

Exh. RF-8  
Docket UE-230172  
Witness: Ryan Fuller

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,

Complainant,

v.

PACIFICORP dba  
PACIFIC POWER & LIGHT COMPANY

Respondent.

Docket UE-230172  
*(Consolidated)*

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In the Matter of

ALLIANCE OF WESTERN ENERGY  
CONSUMERS'

Petition for Order Approving Deferral of  
Increased Fly Ash Revenues

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Docket UE-210852  
*(Consolidated)*

**PACIFICORP**

**EXHIBIT OF RYAN FULLER**

**Mullins Transcript from Oregon Docket No. UE 420**

**October 2023**

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THE PUBLIC UTILITY COMMISSION  
OF THE STATE OF OREGON

Docket No. UE 420

In the Matter of PacifiCorp, dba Pacific Power,  
2024 Transition Adjustment Mechanism.

September 7, 2023

9:30 a.m.

Evidentiary Hearing held before the Oregon Public Utility  
Commission via Zoom on September 7, 2023, beginning at  
9:30 a.m.

PRESENT:

Administrative Law Judge:	Katie Mapes
Commissioner:	Letha Tawney
On behalf of PacifiCorp:	Adam Lowney, Ajay Kumar Katherine McDowell
On behalf of Sierra Club:	Rose Monahan
On behalf of Calpine Energy Solutions:	Peter Richardson, Greg Adams
On behalf of Vitesse:	Irion Sanger, Joni Sliger
On behalf of AWEC:	Brent Coleman
On behalf of Staff:	Stephanie Andrus

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1 CROSS-EXAMINATION

2 BY MR. LOWNEY:

3 Q Good morning, Mr. Mullins.

4 A Morning.

5 Q I'd like to start out with your rebuttal  
6 testimony, please. That's AWEC/200. If you could turn to  
7 page 4.

8 A Okay.

9 Q And if I could direct your attention to line 15.

10 You testify:

11 "To develop a forecast with an overall end  
12 result that is reasonable, the forecast must be  
13 based on modeling assumptions that are both  
14 principled and consistent."

15 You see that?

16 A Yeah.

17 Q Okay. Now, with that testimony in mind, I'm  
18 going to ask you to flip to page 100, or excuse me, page  
19 16 of AWEC 100, which is your direct, or excuse me, your  
20 opening testimony.

21 And on page 16 of AWEC/100, you discuss your  
22 recommendation related to the production tax credit rate.

23 Are you there?

24 A Yup.

25 Q And you recommend an adjustment that would

1 increase the PTC to 3 cents per kWh in 2024; isn't that  
2 correct?

3 A Correct.

4 Q And on line 8 of page 16, you quantify that  
5 adjustment as a decrease to Oregon allocated NPC of 2.7  
6 million; is that correct?

7 A To the -- it's a reduction to the overall TAM  
8 revenues, not -- not net power costs, but that's  
9 the -- that's the right number.

10 Q Okay. That's -- thank you for that correction.

11 Now, further down on this same page, on line 11,  
12 you testify that:

13 "The IRS adjusts the PTC rate each year by  
14 applying an inflation adjustment factor."

15 And then on the next -- further down, you  
16 testify -- and actually let me, sorry, I need to flip  
17 pages -- on page 17, line 9, if you're there, you testify:

18 "It can be determined that the PTC rate  
19 will increase to 3 cents per kWh in 2024 so long  
20 as inflation equals or exceeds 3.13 percent on  
21 an annualized basis for the remainder of 2023."

22 You see that testimony?

23 A I do.

24 Q And then on line 11, you testify:

25 "It's likely that inflation will exceed

1           this level for the remainder of the year."

2           And you testify that you make that  
3 recommendation because "the annualized inflation rate for  
4 April 2023 was 4.9 percent," and that's down on line 13.

5           Now, your testimony doesn't say this, but the  
6 footnote citation supporting that 4.9 percent is relying  
7 on the Consumer Price Index, or the CPI; isn't that  
8 correct?

9           A     Yep.

10          Q     And to be clear, the CPI is not the inflation  
11 metric that actually determines whether the PTC rate  
12 increases or decreases. Isn't that correct?

13          A     Yep. That's right. That's right. In my -- I  
14 guess in my -- what is it? -- my rebuttal testimony,  
15 I -- I guess I talked some -- some about that and compared  
16 to the different inflation factor. What is it?  
17 The -- the -- the PC -- what is it? -- PCE factor.

18          Q     And we'll get there (indiscernible). I just  
19 want to --

20          A     Sure, sure. Just -- just to -- just to finish  
21 up though. So I did compare it to the PCE factor and did  
22 sort of a differential approach. And so recognizing that  
23 those -- those two aren't the -- aren't the same. It  
24 isn't the same as the inflation adjustment factor.

25          Q     And -- and just to be clear, the inflation

1 adjustment metric that is actually used to determine the  
2 PTC rate is called the Gross Domestic Product or GDP  
3 implicit price deflator. Correct?

4 A That's the -- that is the index that -- that the  
5 IRS uses.

6 Q Okay. Now, if I could direct your attention,  
7 please, to PacifiCorp Hearing Exhibit 1308, I'm going to  
8 ask you to first look at page 1, so just let me know when  
9 you're there.

10 A Okay.

11 Q Now, page 1 is the document that you cite in  
12 footnote 10 of your direct testimony that supports the 4.9  
13 percent inflation rate you cited in your direct -- or in  
14 your opening testimony, correct?

15 A And just for reference, the 4.9 percent is on  
16 the very first line of Table A. It says, "All items  
17 unadjusted 12 months ended April 2023," and it shows 4.9  
18 percent. Do you see that?

19 A Yeah. Yeah. I -- seems like this is the  
20 same -- same release, but I don't -- don't recall exactly  
21 what, you know, specific -- you know, what -- where it  
22 specifically was. So it might've been a different  
23 release, but yeah, it's -- it's there.

24 Q And -- and just to be clear, this release  
25 that -- that we're looking at was from April 2023, and it

1 was issued May 10th, 2023. That's at the very top of the  
2 document.

3 A Yeah.

4 Q And just to get our timing straight, your  
5 testimony was filed on June 23rd, your opening testimony.  
6 Is that correct?

7 A Correct.

8 Q Now, if we just turn to page 2 of Exhibit 1308,  
9 this is the same Consumer Price Index news release from  
10 June of 2023. And if we look at the top, it was released  
11 on July 12th, so shortly after you filed your opening  
12 testimony. And if we look on this document, the first  
13 line on Table A is no longer 4.9 percent. It's 3 percent.  
14 Isn't that right?

15 A Yeah, that's -- that's right. But that's the,  
16 you know, that's, of course, the backwards-  
17 looking -- looking value.

18 Q But --

19 A And, you know, the -- the inflation at least  
20 over the course of the year has softened some. You know,  
21 we don't know what's going to happen through -- through  
22 the end of the year, you know, based on, you know, the  
23 timing and the testimony that, you know, the information I  
24 reviewed at the time of filing testimony, I -- I think,  
25 you know, I thought it was more likely than not that it



1 was going to increase. And I -- and I still think that  
2 that's the case. But, you know, of course, it's  
3 not -- it's not a slam dunk in this case. It could go  
4 either way.

5 But given that it's, you know, a passthrough  
6 item in the P-CAM (phonetic), I think it's -- it's, at  
7 least for this item, best to sort of err in favor of  
8 customers and increase it rather than -- rather than not.

9 So -- but -- but, yeah, it has -- inflation has  
10 softened some.

11 Q And -- and so just to be clear, you would agree  
12 that according to this Consumer Price Index publication,  
13 which again is the same data you relied on in your opening  
14 testimony, inflation was now below the level you  
15 identified as necessary to adjust the PTC as of the time  
16 you filed your opening testimony?

17 And just to remind you testified --

18 A Yes.

19 Q -- is less than 3.13 percent or, put the other  
20 way, if inflation has to exceed 3.13 percent in order for  
21 the PTC to increase, and the document we're looking at  
22 from June shows inflation at less than that amount by the  
23 metric you chose to identify in your own testimony.

24 Correct?

25 A Right. So -- so just to be clear, the -- the

1 actual inflation has to be 4 percent for it to -- for it  
2 to trigger. The 3.1, I -- I think that you cited, I think  
3 that was just for the remainder of the year. So I think  
4 that's an important clarification.

5 But I guess the point is that's backwards-  
6 looking so we don't know what's, you know, what's going to  
7 happen through the -- through the end of the year.

8 Q Okay.

9 A And so --

10 Q I appreciate that. I just want to confirm.  
11 It -- it -- despite the fact it's backward-looking, that's  
12 the number you relied on in your own testimony, correct?  
13 The CPI figure, the backward-looking CPI.

14 A No, I mean, I looked at -- I looked at a number  
15 of different -- different factors and things, but --

16 Q But that's the one you're citing in opening  
17 testimony.

18 A -- based on what I had looked at when I filed  
19 testimony. I -- you know, and I still believe it's more  
20 likely to go up than not, but yeah, numbers are what they  
21 are.

22 Q Okay. Now, let's turn to your AWEC 200 and page  
23 41. And on -- beginning on line 16, you note that the  
24 Bureau of Economic Analysis published updated second  
25 quarter GPD implicit price deflator data. Do you see

1 that?

2 A It's on 41?

3 Q Yeah, beginning on line 16 and then continuing  
4 on through line 18.

5 A Yeah.

6 Q And you testify that on line -- beginning on  
7 line 18 that based on that data, the PTC will increase as  
8 long as inflation exceeds -- equals or exceeds 4 percent.  
9 And I think that's what you were just referencing.

10 Correct?

11 A Right. Right. So that's the difference between  
12 the 4 and the -- the -- the 3.1. That was just for the  
13 remaining three -- three quarters.

14 Q And -- and then going back to the CPI data we  
15 were just talking about that. That -- the data -- both  
16 the data you cited in your, or excuse me, the data  
17 in -- from July -- or June of 2023 shows the CPI is at 3  
18 percent, so well below the new 4 percent benchmark you  
19 identify in your rebuttal testimony, correct?

20 A Correct. However, the -- I think, you know,  
21 back to an earlier point, the -- in -- the implicit price  
22 deflator is different than the CPI, and it's different  
23 than the PCE. And when you compare it backwards-looking,  
24 it actually increases more than those inflation values.

25 So like, for example, in 2021 and 2022,

1 the -- the inflation measured by the implicit price  
2 deflator was 6.4 percent, actually in both years, slightly  
3 different rounding. So it actually comes in higher  
4 than -- than those or has come in higher than those  
5 metrics.

6 So, you know, you know, apples to apples between  
7 the different metrics is hard to do, but, you know, based  
8 on everything I -- I saw, I felt comfortable recommending  
9 an increase to -- to 3 cents.

10 Q Well, I understand that. And I just want to  
11 find out exactly what you said in your testimony. And so  
12 in your direct, you relied on the CPI; when you filed your  
13 rebuttal, the CPI index no longer supported your  
14 recommendation. And so on line 24, you now switched to  
15 the Core Personal Consumption Expenditures Inflation Index  
16 because it was higher than the CPI. Isn't that right?

17 A I guess I'd take issue with that, that I  
18 would -- that I would simply change something because it  
19 doesn't agree with my recommendation. I mean, I -- I use  
20 this information because it was recent information that  
21 I -- that I had. If I had used the -- the CPI value, I  
22 think it would show a similar analysis when, you know,  
23 when you compare it back to the implicit price deflator.

24 So -- so I think I would take issue with that.

25 Q Well, you just said you're using more recent

1 data, but on line 23, the Core PCE data you were using was  
2 from June 14th of 2023. So it's actually older than the  
3 data you were using when you prepared your opening  
4 testimony. Isn't that correct? So you're using older  
5 data from a different metric because it gave you a higher  
6 number.

7 A No, that's not right. The -- this was from  
8 June -- yeah, this is from June '23 -- yeah,  
9 twenty -- yeah, 14th, 2023.

10 Q So before you filed your opening.

11 A Yeah, the previous data was several months  
12 earlier.

13 Q Well, but this was available before you filed  
14 your opening testimony; isn't that correct?

15 A Sure, but it takes a lot of time to, you know,  
16 write and prepare that testimony, so -- and I'm not  
17 exactly sure when this actually gets, you know, published  
18 out on the web and all that -- that -- that stuff. So,  
19 you know, this was kind of the -- the most recent  
20 information I could find. And -- and, you know, there's  
21 lots of -- there's lots of metrics and lots of ways  
22 to -- to measure inflation. I think that's -- that's for  
23 sure.

24 But -- but to say that, you know, I'm -- I'm  
25 picking and choosing just to support a recommendation,

1 I -- I would -- I would disagree with that.

2 Q Well, and that's -- and that's fair, but just to  
3 be clear, your -- your testimony doesn't explain that you  
4 switched metrics, does it?

5 A I think my testimony speaks for itself. You  
6 know, I clearly cite where the numbers are coming from.  
7 So --

8 Q Okay. But you don't explain that you're using a  
9 different metric now based on data that predated your  
10 opening testimony. Correct?

11 A Is that a different question?

12 Q Okay. Well, let's move on. So the sentence  
13 that begins on line 23 of page 41 begins with:

14 "Recent Federal Reserve projections  
15 published on June 14, 2023, for example,  
16 forecast Core PCE Inflation of 3.7 to 4.2  
17 percent in the calendar year 2023, and  
18 historically Core PCE Inflation has been  
19 approximately 1.6 percent less than the  
20 inflation rate measured using the GDP implicit  
21 price deflator."

22 Now, there's a lot of factual statements you  
23 make in that sentence. And you have a citation, Footnote  
24 54, to a Federal Reserve Open Market committee document,  
25 correct?

1 A Yeah.

2 Q And to be clear of all the factual statements in  
3 that sentence, the only statement that is actually found  
4 in that Federal Reserve report is that the forecast Core  
5 PCE Inflation of 3.7 to 4.2 percent. Correct?

6 A Those are the values in -- in the report. You  
7 can mathematically compare those values to the implicit  
8 price deflator values in the prior sentence to -- to  
9 figure out the -- the 1.6 percent. So I think that speaks  
10 for itself.

11 Q Well, and just to be clear that when you  
12 say -- and you use the word "historically" on line 1 of  
13 page 42. You say, "Historically Core PCE Inflation has  
14 been approximately 1.6 percent less." And isn't it true  
15 that you calculated that number based on two years of  
16 data?

17 A It is correct. I -- I compared those -- those  
18 two years. That's -- that's right.

19 Q And isn't it also true that if you use more than  
20 two years of data, your results would have been different?  
21 That 1.6 percent would have been a different number.

22 A It could be. Those are -- those are the two  
23 years that I looked at. I mean, it was quite high  
24 relative to the PCE in '21 and '22.

25 Q And isn't it also true that the calculation you

1 performed to determine the change in the GDP implicit  
2 price deflator from year to year was based on the fourth  
3 quarter results of that metric?

4 A Yep, that's right. Yeah, the year end -- it's  
5 the year end value. That's what I use.

6 Q Okay. Now, if I could turn your attention,  
7 please, to PacifiCorp 1301. And this is your testimony  
8 from Docket UE 390, which was the TAM, the 2022 TAM, and  
9 just let me know when you're there.

10 A Okay.

11 Q If you could turn to page 5, please, and  
12 beginning on line 15, you testify that:

13 "The annual GDP implicit price deflator  
14 represents an average over the course of the  
15 calendar year. The annual GDP implicit price  
16 deflator is not, for example, based on the year  
17 end value."

18 And so isn't it true that when you calculated  
19 your 1.6 percent, not only did you only use two years of  
20 data, but you didn't calculate the GDP implicit price  
21 deflator correctly, according to the testimony you  
22 provided in the 2022 TAM?

23 MR. COLEMAN: I'm sorry (indiscernible).

24 THE WITNESS: No, that's not right.

25 MR. COLEMAN: Which page are we on? Which



1 page 5? Page 5 of the exhibit or page 5 of the original  
2 testimony?

3 MR. LOWNEY: Sorry. Page 5 of the original  
4 testimony.

5 MR. COLEMAN: Okay. Thank you.

6 BY MR. LOWNEY:

7 Q And I'm sorry. I can restate the question, Mr.  
8 Mullins.

9 A No, no, I think that's all right. I have kind  
10 of short memory, but yeah, so -- so no, that's -- that's  
11 not right. So the -- the -- the year end values were used  
12 because that compares to the -- that -- the 4 percent that  
13 I had calculated as -- as triggering the increase.  
14 So -- so that's the -- that's the 4 percent year -- change  
15 on a year-end-to-year-end basis to trigger the increase;  
16 although the increase itself is calculated on an average  
17 of the four quarters over the year.

18 So it's -- it's two different things. So when  
19 you talk about kind of the difference, it's -- it's  
20 really, you know, two different things that we're looking  
21 at.

22 Q Okay. And just to be clear, that's a  
23 calculation you developed on your own. Correct?

24 A So the --

25 Q The methodology you used --

1 A -- the 4 percent --

2 Q I can -- I can ask -- maybe it's a confusing  
3 question. So the -- the methodology you use to calculate  
4 the 1.6 percent based on two years of data, that's a  
5 calculation you performed yourself based on a methodology  
6 you created. Correct?

7 A Well, the -- so the -- the way that the implicit  
8 price deflator increases, that's defined by the IRS. And  
9 so they, you know, that's all kind of laid out, and they  
10 have their own -- own way of doing it.

11 And so in calculating those and figuring out how  
12 those factors have to change in order to trigger an  
13 increase, you know, that was a calculation that -- that I  
14 did. And in evaluating, you know, what changes, you know,  
15 what might, you know, cause it to increase above that  
16 level, I did, you know, calculations for that.

17 Q Okay. Let's move on. If I could direct your  
18 attention, please, to AWEC/200, this is your rebuttal  
19 testimony, on page 30.

20 A Okay.

21 Q Now, on line 3, the very last word there and  
22 then carrying on to line 4, you testify that:

23 "The AURORA model is producing levels of  
24 short-term purchase transactions that are  
25 inconsistent with historical levels."

1 Do you see that testimony?

2 A I do.

3 Q And I probably should have asked this question  
4 1st, but just for context, you're discussing here why it's  
5 reasonable to use your methodology for calculating the  
6 day-ahead to real-time adjustment. Correct?

7 A I wouldn't call it a methodology, but  
8 the -- yeah. So my -- what my proposal is, is to just use  
9 the -- the historical average rather than, you know,  
10 running through all the complications of the, you know,  
11 the different -- different pieces.

12 Q Okay. And as we just said, your -- your  
13 reasoning, at least as described on line 4, is that "The  
14 AURORA model is producing levels of short-term purchase  
15 transactions that are inconsistent with history," correct?

16 A Yeah, and then I'd have to pull up that  
17 confidential figure 5 here. Let me --

18 Q And -- and I could -- let me just direct your  
19 attention to AWEC/201, and that's a document titled  
20 "Mullins Proposed NPC Forecast." And looking at page 1.

21 A Okay. Let me pull that one up. Okay.

22 Q And actually, I misspoke. If I could direct  
23 your attention to page 4 of that document.

24 A Okay.

25 Q And I'd just like to ask you some questions

1 about your modeling results and the purchase levels  
2 included there. So if we look about halfway down, there's  
3 a line called "Total Short Term Firm Purchases," and it  
4 shows a figure that's rounded to \$88 million. Do you see  
5 that?

6 A I don't see that. So you're looking at AWEC/200  
7 Mullins/4?

8 Q AWEC/201 Mullins/4. This is your NPC report.

9 A AWEC/201. Okay.

10 Q And about halfway down, there's a "Total Short  
11 Term Firm Purchase" line, and it shows rounded results of  
12 \$88 million.

13 A Okay.

14 Q And then a little further down, there's another  
15 line that says "Total System Balancing Purchases," and  
16 that shows a rounded number of \$923 million.

17 A Okay.

18 Q You see that? And --

19 A Yup.

20 Q -- if you add those two numbers together, you're  
21 going to get a figure north of a billion dollars in total  
22 short-term purchases, correct?

23 A Right. Um-hum.

24 Q Okay. Now, do you have Mr. Mitchell's  
25 testimony?

1 A Um --

2 Q In particular --

3 A I do.

4 Q -- his Exhibit 403, which is the "Reply Update  
5 Net Power Cost Report."

6 A It's the -- the reply update. Okay.

7 Q And look at page 4. And in this document, you  
8 know, your report and Mr. Mitchell's report largely mirror  
9 one another in terms of their format. Obviously, the  
10 numbers are different.

11 So if we go to page 4 of Mr. Mitchell's exhibit  
12 and look at the same line for "Total Short Term Firm  
13 Purchases," it's actually the same number as yours. It's  
14 roughly \$88 million. Further down, the "Total System  
15 Balancing Purchases" in Mr. Mitchell's report is \$770  
16 million. Do you see those two figures?

17 A I do.

18 Q And if you add those together, it comes up with  
19 right around \$858 million in total purchases under the  
20 company's reply update, correct?

21 A Yep.

22 Q And so your modeling without the DA/RT price  
23 component produces higher levels of short-term purchases  
24 than PacifiCorp's modeling with the price component,  
25 correct?

1           A       Yeah, I think on a dollar basis. So -- so one  
2 of the things going on there is that the -- you know, at  
3 least part of the DA/RT adjustment is going in and  
4 reducing the -- the dollars, even though it's related sort  
5 of to both sales and purchases.

6                        But I think it is actually a problem with the  
7 AURORA model where it's just -- it's -- it's not properly  
8 optimizing sales and purchases and resulting in really too  
9 high levels of -- of purchases.

10           Q       Well, and just to be clear, if, according to  
11 your testimony, PacifiCorp's modeling is skewed and  
12 inconsistent with historical actuals, yours is even more  
13 skewed and even more inconsistent, isn't it? Because it  
14 has even higher, over a billion dollars, in net -- in  
15 purchases in your forecast.

16           A       Yeah, I think I'd have to -- I'd have to take a  
17 closer look at what's -- what's causing that. I  
18 hadn't -- hadn't noticed that until -- until you pointed  
19 it out.

20           Q       Okay. Now, if you could also refer to  
21 PacifiCorp/800, that's Mr. Mitchell's surrebuttal  
22 testimony.

23           A       Okay.

24           Q       Page 29. And I'm going to ask you a question  
25 about a confidential figure. I don't -- if we need to go

1 into a confidential session to answer this, we can  
2 disregard the question, but I'm hoping I can ask you a  
3 question that doesn't require you to divulge a  
4 specifically confidential figure.

5           So, again, keeping in mind your modeling results  
6 show short-term purchases of over a billion dollars. And  
7 if you look at confidential figure DA/RT 1, the left-hand  
8 column -- or the left-hand bar graph shows "Historical  
9 actual short term purchase dollars." And you would agree  
10 that your results are more than 200 percent higher than  
11 the highest result in 2022 and far exceed any level of  
12 historical purchase rates.

13           A     Yeah, so I actually don't have the -- the  
14 confidential version, but I think it's something that I  
15 would have to -- have to look at. I think there may  
16 be -- may be something going on in my particular  
17 spreadsheet but would be something I -- I need to look at.

18           Q     Okay. Well, let's also turn to AWEC/202. And  
19 this is the exhibit you prepared that shows the actual  
20 results from 2022 that you use as a comparator at several  
21 points in your testimony.

22                     And again, if we could turn to page 4.

23                     Then just let me know when you're there.

24           A     Okay.

25           Q     And that shows for 2022 actuals short-term firm

1 purchases of a little over \$407 million. Do you see that?

2 A Yeah.

3 Q And so again, your level of sales in your model  
4 is actually more than double that, correct?

5 A Yeah, I think that's fair enough. But I -- but  
6 I think one of the things that at least when I -- when  
7 I -- what I focus on when I look at the modeling is sort  
8 of the net figure of sales and purchases. So, you know,  
9 there's a lot of models that, you know, buy and sell, but  
10 a lot of those end up being just -- just offsetting at  
11 least in terms of dollars.

12 But -- but, like I said, I think that's  
13 something I'd have to look at more closely.

14 Q All right. Well, let's -- let's look at the  
15 sales levels you just mentioned. So if I could turn you  
16 back to AWEC/201, which is, again, your proposed NPC  
17 forecast.

18 And if you look at page 1, right at the second  
19 line from the bottom, it has "Total System Balancing  
20 Sales," and you model a rounded figure of \$728 million.

21 A Okay.

22 Q And I'm sorry, I'm going to have you flip back  
23 to PacifiCorp/403, which is, again, Mr. Mitchell's reply  
24 update report, and look at page 1, and we'll just look at  
25 the same figure for the PacifiCorp forecast.



1           And let me know when you're there.

2           A     Okay.

3           Q     All right. So page 1, PacifiCorp's forecast has  
4 \$402 million in -- in -- in sales. So again, your sales  
5 forecast is nearly twice as high as PacifiCorp's in your  
6 model. Is that correct?

7           A     Yeah, I -- I think what's going on in mine is  
8 the -- something with the -- with the DA/RT adjustment.  
9 So where the offsetting values -- when I deleted the  
10 offsetting volumes, the -- the offsetting dollars didn't  
11 get captured right, and so they got blown up. And so  
12 overall, it didn't impact the study, but I'm thinking  
13 that's what happened in my -- in my study, and I could  
14 confirm that later.

15                     But -- but I think overall, you know,  
16 what -- what I'm proposing with the DA/RT adjustment and  
17 whatever these, you know, sales end up -- end up being,  
18 you know, between all of the -- the studies is  
19 just -- just tie it to the historical average. So I think  
20 there -- there may be an issue with, with how that  
21 got -- how that flowed through in my model. But at the  
22 end of the day, all we're -- all -- you know, our  
23 recommendation is just tie it to the average, and you  
24 don't have to deal with these, you know, the -- the issues  
25 of the, you know, sales and -- and purchases and the

1 levels and things like that by, you know, just -- just  
2 using what it is.

3 Q Well, and -- and just to be clear, though, your  
4 recommendation is based on the modeling results that we're  
5 describing that, if I'm understanding correctly, you're  
6 admitting are erroneous or unreliable. Is that correct?

7 A No, no, I think what -- well, I actually don't  
8 know. So I need to go back and double-check. But -- but  
9 I think what happened is some extra sales and offsetting  
10 sales and purchases got mixed into my model. And so I  
11 think that's something that I would need to look at.

12 But at the end of the day, what we did was just  
13 tied it to the historical -- the historical levels. So,  
14 you know, that was -- that was the intention of what  
15 we -- of what our -- what our recommendation is.

16 And, of course, you know, PacifiCorp will do a  
17 final study at the, you know, end of this case anyway to  
18 kind of true all that up. So --

19 Q Okay. Well, let's -- let's look at the  
20 historical actual. So let's refer back to AWEC/202,  
21 please, and page 1. And so this is the 2022 actual data,  
22 and it shows total sales -- short-term firm sales at \$272  
23 million. Do you see that?

24 A Yeah.

25 Q And so isn't it true then that in your modeling

1 by increasing the market caps and removing them from Four  
2 Corners, Mid-C, and Palo Verde, you created a forecast  
3 that has nearly tripled the level of sales relative to  
4 2022.

5 A Well, but, you know, market prices have gone up  
6 by about that as well. Right? So, I mean, that's going  
7 to be the biggest -- biggest driver of that is, you know,  
8 market prices are -- are, you know --

9 Q Well, let's ask about that. So if you could  
10 turn to --

11 A -- (indiscernible).

12 Q -- page 7 of AWEC --

13 A Never mind. Strike that. Strike that. That's  
14 not right.

15 Q Yeah, I was going to say because you actually  
16 testify the market prices are lower now than they were in  
17 2022; isn't that correct?

18 A That's right. That's right. Strike that.

19 Q Okay. Now, let me ask you a question about  
20 market caps. So if I could direct your attention to your  
21 rebuttal testimony, AWEC/200, at page 2.

22 A Okay.

23 Q And I'd like to ask you a question about Table  
24 1, which is your forecast. You know, first of all, at the  
25 very top, it says "RMP July Update NPC Forecast,"

1 and -- and just to be clear, I think that's leftover  
2 language from testimony you filed in Wyoming. This is  
3 obviously not an RMP case, and it's not a July update.  
4 Isn't that correct?

5 A So, yep, that's -- that's a typo. So thanks.

6 Q Okay. And then on line 6, where you're  
7 describing your market cap recommendation, it says 95th  
8 percentile, and that's not, in fact, your recommendation  
9 in this case, is it?

10 A Oh, in the table. Yep, that's right. That's  
11 a -- it should be the 75th. Should say 75th.

12 Q And -- and down on line 11 on that same page  
13 where you describe your recommendation, you say it should  
14 "be modeled consistent with the Commission's decision  
15 Docket No. UE 390, the 2022 TAM." You see that?

16 A Yeah.

17 Q And -- and just to be clear, when the Commission  
18 approved that use of the 3rd quartile of averages, it was  
19 on a non-precedential basis. Isn't that correct?

20 A Yeah, I'd have to have to look at the order,  
21 but, you know, you can -- you can always make changes or,  
22 you know, propose changes after -- after an order. So --

23 Q Okay. Of course. Well, let's -- let's turn  
24 back -- and I apologize for making you jump around. Let's  
25 look at your opening testimonies. That's AWEC/100 at

1 page 6.

2 Let me know when you're there.

3 A All right.

4 Q And on line 16, you're describing why using the  
5 70th -- 75th percentile is your recommendation. And you  
6 testify that:

7 "Using an average to set a maximum level of  
8 sales has the inherent result of producing sales  
9 value that is less than the historical average."

10 Do you see that testimony?

11 A Yep.

12 Q And then you say in the next sentence, "That  
13 is," and I quote, "the main problem with PacifiCorp's"  
14 recommendation in this case. Do you see that?

15 A Yeah.

16 Q And -- and that's why then, on line 18, you  
17 recommend using the -- or you testify, excuse me, that the  
18 Commission recognized that fact when it approved using the  
19 3rd quartile approach. Do you see that?

20 A Yeah.

21 Q Okay. I'd like to direct your attention to  
22 PacifiCorp/1300, which is the order that the Commission  
23 issued in the 2022 TAM. So just for context, this is  
24 order number 21-379 from Docket UE 390. And just let me  
25 know when you're there. I'd like to direct your attention

1 to page 27 and 28.

2 A Apologies, what's the number again?

3 Q It's Exhibit -- PacifiCorp/1300.

4 A Okay.

5 Q And thankfully, the page in the original and the  
6 page in the exhibit are the same on this one. Apologize  
7 for the confusion earlier.

8 A Okay. What was the -- what was the page number?

9 Q Page 27.

10 A Okay.

11 Q And if we look at the -- the second paragraph,  
12 excuse me, the second sentence in the bottom paragraph, it  
13 says:

14 "PacifiCorp's table comparing its overall  
15 annual forecast of sales volume compared to  
16 actual sales volume shows that overall actual  
17 sales are approximately 6 million dollars,  
18 excuse me, 6 million megawatt hours per year for  
19 the last four years."

20 And in that case, those four years were 2017 to  
21 2020. Do you see that?

22 A Okay.

23 Q Okay. So I just want to keep that in mind, the  
24 \$6 million (sic). Now, if we turn to the very next page,  
25 page 28, at the very top, it shows that in PacifiCorp's

1 case, using the average of averages resulted in -- and  
2 this is a number from that table -- nearly 7 million -- 7  
3 million megawatt hours. That's 6,693,996. You see that  
4 number?

5 A I don't see that number.

6 Q So we're on page 28. There's a table at the  
7 top. It's in the "Forecast" column. It's the second  
8 number from the bottom.

9 A Okay.

10 Q And that's the calculation of forecasted sales  
11 using the average of averages approach. And it's rounded  
12 to 7 million megawatt hours.

13 A Okay.

14 Q And on the previous page, the Commission found  
15 that the historical average was right around 6 million.

16 A Okay.

17 Q So isn't it true that you're wrong when you  
18 claim that the main problem with the average  
19 of -- averages is that it will inherently produce sales  
20 volumes that are less than the historical average?  
21 Because in this case, the forecasted sales are higher than  
22 the historical average.

23 A No, that's not right.

24 Q Well, that's the data the Commission relied on.  
25 Isn't that correct?

1           A       Well, this -- these sales here would include,  
2 like, the DA/RT adjustment, for -- for example, and  
3 other -- other adjustments, so, you know, using -- if you  
4 use -- I mean, it's -- if you set a maximum in a  
5 value -- in a -- in a model and say it's 100 and  
6 that's -- you're -- you -- you want that to be the -- the  
7 average value, the -- the model has to select up to 100 in  
8 every single hour in order to -- for it to be that average  
9 value. But the model doesn't do that because sometimes  
10 it's lower, sometimes it's -- sometimes it hits the cap,  
11 sometimes it doesn't. So because it's not always up at  
12 that cap level, it's always going to be -- going to be  
13 lower -- lower than the cap.

14                   And, of course, there's -- there are other, you  
15 know, modeling adjustments that are done after market caps  
16 to -- to actually increase sales that actually don't agree  
17 with, but, you know, but, you know, mathematically,  
18 it's -- it's -- it's just not possible.

19           Q       Well, this data shows you're wrong, though;  
20 isn't that correct? And isn't that because those caps are  
21 set using bookouts, which are not included in the actual  
22 historical sales data?

23           A       No, I don't think it -- I don't think it  
24 shows -- shows that I'm wrong. I mean, the -- the -- the  
25 map kind of speaks for itself there. You know, the fact



1 that there are additional volumes at an outside of grid, I  
2 don't think it makes the conclusion that I have the  
3 testimony wrong, that, you know, setting a -- using a  
4 maximum to set an average is not -- not accurate.

5 Q All right. Let's turn to your rebuttal  
6 testimony, AWEC 200, page 4.

7 A Okay.

8 Q Now, I'd like to ask you about the question and  
9 answer that begins on line 17, where you're discussing the  
10 fact that PacifiCorp has historically under-forecast its  
11 net power costs in the TAM. And on line 17, you testify,  
12 "What is driving the recent NPC variances?" And you  
13 state, "Market conditions in late 2022 and early 2023 were  
14 extraordinary."

15 Do you see that?

16 A I do.

17 Q Now, if I could direct your attention to  
18 PacifiCorp 1302, and this is again testimony from Docket  
19 UE 390, which was the last litigated TAM.

20 A Okay.

21 Q Let me know when you're there. And if I --

22 A I'm there.

23 Q -- direct your attention to page 3 of the  
24 original. So it's page 5 of the exhibit.

25 And on line 16, in that case, you're testifying

1 again that you disagree that PacifiCorp is persistently  
2 under-forecasting NPC.

3 And beginning on line 21, you testify, excuse  
4 me, on the next page, page 4, beginning on line 5, you  
5 testify that:

6 "The GRID model is designed to produce a  
7 normalized forecast, which does not include the  
8 extraordinary events that have taken place in  
9 recent years."

10 And then you point to 2018, '19, and '20 as also  
11 being extraordinary years. So if we just put this  
12 together with the testimony in this case, of the last five  
13 years, four of them have been extraordinary years that  
14 don't show that there's an under-forecasting problem,  
15 correct?

16 A (No audible response.)

17 Q And the one year that, by your own admission, is  
18 normal was 2021. Is that correct?

19 A I guess there's a couple -- couple questions  
20 there. Not sure which one to answer.

21 Q Well, is it your testimony that of the last five  
22 years, there has been only one normal year, 2021?

23 A Well, in the past five years, there have been  
24 some extraordinary circumstances, you know, the pipeline  
25 rupture with -- with Enbridge; the -- what is it? -- the

1 Texas energy crisis; and then, you know, recently, kind of  
2 elevated prices last year and -- and kind of the -- just  
3 market prices that went through the roof.

4           And, you know, at the (indiscernible) part of  
5 this year. And -- and I guess the point is that, you  
6 know, we -- we -- we forecast market prices, right?  
7 They're -- they're put into the -- into the model, and  
8 they're -- they're put in at what the forward -- forward  
9 market prices are at the time. And sometimes they're  
10 lower. Sometimes they're higher. And maybe they don't  
11 pick up on, you know, some of these, you know,  
12 extraordinary events, but, you know, they -- they are, you  
13 know, the prices that if you went out today, you could buy  
14 power next year at.

15           And so, you know, if -- if -- if  
16 there's -- there's an issue with -- with the -- the market  
17 prices, that's -- that's just in the market price  
18 forecast. It's not -- not necessarily, you know, a  
19 modeling -- a modeling issue. And so I think that's the  
20 point of this testimony and the -- the testimony in this  
21 case.

22           Q     Well, and just to be clear, that 2021 was the  
23 one year in the last two litigated TAMs that you did not  
24 describe as extraordinary. And isn't it true that  
25 according to the company's analysis, they under-forecast

1 NPC by 21 percent in that year?

2 A I -- I don't know. I don't know. But -- but I  
3 think the -- the point I was making is that the, you know,  
4 you know, it's -- it's based on normalized or, you know,  
5 forward-looking market prices. And so, you know, if you  
6 take those as a given that it, you know, that it is, you  
7 know, you know, you can't -- you can't take these -- these  
8 events sort of out of -- out of that context.

9 Q But if every year has the same type of  
10 extraordinary event, it's at some point no longer  
11 extraordinary. Isn't that correct?

12 A You know, not necessarily. I mean, you know,  
13 certainly, the second half of this year has been -- has  
14 turned out to be better than expected. So, you know,  
15 things go through phases. Sometimes it's -- it's  
16 turbulent, and sometimes it's not.

17 I mean, I think, you know, ten years ago, eight  
18 years ago, market prices were pretty low. They stayed low  
19 for a long time. So I don't think so.

20 Q All right. Well, let me -- let me just direct  
21 your attention -- I want to keep that in mind that seven  
22 or eight years ago, market prices were normal. So if you  
23 could look at PAC/1306, this was testimony that you filed  
24 in Docket UE 396, excuse me, 296, which was the 2016 TAM.

25 A It was a long time ago.

1 Q It was a long time ago. We were much younger  
2 then. Less gray hair on my end anyway.

3 And if I could just turn your attention to page  
4 9 of the original, which is 10 of the exhibit.

5 And there --

6 A Okay. So I'm at 1306, page 10.

7 Q Correct. Page 9 of the -- yeah, page 9 of the  
8 original, 10 of the exhibit.

9 A Okay.

10 Q At the very top, you're testifying about "Why  
11 has the company's actual NPC been higher than normalized  
12 NPC?" And again, you describe abnormal years in 2013 and  
13 '14, correct?

14 A Yep.

15 Q So collectively, then, if you add that back in  
16 with the testimony more recently, over the last 11 years,  
17 7 of them have been abnormal or extraordinary, and that  
18 explains the consistent and persistent under-forecasting  
19 according to your testimony?

20 A I -- I don't know if I could remember very well  
21 back that far, but I mean, you certainly could  
22 characterize it that way if -- if you wanted to, but, you  
23 know, I -- I do think that, you know, what's -- what's  
24 happened in the past year is -- has been, you know, kind  
25 of on a different level.

1           You know, you -- the thing is with these markets  
2 is you never -- you never know what's -- what's going to  
3 happen with them. So --

4           Q     And just to be clear --

5           A     -- yeah, it has been extraordinary.

6           Q     Sorry, I didn't mean to interrupt. And just to  
7 be clear, when you describe 2022 as an extraordinary year,  
8 that's also the year you're comparing 2024 to, correct?

9 When you're saying net power costs in 2024 should be  
10 closer to 2022 despite the fact that was an extraordinary  
11 year.

12          A     Yeah, I mean, I think based on what we're seeing  
13 in markets now, I mean, probably lower, but, you know, I  
14 think it -- it is what it is.

15          Q     Okay. I just have a few more questions, Mr.  
16 Mullins. If you could turn back to your opening  
17 testimony, AWEC 100, at page 3, please.

18          A     All right. I think I am there.

19          Q     All right. And --

20          A     Okay.

21          Q     -- moving down to line 14, you're describing an  
22 adjustment that you made related to the model version of  
23 AURORA. And you testify on line 17 that "Energy Exemplar  
24 provides periodic updates to the AURORA model every few  
25 months." You see that?

1 A Yeah.

2 Q And then on the next line, you say, "These  
3 updates generally include changes and improvements to the  
4 modeling environment and the model's algorithms." Do you  
5 see that?

6 A Yep.

7 Q And in this testimony, you criticize the company  
8 for using an older version of AURORA than the one you  
9 used. Isn't that true?

10 A I don't think I -- I criticize them, so I don't  
11 think that's true.

12 Q Well, you recommend that the -- that the NPC  
13 update be based on the results of your calculations using  
14 a more updated version, which, according to your  
15 testimony, includes improvements. Isn't that true?

16 A So -- right. So I guess to -- to clarify,  
17 because I clarified this in my -- my rebuttal testimony,  
18 so, you know, when I was preparing this testimony and I  
19 was rerunning the model, I was coming up just with a  
20 lower -- lower value than -- than PacifiCorp was. And I  
21 wasn't sure what the -- the cause of it was.

22 And here I just attribute it -- attributed it to  
23 the -- the different model versions; however, in  
24 the -- the reply update PacifiCorp used an updated  
25 modeling version, and so I was able to confirm that it

1 wasn't actually the -- it's not actually the model version  
2 that's causing the difference. It's just something about  
3 my computer versus their computer that's -- that's causing  
4 the difference.

5           And it's -- it's, you know, different computers  
6 have, you know, sort of different, you know, parameters  
7 and then different, like, rounding points and different,  
8 you know, ways of randomizing numbers, and I think in a  
9 big simulation, those -- those can add up.

10           And so -- and so yeah, so mine still resulted in  
11 a lower -- lower value. So I included that in my  
12 recommendation.

13           Q     And -- and just to be clear, PacifiCorp updated  
14 the version they were using in their reply update. You  
15 did not update yours. So now you are using an older  
16 version that, by your own testimony, lacks the  
17 improvements that are included in the version PacifiCorp  
18 is using. Isn't that correct?

19           A     Right, yeah, and I -- I didn't -- you know,  
20 I -- I confirmed it wasn't the model version that's  
21 causing the difference, right? So it was the -- just the  
22 computer it was being run on. So --

23           Q     Well, you --

24           A     But that's right. I -- I didn't update my -- my  
25 model version.



1 Q So when you were describing how AURORA updates  
2 the model and that update -- those updates include  
3 improvements, you -- are you testifying today you  
4 just -- you don't know what happens with AURORA? You're  
5 not familiar with how that model gets updated and changed.

6 A Well, I think that's kind of a rude way to put  
7 it, but no, I wouldn't testify that way.

8 Q But your testimony originally is  
9 incorrect -- I'm trying to understand exactly why -- if  
10 the testimony in your direct still stands or if you are  
11 changing it.

12 A Yeah, I think I'd take a look at my rebuttal  
13 testimony and maybe find it.

14 Right. So I talked about it on page, like, 41  
15 of my rebuttal. So I say I attributed this to the use of  
16 a different AURORA model version. And then PacifiCorp  
17 updated its AURORA model version in reply testimony, but  
18 the differences are still there.

19 So I -- my understanding now is that the  
20 difference or the difference is being driven by an  
21 architectural difference, so, you know, a difference in  
22 the type of computer. And so -- and the difference was  
23 smaller in my, you know, rebuttal testimony, but, you  
24 know, so -- so I -- I included the 500, you know, \$500,000  
25 difference in my recommendation because that's what my

1 computer calculated.

2 Q All right. Thank you, Mr. Mullins.

3 MR. LOWNEY: I have no further questions.

4 ALJ MAPES: Thank you, Mr. Lowney, Mr.  
5 Mullins.

6 Mr. Coleman, do you have any redirect?

7 MR. COLEMAN: So a pause to see if there's  
8 any or any questions from -- from yourself or  
9 Commissioner.

10 ALJ MAPES: There are not.

11 MR. COLEMAN: Can you bear with me just one  
12 second to take a quick look at my notes?

13 ALJ MAPES: Absolutely.

14 (Pause)

15 MR. COLEMAN: Your Honor, I think in the  
16 interest of time and the scope of the case and its  
17 procedural posture, I don't have anything to redirect.

18 ALJ MAPES: Okay. Well, thank you, Mr.  
19 Mullins. You're excused.

20 THE WITNESS: All right. Thank you.

21 ALJ MAPES: So those are the witnesses we  
22 have scheduled for today. Tomorrow, we will resume in  
23 confidential session.

24 Actually, let me check on that. Mr.  
25 Lowney, do you know if, given the settlement, your