Application No. 18-04-___
Exhibit PAC/900
Witness: Michael G. Wilding

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

PACIFICORP

Direct Testimony of Michael G. Wilding

Modifications to the Energy Cost Adjustment Clause

April 2018

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ATTACHED EXHIBITS

Q. Please state your name, business address, and present position with PacifiCorp d/b/a Pacific Power (PacifiCorp).

A. My name is Michael G. Wilding. My business address is 825 NE Multnomah Street, Suite 600, Portland, Oregon 97232. My title is Director, Net Power Costs and Regulatory Strategy.

I. QUALIFICATIONS

Q. Briefly describe your education and business experience.

A. I received a Masters of Accounting degree from Weber State University and a Bachelor of Science degree in accounting from Utah State University. I am a Certified Public Accountant licensed in the State of Utah. Before joining PacifiCorp, I was employed as an internal auditor for Intermountain Healthcare and an auditor for the Utah State Tax Commission. I have been employed by PacifiCorp since February 2014.

Q. Have you testified in previous regulatory proceedings?

A. Yes. I have filed testimony on behalf of PacifiCorp in regulatory proceedings in California, Idaho, Oregon, Utah, Washington, and Wyoming.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony?

A. I present PacifiCorp's proposal to modify the Energy Cost Adjustment Clause (ECAC) to include certain costs that are strongly related to net power costs (NPC) including production tax credits (PTCs) and start-up fuel costs.

Q. Please briefly describe PacifiCorp's current ECAC as authorized by the Commission.

A. The California Public Utilities Commission's Order[1] in the 2007 general rate case implemented an ECAC on January 1, 2007. This mechanism sets two separate rates for the following year: the balancing rate (a true-up of actual NPC), and the offset rate (the forecasted NPC for the following year). Both the balancing rate and the offset rate go into effect annually on January 1.[2] The balancing rate is adjusted each year if the new rate varies from the current rate by five percent or more. The offset rate can also be changed if there is a difference in NPC for the upcoming 12 months of greater than five percent. Actual NPC is the sum of the total PacifiCorp amounts recorded in Federal Energy Regulatory Commission (FERC) Accounts: 501, 503 and 547 (Steam Production Fuel Expense), 555 (Purchased Power), 565 (Wheeling), 447 (Sales for Resale).

Over time, the ECAC has evolved to include fuel stock carrying charges, costs for implementation and reporting verification under the California Air Resources Board Mandatory Reporting Rule and Cap and Trade Program (ARB administrative costs), net metering surplus costs, and purchases of renewable energy credits for renewable portfolio standard compliance.

Q. Please summarize the modifications that PacifiCorp is proposing to the ECAC?

A. PacifiCorp is proposing to modify the ECAC to include the following items:

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[1] *See In the Matter of the Application of PacifiCorp for an Order Authorizing a General Rate Increase and Implementation of an Energy Cost Adjustment Clause and a Post Test-Year Adjustment Mechanism,* Application No. A.05-11-022, Decision No. 06-12-011 (Dec. 14, 2006).

[2] The Commission approved Tariff Schedule ECAC-94 states that the "Implementation and effective date of Total ECAC Adjustments shall be January 1st of each year"; however, the actual effective date is based on the commission's decision in each ECAC application.

- PTCs
- Start-up fuel costs

Please refer to Exhibit PAC/901 for a redline version of the proposed changes to tariff Schedule ECAC-94.[3]

Q. Is PacifiCorp proposing any changes to the mechanics of the ECAC?

A. No. The ECAC will continue to be calculated and function as it does today with the exception of the addition of PTCs and start-up fuel costs.

III. INCLUSION OF PTCs

Q. Please explain why PTCs should be included in the ECAC.

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 PacifiCorp's federal income taxes. For each kilowatt-hour of energy generated at eligible wind-powered generating facilities PacifiCorp receives a $0.024 credit ($0.011 credit for eligible hydro generating facilities) 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. Table 1 below shows the expiration dates of the PTCs for PacifiCorp's geothermal and wind power plants.

[3] Tariff Schedule ECAC-94 lists fuel as part of net power costs and therefore no changes are proposed to separately list start-up fuel.

Table 1: PTC Expiration Dates for Wind/Geothermal Plants

Wind/Geothermal Plant	PTC Expiration Date
Leaning Juniper	9/13/2016
Marengo I	8/2/2017
Blundell Bottoming Cycle	12/1/2017
Goodnoe	12/17/2017
Marengo II	6/25/2018
Glenrock	12/30/2018
Seven Mile	12/30/2018
Seven Mile II	12/30/2018
Glenrock II	1/16/2019
Rolling Hills	1/16/2019
High Plains	10/14/2019
McFadden Ridge	10/31/2019
Dunlap I	9/29/2020

However, as demonstrated by Mr. Timothy J. Hemstreet's testimony,[4] repowering the wind facilities will requalify them for PTCs.

The amount of renewable electricity PTCs received is dependent on the amount of generation at eligible facilities. The generation depends on weather, varying from year to year as weather patterns fluctuate. This volatility makes the generation from these facilities difficult to predict. The forecasted generation of these facilities used to set the offset rate, or forecasted NPC in the ECAC, is the same output currently used to calculate the value of the renewable electricity PTCs in general rate cases. To the extent the generation from these plants varies from the forecast, the impact on NPC gets updated via the ECAC filings but the PTC impact is not currently trued-up. Therefore, including a true-up of the PTCs in the ECAC is appropriate.

[4] Exhibit PAC/600.

Additionally, PTCs reduce PacifiCorp's revenue requirement, which provides a benefit to customers. PTCs are only available during the first 10 years of a qualifying resource's life, which means as they expire there can be a significant impact on PacifiCorp's revenue requirement.

Q. Please explain how PacifiCorp's efforts to integrate more renewable resources have led to the company proposing to include PTCs in the ECAC?

A. PacifiCorp is embarking on a major investment in renewable resources referred to as Energy Vision 2020. The investment will upgrade or repower PacifiCorp's existing wind fleet with longer blades and newer turbine technology and add new wind generation plants to the system. Energy Vision 2020 will qualify for PTCs, which will provide a direct benefit in customer rates. The ECAC is the best mechanism by which to track this customer benefit as it is variable and has a relatively short and defined life.

Q. How does PacifiCorp propose to treat PTCs in the ECAC?

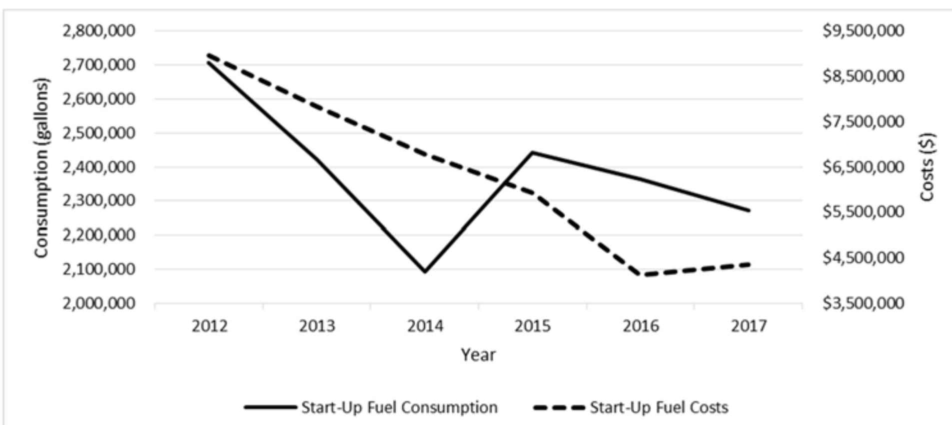
A. Similar to other items currently in the ECAC, PTCs would be included in the offset rate based on the forecasted wind production included as part of the forecasted NPC, and the balancing rate would include a true-up of actual PTCs.

IV. INCLUSION OF START-UP FUEL COSTS IN THE ECAC

Q. Please explain why start-up fuel costs should be included in the ECAC.

A. PacifiCorp's coal-fired generation plants rely on number two diesel fuel or natural gas as start-up fuel. The primary function of start-up fuel is to provide a proper ignition source during startup, flame stability during coal mill and other operation interruptions, and flame support during derate and shutdown activities. In addition, start-up fuel includes the cost of fuel oil used in coal mills. From a generation perspective, start-up fuel is not used to increase overall heat input as the thermal design uses coal to regulate and increase the overall heat input. Even though start-up fuel is not used to increase the heat input and generate energy, it is essential to the generation process and should be treated the same as the coal fuel cost. In addition, the cost of the number two diesel fuel or natural gas used for start-up should be included in the ECAC because of its exposure to volatile market prices. Table 2 below shows the total PacifiCorp Start-Up Fuel costs and volumes for 2012 through 2017. As depicted in the Table there is variability in Start-Up Fuel Consumption (volumes) and the cost of that fuel.

Table 2: Start-Up Fuel Consumption & Cost



	2012	2013	2014	2015	2016	2017
Start-Up Fuel Costs ($)	$8,967,108	$7,825,322	$6,777,327	$5,933,199	$4,119,298	$4,359,355
Start-Up Fuel Consumption (gallons)	2,707,041	2,421,867	2,093,035	2,441,758	2,364,998	2,271,372

Q. What has PacifiCorp done to control its start-up fuel costs?

A. PacifiCorp has shown best efforts to control start-up fuel costs by strategically entering into hedging agreements to minimize market exposure and variability in start-up fuel costs. However, market exposure and variability in volumes consumed still exists causing start-up fuel costs to fluctuate, justifying its inclusion in the ECAC.

Q. Why is start-up fuel not already included in the ECAC?

A. Historically, start-up fuel has been included in revenue requirement as an operations and maintenance expense. When the ECAC was created and NPC was defined it focused on the costs forecasted in PacifiCorp's production cost model or Generation and Regulation Initiative Decision Tools model. However, the description of Fuel Expenses within the Uniform System of Accounts (account 501) makes no distinction between start-up fuel and generating fuel. Also, there is a direct correlation to NPC that is similar to other coal fuel expenses. The volatility of these costs and direct connection to NPC make start-up fuel costs appropriate to include in the ECAC.

Q. Please explain how PacifiCorp's efforts to better integrate renewable resources have led to increased variations in start-up fuel costs.

A. In recent years, PacifiCorp has modified the dispatch and operations of its coal-fired generation plants due to the increased penetration of renewable resources on the system. These modifications have resulted in lower NPC; however, they have also increased the variation start-up fuel consumption. Coal plant minimum operating levels have been lowered and ramp rates have increased allowing coal generation to integrate and at times be displaced by zero-fuel-cost renewable energy. This increased flexibility aids in the integration of renewable resources on PacifiCorp's system and allows for greater energy imbalance market transfers (inter-regional benefits). These fluctuations in generation cause an increased variation in start-up fuel costs as units may ramp-up or -down more frequently dependent on the availability of lower cost resources.

Q. How does PacifiCorp propose to treat start-up fuel in the ECAC?

A. Similar to other items currently in the ECAC, forecasted start-up fuel costs would be included in the offset rate, and the balancing rate would include a true-up of actual start-up fuel costs.

Q. When does PacifiCorp propose the changes to the ECAC become effective?

A. In the August 1, 2018 ECAC filing, PacifiCorp plans to include a forecast of PTCs and start-up fuel costs in the offset rate for the 2019 test period.[5] Beginning with the August 1, 2019 ECAC filing, a forecast of PTCs and start-up fuel costs will be included in the offset rate and will be trued-up through the balancing rate.

Q. Does this conclude your direct testimony?

A. Yes.

[5] The August 1, 2018 ECAC Filing will have a requested rate effective date of January 1, 2019, which is the same requested rate effective date as this proceeding.