Energy Vision 2020
Wyoming’s Wind Energy Future
October 2, 2017
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PacifiCorp Overview

- Six-state service territory
  - Utah  – Oregon
  - Idaho  – Washington
  - Wyoming  – California

- 5,479 employees\(^{(1)}\)
- 1.9 million electricity customers
- 143,000 square miles of service territory
- 16,500 transmission line miles
- 10,894 MW\(^{(2)}\) owned generation capacity
  - Coal  55%
  - Natural gas  25%
  - Hydro  10%
  - Wind, geothermal and other  10%

\(^{(1)}\) 2018 year-end budget, excludes casual and temporary
\(^{(2)}\) Net MW owned in operation as of December 31, 2016
Energy Vision 2020

• April 4, 2017, Rocky Mountain Power announced a $3.5 billion wind and transmission investment.
  • Repowering of 905 MW (648 MW in WY) of existing wind ($1B)
  • 1,100 MW of new wind ($1.8B), enough wind energy to power the equivalent of the annual consumption of 400,000 typical homes.
  • 140-mile transmission project to connect new wind ($700M)
• On June 30th, RMP made regulatory filings in WY, UT & ID – is conducting technical workshops
• 1,100 and 1,600 construction jobs in Wyoming.

• Estimated $120 million in tax revenue through construction and another $11-$14 million annually in tax revenue.

• All federal tax credits will flow back to our customers. Net result is a cost savings for Rocky Mountain Power customers.
Wind Repowering

• Repowering is the upgrade of an existing wind facility with new wind-turbine-generator (WTG) equipment that can increase the facility’s output.

• Replace the nacelle and rotor (hub and blades) of the WTG.

• Repowered facilities in Wyoming:
  – Glenrock I & III, Rolling Hills, Seven Mile Hill I & II, High Plains, McFadden Ridge, and Dunlap

• Repowered facilities in Washington:
  – Marengo I & II, Goodnoe Hills

• Repowered facility in Oregon:
  – Leaning Juniper
New Transmission and Wind Generation

- PacifiCorp proposes to invest or cause to be invested $2.5 billion in new wind and transmission facilities, which would be operational by December 31, 2020, and therefore receive the full benefit of the federal wind production tax credit.
- The combined wind and transmission projects will deliver customers an estimated $137 million in benefits over time.
- The projects were identified as components of the 2017 Integrated Resource Plan’s preferred portfolio, and they are mutually dependent on one another.
  - The wind projects rely on the transmission projects for interconnection to the company’s system.
  - The transmission projects are supported by the economic attributes (*zero-fuel-cost generation, PTCs*) of the wind projects.
The Transmission Projects

The transmission projects include six major elements:

- A. The 140-mile Aeolus-to-Anticline 500 kV line, which includes the construction of the new Aeolus and Anticline substations;
- B. The five-mile Anticline-to-Jim Bridger 345 kV line, with modifications at the Jim Bridger substation;
- C. A voltage control device at the Latham substation;
- D. A new 16-mile 230 kV line from Shirley Basin to the proposed Aeolus substation, with modifications at the Shirley Basin substation;
- E. The reconstruction of four miles of an existing 230 kV transmission line between the proposed Aeolus substation and the existing Freezeout substation, with modifications at the Freezeout substation; and
- F. The reconstruction of 14 miles of an existing 230 kV transmission line between the Freezeout and Standpipe substations, with modifications at each.

- Items A-C above are referred to below as the “Aeolus-to-Bridger/Anticline Line,” and items D-F are referred to as the “230 kV Network Upgrades.”
The Transmission Projects
Wind Projects

• The CPCN application includes 860 MW of new resources, which will be included as benchmark resources in the Request for Proposals (RFP):
  – 250 MW Ekola Flats facility
  – 250 MW TB Flats I facility
  – 250 MW TB Flats II facility
  – 110 MW McFadden Ridge II facility

• If other resources are selected by the RFP, they will be equal to or better than the benchmark wind projects.
  – Bids due in October 17, 2017.
  – Shortlist evaluation to be completed in January, 2018.
  – Commission acknowledgement/order expected April, 2018.
Overview of Customer Benefits

• The transmission projects will provide a range of benefits, including:
  – Relieving congestion in eastern Wyoming, increasing transfer capability by 750 MW, and allowing up to 1,270 MW of new wind resources;
  – Providing critical voltage support to the transmission system in southeastern Wyoming, allowing the addition of new resources; and
  – Increasing reliability, reducing capacity and energy losses, and providing flexibility in the management of existing resources, including coal.

• The wind projects add significant new zero-fuel-cost generation to the system, lowering net power costs and contributing 10 years of PTC value, which will be passed directly to customers.
  – The wind projects also support the development of the much-needed transmission Projects.

• The combined projects will deliver customers an estimated $137 million in net benefits over their life.
RFP Overview

• Per regulatory requirements in Oregon and Utah, PacifiCorp is seeking approval of its RFP in both states.
  – Both states require use of an independent evaluator (IE).
  – Benchmark projects will be offered.

• The RFP will solicit bids for wind resources that will interconnect with and/or utilize PacifiCorp’s transmission system in Wyoming and other states.

• Projects must demonstrate the ability to qualify for the full value of PTCs and achieve commercial operation no later than December 2020.

• Timing for the RFP reflects the need to deliver the transmission and wind projects by December 2020—results of the RFP process will be submitted through supplemental filing in January 2018.
Wyoming Permitting Overview

- NEPA
  - Element of Gateway West segment D, Record of Decision November 2013
  - Plan of Development and Mitigations, currently in development

- Certificate of Public Convenience and Necessity
  - Filed June 30, 2017, Order expected April 2018

- Conditional Use Permit (Carbon County)
  - Planned application Spring 2018

- Wyoming Industrial Siting Permit
  - Planned application Spring 2018

- Anticipated Construction award December 2018

- Construction start April 1, 2019
Wildlife

• PacifiCorp fully embraces its commitment to being a steward of the environment and is engaged in identifying and addressing potential wildlife impacts throughout the siting, construction, operation, and decommissioning phases of our projects which include:
  – Pre-construction usage surveys and relevant agency coordination
  – Informed curtailment program during high eagle usage periods
  – Nest buffer and seasonal construction setbacks implemented during construction
  – Eagle nest surveys and ongoing annual monitoring
  – Ongoing avian/bat impact monitoring
  – Multiple years of post-construction monitoring for sage grouse, ungulates, and other species of concern and testing of eagle detection and deterrence radar/camera
  – Multiple years of habitat modification/prey base surveys and management to reduce raptor usage near wind turbines
  – Removal of wildlife/livestock carrion on and near project
  – Retrofitting power poles and substations
Questions?

Thank You