Docket No. 20000-520-EA-17
Witness: Rick A. Vail

BEFORE THE WYOMING PUBLIC SERVICE COMMISSION

ROCKY MOUNTAIN POWER

Rebuttal Testimony of Rick A. Vail

December 2017

Q. Are you the same Rick A. Vail who previously filed direct testimony in this case on behalf of Rocky Mountain Power ("Company"), a division of PacifiCorp?

A. Yes.

PURPOSE AND SUMMARY OF REBUTTAL TESTIMONY

Q. What is the purpose of your rebuttal testimony?

A. I support the Company's application for certificates of public convenience and necessity ("CPCNs") and for nontraditional ratemaking treatment, update the status of several aspects of the Aeolus-to-Bridger/Anticline Transmission line and 230 kV Network Upgrades ("Transmission Projects"), and show the important progress the Company has made on the Transmission Projects, as well as their decreasing risk. I also respond to the direct testimony of Wyoming Industrial Energy Consumers ("WIEC") witness Mr. James R. Dauphinais and Wyoming Office of Consumer Advocate ("OCA") witness Mr. Bryce J. Freeman.

Q. Please summarize your testimony.

A. I address the following key issues for the Transmission Projects:

- An update of the status of the following items:
  - Expected design and cost;
  - Engineering, Procurement, and Construction ("EPC") contracts;
  - Required permits at the federal, state, and local level; and
  - The required power system analyses and easements.
- The necessity of these projects to reduce line losses and derates along with dispatching of Company-owned resources.
- Mitigation of risks to minimize costs and project delays due to:

- The permitting process and the Company's plan for obtaining required permits prior to construction;
- Obtaining the required easements; and
- Construction delays (EPC contracts and mitigation for meeting construction deadlines).

- Relevant Open Access Transmission Tariff ("OATT") and Federal Energy Regulatory Commission ("FERC") precedent confirming the reasonableness of the Company's assumptions regarding revenues from third-party customers.
- The Company's need for timely conditional CPCNs to maintain project timelines.

TRANSMISSION PROJECTS UPDATE

Q. Since the Company's initial CPCN filing, has the Company maintained the project schedule and cost estimates for the Transmission Projects?

A. Yes. The Company has made significant progress in the development of the Transmission Projects since its initial filing. The Company is on track to meet its development schedule at or below the costs estimated in the Company's filing.

Q. Please provide a status update on the design of the Transmission Projects.

A. Currently, both the 500 kV transmission facilities and 230 kV network upgrades are in the detail design phase. For the 500 kV facilities, the Company is focusing on two key elements: (1) micro-siting structures; and (2) structure design.

Micro-siting structures involves confirming the precise structure locations and associated access roads to accommodate features such as pipelines, fiber optic cables, and other utilities, along with micro-siting to avoid sensitive biological or cultural

features.

The structure design process focuses on selecting the tower and foundation design the Company will use. Before filing the CPCN application, the Company determined that it could use a new tower design that would significantly reduce structure weights, and therefore cost, as compared to the tower design used in other segments of the Energy Gateway project. The Company is developing and testing the revised structures. The Company expects to complete development and testing by summer 2018, in line with the overall EPC schedule. The Company is currently completing the initial design phase, the first prototype is in the fabrication process, and tower testing is scheduled to begin mid-first-quarter 2018. Development efforts to date have confirmed the baseline assumptions included in the design and cost basis of the CPCN filing.

In addition, the Company completed additional geotechnical field survey work during summer 2017 to further aid the EPC contractors in bid preparation and reduce the risk assumptions associated with the foundation design. The Company is on track to complete the overall 500 kV transmission design package by April 2018.

Q. What is the status of the 500 kV substation design work?

A. The 500 kV substation design work is on schedule. The Company has focused recent efforts on thoroughly analyzing the precise location and space requirements for each new substation. This has led to a reduction in the initial space requirements and allowed for a more balanced cut and fill design to reduce the cost of importing high cost fill materials. At the Jim Bridger substation, design optimization efforts will facilitate construction of the new line termination bay while minimizing disruptions to the

existing facility. The Company anticipates completing the substation design necessary for competitive market EPC bidding by April 2018.

Q. What is the status of the 230 kV facilities?

A. Design work for the 230 kV transmission facilities is also ongoing. The Company has selected the proposed line route, after considering field surveys for biological and cultural constraints, as well as incorporating landowner comments. Structure design will be based upon the Company's standard design steel frame H frames. The Company will begin design work for the 230 kV substations in early 2018. All design work for the 230 kV facilities will be complete by fall 2018, to allow for the competitive market procurement process to support a 2019 construction period.

Q. Is there any change in the projected costs of the Transmission Projects?

A. No. The cost estimates included in the original filing are unchanged. As discussed below, the construction costs will be updated as part of the January 16, 2018 supplemental filing.

Q. What is the current status of the EPC contract for the 500 kV line?

A. The Company is currently in a competitive selection process for an EPC contractor for the 500 kV line. Because the 500 kV line is approximately 85 percent of the total costs of the Transmission Projects, the selection of the EPC contractor will be a significant milestone in confirming final project costs. The Company expects to have the preliminary results of this process by its supplemental testimony on January 16, 2018, and will include resulting cost updates at that time.

Q. Please provide more detail on the status of the EPC contracts for the Transmission Projects.

A. The Company has engaged with eight transmission line contractors to secure Master Service Agreement Terms and Conditions that will apply to the Transmission Projects. The contractors represent some of the leading engineering and construction companies in the country. Negotiations are currently ongoing to finalize these terms and conditions by January 2018.

Concurrent with these activities, the Company issued a request for detailed technical information to the same contractors. This request requires contractors to provide detailed project plans, resource profiles, schedules and cost data. The Company will analyze the responses to develop a shortlist of contractors, based on a combination of cost and viability of overall project approach, for a final pricing event in summer 2018. Contractor responses were received December 11, 2017. The Company will also use the data within the responses to inform analysis being performed for the Wyoming Industrial Siting Permit application. The 500 kV transmission line EPC contracts remain on track to be in place by October 2018.

For the 500/345 kV substation scope of work, the Company is currently preparing a Terms and Conditions Request for Proposal ("RFP") that will be issued by early February 2018 to up to six qualified contractors who will be responsible for full EPC services for the 500/345 kV substations. The RFP will also request budgetary price information. The Company intends to negotiate EPC contract terms and conditions before final pricing to expedite final contract negotiations in the fall of 2018. The Company will issue a final price bid event to all six companies in the summer of 2018.

For the 230 kV network upgrades, the Company intends to competitively source both the transmission line and substation construction through existing term "Line Service Agreements" the Company holds with over one dozen qualified contractors capable of working in Wyoming. The Company may acquire major substation equipment as a direct purchase through a competitive RFP to qualified vendors. The Company is on schedule to procure the 230 kV work in late 2018 with main construction anticipated during 2019.

Q. What is the status of the permits required for construction of the Transmission Projects?

A. The Company has been working with various agencies and stakeholders to obtain the final permits necessary to construct the facilities and the Company's permitting activities remain on schedule. A summary status of key items is presented below:

Section 106 Consultation, National Historic Preservation Act: Field surveys were completed during summer 2017. The final class III cultural report was submitted to the BLM on December 15, 2017. Amendments to the Programmatic Agreement have been issued to stakeholders and agreement is anticipated by December 31, 2017. Draft outlines for the Historic Properties Treatment Plan have been issued to stakeholders for comments, which are due December 15, 2017. Final approval by the Wyoming State Historic Preservation Office of the Class III report and the Historic Properties Treatment Plan is expected by mid-August 2018.

Plan of Development: Work continues in close cooperation with the BLM. Initial updated draft sections have been provided to the BLM, with comments received. The Plan of Development is on schedule to be completed by May 2018 to support the

EPC procurement schedule. Final Plan of Development mapping will be completed by the end of 2018 after inclusion of updated data from the 2018 field survey season.

Clean Water Act Section 401: Wyoming Department of Environmental Quality ("WYDEQ") Water Quality Division ("WQD") has categorically-certified the majority of the 2017 United States Army Corps of Engineers ("USACE") Nationwide Permits on ("NWP") non-Class 1 waters in Wyoming with the expectation that applicants must comply with the permit's terms and conditions, including permit specific 401 Certification conditions for the certification to be valid. These categorically-certified permits do not require an individual 401 Certification by the WYDEQ/WQD. The Project requires that a section 404, nationwide permit 12 ("NWP 12") be obtained. This will meet the requirements for Section 401 certification.

Clean Water Act Section 404/NWP 12: The Company has completed all wetland delineations to determine impacts which are being reviewed for avoidance via detail design reviews. The Company will submit its pre-construction notification to certify the project does not exceed greater than 0.1 acres of permanent impact at any one delineated wetland area. This is on schedule for approval in May 2018.

Wyoming Industrial Siting Permit: The Company held an initial meeting with the WYDEQ with respect to the Industrial Siting Permit and the WYDEQ determined that the jurisdictional determination first recorded in 2012 is still valid. The Company is preparing an application for submission by the end of June 2018. The 135-day review period as described in the Wyoming Administrative Rules, Chapter 35, will therefore conclude with a decision due by mid-November 2018.

Carbon County Conditional Use Permit ("CUP"): The Company held a preliminary meeting with Carbon County to discuss the requirements of the CUP application. The Company is preparing the application for a May 2018 submission and an August 2018 decision.

Q. What is the status of the technical studies that are necessary to support the Transmission Projects?

A. The Company performed numerous technical studies that demonstrate the benefits and reliability improvements resulting from the Transmission Projects. As with any large-scale transmission project, the Company continues to perform additional technical studies. Confidential Exhibit RMP___(RAV-1R) to my rebuttal testimony provides a detailed outline of the studies that have been performed so far and a description of the additional studies that will be performed, along with the timing of the additional studies.

In May 2017, the Company completed detailed studies, including power flow and stability analysis, evaluating a wide range of operating conditions. This report, the Preliminary Aeolus West Transmission Path Transfer Capability Assessment, is an exhibit to WIEC's testimony.

Preliminary NERC FAC-013-2 Transmission Assessment studies are currently underway for the Aeolus-to-Bridger/Anticline line and are expected to be finalized in 2020. The first set of studies to be included in this process has already been completed and demonstrated an increase of transfer capability of 750 megawatts ("MW") from east-to-west across Wyoming. Additional studies cannot be formally initiated until specific new southeast Wyoming wind resources have been identified in the 2017R

RFP process. Technical analysis demonstrates that the Aeolus-to-Bridger/Anticline line increases the system's stiffness factor sufficiently to interconnect up to 1,270 MW of new resources. All of the technical study work completed to date continues to support the initial assumptions for the Transmission Projects, the facilities identified, and the benefits that the Transmission Projects will provide.

Q. Mr. Dauphinais is critical of the fact that the Company has yet to complete many of the studies that are necessary for the Transmission Projects. (Dauphinais Direct, page 7, line 14 to page 8, line 9.) How do you respond to this criticism?

A. Mr. Dauphinais' testimony specifically focused on the lack of power flow, dynamic stability, stiffness factor analysis, Sub-Synchronous Resonance, and voltage stability studies for the Transmission Projects. All necessary transmission planning studies required by Western Electricity Coordinating Council ("WECC"), with the exclusion of Sub-Synchronous Resonance studies and stiffness factor analysis, were completed as part of the Aeolus West path rating process, which was granted Phase 3 status on January 5, 2011. Sub-Synchronous Resonance studies were completed in November 2017. Stiffness factor analysis is on-going with PacifiCorp utilizing an external consultant to perform Power System Computer Aided Design ("PSCAD**"**) analysis.

Q. Mr. Dauphinais is also critical of the fact that the Company is relying on a 2010 WECC study that he claims has not been updated. (Dauphinais Direct, page 8, lines 10–16.) How do you respond?

A. At the March 30, 2010, Gateway West and Gateway South combined project review meeting participants approved the Gateway Phase 2 Study Plan and agreed that incremental limitations for transmission segments that are added between states, will

be addressed via System Operating Limit ("SOL") studies. This same process was previously followed and successfully demonstrated by BPA and Avista for the West of Hatwai Expansion project. In addition to SOL studies, which will be completed before the project goes into service, PacifiCorp will be performing FAC-013-2 Transfer Capability Assessment studies, which will be shared with other utilities and WECC. These studies are scheduled for completion by October 2019, more than one year in advance of the project in-service date.

Q. Mr. Dauphinais claims the Company's October 2017 Aeolus West Transmission Path Transfer Capability Assessment Preliminary Study Report indicates that the Company requires additional facilities that have not been studied yet. (Dauphinais Direct, page 9, lines 9–21.) Is this correct?

A. No. The need for dynamic voltage support at Latham Substation and three different Remedial Action Schemes ("RAS") have been studied based on anticipated generation projects in the PacifiCorp Large Generation Interconnection ("LGI") queue; however, the final design of these facilities will not be formalized until the Company obtains the 2017R RFP results in early 2018. At that time, the technical studies will be finalized and specific technical requirements of the proposed facilities defined. Technical study timelines support the proposed in-service date of the project.

NECESSITY OF THE TRANSMISSION PROJECTS

Q. Mr. Freeman claims that the proposed Transmission Projects are not needed to serve customer load. (Freeman Direct, page 13, line 26 to page 14, line 19.) Mr. Dauphinais makes a similar claim. (Dauphinais Direct, page 5, lines 3–14.) Do you agree?

A. No. The Transmission Projects will improve system performance and reliability and directly serve customers. Both Mr. Freeman and Mr. Dauphinais focus on the fact that the Transmission Projects will be built only if the Wind Projects are also built. But that is because the Transmission Projects are economic to construct only if the Wind Projects are also built.

Q. What is the current status of the Company's eastern Wyoming transmission system?

A. The Company's eastern Wyoming transmission system is severely restrained and experiences voltage support issues. While the Company is in compliance with all NERC/WECC reliability standards, the stiffness factor (measurement of a transmission system's ability to control voltage within acceptable limits) in eastern Wyoming is such that new resources cannot be connected to the system and there is an increased risk of voltage swings outside acceptable limits in an outage condition. This system condition also limits the ability to schedule outages for segments of the transmission system in order to perform routine maintenance.

Q. Does the OCA agree that the Company's eastern Wyoming transmission system is severely constrained?

A. Yes. (Freeman Direct, page 14, lines 16–17.)

Q. Do these general conditions apply specifically to the area where the Transmission Projects will be constructed?

A. Yes. The same constraints and stiffness factor limits present in eastern Wyoming generally are present along the TOT 4A transmission path where the Transmission Projects will be constructed. Because of the constraints and the stiffness factor limit, new resources cannot be connected behind the path (*i.e.*, east of the path). Further, an outage of a TOT 4A transmission element results in a path derate to prevent a thermal or voltage system violation and maintain system reliability. Existing generation must often be curtailed to operate within derated path limits, which is a curtailment in firm transmission service rights used to serve customer load.

Q. Does the OCA agree that the Transmission Projects will increase system reliability?

A. Yes, while Mr. Freeman raises concerns about cost-effectiveness, he agrees that the Transmission Projects will provide important reliability benefits. (Freeman, page 15, line 27.)

Q. Has the Aeolus-to-Bridger/Anticline line been identified as part of a regional transmission planning process?

A. Yes. The current transmission system master plan for Wyoming calls for the construction of facilities associated with Energy Gateway, specifically Energy Gateway West and Energy Gateway South. The Aeolus-to-Bridger/Anticline line is a subset of the Energy Gateway West project. The Company has identified these projects in long term transmission plans in order to: (1) relieve congestion and increase transmission capacity across Wyoming, allowing interconnection and integration of new generation

resources and enabling more efficient dispatch of and greater flexibility in managing existing resources; (2) provide critical voltage support to the transmission system; (3) improve system reliability; and (4) reduce energy and capacity losses. Up until now, the important benefits of the Transmission Projects have been cost prohibitive. As a part of the Combined Project, however, customers can economically obtain the much needed support and benefits the Transmission Projects will bring to the Company's existing transmission network.

Q. Will the Transmission Projects also increase system efficiency?

A. Yes. The addition of a transmission line in parallel with an existing line(s) or path will reduce the impedance of the path, resulting in overall reduced energy line losses. Line losses before and after the addition of the Transmission Projects were compared, with the difference being the line savings attributed to the Transmission Projects. Reduced line losses mean more efficient delivery of energy and capacity at reduced costs with or without the addition of new generation resources providing additional operational flexibility of existing resources.

Q. Have there been previous investments in transmission facilities along the TOT 4A path?

A. Yes. Since the time that the TOT 4A transmission path was initially defined, a significant number of transmission additions and modifications have been made to the Wyoming transmission system to increase the capacity on this path, including addition of new transmission lines (Spence – Mustang, 1991; Dave Johnston – Casper Rebuild, 2010; and Sheridan-Dry Fork-Hughes / Carr Draw, 2010-11), adding shunt capacitors for voltage support, implementation of dynamic line ratings (Platte-Miners 230 kV line,

2013) and addition of a synchronous condenser (Standpipe, 2016).

As significant new facilities were added, WECC path rating studies have been performed to increase the rating of the path. The last set of path rating studies were completed April 17, 2013, with the granting of Phase 3 status by the WECC planning coordination committee ("PCC"). These additions and subsequent path rating have supported the addition of resources behind the path to the point today where the stiffness factor and the path rating cannot support additional resources without infrastructure additions. Generation interconnection studies have shown that new resources cannot be reliably interconnected without the addition of transmission infrastructure.

RISK MITIGATION OF TRANSMISSION PROJECTS

Q. Mr. Dauphinais identifies many risks associated with development of the Transmission Projects, such as cost over-runs, or construction delays, that may adversely impact their economics. (Dauphinais Direct, page 3, lines 1–10.) Mr. Freeman is also concerned that the schedule provides little room for delay. (Freeman Direct, page 29, lines 1–20.) Please describe the Company's experience mitigating these types of transmission project risks.

A. In the past five years, the Company has completed two significant and similar Energy Gateway transmission projects: (1) the 100-mile 500/345 kV Mona-to-Oquirrh transmission line; and (2) the 170-mile 345 kV Sigurd-to-Red Butte transmission line. Similar to the Aeolus-to-Bridger/Anticline line, both projects required a National Environmental Policy Act-compliant Environmental Impact Statement, including a Record of Decision, Plan of Development, and Right of Acquisition process. Using its

expertise in utility resource development and project management, the Company delivered both the Mona-to-Oquirrh and Sigurd-to-Red Butte transmission lines within the cost estimates used in the CPCN processes and on time. Table 1 below summarizes the actual project performance relative to the CPCN filing information:

TABLE 1

	Original CPCN Filing Information				ACTUAL DATA	
PROJECT	REF	Date of Application	COST ($,000,000s)	In-Serivce	COST	In-Service
Mona Oquirrh	UT Docket 09-035-54	November 21, 2009	$ 450.00	5/31/2013	$ 364.00	5/31/2013
Sigurd Red Butte	UT Docket 12-035-97	September 17, 2012	$ 380.00	6/30/2015	$ 357.80	6/30/2015

The Transmission Projects have the same project management team, and the Company developed the budget and schedule in the same manner as these earlier projects. The Company's past experience substantially mitigates construction cost and schedule risk.

Q. Mr. Dauphinais specifically argues that the lack of Wyoming Industrial Siting Permit and the lack of a CUP from Carbon County may delay the Transmission Projects. (Dauphinais Direct, page 10, line 16 to page 11, line 15.) Mr. Freeman expresses a similar concern over permitting risks. (Freeman Direct, page 25, lines 11–17.) How do you respond to this concern?

A. The Company understands that the permitting process for transmission is complex, but the Company is already well on its way to securing all required permits. In my testimony regarding permit status, I note that the Company is currently preparing applications for all of the major remaining permits. The permitting schedule sets forth completing the process by the end of 2018. To mitigate the risk of permitting delays, this schedule allows some delay without adversely impacting the overall construction schedule.

In addition, to further mitigate the risk of potential delays, the Company is

actively engaging with stakeholders to inform them of the Transmission Projects and the applicable permit application process. The Company meets with the BLM on a regular basis to review project status, planned or expected deliverables to the BLM and cooperating agencies in relevant areas such as Section 106 consultation, Plan of Development work, and the like. Similarly, the Company has met with the Wyoming Industrial Siting Council to review the application process and the Company will soon begin to engage with agencies supporting the Industrial Siting Permit to inform those agencies of the project details. Engaging with stakeholders increases the ability to understand local needs, identify appropriate approaches and potential mitigations to successfully complete the permit and approval process.

Q. What about the risk of delay associated with obtaining rights-of-way for the Transmission Projects?

A. Although the Company does not intend to complete acquisition of rights-of-way until early 2019, the Company is confident that this timing will not delay the Transmission Projects. As outlined in the testimony of Company witness Mr. Roderick D. Fisher, the Company has been engaged with landowners on the projects since 2007 as part of its outreach for the overall Energy Gateway West project. During that time the Company learned a great deal about the concerns of landowners and has, where practical, addressed many of them.

In summer 2017, the Company again opened dialogue with all landowners willing to discuss the Transmission Projects. This effort has identified, and continues to identify, additional concerns and questions that the Company is committed to resolve in order to balance the needs of landowners with the project and its schedule. This

renewed discussion will, through previous experience, resolve many issues and lead to successful conclusion of negotiations. Because any project will affect landowners in different ways, the effort and time frame of negotiations are individual and will vary from landowner to landowner. When landowners are willing to actively engage in the process, timely resolution is almost always assured.

Q. How has the Company managed the risk of construction cost over-runs and delays for the Transmission Projects?

A. Since starting the Energy Gateway Program, which includes the Aeolus-to-Bridger/Anticline line, the Company has used a Facilities Definition Document to clearly define and describe the required scope of the project to all parties. The Facilities Definition Document is one of the foundations for the project success described earlier in my testimony. This document was updated prior to development of the schedule and budgets that were included in the CPCN application. A clear definition of the project scope from the beginning of the project life-cycle brings an increased confidence in the accuracy of forecasts.

In addition, as an overall strategy of controlling contract cost and performance, the Company will secure fixed-price, fixed-performance date contracts that will provide liquidated damages for late performance. The Company also utilizes project management techniques to trend and forecast performance, including earned value analysis, which provides an early notification of potential productivity concerns that can then be addressed before becoming a major issue. In fact, the Company anticipates executing contracts for the Aeolus-to-Bridger/Anticline line (which is a substantial portion of the overall Transmission Projects' cost) in early 2018 that will effectively

lock-in the cost for that line.

Q. How has the Company evaluated risks associated with the construction schedule?

A. Project risks related to the construction schedule fall broadly into three classifications: (1) restricted access due to environmental constraints; (2) weather restrictions; and (3) late commencement due to late receipt of all permits.

To mitigate the potential impacts due to environmental constraints, the Company considered previous project history constructing in areas with similar levels of constraints and built the overall schedule based on this experience. From previous practical experience and the ongoing agency engagements described in my testimony, the Company understands that mitigation techniques, such as supervised or monitored access into environmentally restricted areas, is possible through negotiation and cooperation between respective parties. Additional mitigation plans such as re-sequencing of work or schedule compression have also been successfully employed on previous projects, with the contractor assuming the risk of occurrence for such items.

To mitigate the risk of constraints caused by weather, the schedule has been developed to minimize construction during the winter and perform additional work in the summer. In 2009, the Company engaged with several qualified and respected construction contractors to analyze the feasibility of the construction program. This exercise informed the Company on the overall approach needed for the project and has aided the development of the project schedule. In addition, the Company is currently negotiating contracts where the construction contractor will assume the risk for weather delays and allow for such delay within their schedule and the guaranteed completion dates within the contract.

Q. What are the primary risks and mitigation measures underway?

A. The primary risk in maintaining the critical-path construction schedule for the Transmission Projects is the on-going regulatory review and approval processes currently underway. In particular, it is critical that the Company obtain CPCNs for the Transmission Projects, which are conditioned upon acquisition of all necessary rights-of-way, with sufficient time to meet this condition. The Company must also obtain the outstanding siting permits by the end of 2018. If the Company does not receive conditional CPCNs in early 2018, or siting permits by the end of 2018, it will need to assess the viability of achieving a year-end 2020 online date before moving forward. To manage the risk of obtaining timely regulatory reviews and approvals, the Company will secure off-ramps in its EPC contracts, allowing the Company to be assured of regulatory approvals before significant capital commitments or outlays are made.

Q. Is the Company confident that it can manage the construction schedule risk and deliver the Transmission Projects by 2020?

A. Yes. To manage construction schedule risk, the Company will structure and manage the Transmission Projects on a firm, date-certain, fixed-price, turnkey contract basis. Construction contractors and equipment suppliers will be held to key construction and delivery milestones and development of compressed schedule mitigation plans, if required. The Company will establish construction contract completion dates and backstop them with guarantees.

Q. Does the Company have experience constructing similar types of projects that require completion by a date certain?

A. Yes. The Company has managed multiple major projects that required the work be

completed by a date certain, or similar circumstances where project completion was required to allow a project to tie into an existing system within a short planned-outage window or closely coordinated with delivery of transmission system network upgrades. Examples of these projects include: (a) Dunlap wind facility; (b) High Plains wind facility; (c) McFadden Ridge I wind facility; (d) Populus-to-Terminal 345 kV transmission line; (e) Sigurd-to-Red Butte transmission line; (f) Mona-to-Oquirrh transmission line; (g) Lake Side 2 combined cycle natural gas facility; (h) Jim Bridger Unit 3 and Jim Bridger Unit 4 selective catalytic reduction systems; (i) Naughton Unit 1 and Naughton Unit 2 flue gas desulfurization systems ("FDG"); (j) Hunter Unit 1, Hunter Unit 2, Huntington Unit 1, and Huntington Unit 2 pulse jet fabric filters ("PJFF"); and (k) Wyodak PJFF, (l) Dave Johnston Unit 3 and Dave Johnston Unit 4 PJFF and FGD systems.

Q. If the Transmission Projects are not fully in-service by December 31, 2020, can the Wind Projects still qualify for the production tax credit?

A. Yes. Assuming the Transmission Projects are not completed by December 31, 2020, but otherwise have facilitated synchronization to the transmission grid and commissioning of individual wind turbines in accordance with Internal Revenue Service ("IRS") guidance, the Company would treat a completed and functional wind turbine as being placed in service regardless of any transmission constraints affecting a wind project. In Private Letter Ruling ("PLR") 20033403, the IRS ruled that if a wind turbine has all necessary operating permits and licenses, has been synchronized to the power grid, the critical tests for the components of the wind turbine have been completed, the wind turbine has been placed in the control of the taxpayer by the

contractor and the taxpayer has sold electricity that has been produced by the wind turbine, then the wind turbine has been placed in service. This is even if the wind project is not producing transmission-level electricity due to a delay in a transmission project and has not been deemed to be under commercial operation by a regulatory commission. A PLR may not be relied on as precedent by other taxpayers; however, it is indicative of the IRS position on certain matters.

THIRD-PARTY TRANSMISSION REVENUE

Q. Mr. Dauphinais also expressed a concern that the Company's forecasted third-party transmission revenue resulting from the Transmission Projects will not materialize because the costs of the Transmission Projects may not be included the Company's OATT rates. (Dauphinais Direct, page 12, lines 17–19). How do you respond to this concern?

A. Mr. Dauphinais' concern is unfounded. The Transmission Projects are network transmission assets under the Company's OATT because they will be integrated into the Company's transmission network, available for scheduling by all customers, and provide benefits to the network, such as congestion relief, increased transmission capacity and improved system reliability, among others. Based on these characteristics, I understand that FERC precedent supports rolling the costs of these assets into the Company's transmission rates.

I also understand that FERC's longstanding open access transmission policies state that the cost of network upgrades necessary to accommodate transmission service should be rolled into transmission rates because these types of upgrades are presumed to benefit all network users. As noted earlier in my testimony, the Transmission Projects

clearly provide network benefits to all customers that utilize the transmission system, including third-party transmission system users, while also allowing additional generation to be connected.

Q. Does Mr. Dauphinais recognize that FERC precedent generally supports rolling the costs of network transmission facilities into OATT rates?

A. Yes. (Dauphinais Direct, page 13, lines 16–17.) Mr. Dauphinais cites only one case where a utility was unable to roll a transmission project into its FERC formula rates. Notably, the 1993 case cited by Mr. Dauphinais predates two landmark FERC orders that revamped major federal transmission policies and that still define the federal landscape we operate in today. First, FERC's 1994 transmission pricing policy order essentially marked the beginning of the presumption that any network transmission facility benefits all network users and, thus, the cost of any network facilities should be rolled into transmission rate base and shared among all network users rather than directly allocated to the customer "causing" the need for the new facility. *Inquiry Concerning the Commission's Pricing Policy for Transmission Services Provided by Public Utilities Under the Federal Power Act*, 59 Fed. Reg. 55,031 (Nov. 3, 1994), FERC Stats. & Regs. ¶ 31,005 46 (1994), order on reconsideration, 71 FERC ¶ 61,195 (1995).

Second, in 1996, FERC established open access transmission policies, including the pro forma OATT. *Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, 61 Fed. Reg. 21,540 (May 10, 1996), FERC Stats. & Regs. ¶ 31,036 (1996).

Q. Has the Company ever had FERC reject a request to roll the costs of a transmission project into its OATT rates?

A. No.

Q. How will the costs of the Transmission Projects flow into the Company's transmission rates, and who will pay these rates?

A. The Company's current transmission formula rate (included in PacifiCorp's OATT) was approved by FERC in Docket No. ER11-3643. PacifiCorp's transmission formula rate is updated annually to update the transmission revenue requirement ("ATRR") that represents the annual total cost of providing firm transmission service over the test year. The ATRR calculation incorporates a return on rate base, income taxes, expenses, and certain revenue credits, among other specific elements and adjustments. Transmission assets, including new transmission capital, are included in PacifiCorp's formula weighted by months in service. The ATRR is converted into a rate by dividing ATRR by firm transmission demand. All third-party revenues for transmission service (along with third-party revenues for ancillary services) are included as revenue credits in the calculation of rates in each of PacifiCorp's state retail jurisdictions.

CONDITIONAL CPCNS

Q. The OCA testifies that the Company originally sought conditional CPCNs in this filing, but suggests that the requested CPCNs are no longer conditional under the case schedule. (Freeman Direct, pages 24–25.) To clarify, is the Company still seeking conditional CPCNs?

A. Yes. The Company requested conditional CPCNs by April 2018 to allow it to begin obtaining rights-of-way ("ROW"). The Company's request has not changed.

Conditional CPCNs will allow the Transmission Projects to move ahead, with the requirement that the Company return to the Commission to remove the condition on the CPCNs, once it has obtained all ROW.

Q. Why does the Company need the conditional CPCNs by April 2018?

A. Under the schedule for the Transmission Projects, the Company needs conditional CPCNs in April 2018, to allow sufficient time for the ROW acquisition process to be completed to meet the April 1, 2019, construction start date.

Q. Does this conclude your rebuttal testimony?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION OF WYOMING

IN THE MATTER OF THE APPLICATION OF ROCKY MOUNTAIN POWER FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY AND NONTRADITIONAL RATEMAKING FOR WIND AND TRANSMISSION FACILITIES	DOCKET NO. 20000-520-EA-17 (RECORD NO. 14781)

AFFIDAVIT, OATH AND VERIFICATION

Rick A Vail (Affiant) being of lawful age and being first duly sworn, hereby deposes and says that:

Affiant is the *Vice President, Transmission* for PacifiCorp, 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 *Vice President, Transmission.*

Further Affiant Sayeth Not.

Dated this 15 day of December, 2017

Rick A Vail
Vice President, Transmission
825 NE Multnomah St., Suite 1600
Portland, OR 97232
503-813-6938

STATE OF Oregon)
) SS:
COUNTY OF Multnomah)

The foregoing was acknowledged before me by *Rick A Vail* on this 15th day of December, 2017. Witness my hand and official seal.

Notary Public

My Commission Expires: 3-12-19

OFFICIAL STAMP
PATRICIA ANN DEAS
NOTARY PUBLIC-OREGON
COMMISSION NO. 937208
MY COMMISSION EXPIRES MARCH 12, 2019