BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Direct Testimony of Jeffrey K. Larsen

June 2017
Q. Please state your name, business address, and current position with PacifiCorp d/b/a Rocky Mountain Power ("Company").
A. My name is Jeffrey K. Larsen, and my business address is 1407 West North Temple, Suite 310, Salt Lake City, Utah 84116. I am currently employed as Vice President of Regulation for Rocky Mountain Power.

Q. Please describe your education and professional background.
A. I received a Master of Business Administration degree from Utah State University in 1994, and a Bachelor of Science degree in Accounting from Brigham Young University in 1985. I have also participated in the Company’s Business Leadership Program through the Wharton School, and an Advanced Education Program through the J.L. Kellogg School of Management at Northwestern University. In addition to formal education, I have also attended various educational, professional and electric industry-related seminars and training programs during my career at the Company. I joined the Company in 1985, and I have held various accounting, compliance, regulatory, and management-related positions prior to my current position.

Q. Have you provided testimony in previous regulatory proceedings?
A. Yes. I have filed testimony on various matters in the states of Utah, Idaho, Wyoming, California, Washington, Oregon, and Nevada.

Q. What is the purpose of your testimony?
A. I explain the Company’s requested ratemaking treatment for the wind repowering project for which the Company is seeking approval in this Application. Specifically, I describe how the Company proposes to match the costs and benefits of the wind
repowering project by deferring the costs and benefits that do not go through the Energy Balancing Account (“EBA”) and passing back the net benefits through the proposed Resource Tracking Mechanism (“RTM”). I also explain and support the Company’s proposed accounting treatment and request for continued cost recovery of the upgraded and replaced wind equipment.

Q. Please summarize the Company’s proposed ratemaking treatment for the wind repowering project.

A. The Company requests approval of its decision to act on the time-constrained economic opportunity to upgrade most of its wind facilities and requalify for federal production tax credits (“PTCs”). The wind repowering project will provide customers additional cost-effective generation, and tax benefits resulting from renewed PTC eligibility, and extend the life of the repowered facilities by at least an additional 10 years.

The proposed RTM is designed to capture customer benefits resulting from wind repowering, and match those benefits with the costs of repowering until the costs and benefits are fully included in base rates through a general rate case. Once the full costs and benefits are included in base rates, recovery of those elements would cease through the RTM, with the exception of PTCs. The Company is proposing to cap the RTM until the next general rate case so that, after taking into account the wind repowering benefits that will flow through the Company’s EBA, it will not operate to surcharge customers. After the next general rate case, the Company proposes to use the RTM to track the actual change in PTCs from the base level included in rates. Because PTCs are entirely dependent on the variable output of the repowered wind facilities and
difficult to precisely forecast, tracking PTCs through the RTM ensures that customers receive their full value.

Under the RTM, the Company would begin deferring the costs and benefits associated with the wind repowering activity for each repowered wind facility in the month they go into service.

Q. Please summarize the Company’s proposed accounting treatment for the wind equipment replaced by repowering.

A. The Company proposes to record the remaining book balances of replaced wind equipment in the accumulated depreciation reserve (“ADR”), and continue to recover these costs in rates.

Q. As the repowered wind facilities come into service, what are the annual, estimated deferral balances that would flow through the RTM?

A. As described more fully later in my testimony and exhibits, the Company is projecting estimated, annual revenue requirement benefits in Utah of up to $10.7 million by 2022, as summarized in Figure 1. The Company will capture the impacts of wind repowering through the RTM until they are included in base rates.

Figure 1

<table>
<thead>
<tr>
<th>Repowering Estimated Revenue Requirement Cost (Benefit)</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
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<tbody>
<tr>
<td>Total Company 1 Revenue Requirement</td>
<td>-5,938</td>
<td>6,443</td>
<td>-9,380</td>
<td>-25,184</td>
</tr>
<tr>
<td>2 Utah Allocated</td>
<td>-2,531</td>
<td>2,735</td>
<td>-4,012</td>
<td>-10,748</td>
</tr>
<tr>
<td>3 Utah EBA</td>
<td>-215</td>
<td>-4,136</td>
<td>-5,859</td>
<td>-7,732</td>
</tr>
<tr>
<td>4 Utah Deferral</td>
<td>-2,316</td>
<td>4,136</td>
<td>1,857</td>
<td>-3,017</td>
</tr>
<tr>
<td>5 Net Customer Benefit</td>
<td>-2,531</td>
<td>0</td>
<td>-4,012</td>
<td>-10,748</td>
</tr>
</tbody>
</table>
Q. How do the revenue requirement benefits in Figure 1 relate to Company witness Mr. Rick T. Link’s analysis of revenue requirement savings from wind repowering?

A. Mr. Link conducted a revenue requirement differential analysis, while my analysis is a revenue requirement calculation based on his information.

Q. Is the RTM proposed here the same mechanism the Company proposes in the concurrently filed application for approval of a resource decision for new wind resources and associated transmission?

A. Yes. The Company proposes to use an RTM to track the costs and benefits associated with both wind repowering and the new wind and transmission resources discussed in the concurrently filed application. The Company proposes to separately track the costs and benefits of the two projects through different sections of the new tariff, in this case Schedule 97, which I provide in Exhibit RMP__(JKL-5). The Company proposes slight differences in the treatment of the deferral balances, applying the surcharge cap to wind repowering only.

REQUEST FOR APPROVAL OF RATEMAKING TREATMENT

Q. Under what authority is the Company proposing approval of the ratemaking treatment for the wind repowering project?

A. The Company seeks approval to defer the cost and benefits of the wind repowering project under Utah Code Ann. § 54-4-23, with the net benefits to be passed through the proposed RTM. Utah Code Ann. § 54-17-402 authorizes the Commission to approve a utility’s proposed “resource decisions” outside of a general rate case. Utah Code Ann. § 54-17-403 authorizes cost recovery of the approved resource decision “in a general
rate case or other appropriate proceeding.” The Company proposes to use the annual RTM review, filed concurrently with the annual EBA review, as the proceeding referenced in Utah Code Ann. § 54-17-403 for cost recovery (or in this case, pass through of net benefit). This will address the proper ratemaking treatment to match the annual costs and benefits of the wind repowering project until the incremental costs and benefits are fully reflected in base rates, primarily including incremental capital and operating costs, and PTC benefits. Net power cost savings would currently be captured in the Company’s EBA, however, to the extent the EBA is modified or eliminated, the Company would use the RTM to pass back any incremental net power cost savings not captured in the EBA. This mechanism will align the costs and benefits so that customers receive the full net benefits from the repowering project while shareholders receive appropriate cost recovery of the prudent investment. Once the full costs are reflected in base rates in a general rate case, the Company proposes that the RTM continue to track only year-to-year changes in PTCs to capture the full impact of the new PTCs.

Q. Why is it appropriate to provide the Commission and interested parties the opportunity to review and approve the ratemaking treatment for a resource decision before construction?

A. The benefit of the RTM being approved now is that it sets the process for consistent and fair treatment between customers and shareholders with respect to the ratemaking impacts of the wind repowering project. As a general policy matter, the Company believes that it is prudent and in the public interest to have regulatory review of large investments before implementation and construction. Such review avoids the need to
address large investments in the context of a rate case along with the potential for
disallowances of very large investments. For instance, in Docket No. 14-035-147, the
Commission and interested parties reviewed and approved a stipulation for closure of
the Deer Creek Mine, that was initially filed under the provisions of Utah Code Ann.
§ 54-17-402, in conjunction with the ratemaking treatment.

As the other Company witnesses have discussed, the wind repowering project
has positive economic benefits for customers and is in the public interest due to the
benefits of the incremental generation and PTCs. Without the proposed ratemaking
treatment through the RTM, customers may not obtain the full benefits of the project,
or a mismatch would occur between costs and benefits with customers receiving the
immediate benefit of the incremental zero-cost energy production with no recognition
of the capital costs, which would be borne by the shareholders. Currently, 100 percent
of the benefits of incremental zero-cost generation from repowering would
automatically flow through the EBA while the PTCs and costs associated with the
investments would not be captured in rates and would flow to shareholders. Customers
would be receiving benefits while shareholders would absorb a net cost. The deferral
and RTM seeks to align the costs and benefits so that customers receive the full net
benefits from the repowering project while shareholders receive appropriate cost
recovery of the prudent investment. Moreover, the Company is proposing to implement
the RTM concurrently with the EBA to match the timing for all costs and benefits in
rates until reflected in base rates following a general rate case.
Q. Please describe the mechanics of the RTM.

A. Upon the completion of repowering at each wind resource, the Company will begin monthly deferrals of the associated costs and benefits in the RTM balancing account, which will operate on a calendar-year basis. On March 15 each year, the Company will file the RTM deferral balance from the prior calendar year, to be included in rates beginning May 1, on an interim basis. This schedule is aligned with the EBA, and the RTM review will continue on the same schedule as the EBA each year.

Q. Why is it important to link the timing of the RTM with the EBA?

A. Linking the RTM and the EBA helps match the increased production benefits of the repowered wind resources, which will flow through the EBA, with the costs of wind repowering. The RTM will minimize rate changes by using an annual filing date, as opposed to changing rates every time the Company completes repowering of a specific wind resource. Also, by filing the EBA and RTM concurrently, the Company can more readily combine the two mechanisms into a single line item on customer bills.

Q. What costs and revenues will be incorporated in the RTM deferral?

A. The deferral for each of the repowered wind resources will include the following revenue requirement components:

- Plant revenue requirement, consisting of:
  - Capital investment
  - ADR
  - Accumulated Deferred Income Tax (“ADIT”)
  - Operations and Maintenance Expense (“O&M”)

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• Depreciation expense
• Property taxes
• Wyoming Wind Tax
• Net Power Cost ("NPC") savings
• PTCs

These items are summarized in Exhibit RMP___(JKL-1). The Company will calculate the RTM deferral as the difference between the value included in base rates for these items and the new value taking into account the costs and benefits of repowered wind facilities as they are placed into service.

**REVENUE REQUIREMENT COMPONENTS OF RTM**

**Q.** Please describe how the RTM will track rate base components, which include the capital investment, ADR, and ADIT.

**A.** After a repowered wind resource is placed into service, the Company will defer the full amount of the capital investment, ADR, and ADIT related to repowering in the RTM. Once the Company has included some or all of the repowered wind resources in base rates through a future general rate case, the amount in rates will become the “wind base” plant balance that would be subtracted from the capital investment in subsequent annual RTM filings. The Company will use the net plant balance described above to calculate a return on investment using the most recent Commission-approved cost of capital and income tax rate.

**Q.** Please describe how the RTM will track depreciation expense.

**A.** The Company will include depreciation expense in the RTM deferral as the actual monthly plant-in-service balances associated with wind repowering, less the repowered
wind base plant-in-service balance, multiplied by the current depreciation rates. Until
a general rate case is filed, no depreciation expense associated with the repowered wind
resources is reflected in base rates, so the full amount would be included in the RTM.

Q. Please describe how actual depreciation expense will be calculated.
A. The current depreciation rates will be applied to the gross electric plant-in-service
(“EPIS”) balance, associated with wind repowering, to calculate the depreciation
expense. As existing equipment is replaced by repowering, the Company will transfer
the replaced assets from gross EPIS to the ADR, thereby reducing depreciation expense
on the existing investment until the next depreciation study. At that time, the Company
will review the net plant balance for wind resources and propose new depreciation rates
to recover both the repowering investment and the remaining investment in the replaced
equipment. Because the repowering investment is projected to be less than the
remaining investment, the initial depreciation expense after wind repowering will
temporarily decrease until the Company implements new depreciation rates from its
next depreciation study. The RTM deferral will reflect this decrease in depreciation
expense. I provide more details on the proposed ratemaking treatment for replaced
equipment later in my testimony.

Q. Please estimate the amount of the temporary decrease in depreciation expense.
A. As of December 31, 2016, the Company had approximately $2.0 billion gross
investment in wind with approximately $67 million of annual depreciation expense.
Approximately $1.2 billion of gross electric plant-in-service will be replaced as part of
the wind repowering project and transferred to the ADR. Wind repowering will cost
approximately $1.1 billion, so gross plant will decrease from $2.0 billion to $1.9
billion, thereby reducing annual depreciation expense from approximately $67 million to approximately $64 million based on the current depreciation rates.

Q. What happens to depreciation expense after the initial implementation of the wind repowering project?

A. The reduced depreciation expense will continue until the rates from the next depreciation study are approved by the Commission and included in base rates. The depreciable lives and depreciation rates of all assets, including the Company’s wind assets scheduled for repowering, will be reviewed as part of the next depreciation study to be filed with this Commission in the fall of 2018. As part of the depreciation study, the depreciation rates will be revised to recover the remaining wind plant balances, including the impacts of the debit balance in the ADR, over the life of the assets.

Q. How will the RTM reflect incremental O&M expense?

A. As repowered wind resources are placed into service, the Company will compare the actual O&M expense for each wind resource to the 2014-2017 historical four-year average of O&M expense by wind resource. The difference will be included in the RTM deferral.

Q. Why did the Company select a four-year average of calendar years 2014-2017?

A. A pre-repowering four-year historical average helps to smooth variations in O&M expense that can occur year to year. Also, because repowering may impact wind resources during 2018 and 2019, those years should be excluded for an accurate reflection of the average wind O&M before wind repowering.

Q. How will the RTM reflect property taxes?

A. The Company will calculate property taxes associated with the repowered wind
resources by taking the monthly average of the capital investment less ADR included in the RTM deferral multiplied by the average property tax rate from the Company’s last general rate case.

**Q. How will the RTM reflect Wyoming wind taxes?**

**A.** The Company will calculate the Wyoming wind tax by taking the incremental generation associated with wind repowering multiplied by the Wyoming wind tax rate.

**NPC AND PTC BENEFITS IN THE RTM**

**Q. Please explain the calculation of the incremental NPC benefits in the RTM.**

**A.** Wind repowering will result in additional zero-fuel-cost energy, reducing total NPC. Under the current EBA, 100 percent of the incremental NPC benefits of the wind repowering project will be credited to customers, with zero percent assigned to the Company. Based on the Commission order in Docket No. 09-035-15, the current EBA pilot structure extends through December 31, 2019. If at the conclusion of the EBA pilot period, the EBA structure is modified such that less than 100 percent of the incremental NPC benefits is credited to customers through the EBA, the Company proposes to capture any of the incremental NPC benefits in the RTM that are not credited to customers through the EBA, so that customers continue to receive 100 percent of the net benefits of the wind repowering project until the costs and benefits of the wind repowering project are fully reflected in rates.

In order to credit customers with 100 percent of incremental NPC benefits the Company would calculate the incremental NPC benefit in the RTM as the increased generation achieved by repowering, applied to the total wind generation to derive the
incremental energy on a per-plant basis. The calculation is described in Exhibit RMP__(JKL-4).

The Company would then value the incremental energy using a monthly market price less wind integration costs, and the RTM will pass the appropriate percentage of that value through to customers.

**Q. What market price would the Company use to value the incremental energy?**

**A.** The market price used in the calculation would be dependent on the physical location of the wind resource and the time of the generation. If the wind resource is located on the west side of the Company’s system, the monthly Mid-Columbia heavy load hour (“HLH”) and light load hour (“LLH”) market price would be used. If the wind resource is located on the east side of the Company’s system, the monthly Four Corners HLH and LLH market price would be used. Additionally, the market price would be reduced by the wind integration costs from the most recent integration study, which currently is from the Company’s 2017 Integrated Resource Plan.

**Q. Please explain the calculation of the PTCs that will be included in the RTM.**

**A.** Currently, the IRS rate for PTCs is $24 per megawatt-hour, and PTCs are generally applicable for a period of 10 years after a wind resource is operational. The PTC rate is applied to the actual megawatt-hours of generation from the eligible wind turbine resources. This produces a tax credit that can be used to offset a company’s income tax expense under IRS guidelines. To derive the revenue requirement value of the tax credit, the PTC value must be grossed-up by the Company’s tax gross-up rate. The Company will use the tax gross-up rate from its most recent general rate case to
calculate the value of the PTCs from wind repowering. The RTM will reflect the value for the grossed-up PTCs.

Q. **Why should the RTM track the benefits of the PTCs on an ongoing basis?**

A. The amount of PTCs received is entirely dependent on the amount of the generation at eligible facilities. The generation is highly dependent on weather, varying from year-to-year as weather patterns fluctuate. Accordingly, because the PTCs are significant and actual output is beyond the control of the Company, the Company proposes to use the RTM to track and true-up PTCs on an ongoing basis.

Q. **Do the base rates that are currently in place include PTCs for the existing resources?**

A. Yes. These resources qualified for PTCs when they initially began commercial operation. A value based on the generation from these projects during the test period is currently included in base rates. The Company is not proposing to remove this value from base rates through this mechanism. The RTM is intended to track the PTCs associated with repowered wind resources only.

Q. **How will the Company treat wind repowering costs incurred before the in-service dates of the repowered resources?**

A. As described in the testimony and exhibits of Mr. Hemstreet and Mr. Link, the Company will incur minor repowering costs before the in-service dates of the repowered wind resources. These costs were included in the Company’s economic analysis. Most of the costs are due to reduced generation from the facilities before and during repowering, and the associated loss of PTCs. These costs will be included in the EBA. Because these costs are part of the overall project, which will benefit customers,
it is appropriate that customers pay for them. The impact from the current PTCs ending will be borne entirely by the Company because the benefits are currently built into rates.

**RTM CALCULATION AND STRUCTURE**

**Q. Have you prepared an exhibit that illustrates the calculation and structure of the RTM on a year-by-year basis?**

**A. Yes. Exhibit RMP__(JKL-2) provides an illustrative example of the calculation of the RTM on an annual basis. The annual amounts will be the sum of the monthly amounts shown in Exhibit RMP__(JKL-3), and the individual lines are described as part of that exhibit.**

**Q. Please explain Exhibit RMP__(JKL-3).**

**A. Exhibit RMP__(JKL-3) is an example of the RTM’s monthly calculation. The RTM deferral will be adjusted after a general rate case to exclude amounts that are recovered as part of base rates in the rate case to assure against double-recovery. For items partially recovered in base rates, such as capital investments included for part of the test period, the portion included in the test period will be removed as of the effective date of the general rate case. Page 5 of Exhibit RMP__(JKL-3) includes an overview of the total plant revenue requirement, net power cost, and PTC sections.**

Once per year on a calendar-year basis, the Company will sum the monthly RTM revenue requirement entries to prepare the annual RTM application for filing with the Commission on March 15, with an interim rate effective date that corresponds with the EBA application (May 1). The Company is proposing to cap the RTM until the next
general rate case so that, after taking into account the wind repowering benefits that will flow through the Company’s EBA, it will not operate to surcharge customers.

Q. **How will the costs and benefits associated with the wind repowering project be allocated to Utah customers?**

A. The Company will use Utah’s applicable inter-jurisdictional allocation factors to allocate total-company revenue requirement to Utah based on the current Commission-approved allocation methodology. Because the allocation factors are dynamic and change with variations in jurisdictional loads, the Company is proposing that the allocation factors used in the RTM match the allocation factors used in the calculation of the EBA.

Q. **How will the Company calculate rates to credit or recover RTM balances?**

A. The Company will file a separate rate to credit or recover the net amount in the RTM deferral. The Company proposes to use the same class allocation and rate design as used for the annual EBA filing. For billing purposes, the EBA and RTM rates could be consolidated on the customer bill.

Q. **Has the Company prepared a tariff for the RTM?**

A. Yes. The Company has prepared a tariff for implementation of the RTM. The tariff is identified as Schedule 97A, Resource Tracking Mechanism - Wind Repowering, and is included in my testimony as Exhibit RMP___(JKL-5).

Q. **What procedures do you envision for an application to adjust the RTM?**

A. The Company expects that the Commission will docket and notice an RTM application similar to other tariff filings. The Commission staff and intervening parties will have an opportunity to examine the application and submit data requests. The Company will
work with the parties, which could result in a consensus recommendation that will be presented to the Commission, or the matter could be scheduled for hearing if there are contested issues. The important aspect of the proposed RTM schedule is that it be processed concurrently with the EBA to preserve the matching principle for costs and benefits.

**Q. Would stakeholders be able to challenge the general prudence of wind repowering when the Company files to change rates under the RTM?**

**A.** No. The Company is seeking approval in this filing that the decision to repower most of the Company’s wind facilities is reasonable, prudent, and in the public interest. If the Commission makes this finding in this proceeding, review of the specific costs included in the RTM would be subject to Utah Code Ann. § 54-17-403, which provides that retail rates may include the state’s share of the costs of the approved resource decision up to the projected costs in this Application. Any increase from the projected costs would be subject to review by the Commission under Utah Code Ann. § 54-7-12. The Commission may only disallow some or all costs if the Commission finds the Company’s actions in implementing the approved resource decision were not prudent because of new information or changed circumstances, or if the Company was responsible for material misrepresentation or concealment in connection with the resource approval process.

**ACCOUNTING TREATMENT FOR REPLACED EQUIPMENT**

**Q. Please explain the Company’s proposed accounting treatment for equipment replaced by wind repowering.**

**A.** As existing wind generation equipment is replaced during the repowering process, the
Company will follow accounting treatment consistent with FERC regulations and allowed by generally accepted accounting principles. The original investment will be transferred from FERC account 101, EPIS, to Account 108, ADR, by crediting EPIS and debiting the ADR. This entry will not change the Company’s net plant balance, but it will shift the ADR from a negative to a positive balance. The remaining original investment plus new capital additions will be depreciated using current depreciation rates until the Company’s next depreciation study.

Q. **Is the Company requesting continued cost recovery of plant balances associated with equipment replaced in the wind repowering project?**

A. Yes. The existing net plant is currently in rates and should remain in rates. The Company’s decision to pursue the wind repowering project is dependent on the Company continuing to recover its current investment in its wind facilities. The equipment replacement does not change the net book balance of the existing assets pre-repowering, and the incremental investment to repower these wind resources will be recovered through the RTM until the costs are captured through the general rate case process.

Q. **How would the Company treat any salvage value of the replaced equipment?**

A. The Company would treat the salvage value of the equipment under the same accounting guidelines. To the extent that any salvage value is obtained from the equipment, then the value would be credited to the ADR, reducing the net plant balance.
Q. How will the Company allocate the investment in the wind repowering project to the state jurisdictions PacifiCorp serves?

A. Currently, the Company’s investment in wind generation facilities is treated as a system resource under the approved 2017 Protocol Allocation Agreement. That approved methodology will continue for ratemaking purposes through 2019. The same treatment will apply to new investments that occur in that period. After that time period, the then-applicable allocation methodology approved by the Commission would govern.

The Company’s analysis demonstrates that the wind repowering project delivers net system benefits, and the Company believes that the repowered wind facilities should continue to be allocated across the six-state service territory on a system basis unless there is an agreement through the Multi-State Process to do otherwise.

CONCLUSION

Q. Please summarize your testimony.

A. The wind repowering project presents an excellent opportunity to provide customers with additional zero-fuel-cost wind energy for an extended period of time. To match investment and operational costs with the benefits of the repowered wind resources until the costs and benefits are fully included in base rates through a general rate case, the Company proposes to defer all costs and benefits and to implement the RTM. The matching of the costs and benefits through the RTM is fair to customers and shareholders.
Additionally, allowing the Company to assign replaced equipment to the ADR from plant-in-service and continue rate recovery of the plant balances over the useful life of the repowered wind investment life is just and reasonable and allows the Company to pursue the wind repowering project.

Q. What is your recommendation to the Commission?
A. I recommend that the Commission approve the wind repowering project and the Company’s proposals for ratemaking treatment, and for the continued recovery of the replaced equipment. Approval will provide certainty to the Company and enable it to move forward with the wind repowering project.

Q. Does this conclude your direct testimony?
A. Yes.