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July 25, 2012

MEMORANDUM

TO: Power Committee

FROM: Howard Schwartz

SUBJECT: Transmission Planning Overview

Transmission issues have become more prominent in each successive Power Plan. In addition to understanding how transmission decisions influence power generation operations and costs, the Seventh Plan is likely to feature more a more conscious integration of transmission and power planning. This Transmission Planning Overview is one of several anticipated introductions to the major transmission issues facing the Northwest. Subsequent presentations may look at the difficulties of siting new transmission, operations and reliability, the regulatory alphabet soup, and proposals for coordinating transmission operations across Balancing Authorities. We can also expect reports from Columbia Grid and the Northern Tier Transmission Group about their progress in implementing FERC Order 1000.

Transmission Planning Overview

NWPPC Power Committee

Howard Schwartz, WA State Staff
August 7, 2012
Spokane, Washington



Overview of the Overview

Transmission issues have become more prominent in successive Power Plans. The 7th will feature more integration of transmission and power planning.

This is one of several introductions to the major transmission issues facing the Northwest.



Transmission Issues

This presentation

- § Planning**
- § Possible Future Presentations**
- § Siting**
- § Operations and reliability**
- § Regulatory framework**
- § Inter-Balancing Authority coordination**



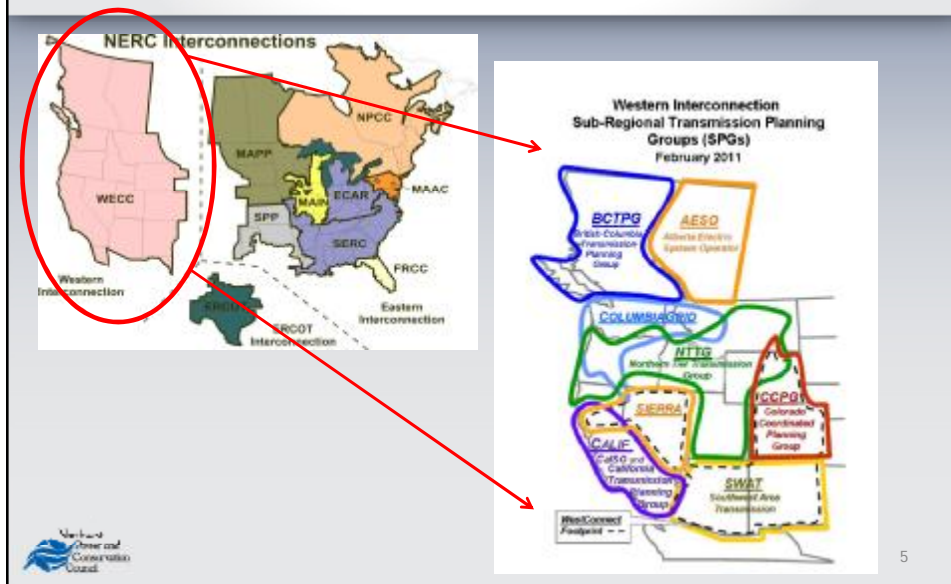
Planning

There are two major planning processes underway in the United States

- § The interconnection-wide 10 and 20 year plans funded by US DOE using ARRA funds**
- § Regional/sub-regional planning under FERC Order 1000**



Geographical context – Western Interconnection (WECC)



WECC 10 and 20 Year Plans

- § In 2007, WECC's Transmission Expansion Planning Policy Committee (TEPPC) started its interconnection-wide transmission planning
 - Receives stakeholder requests (including states/provinces) to model different scenarios
- § Under US DOE grant in 2009, WECC expanded this effort under the Regional Transmission Expansion Project (RTEP) project and agreed to develop "Transmission Plans" in 2011 and 2013

WECC 10 and 20 Year Plans

The first 10 year plan was published in 2011.

Wally Gibson reported on this plan at the September, 2011 Council meeting in Astoria. Wally noted that this was “More a ‘planning exercise’ than a ‘plan’ – WECC is not an implementing entity for transmission development. [It] aims to provide information to implementers.”

The essence of the plan was that since California was building almost all of its renewables at home, no new transmission beyond what was already planned (“the foundational projects”) would be needed. Some paths needed to be watched in case congestion increased.

The second 10 year plan and the first 20 year plan will be published in 2013.



The WECC 20 Year Plan

The next 10 year plan will probably be similar to the first 10 year plan:

- Similar time horizon and thus
- Similar assumptions about resources and costs

The 20 Year plan may be different

- Longer time horizon; thus more speculative
- Driven by scenarios which are deliberately distinctive



Scenarios in the 20 Year Plan

Overseen by the Scenario Planning Steering Group:

“The purpose of SPSG is to provide strategic guidance to the Transmission Expansion Planning Policy Committee (TEPPC) on (1) scenarios to be modeled in transmission planning studies, (2) the modeling tools to be used, and (3) key assumptions to be used in creating and reviewing the scenarios.” (WECC Web site)

Members of the SPSG

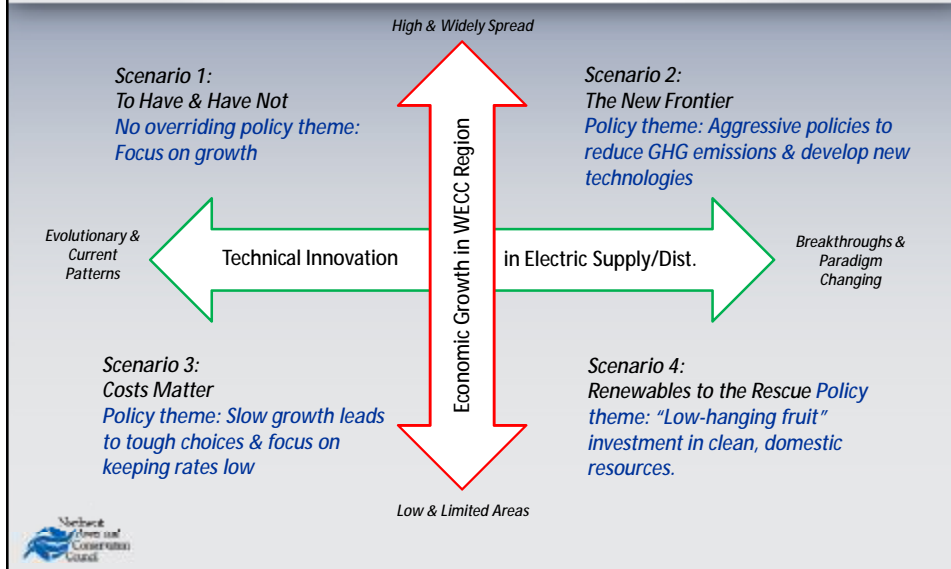
- 8 from electricity industry
- 8 from advocates: environmental, renewable energy, consumer, etc.
- 8 from state governments (Commissions, energy offices)
- Plus tribal governments, federal agencies (ex-officio)

Use of the Scenarios

- Provide conceptual guidance to a wide range of possible futures
- Modeled by TEPPC along with other study requests (e.g. High DSM, missed RPS targets, cheap natural gas, etc.)
- Revised and re-used as needed



Scenarios and their Policy Themes



Essentials of FERC Order 1000

New Regional Planning Requirements

Order 1000 expands on the requirements for regional transmission planning that were adopted in Order No. 890 just five years ago, which FERC now considers inadequate. These additional requirements include:

- All jurisdictional transmission providers must adopt and participate in a regional transmission planning process through which a regional transmission plan is produced [Due: Fall, 2012];
- The process must consider transmission and non-transmission proposals by any qualified entity;
- The process must plan for the effects of "Public Policy Requirements," such as environmental or renewable energy laws and regulations, in addition to traditional reliability and economic considerations;
- The process must include a cost allocation methodology, consistent with FERC principles, to determine how the costs of facilities approved in the plan are allocated to customers;
- Incumbent transmission providers must have no federal priority rights over "non-incumbent" developers to build transmission facilities selected for the regional plan; and
- Transmission providers must develop inter-regional transmission coordination procedures and cost allocation methods with neighboring regions. [Due: Spring, 2013]



WECC Sub-Regional Planning Entities

Under FERC Order 1000 each planning group must coordinate with its neighbors. It can chose just one neighbor or two or more.

The relationship between the FERC Order 1000 plans and the WECC/RTEP is unclear:

Could they be rolled up to constitute the WECC wide plan? Should they reflect the WECC-wide plans? Should they all use the same assumptions and data as WECC? How will these questions be resolved?



FERC ORDER 1000 Policy Issues

- § Expanding FERC Jurisdiction
- § Jurisdictional and non-Jurisdictional transmission owners
- § Role of the States
- § How to allocate costs
- § What effect will the plans have?



Council Roles in Transmission Planning

In the past Council staff were intensively involved in WECC/TEPPC activities. Now staff provides data and reviews the analyses of others who provide input to WECC.

Council staff are exploring further cooperation with Columbia Grid and NTTG in integrating transmission and power planning.

The Council as whole remains a major participant in areas where transmission operations affect power supply and fish issues: Wind Integration Forum, oversupply, demand response.



Possible Future Presentations

Planning:

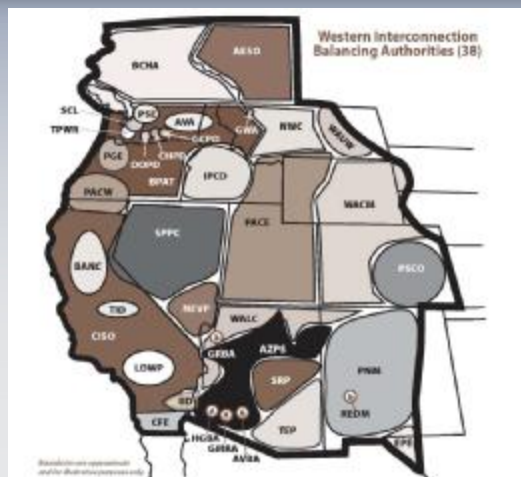
- Columbia Grid and NTTG on their implementation of FERC Order 1000
- The integration of energy and transmission planning
- Issues regarding FERC Jurisdiction in the PNW

Other transmission topics:

- Siting: Why is it so hard and what can be done?
- Operations and reliability (Standards, enforcement, costs)
- Regulatory framework (FERC, DOE, WECC, States)
- Inter-Balancing Authority coordination (EIM, etc.)



WECC Balancing Authorities



Thanks and Acknowledgements

Note: Staff at WECC and WGA/WIEB provided many of the slides used in this presentation. Edits are solely my responsibility –HS.

