

# **SPSC Webinar: Input on the 10-Year Transmission Plan**

November 18, 2010

# Outline of Presentation

- SPSC responsibility
- Overview of potential roadmap
- Key issues in the development of the 10-year Plan
  - Goal of the 10-year Plan?
  - Synthesizing framework?
  - Recommendations in the Plan?
  - Gaps in the Plan?
  - Relationship of 10-year Plan and 20-year Plan?
  - Other?
- Concepts to present to the WECC Board

# SPSC responsibilities in the development of the 10-year Plan

- Charter requires that SPSC will:
  - Provide input and recommendations to WECC and Subregional Planning Groups
  - Advise Governors and regulatory commissions

# Overview of potential roadmap

- SPSC uses this webinar to start discussion of key issues in the development of the 10-year Plan
  - Agree today on key broad issues for SPSC
  - Create SPSC Rapid Response Team to execute SPSC guidance
    - Provide input to TAS and its Studies Work Group
    - Report developments back to SPSC
- SPSC will not focus on additional refinements of the Whitepaper but actively participate in developing the 10-year Plan
- SPSC message to the WECC Board at its Dec. 8-9 meeting
  - SPSC will review the slide presentation (initial ideas in slides 20-24)
- SPSC will refine its message at its Jan. 11-12 meeting
  - Communicate SPSC views prior to TEPPC Feb. 24-25 meeting
- SPSC will deliver comments on the 10-year Plan to the WECC Board in March

# KEY ISSUES

- Goal of the 10-Year Plan?
- Synthesizing framework for the Plan?
- Recommendations in the Plan?
- Gaps in the Plan?
- Relationship between the 10-year Plan and the 20-year Plan?
- Other?

# Goal of the 10-year Plan?

- Current version of the Whitepaper did not provide a clear goal statement for the 10-year Plan
- Stakeholders at the Nov. 9 joint TEPPC/SPSG meeting called for a goal statement, although no clear consensus
- Common themes identified:
  - Address congestion
  - Meet loads with reasonable/low/minimize costs
  - Maintain reliability
  - Attain low carbon future
  - Protect environmental resources

# Option 1: Single objective statement

- The plan should identify the transmission system 10-years in the future that meets customer loads at reasonable costs subject to the following constraints:
  - Reliable service
  - Current policy requirements (e.g., state RPS, IRP) and potential future policies (e.g., GHG, federal RPS)
  - Environmental resources (e.g., water, wildlife)
  - Operating by 2020

## Option 2: Multiple objective statement

- Plan for a system that enables/allows suppliers to meet Western customer loads at the lowest possible cost, lessens congestion, and provides access to lower-cost renewable resources subject to the following constraints (e.g. reliability, environmentally benign, allows utilities to meet all statutory and regulatory requirements, built and operating in 2020).

# Goal statement observations

- Statement can identify single OR multiple goals/objectives subject to constraints. May not be one overarching goal.
- Can treat what some people consider goals as constraints. Could treat an explicit CO<sub>2</sub> goal as a statutory and regulatory constraint. Legislators set the statutory framework; we shouldn't set goals independent of that framework.
- Transmission is an enabling technology.
- A transmission plan cannot answer all questions about how we meet customer needs at the lowest cost and risk. There are certain key factors – such as resource mix – that a transmission planner must take as an exogenous variable.

# Synthesizing framework for the 10-year Plan?

- Section 5 of the Whitepaper identifies a 12-step analytical approach for developing the Plan
- Section 5.11 attempts to identify critical paths that justify transmission expansion for the Plan
  - Example below ...

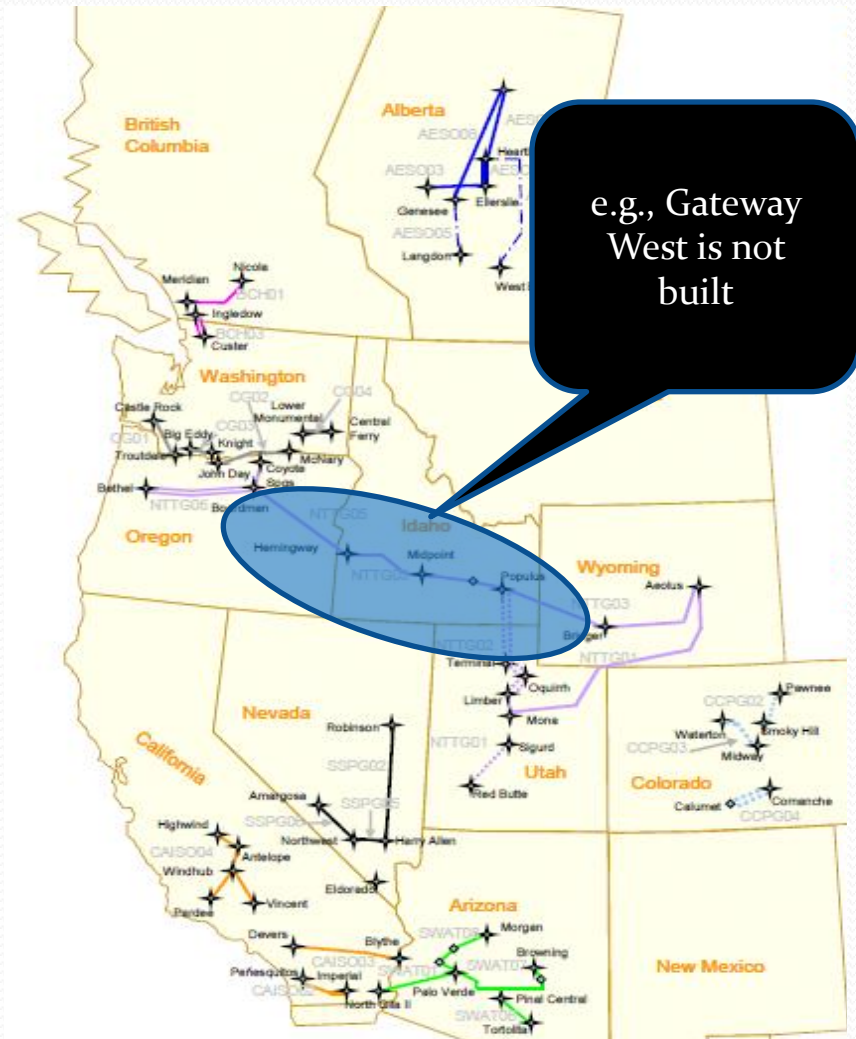
# Example: Framework for Plan Formation

- Step 1: Reference Case Transmission Expansion Solutions (included in Whitepaper)
  - Start with Reference Case that includes Foundational Projects
  - Identify priority **chronic** congestion (but exclude **design** congestion)
  - Identify any additional transmission expansion solutions needed to relieve congestion



# Framework for Plan Formation

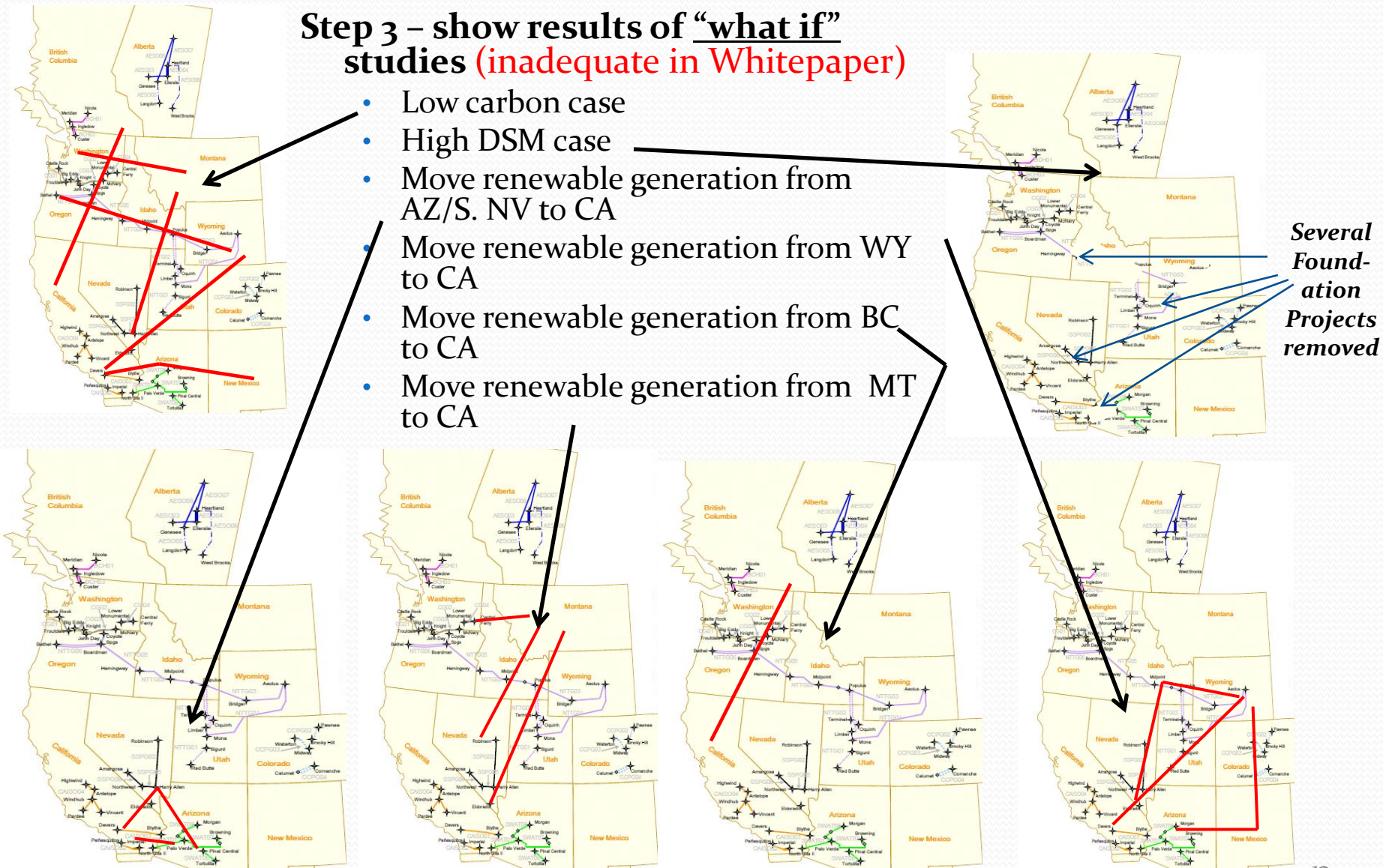
- **Step 2: Foundational Projects Sensitivity Analysis (included in Whitepaper)**
  - Evaluate chronic congestion and cost impacts if one or more of the critical Foundation Projects are not built
  - Identify alternative transmission expansion solutions



# Framework . . . cont. – identify conditional congestion solutions driven by alternative resource locations or policy futures

## Step 3 – show results of “what if” studies (inadequate in Whitepaper)

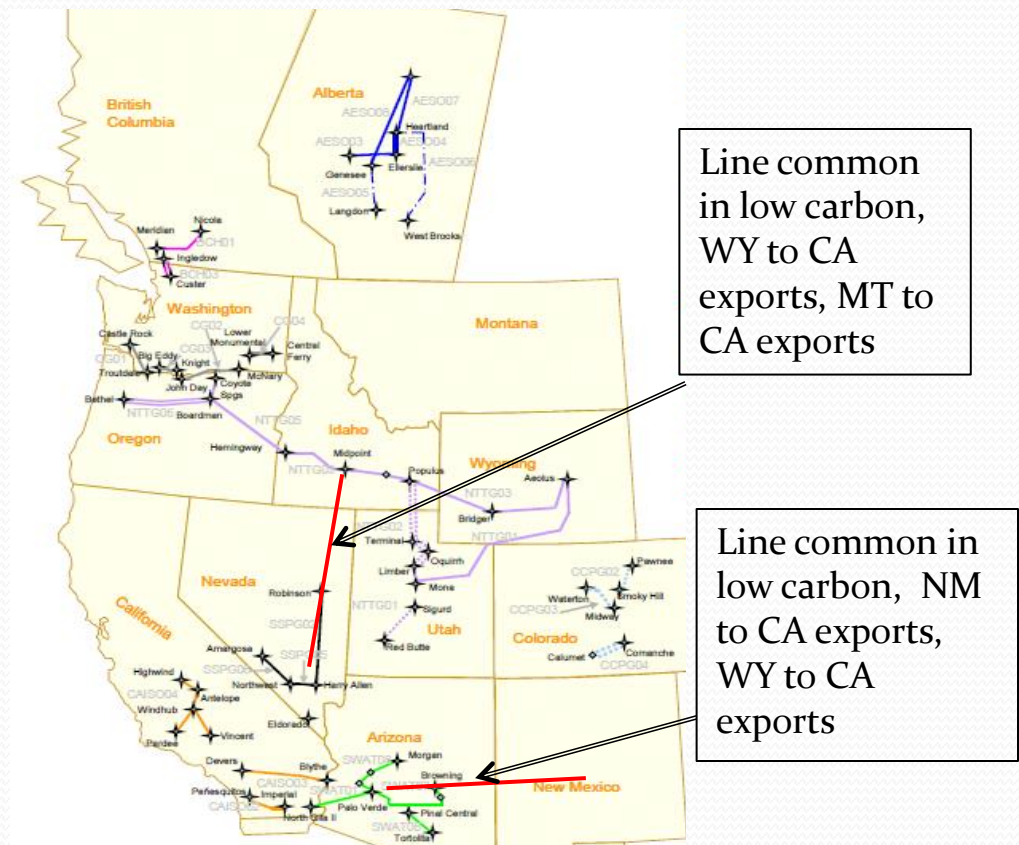
- Low carbon case
- High DSM case
- Move renewable generation from AZ/S. NV to CA
- Move renewable generation from WY to CA
- Move renewable generation from BC to CA
- Move renewable generation from MT to CA



# Framework . . . Cont.

## Step 4: Transmission common in many cases (included in **Whitepaper**)

- Identify lines or paths that are congested across a range of generation and policy futures (i.e., recurrent congestion)



# Framework Refinements

- Stakeholders at the Nov. 9 joint TEPPC/SPSG meeting identified additional perspectives to the Section 5.11 framework:
  - Plan must identify reliability-based lines
  - Bucketize/categorize “what if” assumptions and results
  - Production cost modeling of congestion is a limiting, if not wrong, metric
  - Consider the benefits of transmission lines for reasons other than reducing congestion
  - There may be no need for additional lines to address congestion after adding the Foundational projects

# Recommendations in the Plan?

- Section 5.12 of the Whitepaper proposes to develop recommendations for the Plan
  - Purpose to move toward collaborative set of actions to see projects built
  - Recommendations to target subjects (e.g., permitting, financing) and specific entities (e.g., state regulators, FERC, etc.)
- Should the Plan include recommendations?
- Who decides the recommendations?
- Types of recommendations?

# Gaps in the Plan?

- Many stakeholders recognize the inherent limitations the first 10-year Plan
- Areas to improve in future Plans?
  - Expanding public policy goals and constraints (e.g., water and wildlife resources)
  - Tools that optimize the resource portfolio
  - Variable generation integration analysis
  - Limitations of production cost modeling
  - And others

# Relationship between the 10-year Plan and the 20-year Plan?

- Stakeholders at Nov. 9 joint TEPPC/SPSG meeting raised questions about the connection between the 10-year and 20-year Plans
- Ideas suggested:
  - Identify the purposes of the 10-year and 20-year Plans
  - These plans should iterate between each other
  - The 20-year plan should set public policy targets and a “broad set of energy futures”
  - Future 10-year plan should be -
    - A roadmap of near-term transmission expansion
    - A tool to evaluate the progress made toward 20-year plan

# Other Issues

- What metrics should be used?
- When is congestion worth fixing and how do we evaluate that?
- How do we assess the operational impacts of large amounts of variable generation?
- Other?

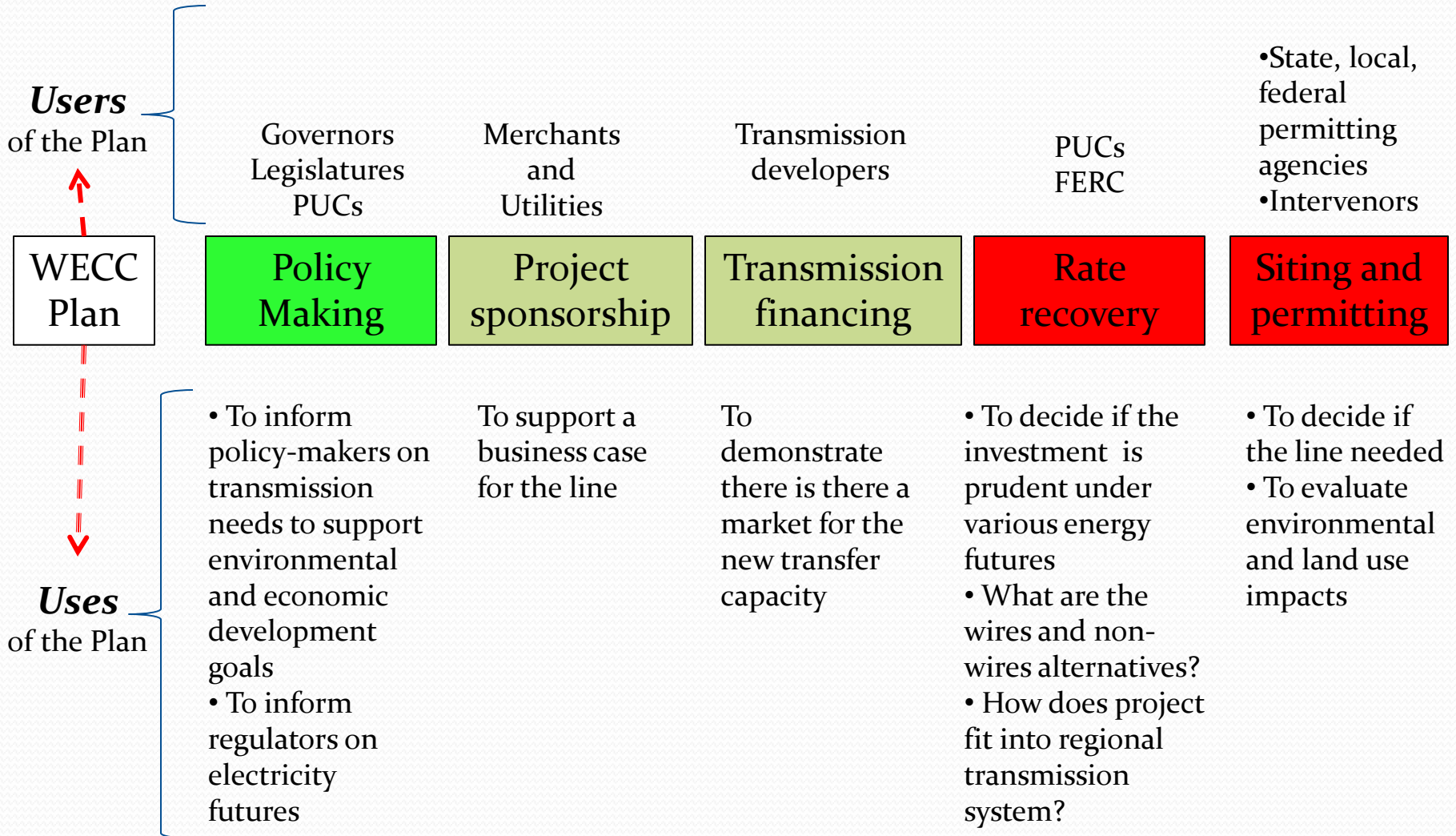
# PRESENTATION TO WECC

- Historical context of transmission planning
- Users and Uses of the Plan
- Progress that has been made
- Some important issues SPSC will be working through in January

# History of Interconnection-wide Transmission Planning

- 2001 – Western Governors requested first interconnection-wide plan during Electricity Crisis
  - No industry answer to question of what wires are needed
  - Conceptual plans prepared in 60 days
- 2001 – Governors asked that interconnection-wide planning be institutionalized which was done within SSG-WI
- 2005 – Governors support WECC taking over interconnection-wide transmission planning as SSG-WI terminated
- State-provincial study requests drive TEPPC studies
  - 2008 WIRAB requested low carbon scenario
  - 2009 WREZ requested high renewables scenarios
  - 2010 SPSC requests

# Users and Uses of a WECC Plan



# Observations on TEPPC process – very good start

- Study process
  - TEPPC has given priority to study needs of states/provinces
  - More cases being studied
  - Improved load info
  - Continuing improvements in modeling techniques
  - New 20-year modeling tool being acquired
- Beginning process to move from studies to a plan

# Key issues for SPSC

- Goal statement for the 10-year Plan
- Synthesizing framework for the Plan
- Whether the Plan should include recommendations and how they should be developed
- Gaps in the Plan and future improvements
  - (e.g., more robust incorporation of public policy goals/constraints, tools that optimize the resource portfolio, variable generation analysis, when congestion is worth fixing, looking beyond congestion in determining necessary transmission)