Electric Transmission Challenges and Opportunities

Washington Joint Committee on Energy Supply & Energy Conservation

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Northern Tier Transmission Group

- PacifiCorp is a member of NTTG.
- Participating utilities own more than 27,500 miles of transmission lines and serve approximately 3.5 million customers in Oregon, Washington, California, Idaho, Montana, Wyoming, and Utah.
- Participating Utilities:
  - PacifiCorp
  - NorthWestern Energy
  - Portland General Electric
  - Idaho Power
  - Deseret Power Electric Cooperative
  - Utah Associated Municipal Power Systems

NTTG Members’ Transmission Facilities

- NTTG
- Other Western U.S. and Canada Transmission
PacifiCorp Transmission System Overview

- PacifiCorp owns and operates one of the largest privately held transmission systems in the United States.

- We serve approximately 1.7 million PacifiCorp customers as well as non-affiliated utilities and other entities via 15,000+ miles of transmission line.

- Our system crosses 10 western states, and is interconnected with more than 83 generating plants and 12 adjacent control areas at 153 interconnection points.

- PacifiCorp is investing approximately $6 billion in its Energy Gateway Transmission Expansion Project to meet growing load and renewable energy policy requirements.
PacifiCorp’s Energy Gateway Transmission Project

- Over 1900 miles of new transmission
- Over $6 billion of investment
- Siting in 6 states
- Major segments in-service 2010-14

Priorities

- Reliably serve growing energy needs of existing network customers.
- Meet renewable portfolio standards.
- Connect network resources to loads.
- Reduce projected delivered costs of wholesale power.
- Expansion available if timely financial commitments from third parties are received.
Energy Gateway – Renewable Potential Maps

Data on renewables potential from the National Renewable Energy Laboratory for the U.S. Department of Energy.

http://mapserve2.nrel.gov/website/resource_atlas/viewer.html   6/08

Biomass

Wind

Geothermal

Solar

These maps are indicative of renewable potential and do not address either the technical or economic potential for energy resource development.
Walla Walla-McNary Transmission Project

- Improves system reliability, relieves constraints and improves access to southeast Washington’s considerable renewable energy resources.
Challenges

- Transmission projects require considerable upfront capital investment, and several years of planning, permitting and construction before they can be placed in service.

- Renewable energy mandates require a substantial increase in renewable energy generation. Renewable resources like wind and solar are location-specific, and are commonly located far from population centers, requiring extensive transmission improvements.

- Chicken or the egg? Developers are reluctant to site projects in areas lacking adequate transmission, but current regulations allow for cost recovery of transmission facilities considered used and useful.

- Siting challenges (NIMBY factor)
Opportunities

– Incentivize transmission investment to support new smart-grid and electric-vehicle technologies.

– Promote development of high-potential renewable energy zones and provide greater certainty for transmission investments connecting to these zones.

– Allow utilities cost recovery for sizing transmission projects to meet anticipated load growth—harnessing economies of scale and using corridors more efficiently.

– Establish consistent policies that streamline the approval process for transmission investment.
Questions/Discussion