BEFORE THE

PUBLIC UTILITY COMMISSION OF OREGON

UE 390

In the Matter of	)
	)
PacifiCorp d/b/a Pacific Power	)
	)
2022 Transition Adjustment Mechanism	)
	)

OPENING TESTIMONY OF

BRADLEY G. MULLINS

ON BEHALF OF

ALLIANCE OF WESTERN ENERGY CONSUMERS

June 9, 2021

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I. INTRODUCTION AND SUMMARY

Q. PLEASE STATE YOUR NAME AND OCCUPATION.

A. My name is Bradley G. Mullins. I am a consultant representing utility customers before state public utility commissions in the Northwest and Intermountain West. My witness qualification statement can be found at Exhibit AWEC/101.

Q. PLEASE IDENTIFY THE PARTY ON WHOSE BEHALF YOU ARE TESTIFYING.

A. I am testifying on behalf of the Alliance of Western Energy Consumers ("AWEC"). AWEC is a non-profit trade association whose members are large energy users in the Western United States, including customers receiving electric services from PacifiCorp.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I discuss my initial review of PacifiCorp's proposed Transition Adjustment Mechanism ("TAM") revenues, including Net Power Costs ("NPC"), for calendar year 2022. Specifically, I discuss my review of PacifiCorp's proposed $1,214,140 revenue increase associated with the 2022 TAM filing. Relevant discovery responses may be found in Exhibit AWEC/102.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. My recommendations are summarized in Table 1, below, followed by brief descriptions of each issue.

Table 1
AWEC Proposed TAM Adjustments
($000)

1	**Initial Filing**	**1,214,140**
2	Adjustments	
3	PTC Rate	(2,649,684)
4	Market Caps	(5,229,355)
5	Other Revenues	(949,615)
6	BCC Materials & Supplies	(785,644)
7	**Total Adjustments**	**(9,614,299)**
8	**Adjusted**	**(8,400,159)**

Production Tax Credit Rate: I recommend updating the production tax credit rate for 2022 to 2.6¢/kWh.

Market Caps: I recommend maintaining the currently approved methodology for Market Caps because no evidence or analysis was presented to justify a change.

Other Revenues: Consistent with past stand-alone TAM filings, I recommend PacifiCorp continue to update its Other Revenues forecast in this proceeding. I also recommend that fly ash sales be considered in the Other Revenue forecast.

Bridger Coal Company Materials & Supplies: I recommend an adjustment for the materials and supplies forecast at Bridger Coal Company, recognizing the fact that PacifiCorp has consistently over-forecast those amounts by a significant margin in past proceedings.

II. PRODUCTION TAX CREDIT RATE

Q. PLEASE SUMMARIZE YOUR RECOMMENDATION RELATED TO PRODUCTION TAX CREDITS.

A. PacifiCorp's TAM filing assumes a PTC rate equal to 2.5¢/kWh for the 2022 forecast period. The 2.5¢/kWh rate was acknowledged on April 27, 2021, by the Internal Revenue Service ("IRS") as the PTC rate for 2021.[1/] Notwithstanding, in 2022—the year in which the proposed net power costs at issue in this proceeding will be in effect—the PTC rate will increase to

1/ Federal Register Vol 86, No 79, page 22300-22301 (Apr. 27, 2021).

2.6¢/kWh, as discussed below. Accordingly, I recommend updating PacifiCorp's forecast to be based on a 2.6¢/kWh PTC rate. The impact of using a 2.6¢/kWh PTC rate is a $2,649,684 reduction to the Oregon-allocated TAM revenues.

Q. WHAT CAUSES THE PTC RATE TO CHANGE FROM YEAR-TO-YEAR?

A. The PTC rate is established pursuant to Internal Revenue Code ("IRC") § 45.[2/] The PTC rate was first authorized in 1993 and established at a baseline of 1.5¢/kWh. To account for inflation, the IRS adjusts the PTC rate each year by applying an "inflation adjustment factor." In IRC § 45(e)(2)(B), the calculation of the inflation adjustment factor is outlined as follows:

> The term "inflation adjustment factor" means, with respect to a calendar year, a fraction the numerator of which is the [Gross Domestic Product ("GDP")] implicit price deflator for the preceding calendar year and the denominator of which is the GDP implicit price deflator for the calendar year 1992. The term "GDP implicit price deflator" means the most recent revision of the implicit price deflator for the gross domestic product as computed and published by the Department of Commerce before March 15 of the calendar year.[3/]

In addition, when applying the inflation adjustment factor, the credit rate is rounded to the nearest multiple of 0.1¢/kWh. Consequently, while the inflation adjustment factor changes every year, the PTC rate does not necessarily change each year. For example, in 2022, the unrounded PTC rate would need to exceed 2.550¢/kWh to trigger an increase to 2.6¢/kWh.

Q. WHAT WAS THE INFLATION ADJUSTMENT FACTOR FOR 2021?

A. The inflation adjustment factor for 2021 was 1.6878, resulting in an unrounded PTC rate of 2.5317 ¢/kWh. Thus, while the PTC rate rounded down to 2.5¢/kWh in 2021, the unrounded PTC credit rate was within 0.0183¢/kWh of 2.550¢/kWh and rounding up to 2.6¢/kWh.

2/ 26 U.S.C. § 45(b)(2) (2021).
3/ IRC § 45(e)(2)(B).

Q. WHAT INFLATION ADJUSTMENT FACTOR WILL RESULT IN AN INCREASE TO THE PTC RATE?

A. The inflation adjustment factor must equal or exceed 1.700 to trigger an increase in the PTC rate to 2.6¢/kWh. Whether this level is achieved, however, depends on the annual GDP implicit price deflator, which, as noted above, is an economic index of inflation published by the Department of Commerce, Bureau of Economic Analysis. As I discuss below, based on information that is known about the GDP implicit price deflator today, it can be determined that the inflation adjustment factor will be sufficient to cause the PTC rate to round up to 2.6¢/kWh in 2022.

Q. HOW DOES THE GDP IMPLICIT PRICE DEFLATOR DETERMINE THE INFLATION ADJUSTMENT FACTOR?

A. Exhibit AWEC/103 contains an analysis showing how the GDP implicit price deflator is used to calculate the PTC inflation adjustment factor. As noted in IRC § 45(e)(2)(B), the calculation of the inflation adjustment factor is a simple fraction.

The numerator of the fraction is equal to the GDP implicit price deflator for the calendar year prior to the tax year. For tax year 2022, for example, the numerator will be based on the GDP implicit price deflator from calendar year 2021.

The denominator of the fraction is equal to the GDP implicit price deflator for 1992, the calendar year prior to the 1993 tax year when the PTC was first implemented.

The denominator of the inflation adjustment factor is a known value. The GDP implicit price deflator for calendar year 1992 was 67.325.[4/] Thus, while the precise value for the inflation adjustment factor for calendar year 2022 is not yet known, the periodically published

[4/] This is based on the current index values. Note that the baseline year used to establish the GDP implicit price deflator index value has been updated, which can be seen in Exhibit AWEC/103.

GDP price deflator values can be used to determine whether the ultimate inflation adjustment factor will exceed 1.700 in 2022 and trigger an increase to the PTC rate.

Q. WHAT GDP PRICE DEFLATOR VALUE WILL TRIGGER AN INCREASE TO THE PTC RATE?

A. Since the denominator of the inflation adjustment factor is known, it can be concluded that a GDP implicit price deflator of 114.45 or more will result in an inflation adjustment factor of 1.700 and a corresponding increase to the PTC rate to 2.6¢/kWh.

Q. IS ENOUGH DATA AVAILABLE AT THIS TIME TO DETERMINE WHETHER THE GDP IMPLICIT PRICE DEFLATOR WILL EXCEED 114.45 FOR 2021?

A. Yes. Based on the GDP implicit price deflator published for Q1 of 2021, it can be concluded with reasonable certainty that the annual 2021 GDP implicit price deflator will exceed 114.450. Accordingly, it also can be concluded that the 2022 PTC Inflation Adjustment Factor will exceed 1.700, and as a result, the 2022 PTC rate will round to 2.6¢/kWh, consistent with the discussion above.

The annual GDP implicit price deflator represents an average over the course of the calendar year. The annual GDP implicit price deflator is not, for example, based on the year end value. Rather, the amount is calculated over four quarters and the average of those quarterly values is used to derive the annual value.

In 2020, for example, the average annual GDP implicit price deflator was 113.625. Notwithstanding, the Q4 2020 the GDP implicit price deflator index value was higher than that value. In Q4 2020, the GDP implicit price deflator increased to 114.368, within only 0.082 of the threshold value to trigger the PTC rate change under discussion.

As detailed in Exhibit AWEC/103, the GDP implicit price deflator index value increased to 115.514 in Q1 of 2021, exceeding the 114.450 threshold value by a margin of

1.564. Since the annual value is calculated as an average and the threshold value has already been exceeded in Q1 of 2021, the GDP implicit price deflator value would need to decline by a significant amount in each of the three remaining quarters of 2021 for the average annual value to decline back below the 114.450 threshold value. In other words, the economy would need to fall into a recession, with three quarters of unprecedented deflation, for the annual GDP implicit price deflator to decline back below 114.450 and for the PTC rate to remain at 2.5¢/kWh. As I discuss below, the level of deflation necessary for the GDP implicit price deflator index to decline below 114.450 as an annual average—and thus the PTC rate to remain at 2.5¢/kWh—is so unlikely as to be nearly impossible. Therefore, while the precise GDP implicit price deflator for 2021 is not yet known at this juncture, it can be concluded that the average GDP implicit price deflator will exceed 114.50 for 2021 and that the PTC rate will increase to 2.6¢/kWh in 2022.

Q. WHAT MAGNITUDE OF DEFLATION WOULD BE REQUIRED FOR THE GDP IMPLICIT PRICE DEFLATOR TO REMAIN BELOW 114.50?

A. Mathematically, for the GDP implicit price deflator to decline back below 114.50 and thus not trigger an upward rounding of the PTC rate, the economy would need to experience deflation of 0.62% in each of the three remaining quarters of 2021. This calculation is shown in Exhibit AWEC/103. On a cumulative basis, such a scenario would represent deflation of 1.84% over the three-quarter period. Such a level of inflation would have no precedent in modern history, particularly since the abolition of the gold standard in the 1970s. During the period of modern monetary policy, when the dollar has been decoupled from gold prices, there have been only four instances of modest deflation, as measured by the GDP implicit price deflator—and none of those instances have come remotely close to deflation of 1.84%.[5] In the 2008 financial crisis, for example, the GDP implicit price deflator declined by 0.16%. Further, in Q1 of 2015, modest deflation was experienced, corresponding to a 0.09% reduction to the GDP implicit price deflator. Similarly, in Q1 of 2016, modest deflation corresponding to a 0.07% reduction to GDP implicit price deflator was also experienced. Finally, in Q2 of 2020, corresponding to the onset of the COVID-19 pandemic, GDP implicit price deflator declined by 0.53%. All of these instances, however, were limited to a single quarter. Thus, experiencing deflation of 1.84% over a three-quarter period would represent an unprecedented catastrophe that is more than three times more significant than what has recently been experienced due to the COVID-19 pandemic. Given the health of the economy in 2021 to date, such an outcome is a near impossibility.

Q. WHAT LEVEL OF INFLATION IS EXPECTED FOR THE REMAINDER OF 2021?

A. We will know more about the economic condition in 2021 as this case progresses. However, the general consensus in the financial press is that, as a result of the easing of the COVID-19 pandemic, prices will increase. Certainly, inflationary expectations have been high in the past few months. Prices of lumber, for example, have experienced record high levels during the first half of 2021.

Further, as of writing this testimony, Q2 2021 is underway. Based on the general health of the economy, it can be observed that catastrophic deflation is not being experienced in Q2 2021. Based on this observation, it can be concluded that the likelihood of catastrophic deflation necessary for the PTC rate to remain at 2.5¢/kWh is even more remote. If one simply

[5] The historical data is provided in my workpapers.

assumes that the GDP implicit price deflator will remain constant in Q2 of 2021, the level of deflation in Q3 and Q4 necessary for the PTC rate to stay at 2.5¢/kWh is 2.45% on a cumulative basis. Based on this observation and the discussion above, I recommend increasing the PTC rate to 2.6¢/kWh as a known and measurable change in this proceeding.

III. AVERAGE MARKET CAPS

Q. WHAT IS PACIFICORP PROPOSING WITH RESPECT TO MARKET CAPS?

A. PacifiCorp is proposing to modify its Market Cap methodology to be based on the methodology that the Commission rejected in the 2013 TAM, Docket UE 245. Rather than using the Market Cap methodology based on the highest monthly levels of short-term firm market transactions, in the four-year base period, PacifiCorp proposes to use Market Caps based on average levels, consistent with its proposal in the 2012 TAM filing, Docket UE 227. PacifiCorp provides no justification for this change, and the actual data does not support such a change. Moreover, since PacifiCorp is changing its modeling framework from the GRID model to the AUOROA model, there is little need to attempt to modify GRID's modeling parameters at this time. Accordingly, I recommend the Commission reject PacifiCorp's proposal and require PacifiCorp to continue to use the approved methodology.

Q. WHAT ARE MARKET CAPS?

A. The GRID model is a production cost model that uses a linear program to optimize market sales, market purchases, plant dispatch, and transmission, subject to series of cost and operational inputs meant to simulate plant dispatch. Market caps are a particular parameter input into the GRID model that limits the amount of sales or purchases that the model may make at any particular market hub and time period.

Q. HAS THE MARKET CAP METHODOLOGY BEEN LITIGATED IN PAST PROCEEDINGS?

A. Yes. The current Market Cap methodology is the biproduct of many years of litigation. Market caps were originally introduced in the early years of the GRID model, but were limited to graveyard hours for major market hubs, except Mona.[6]

In Docket UE 227 (the 2012 TAM), however, PacifiCorp made a material change to Market Cap modeling, changing the methodology to be based an average level of short-term firm sales, on a diurnal basis, over the 48-month base period. In that docket, ICNU, AWEC's predecessor, opposed the change to the Market Cap methodology because there are many hours in the historical period when the actual hourly sales amount exceeded the average sales value used in the Market Cap calculation.[7] In that Docket, the Commission acknowledged ICNU's concerns, while making the following finding:

> We will accept Pacific Power's modeling of Market Caps here on a non-precedential basis. We direct Staff to conduct workshops with the parties to address the market caps issue, with the goal of determining whether agreement can be reached on a fair and reasonable method for modeling (or excluding) market caps in the future. If no agreement can be reached, we will expect Pacific Power to provide clear and robust evidence justifying its modeling of market caps in the company's next TAM proceeding. We will also ask Staff to present in the next TAM docket its own technical analysis of this issue.[8]

In Docket UE 245 (the 2013 TAM), parties were unable to reach a consensus on the issue surrounding Market Caps, and PacifiCorp filed its case using the average Market Cap methodology. Accordingly, the average Market Cap methodology was again litigated, with ICNU and Staff opposing the use of Market Caps altogether. In resolution, the Commission

[6] UE 245, Direct Testimony of Gregory N. Duvall, PAC/100, Duvall/19:6-12 (Feb. 29, 2012).
[7] UE 227, Order 11-435 at 21 (Nov. 4, 2011).
[8] Id. at 23.

accepted PacifiCorp's continued use of Market Caps. Notwithstanding, rather than using the arithmetic average over the four-year period, the Commission accepted Staff's alternate position and directed PacifiCorp "to revise GRID to base market caps on the highest of the four most recently available relevant averages for each trading hub, each month, and differentiated by on- and off-peak hours."[9/] This is the methodology that is in place today.

Importantly, in discussing the arguments surrounding the modeling of Market Caps in GRID, the Commission noted that "[b]ecause GRID is a forecasting model that is only as good as its constructs and inputs, the real question presented is not whether market caps should be used as a patch to address certain limitations of the GRID model, but whether the GRID model itself should be fixed."[10/] As discussed below, given PacifiCorp's anticipated replacement of GRID with AURORA, it is not necessary to experiment with fixing GRID at this time.

Q. WHAT IS PACIFICORP PROPOSING IN THIS PROCEEDING?

A. Notwithstanding the extensive litigation discussed above, PacifiCorp is proposing that the Commission reverse its decision in Docket UE 245 (the 2013 TAM), and revert to using average Market Caps.

Q. WHY IS PACIFICORP PROPOSING TO REVERSE THE COMMISSION'S DECISION IN DOCKET UE 245?

A. PacifiCorp witness Webb identified language in the final order in Docket UE 374, its 2020 general rate case, stating that "PacifiCorp may be able to make targeted forecast adjustments to remedy specific issues with its under-recovery."[11/] PacifiCorp believes that statements such as

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9/ UE 245, Order 12-409 at 8 (Oct. 29, 2012).
10/ Id. at 7.
11/ UE 374, Order No. 20-473 at 130 (Dec. 18, 2020).

this from the Docket UE 374 Order justify its reinstitution of a previously rejected Market Caps method.

PacifiCorp also makes a number of other blanket assertions such as the "original market caps methodology did not use the maximum monthly capacity and PacifiCorp opposed this revision in the 2013 TAM on the basis that it would reduce forecast accuracy,"[12/] and statements such as "the maximum monthly capacity of the last four years which makes Market Caps higher, or less restrictive, without regard to whether those caps replicate actual market conditions."[13/] These assertions, however, were not supported by analysis.

Q. DID PACIFICORP PERFORM ANY QUANTITATIVE ANALYSIS TO SUPPORT ITS PROPOSAL?

A. No. While PacifiCorp makes blanket assertions about the accuracy of the Market Caps assumption, no quantitative analysis was provided to support those assertions. In contrast, Market Caps are an issue that has been extensively litigated in past proceedings based on thorough quantitative analysis. To the extent that PacifiCorp seeks to reverse the Commission's prior decision, PacifiCorp bears the burden to present evidence supporting the change. In this case, the only evidence PacifiCorp has provided are unsupported, and previously rejected, assertions, without any analytical backing.

Q. IS THE COMMISSION'S DECISION IN DOCKET UE 374 A VALID BASIS TO JUSTIFY A CHANGE TO THE MARKET CAPS METHODOLOGY?

A. No. My understanding is that the Commission must decide this case based on the evidence submitted in this case. To the extent the Commission made a statement in its Order in Docket UE 374 questioning the level of sales forecast in the GRID model, such a finding would have

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12/ PAC/100, Webb/10:11-13.
13/ Id. at 11:7-9.

been based on the evidence submitted in that docket and not something that can be relied upon to arrive at a decision in this case.

Q. DO YOU AGREE WITH PACIFICORP'S ASSERTION THAT ITS PROPOSAL REPRESENTS THE ORIGINAL METHODOLOGY?

A. No. As discussed above, the original Market Cap methodology was limited to graveyard hours at major market hubs. The methodology PacifiCorp proposes in this docket was accepted only in the 2012 TAM on a provisional and non-precedential basis. Following further review, the Commission evaluated the merits of the average Market Cap method in the 2013 TAM and explicitly rejected it in favor of Staff's alternative method.

Q. IS THE HYPOTHETICAL EXAMPLE PACIFICORP PROVIDED ABOUT EXTRAORDINARY SALES RELEVANT?

A. PacifiCorp also provides a hypothetical example where sales were extraordinary in March of one year and April of another year.[14/] This example was not based on any actual analysis that PacifiCorp performed, and therefore is not relevant.

Q. HAVE YOU REVIEWED STAFF'S ANALYSIS FROM DOCKET UE 374 ALLEGING THAT OFF-SYSTEM SALES ARE BEING OVER FORECAST?

A. No. It appears that much of PacifiCorp's recommendation relies on an analysis that Staff performed in Docket UE 374. That information has not been provided in this docket. Notwithstanding, it is necessary to point out that performing an analysis of off-system sales between forecast NPC and actual operations can be somewhat difficult. This is primarily because much of the sales that PacifiCorp makes are not reported in actual NPC. A large portion of PacifiCorp's off-system sales are "booked-out," i.e., netted against offsetting purchases and not included in actual NPC. Similarly, the NPC forecast also includes the "day-

[14/] Id. at 11:9-17.

ahead/real-time" ("DA/RT") adjustment, which represents additional balancing transactions in the form of offsetting sales and purchases that are added to net power costs outside of the GRID model. Thus, when preparing a comparison of forecast off-system sales to actual off-system sales, it is necessary to view these netting transactions in a consistent manner.

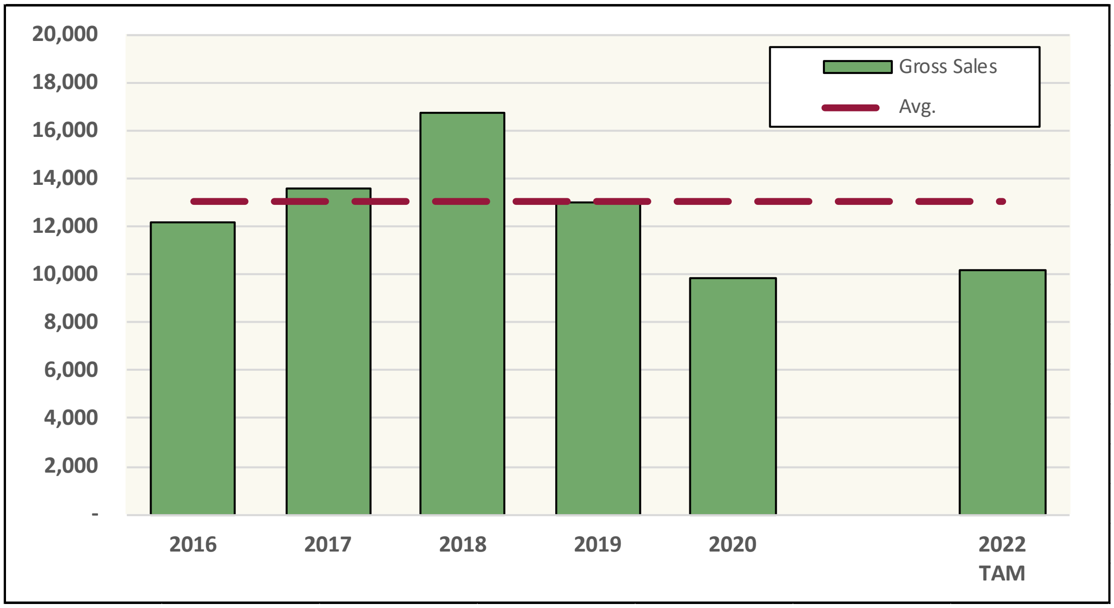
In Docket UE 296, PacifiCorp described the proper way to compare forecast off-system sales to actual off-system sales. When comparing the volumes of off-system sales transactions in forecast NPC, which includes the DA/RT adjustment, it is necessary to compare against the volume of transactions from actual net power costs that also include book-out transactions.[15/] This is because the DA/RT transactions that are added outside of the GRID model are based on total historical volumes "including transactions that may later be booked-out."[16/]

Q. HAVE YOU PERFORMED THAT ANALYSIS?

A. Yes. In Figure 1 below, I perform the same comparison PacifiCorp performed in Docket UE 296, supporting the DA/RT adjustment. The analysis compares the short-term firm sales volumes included in the 2022 NPC forecast, using the currently approved market cap methodology, with the actual volumes over the period 2016 through 2020 with the amount forecast in the current TAM proceeding, including the DA/RT adjustment and the book-outs.

15/ UE 296, Reply Testimony of Brian Dickman, PAC/500, Dickman/25:1-26:16.
16/ Id. at 21:18-19.

Figure 1
Sales Volume Comparison 2016-2020 vs 2022 TAM w/Current Market Cap Method
Including Netting Transactions (GWh)



Q. PLEASE PROVIDE AN OVERVIEW OF FIGURE 1.

A. Figure 1 is a comparison between the volume of sales, in gigawatt-hours, over the period 2016 through 2020 to the volume of sales forecast in the current TAM proceeding. The solid, green portion of the bars represents the volume of gross sales, i.e., including book-outs and the DA/RT adjustment. The book-out amounts are based on the amounts reported in PacifiCorp's FERC Form 1 in the respective years. Finally, the dashed line represents the average of the sales transactions over the period 2016 to 2020.

Consistent with PacifiCorp's analysis in Docket UE 296, this analysis shows the "system balancing volumes in this case are comparable to the historical levels."[17/] In fact, the off-system sales being forecast in the GRID model are less than the historical average, suggesting that the current market cap methodology is too restrictive.

[17/] Id. at 26:15-16.

Q. ARE THERE REASONS TO EXPECT SALES VOLUMES TO BE INCREASING?

A. Yes. As a result of the wind repowering and Energy Vision ("EV") 2020, PacifiCorp is producing a large volume of additional generation that it will be to able market, which was not available in the historical period. The EV 2020 resources alone produce approximately 5,300 GWh of additional generation, and all other things being equal, that new generation is a reason to expect a material increase to sales volumes relative to historical averages. This increase in sales volumes is not necessarily being borne out in the sales data detailed in Figure 1, above. Thus, PacifiCorp's current Market Cap methodology already represents a moderate level of sales relative to what is expected with the addition of the EV 2020 and repowering resources, which its proposed change to this method would further reduce.

Q. HAS PACIFICORP EVER PERFORMED AN ANALYSIS TO VALIDATE WHETHER THE GRID MODEL PRODUCES AN ACCURATE FORECAST INCLUDING THE EXISTING MARKET CAP METHODOLOGY?

A. Yes. In Docket UE 339, PacifiCorp performed a backcast using actual data from 2016, which included the use of the existing Market Cap methodology. As a result of that analysis, PacifiCorp concluded that "when actual data is used as inputs, GRID is able to produce the 2016 NPC within a very reasonable range compared to actual 2016 NPC."[18/] In the study, "[t]he GRID model estimated total company 2016 NPC to be $1,466.3 million compared to actual costs of $1,465.9 million, a variance of $0.4 million or 0.03 percent."[19/] Consequently, while PacifiCorp has repeatedly asserted that the GRID model under-forecasts its power costs, any under-recovery PacifiCorp has incurred in recent years does not appear to be due to

[18/] UE 339, PAC/100, Wilding/25:20-22.
[19/] Id. at 19:21-23.

modeling, but to real-world impacts that were not forecasted, such as the Enbridge outage. The power cost adjustment mechanism exists to address these types of impacts.

Fundamentally, PacifiCorp has not demonstrated in this case that there is a problem with the GRID model that warrants changing the Market Cap methodology. The goal of a forecast is not necessarily to perfectly emulate every aspect of net power costs viewed in isolation. The goal of the forecast is to arrive at a reasonable level of overall costs to include in rates. Market caps are one element in the overall power cost forecast, and if the overall forecast is reasonable, there is no justification to make a change to individual assumptions such as Market Caps.

Q. IS PACIFICORP PLANNING TO REPLACE THE GRID MODEL?

A. Yes. PacifiCorp is in the process of implementing the AURORA model for ratemaking. PacifiCorp had indicated that it would use the Aurora model for this TAM filing, but was unable to complete the modeling in time for the filing. Despite this delay, it is now certain that PacifiCorp will use AURORA to model power costs in next year's TAM, as the Company has recently filed a "power cost only rate case" in Washington that transitions from GRID to AURORA.[20/]

Through its Market Caps proposal, PacifiCorp is requiring a major change in the way GRID modeling is being performed, but the change will be moot once the new AURORA model is implemented next year. As noted above, with respect to Market Cap modeling inputs, the Commission has previously commented that "the real question is not whether market caps should be used as a patch to address certain limitations of the GRID model, but whether the

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20/ Washington Utilities & Transp. Docket No. UE-210402.

GRID model itself should be fixed."[21/] Given the impending replacement of the GRID model, making a dramatic change to precedent, only for the change to be superseded the next year, is neither desirable nor an efficient use of the Commission's resources.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATION.

A. I recommend the Commission reject PacifiCorp's proposal to use the average Market Cap methodology that the Commission previously rejected in the 2013 TAM. PacifiCorp's only justification for changing the methodology are vague references to the Commission's order in Docket UE 374. PacifiCorp provides no concrete analysis or justification to make such a change in this proceeding and relying on obscure references to analyses performed by another party in another proceeding by no means meets the burden of proof to justify such a significant rate increase on ratepayers. To the contrary, the actual data shows that the GRID model is not over-forecasting sales. PacifiCorp recently concluded that the GRID model configured with the current Market Cap methodology produces an accurate forecast in the backcast analysis performed in Docket UE 339. Further, such a change is not timely, as PacifiCorp will be moving to a new model shortly.

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

A. The impact of rejecting PacifiCorp's proposal is a $19,747,145 system, or $5,229,355 Oregon-allocated, adjustment to NPC.

21/ Docket No. 245, Order 12-409 at 7.

IV. OTHER REVENUES

Q. WHAT ARE YOUR RECOMMENDATIONS RELATED TO OTHER REVENUES?

A. I have two recommendations related to Other Revenues. First, PacifiCorp omitted the calculation of Other Revenues from this case and refused to provide the analysis in discovery. I recommend including an Other Revenues forecast in TAM revenues, consistent with past TAM filings. Second, I have observed that PacifiCorp has experienced a material increase in fly ash sales in recent years. Accordingly, I recommend that Fly Ash Sales also be considered in the Other Revenues calculation. These recommendations reduce TAM revenues by $949,615 on an Oregon-allocated basis.

Q. HOW ARE OTHER REVENUES CONSIDERED IN PACIFICORP'S TAM FILINGS?

A. In Docket UE 216, PacifiCorp stipulated to, and the Commission approved, a requirement to include an adjustment for Other Revenues in stand-alone TAM filings.[22/] The stipulation stated "[i]n future stand-alone TAM filings, the Company will reflect forecast changes in Other Revenue for items that have a direct relation to NPC."[23/] In a general rate case year, PacifiCorp updates Other Revenues in the context of the overall revenue requirement, and no Other Revenue adjustment is made in the TAM. PacifiCorp did not, for example, make an adjustment for Other Revenue in the 2020 TAM because Other Revenues were updated in PacifiCorp's GRC filing in Docket UE 374. Notwithstanding, when preparing this case, PacifiCorp did not reintroduce the adjustment in this year's stand-alone TAM filing.

22/ UE 216, Stipulation ¶ 9 (July 6, 2010).
23/ Id.

Q. DID YOU REQUEST PACIFICORP TO PROVIDE THE CALCULATION OF THE OTHER REVENUE ADJUSTMENT?

A. Yes. In AWEC Data Request No. 16(b), PacifiCorp was asked to provide an updated calculation of Other Revenues, consistent with the Commission Order in Docket UE 216. PacifiCorp, however, refused to perform the analysis, stating that "[b]ecause the forecasted revenues for 2022 are not expected to change from Other Revenues included in the Company's general rate case (GRC), Docket UE 374, the Company has not requested any adjustment related to Other Revenues in the 2022 TAM." Strangely, while not identified in the text of the response, PacifiCorp did provide an attachment to its response which appears to have attempted to update the Other Revenue Calculation, showing that the Other Revenue value was expected to change in 2022.

Q. DO YOU AGREE THAT THE COMPANY HAS THE OPTION TO DECIDE WHETHER TO REQUEST AN OTHER REVENUE ADJUSTMENT?

A. No. My understanding is that PacifiCorp does not have the authority to unilaterally change the effect of a prior Commission order. Accordingly, including the Other Revenue adjustment is not at the Company's discretion, but an affirmative requirement of its TAM filings.

Q. IS IT POSSIBLE THAT THE OTHER REVENUE AMOUNTS ARE NOT CHANGING?

A. No. Because the allocation factors are changing, it would be impossible from a mathematical perspective for the Other Revenue amounts to not change at all. Even if the system revenues remain the same, the Oregon-allocated revenues will change. Further, if PacifiCorp believes the amounts are not changing, PacifiCorp is still required to present the analysis to demonstrate so, consistent with the requirement from Docket UE 216.

Q. DID YOU ATTEMPT TO REVIEW THE OTHER REVENUE ITEMS INCLUDED IN THE UE 374 FORECAST?

A. Yes. In response to AWEC Data Request 16(c), PacifiCorp confirmed that "[t]he wind-based ancillary service revenues on a Total Company basis included in base rates is $10,024,343. Allocated on the approved system generation (SG) allocation factor at 26.023 percent, Oregon's share of this amount is $2,608,598." Based on the revenue requirement workpapers from Docket UE 374, the primary source of Other Revenues was from a contract with Seattle City Light for the Stateline wind farm. In AWEC Data Request 16(e), AWEC requested that PacifiCorp provide a copy of the Seattle City Light - Stateline contract. With no explanation, PacifiCorp responded that no such contract exists.

Q. WHAT DO YOU RECOMMEND?

A. Given PacifiCorp's unwillingness to provide a forecast for Other Revenues and the fact that PacifiCorp was unable to produce any agreement associated with the Seattle City Light - Stateline revenues, I recommend using the revenue forecast from the attachment provided in response to AWEC Data Request 16. Notwithstanding, I updated the revenue amount included in base rates to be consistent with the amounts that PacifiCorp reported in response to AWEC Data Request 16(c).

Q. DO YOU HAVE ANY OTHER RECOMMENDATIONS RELATED TO THE OTHER REVENUE FORECAST?

A. Yes. Upon review of PacifiCorp's FERC Form 1, it is apparent that PacifiCorp has experienced a material increase to revenues associated with fly ash sales relative to the amounts included in base rates. These sales are directly tied to the production at PacifiCorp's coal plants, primarily Jim Bridger, so I recommend that they also be considered in the Other Revenue forecast.

Q. WHAT IS FLY ASH?

A. Fly ash is a byproduct of the combustion of coal. It is used in construction to develop concrete, bricks and other building supply products.

Q. WHAT AMOUNT OF REVENUES DOES PACIFICORP EARN FROM SELLING FLY ASH?

A. In 2020 PacifiCorp recognized $6,851,586 of fly ash sales, with approximately $1,814,408 allocated to Oregon. This represents a material increase from the $4,256,000 of fly ash sales, or $1,108,000 Oregon-allocated, considered in Docket UE 374.

Q. FROM WHAT COAL PLANTS DOES PACIFICORP SELL FLY ASH?

A. In response to AWEC Data Request 17, PacifiCorp identified the sources of its fly ash sales for calendar year 2020. PacifiCorp responded that the fly ash sales are predominantly from the Jim Bridger power plant, with small amounts being sold from the Naughton, Craig and Cholla plants.

Q. HOW DO YOU PROPOSE TO DEVELOP A FORECAST FOR FLY ASH SALES?

A. I recommend using calendar year 2020 as the basis for the forecast in this proceeding, adjusted for known and measurable changes. In addition, I propose to adjust the 2020 amount for retirement of Cholla, removing all fly ash sales from Cholla included in the historical data. This is consistent with the way that wheeling expenses are forecast.

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

A. Based on the proposal above, I have performed an updated Other Revenue calculation—including a provision for fly ash sales—which may be found in Exhibit AWEC/104. As can be seen, the effect of these recommendations is a $949,615 reduction to Oregon-allocated TAM revenues.

V. BRIDGER COAL COMPANY MATERIALS AND SUPPLIES

Q. PLEASE DESCRIBE THE ANALYSIS THAT YOU PERFORMED WITH RESPECT TO BRIDGER COAL COMPANY MATERIALS AND SUPPLIES EXPENSES.

A. In Confidential Exhibit AWEC/105, I have performed an analysis evaluating the accuracy of PacifiCorp's forecast of materials and supplies expenses at Bridger Coal Company ("BCC"). The analysis reviews the BCC forecast prepared in the final TAM update filings in Dockets UE 232 (2018 TAM), UE 339 (2019 TAM) and UE 356 (2020 TAM). PacifiCorp provided the BCC forecasts for these respective TAM filings in response to AWEC Data Request 20. The analysis compares the forecasted materials and supplies expenses in each of these dockets to the materials and supplies expenses incurred in actual operations. The actual operating results of BCC was provided in response to AWEC Data Request 04. Based on the comparison, it is possible to evaluate how accurate the prior forecasts have been. This is an important consideration because these forecast levels are based on subjective judgements, rather than a predetermined methodology.

Q. WHAT DID YOU FIND?

A. Based on the analysis, I determined that PacifiCorp's prior forecasts for materials and supplies expenses at BCC were grossly overstated in every year analyzed. In 2020, for example, the forecast was overstated by 32%.

Q. WHAT DO YOU RECOMMEND?

A. Given the consistent history of over-estimating materials and supplies expenses as well as the magnitude of the overstatement, I recommend an adjustment based the historical variances identified in Confidential AWEC/105. As can be seen, my analysis applies the average historical percent variances, measured on a dollars-per-ton basis, to the forecast materials and supplies expenses for the test period. The result is used to develop an adjustment to the test period forecast.

Q. WHAT IS THE IMPACT OF YOUR RECOMMENDATION?

A. This recommendation produces a $3,096,823 reduction to PacifiCorp allocated coal costs. On an Oregon-allocated basis, this adjustment amounts to a $785,644 reduction to NPC.

Q. DOES THIS CONCLUDE YOUR OPENING TESTIMONY?

A. Yes.