines 6-9.

<sup>&</sup>lt;sup>20</sup> Such as RNP. NWEC and ODOE

dockets.

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- And in regard to Staff's proposal that PacifiCorp organize workshops before the 2015
- 3 TAM to allow interested parties to better understand the Company's hydro modeling
- 4 assumptions, CUB wishes to voice its support for such workshops. <sup>21</sup>

# V. CONCLUSION

CUB has reservations about choosing a random year based on the availability of data and the convenience of having already incorporated the data in to other studies. A single year does not seem to serve as an accurate predictor of future wind generation. CUB believes that the Company should collect data on at least three years of actual wind generation before it uses its information to predict future values. CUB does not believe that the Company has demonstrated that its current approach of forecasting wind shaping, and its wind integration costs included in GRID, do "not fully account for the costs of dealing with the variable output of wind resources." CUB's recommendation is that the Company's proposed methodology be denied until more evidence can be gathered to demonstrate that 2011 has reasonable predictive value or at least until the Company has gathered a larger data set. CUB supports the idea of workshops to review PacifiCorp's hydro modeling assumptions, its wind modeling assumptions and its coal supply affiliate mine issues. CUB is amenable to further discussion of PacifiCorp's coal supply but would like such discussions to be part of an investigatory docket. CUB supports Staff's requested reduction of \$1.10 million in Oregon—allocated NPC.

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<sup>&</sup>lt;sup>21</sup> Staff's Prehearing Brief at 6 lines 16-18.

<sup>&</sup>lt;sup>22</sup> ICNU/100 Deen/11.

<sup>&</sup>lt;sup>23</sup> UE 264 CUB/100 Jenks-Hanhan/6 line 19-22 and at 7 lines 1-5.

Dated this 18<sup>th</sup> day of September, 2013.

Respectfully submitted,

f.C.M

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### **UE 264 – CERTIFICATE OF SERVICE**

I hereby certify that, on this 18<sup>h</sup> day of September, 2013, I served the foregoing **CITIZENS' UTILITY BOARD OF OREGON'S POST-HEARING RESPONSE BRIEF** in docket UE 264 upon each party listed in the UE 264 PUC Service List by email and, where paper service is not waived, by U.S. mail, postage prepaid, and upon the Commission by email and by sending one original and five copies by U.S. mail, postage prepaid, to the Commission's Salem offices.

(W denotes waiver of paper service)

(C denotes service of Confidential material authorized)

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