Docket No. 20000-___-ER-20
Witness: Michael G. Wilding

BEFORE THE WYOMING PUBLIC SERVICE COMMISSION

ROCKY MOUNTAIN POWER

Direct Testimony of Michael G. Wilding

March 2020

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, business address, and present position with PacifiCorp d/b/a Rocky Mountain Power ("PacifiCorp" or the "Company").

A. My name is Michael G. Wilding. My business address is 825 NE Multnomah Street, Suite 2000, Portland, Oregon 97232. My title is Director, Net Power Costs and Regulatory Policy.

Q. Briefly describe your education and business experience.

A. I received a Master of Accounting from Weber State University and a Bachelor of Science degree in accounting from Utah State University and am a Certified Public Accountant licensed in the state of Utah. During my tenure at the Company, I have worked on various regulatory projects including general rate cases, the multi-state protocol, and net power cost filings. I have been employed by PacifiCorp since 2014.

Q. Have you testified in previous regulatory proceedings?

A. Yes. I have filed testimony in proceedings before the Wyoming Public Service Commission ("Commission"), and the public utility commissions in California, Idaho, Oregon, Utah, and Washington.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony in this proceeding?

A. My testimony describes how net power costs ("NPC") are currently forecasted, recovered and trued-up by the Company; proposes changes to the annual Energy Cost Adjustment Mechanism ("ECAM") to remove the sharing band, include production tax credits ("PTC"); and update the ECAM for the PacifiCorp 2020 Inter-Jurisdictional

Allocation Protocol ("2020 Protocol")[1] by eliminating the embedded cost differential ("ECD") and including the Wyoming qualifying facility ("QF") adjustment.

III. NPC RECOVERY

Q. Please describe how PacifiCorp recovers its Wyoming-allocated NPC.

A. The Company recovers its Wyoming-allocated NPC through the ECAM, which is described in tariff Schedule 95. The ECAM consists of two components: a Forecast Base ECAM Rate and a Deferred ECAM Rate. Together, these two components recover the ECAM costs approved for recovery by the Commission. NPC are approximately 98 percent of ECAM costs and are comprised of fuel expense, wholesale purchases and sales of electricity, and wheeling expenses. The other components of the ECAM costs are the ECD, chemicals, and coal generation start-up fuel.

Q. Please describe the Forecast Base ECAM Rate.

A. The Forecast Base ECAM Rate is established in a general rate case ("GRC") and is designed to collect Forecast Base ECAM Costs based on the GRC test period. As part of a GRC, PacifiCorp forecasts a level of NPC for the test period using its Generation and Regulation Initiative Decision Tools ("GRID") model. The inputs to this NPC forecast include the Company's Official Forward Price Curve, a weather normalized load forecast, updated contract information, updated coal costs, and normalized hydro and wind generation. Forecast Base ECAM Costs are only updated during a GRC.

Q. Please describe the annual ECAM true-up filing.

A. Each year the actual collection of Forecast Base ECAM Costs are compared to the actual ECAM costs incurred by the Company. Any difference between the base

[1] Docket No. 20000-572-EA-19.

collections and actual costs is subject to a symmetrical sharing band where the Company absorbs 30 percent of the variance and customers are responsible for 70 percent of the variance. The Deferred ECAM Rate reflects customers' 70 percent share of the variance and results in either a refund to customers or a charge.

Q. Why is the ECAM subject to a symmetrical sharing band?

A. The symmetrical sharing band has been in place since the ECAM was implemented in December 2010.[2] At that time, the Commission concluded that the "ECAM should be structured to provide incentives to the Company for four purposes: [i] to use the existing forecasting mechanisms; [ii] to encourage the accuracy of modeling supporting the forecasts; [iii] to avoid creating commercial disadvantage to roughly 70 percent of RMP's load in Wyoming, which would ultimately be detrimental to all Wyoming customers; and [iv] to encourage the Company to use its best efforts to control costs."[3] In the Company's 2015 GRC, the Commission affirmed the sharing band because it "has and will continue to incent RMP to improve its forecasts of base NPC as well as to control other NPC costs."[4]

Q. Why is the Company again requesting that the Commission eliminate the ECAM's sharing band?

A. Since the 2015 GRC, conditions have continued to change such that the sharing band is no longer necessary and should therefore be eliminated. As explained by PacifiCorp

[2] The Wyoming Power Cost Adjustment Mechanism was the predecessor to the ECAM and included a total-company $40 million symmetrical deadband and multiple sharing bands between 70/30 and 90/10 percent.

[3] *In the Matter of the Application of Rocky Mountain Power for Authority to Implement an Energy Cost Adjustment Mechanism*, Docket No. 20000-368-EA-10 (Record No. 12477), Memorandum Opinion, Findings and Order, ¶ 79 (Feb. 4, 2011).

[4] *In the Matter of the Application of Rocky Mountain Power for Approval of a General Rate Increase in Its Retail Electric Utility Service Rates in Wyoming of $32.4 Million Per Year or 4.5 Percent*, Docket No. 20000-469-ER-15 (Record No. 14076), Memorandum Opinion, Findings of Fact, Decision and Order ¶ 79 (Dec. 30, 2015).

witness Mr. Frank C. Graves, certain prudently-incurred system balancing costs that cannot be forecast are being systematically under-recovered because of the sharing band.

Q. How is the energy landscape changing compared to when the sharing band was affirmed in 2015?

A. As discussed further in the testimony of Mr. Graves, since 2015, the energy landscape in the West has continued to evolve, with an increasing number of states adopting clean energy standards, and the growth of the Energy Imbalance Market ("EIM"). In response to changes in federal energy policy, such as the extension of federal PTCs and changing market conditions, PacifiCorp has repowered its existing wind generation fleet and added approximately 1,500 megawatts of new wind capacity and a 140-mile, 500 kilovolt transmission line coming online by the end of 2020. Most of this investment is located in Wyoming.

Q. How has PacifiCorp's resource mix changed as a result of this shifting energy landscape?

A. PacifiCorp continues to adapt to, among other things, changing market conditions and increasing demand from customers for specific types of generating resources. This adaptation is shown in the figures below. In PacifiCorp's 2013 Integrated Resource Plan ("IRP"), the energy and capacity resource mix was heavily dependent on thermal resources. Only 1.5 percent of PacifiCorp's resource capacity came from renewable resources. In contrast, the 2019 IRP projects 33 percent of PacifiCorp's resource capacity in 2021 to come from renewable resources. These IRPs illustrate the Company's orderly and market-based transition to greater reliance on renewable generation, while maintaining an important role for thermal generation to support renewable integration and enhance system reliability.

FIGURE 1
PACIFICORP'S 2013 CAPACITY MIX[5]

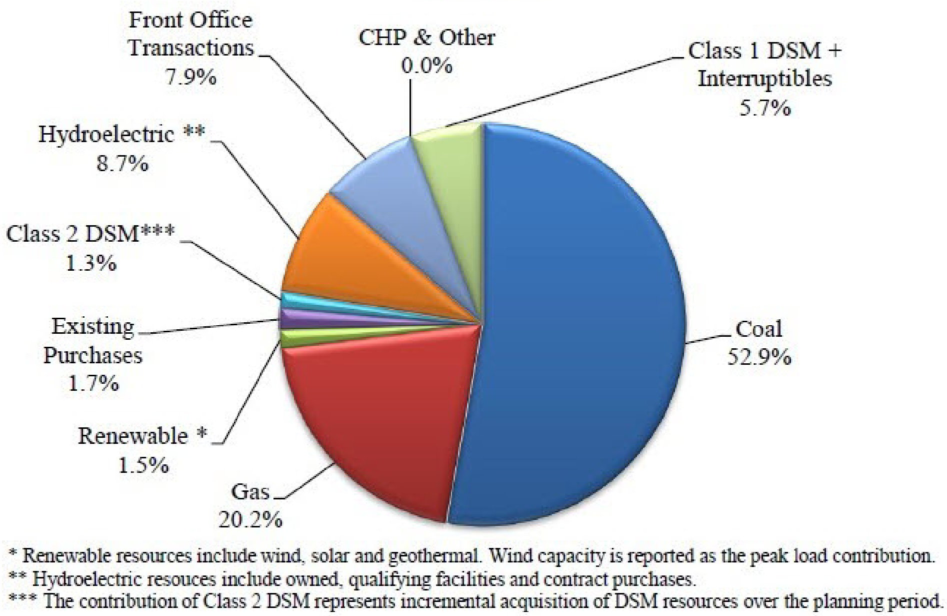
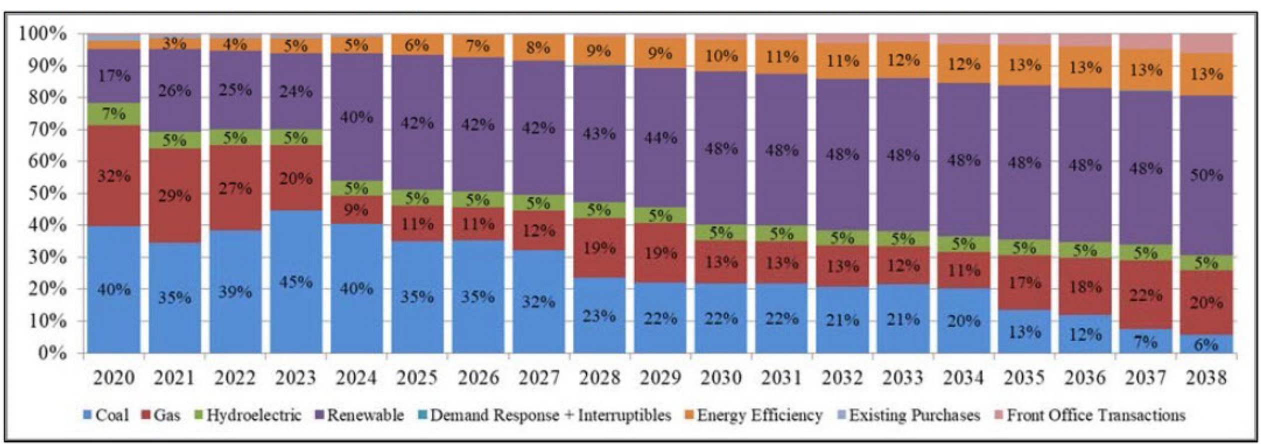


FIGURE 2
PACIFICORP'S 2019 CAPACITY MIX[6]



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[5] *In the Matter of the Filing of Rocky Mountain Power of its Integrated Resource Plan ("IRP") for 2013,* Docket No. 20000-424-EA-13 (Record 13425), 2013 Integrated Resource Plan Volume 1 at 229, Figure 8.28 (April 30, 2013).

[6] *In the Matter of the Filing of Rocky Mountain Power of its Integrated Resource Plan ("IRP") for 2019,* Docket No. 20000-552-EA-19 (Record 15192), 2019 Integrated Resource Plan Volume 1 at 257, Figure 8.44 (Oct. 18, 2019).

Q. How has this change in resource mix affected the Company's NPC?

A. The capital costs and the operations and maintenance expense of renewable resources owned by PacifiCorp, in this case wind resources, are included in base rates, while the variable energy costs are included in NPC. Importantly, the renewable resource provides zero-fuel-cost energy, or even negative-cost energy when PTCs and other benefits are considered. This means that PacifiCorp's customers benefit when they receive the entire energy output of the owned wind resources and those resources are the last Company-owned resources to be curtailed when there is an energy surplus.

If the renewable resource is a QF or another purchased power agreement ("PPA"), then the purchase price of the contract is included in the forecast base NPC in a GRC. PacifiCorp is required by law to purchase the energy output from a QF. PacifiCorp is also generally required to purchase the energy output under non-QF PPAs.

As renewable resources are weather dependent and do not have the same flexibility as a thermal resource, PacifiCorp has limited ability to plan for and control their availability and output. As explained by Mr. Graves, it is impossible to accurately forecast the output of these renewable resources, specifically wind resources, on an hourly basis for an entire year, which makes it increasingly difficult to accurately forecast base NPC in a GRC. Additionally, as Mr. Graves explains, the majority of other states allow recovery of these variations to the forecast to be recovered without being subject to a sharing band.

Q. Mr. Graves discusses the systematic under-recovery of certain balancing costs that are not included in the NPC forecast, however the ECAM has resulted in both a surcharge and a credit to customers. Please explain.

A. This is largely the result of changes in market conditions offsetting the costs not included in the base. For example, Mr. Graves shows a NPC variance favorable to customers in 2016. In 2016, PacifiCorp's hydro generation was within one percent of the year-ahead forecast and its owned wind generation was more than four percent above the year-ahead forecast. In addition, natural gas market prices and energy prices were very low relative to other years. The actual average cost of natural gas generation was approximately 15 percent lower than the year-ahead forecast and the average price of market purchases was approximately 37 percent lower than the year-ahead forecast.

Using a static forecast to set base NPC can sometimes result in more frequent offsetting, especially if changes market conditions persist over long periods of time, e.g. natural gas prices could be substantially lower than forecast for multiple years. However, this offsetting should not be expected to result in a revenue-neutral mechanism over time.

IV. PACIFICORP'S PROPOSAL

Q. What is PacifiCorp's proposal for recovering NPC?

A. PacifiCorp is proposing the following: (1) eliminating the 70/30 sharing band within the ECAM cost recovery for Schedule 95; (2) including PTCs within the forecast and deferred ECAM costs; and (3) updating the ECAM to reflect the 2020 Protocol by eliminating the ECD and including the Wyoming QF adjustment from the forecast and deferred ECAM costs. These proposals are in the public interest because once implemented customers would only pay the actual cost, subject to a prudence review, of the NPC incurred to provide service, no more and no less. Proposed changes to Schedule 95 are included in Mr. Robert M. Meredith's Exhibits RMP___ (RMM-11) and RMP___ (RMM-12).

Q. Will the Company still have an incentive to achieve the lowest-possible NPC if there is no sharing band?

A. Yes. The Company has multiple, powerful incentives to keep its energy costs low — including electric industry transformation, increased competition, and regulatory disallowances. Each of these incentives work together and across the Company's entire six state service territory to incent least-cost resource dispatch and ensure that the Company proactively and prudently manages its NPC for the benefit of customers.

Moreover, the notion that the sharing band incents the Company to lower costs incorrectly implies that the forecast NPC is some sort of benchmark the Company should be trying to beat. In fact, the forecast NPC is simply a regulatory tool used for ratemaking purposes. The Company does not use the base NPC, from any jurisdiction, to make decisions or speculate on market conditions. For example, when transacting in the market, the Company cannot shop around until it finds a price better than what was forecast in the GRC. Day-to-day operations are guided by the policies and procedures in place and the requirement to serve load in the least-cost manner based on conditions at the time, not the NPC forecast.

Q. Will the removal of the sharing band provide a disincentive to accurately forecast NPC?

A. No. The Company remains committed to providing an accurate NPC forecast based on the best available information and modeling. But, as discussed in the testimony of Mr. Graves, there are major drivers in NPC variances that are both difficult if not impossible to accurately forecast and that are not within the control of the Company. And these drivers tend to create an under-forecast, meaning that the sharing band acts as a de facto disallowance of costs regardless of whether the costs were prudent. Removing the sharing band from the ECAM puts the focus of inquiry on the prudence of the Company's actions relative to activities it can control (i.e., shifting from accuracy of predicting wind generation to the prudence of how the Company responds in situations when wind generation does not materialize).

For example, intermittent resources are highly dependent on weather. However, because of the smoothness or perfect foresight of GRID (or any other production cost model as explained by Mr. Graves), the entirety of the costs of unexpected changes in weather are not captured in a forecast of NPC.

Moreover, the current ECAM structure is particularly problematic for intermittent QFs because the Company does not operate the QFs and cannot control their generation but is required by federal law and state regulation to purchase of the power from these facilities. Any increases in production from these QFs is subject to the current ECAM sharing bands, under which the Company is paying 30 percent of the increased costs to the extent the QF contract price exceeds market prices.

Q. Does the ECAM sharing band provide an incentive for *inaccurate* NPC forecasting?

A. Yes. The sharing band encourages intervenors in a GRC to drive the NPC forecast as low as possible knowing that customers will receive a 30 percent discount on the NPC variance. The opposite is true for the Company, and if any incentive exists it is to over-forecast NPC and receive a "bonus" equal to 30 percent of the NPC variance. An ECAM with no sharing band, or a dollar-for-dollar recovery/refund, would truly align the interests of the Company and its customers in setting NPC at the most accurate level possible.

Q. Would removal of the sharing band place Wyoming industrial customers at a commercial disadvantage relative to their competitors?

A. No. As discussed in the testimony of Mr. Graves and Ms. Ann E. Bulkley, the vast majority of state regulators require customers to pay 100 percent of the prudently incurred NPC. The ECAM's sharing band is therefore an outlier and its removal will place Wyoming customers in the same position as their competitors across the country. As discussed further in the testimony of Mr. Gary W. Hoogeveen, the Company's rates in Wyoming are 34 percent lower than the national average, and Wyoming industrial customers will continue to benefit from the Company's low rates.

Q. What are PTCs and how are they included in customer's rates?

A. The generation of energy at certain company-owned facilities is eligible for the renewable electricity PTCs, and the credit is included as an offset to the Company's federal income taxes. For each kilowatt-hour of energy generated at eligible wind-powered generating facilities, the Company receives a $0.025 credit on its tax return, for a duration of 10 years beginning on the date which the facility became commercially operable. The value of these credits is reflected as a reduction to current income tax expense on the financial statements and for rate-making purposes.

The amount of renewable electricity PTCs received is dependent on the amount of generation at eligible facilities, and the forecasted generation of these facilities included in NPC is the same output currently used to calculate the value of the renewable electricity PTCs in a GRC. To the extent the generation from these plants varies from the forecast, the impact on NPC gets updated via the ECAM filings but the PTC impact is not currently trued-up.

Q. Please explain the Company's proposal to include PTCs in the ECAM.

A. Although PTCs are not currently included in NPC, it is logical to treat PTCs similarly for ratemaking purposes since they are tied to generation. As PacifiCorp completes the Energy Vision 2020 projects, leading to new renewable and repowered renewable resources on the system, the PTCs associated with these projects represent a significant source of additional value for customers. PacifiCorp's proposal to track and true-up PTCs through the ECAM is designed to pass back to customers the full and actual value of PTCs.

Q. Why is it appropriate to start including PTCs in the ECAM now?

A. PTCs are only available during the first 10 years of an eligible resource's life. PacifiCorp's existing wind fleet was repowered in 2019 or is being repowered in 2020 and will therefore requalify for PTCs. Additionally the new Company-owned wind resources that will come online at the end of 2020 will also qualify for PTCs. Updating the ECAM now to include PTCs will allow customers to receive the actual PTCs benefits for the life of the eligible resources.

Q. Is the Company's proposed treatment of PTCs in the public interest?

A. Yes. The customer will be able to receive the actual benefits from PTCs.

Q. What is the current level of PTCs included in rates?

A. This case includes approximately $193.4 million of PTCs, Wyoming-allocated.

Q. Please explain the Company's proposal to update the ECAM to reflect certain items in the 2020 Protocol.

A. There are two updates to the ECAM as a result of the 2020 Protocol. The first is the elimination of the Wyoming ECD in both the base and actual ECAM costs beginning January 1, 2021. This increases costs for Wyoming customers by approximately $1.85 million. The second is to include in the Wyoming QF adjustment in both the base and actual ECAM costs. The Wyoming QF adjustment is a cost reduction of approximately $5 million for Wyoming customers. Additionally, the Wyoming QF adjustment should not be subject to any sharing band as agreed to in the 2020 Protocol.

V. UPCOMING SHIFTS IN THE ALLOCATION OF NET POWER COSTS

Q. What other changes is PacifiCorp anticipating to its generation portfolio?

A. In addition to the changes outlined in the 2019 IRP preferred portfolio, PacifiCorp is anticipating that each state within its service territory will have the opportunity to participate in new resources based on their own preference, and each state will therefore have diverging generation portfolios beginning in 2024. The 2020 Protocol outlines the path to state-specific generation portfolios to comply with state-specific energy policies and establishes certain "Framework Issues" that need to be resolved. In addition to providing a path for states to have unique resource portfolios, it is important to maintain the benefits of system dispatch and optimization as much as practicable.

Q. How will unique generation portfolios increase the difficulty of forecasting NPC?

A. Moving from a dynamic inter-jurisdictional cost allocation to a static inter-jurisdictional cost allocation for generation costs will increase the pressure to have every NPC line item accurately forecast to mitigate the risk of potential swings in state-allocated NPC. For example, if the total natural gas fuel expense forecast in a GRC matched the actual total natural gas fuel expense but the fuel expense at each plant was slightly different between the forecast and actuals. Under a dynamic allocation where each state is allocated a proportional share of each plant's fuel expense, then the allocations are not affected and there is zero difference between the forecast and actual state-allocated total natural gas fuel expense. However, under a static allocation, the differences in each plant will flow through to the states causing some states' actual natural gas expense to be higher than forecast and others to be lower. Unless there is complete recovery of actual NPC, this could result in an over or under allocation of fuel costs to Wyoming.

Additionally, as explained by Mr. Graves, production cost models are generally too smooth and because of their perfect foresight, these models do not capture the difference between actual and forecasted NPC perfectly. As described in the 2020 Protocol, the Nodal Pricing Model facilitates a transfer of energy between states at a fair price and crediting generators for their production using a locational marginal price ("LMP"). However, because of the smoothness of every model it is likely that the forecast LMPs and actual LMPs will be different causing differences between state-allocated NPC.

Q. Do the issues identified above still exist if PacifiCorp joins a regional market such as the Extended Day Ahead Market?

A. Yes. In fact, participating in a regional day-ahead market would make it even more difficult to accurately forecast NPC in a GRC. A regional market would optimize the entire footprint of the market, and PacifiCorp would be limited to publicly available information in an attempt to model the market optimization. In addition, the market dynamics themselves would be more complicated with LMPs than they have been in the past and potentially make outcomes more volatile and forecasting more difficult, but participating in the market will be important despite this complexity as it will provide benefits that will potentially reduce total NPC. As explained by Mr. Graves, most utilities that participate in an organized market are able to recover 100 percent of their prudently incurred NPC through some sort of pass-through mechanism.

Q. Does the current construct effectively allow PacifiCorp to meet customer's needs in a changing energy landscape?

A. No. As explained in more detail by Mr. Graves, as PacifiCorp's generation portfolio includes increasing levels of renewable resources, it becomes increasingly difficult to consistently recover prudently incurred NPC using the ECAM. Additionally, as PacifiCorp's energy landscape evolves to state-specific generation portfolios that provide states a path for compliance with their energy policies, additional forecast error risk is introduced and the ability to fully recover actual NPC is even more important.

VI. CONCLUSION

Q. Please summarize your recommendation to the Commission.

A. I recommend the Commission approve modifications to the design of the ECAM to remove the sharing band, update the ECAM for the 2020 Protocol by eliminating the ECD and including the Wyoming QF adjustment, and allow the inclusion of PTCs in the ECAM.

Q. Does this conclude your direct testimony?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION OF WYOMING

AFFIDAVIT, OATH AND VERIFICATION OF TESTIMONY

Michael Wilding (Affiant) being of lawful age and being first duly sworn, hereby deposes and says that:

Affiant is the Director, Net Power Costs and Regulatory Affairs for PacifiCorp d/b/a Rocky Mountain Power, which is a party in this matter.

Affiant prepared and caused to be filed the foregoing testimony. Affiant has, by all necessary action, been duly authorized to file this testimony and make this Oath and Verification.

Affiant hereby verifies that, based on Affiant's knowledge, all statements and information contained within the testimony and all of its associated attachments are true and complete and constitute the recommendations of the Affiant in his official capacity as Director, Net Power Costs and Regulatory Affairs.

Further Affiant Sayeth Not.

Dated this 26 day of February, 2020

Michael Wilding
Director, Net Power Costs and Regulatory Affairs
825 NE Multnomah, LCT 2000
Portland, OR 97232

STATE OF Oregon)
) SS:
COUNTY OF Multnomah)

The foregoing was acknowledged before me by Michael Wilding on this 26th day of February, 2020. Witness my hand and official seal.

Official Stamp
Anne Kohls
Notary Public - Oregon
Commission No. 966746
My Commission Expires September 17, 2021

Notary Public
My Commission Expires: September 17, 2021