



Western Electricity Coordinating Council

Transmission Planning in the West

Regional Transmission Expansion Planning Project (RTEP)

Wyoming Infrastructure Authority

April 27, 2010

Bradley M Nickell, PE
Director of Transmission Planning

Today's Discussion

- WECC Background
- Planning & Project Development
- DOE Grant and WECC Response
- Impacts on Planning Processes

WECC Facts

- The Western Interconnection includes all or part of 14 U.S. states, 2 Canadian provinces and a portion of Baja California Norte, Mexico
- WECC is governed by an independent and balanced stakeholder board consisting of 32 directors drawn from the WECC membership classes
- Membership - 253 members in seven classes

WECC Functions

Non-Planning Functions

- Compliance Monitoring and Enforcement
- Standards Development
- Reliability Coordination
- Market-Operations interface
- Operator training
- WREGIS

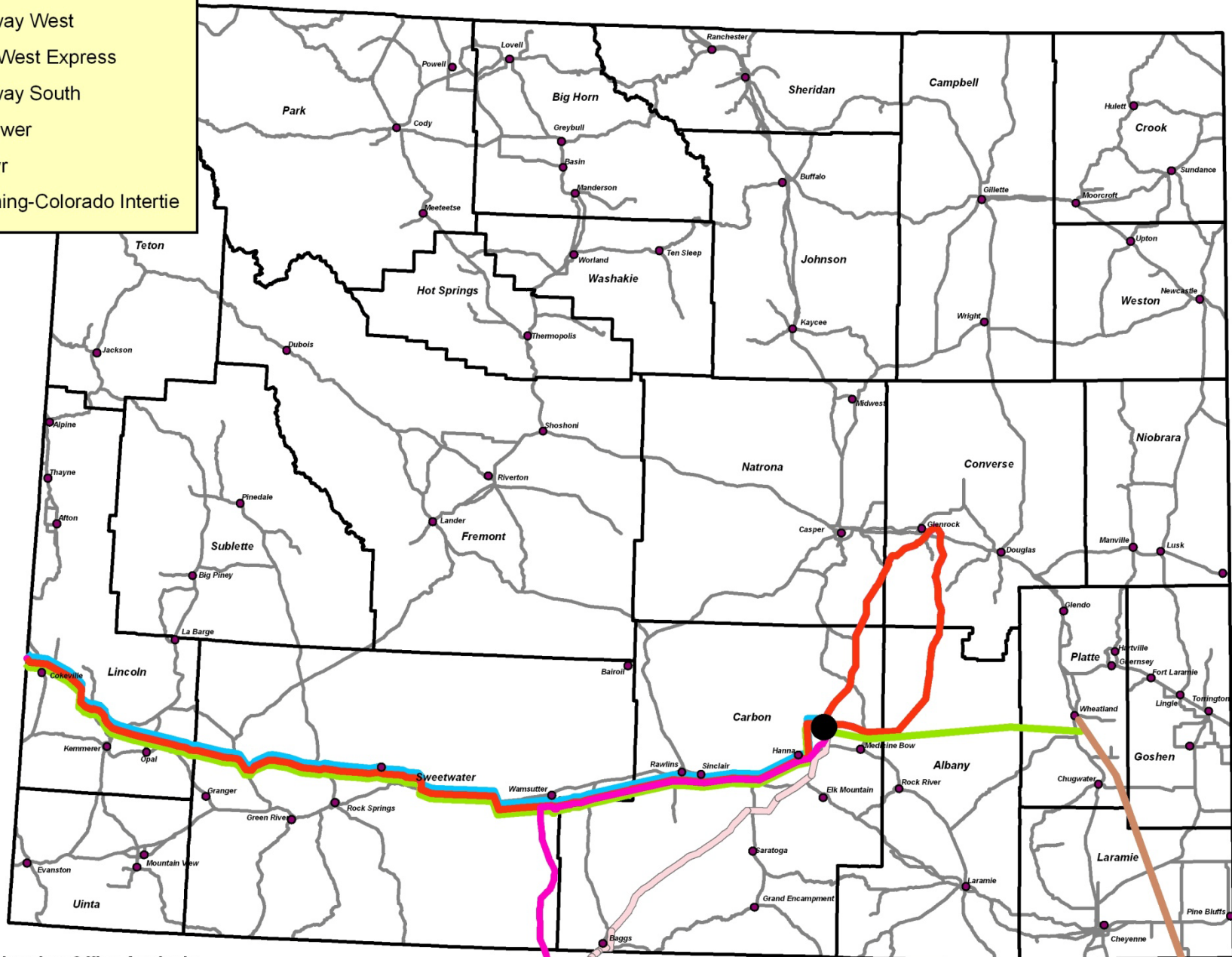
Planning Functions

- Loads and Resources Assessments
- Transmission Expansion Planning
- Reliability studies

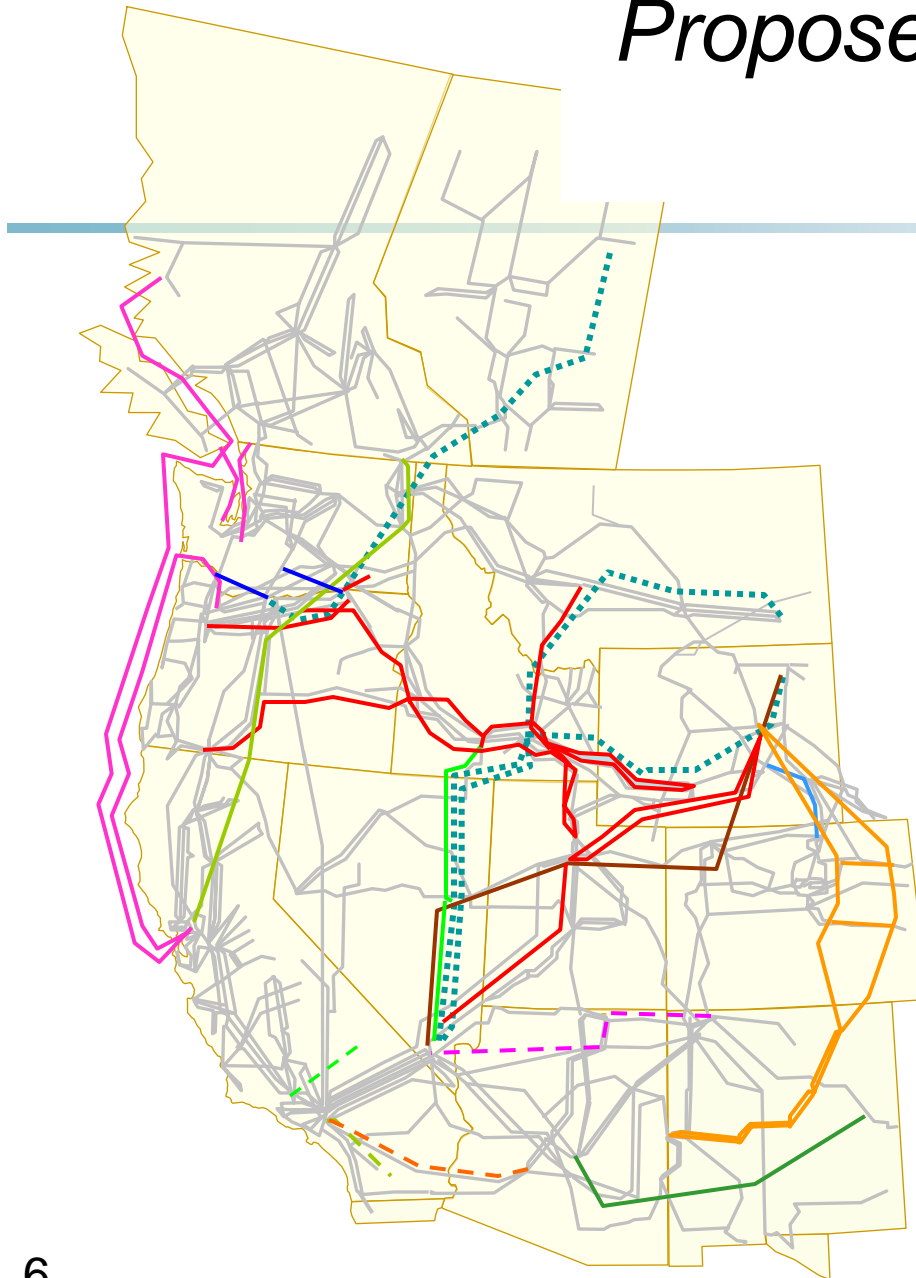
New Transmission Proposed in Wyoming

Legend

- Gateway West
- TransWest Express
- Gateway South
- LS Power
- Zephyr
- Wyoming-Colorado Intertie



Proposed Major Transmission Projects in WECC



Proposed Transmission Projects in the Western Interconnection

Note: This plot includes selected projects from Table 3.2 of 2008 TEPPC Study Plan(v7)

Projects have been grouped to simplify coding.

- Sea Breeze Projects
- TransCanada Projects
- Gateway & Other NTTG Projects
- Columbia Grid Projects
- TransWest Express
- LS Power & Great Basin Projects
- WY-CO Intertie Project
- High Plains Express
- Sun-ZIA
- Canada/PacNW-NoCalif
- - - Central CA Clean Energy (C3ET)
- - - Green Path North
- - - Devers-Palo Verde 2
- - - Navajo Transmission Project

What is Planning?

- Identification of future infrastructure needs to
 1. Serve the expected load reliability
 2. Meet public policy directives
 3. Minimize cost and environmental impact
- Transmission planning – identify future transmission capacity needs given a future set of loads and resources
 - It's all about resource planning

Planning, Projects, and Path Rating

- Planning – Identify the Need
- Project development – Propose a Solution
 - Path rating – Look at the reliability impacts of the solution on the system
 - Siting – Look at the impacts of the solution on the environment
 - Cost Allocation – Assure future cashflows
 - Construction
- Operation

TEPPC

Transmission Expansion Planning Policy Committee

- Purpose and Responsibilities
 - Overseeing WECC transmission database
 - Providing policy direction and management of the regional planning processes
 - Guiding the analyses and modeling for Western Interconnection economic transmission expansion planning
- **Will provide governance over the RTEP project**

TEPPC

Transmission Expansion Planning Policy Committee

- TEPPC's analyses and studies focus on studies with Interconnection-wide implications
 - Reliability, cost and emissions
- TEPPC's role does **not** include
 - Detailed project-specific studies
 - Advocating projects
 - Identifying potential "winners" and "losers"
 - Siting and cost allocation

DOE Funding Opportunity

Regional Transmission Planning

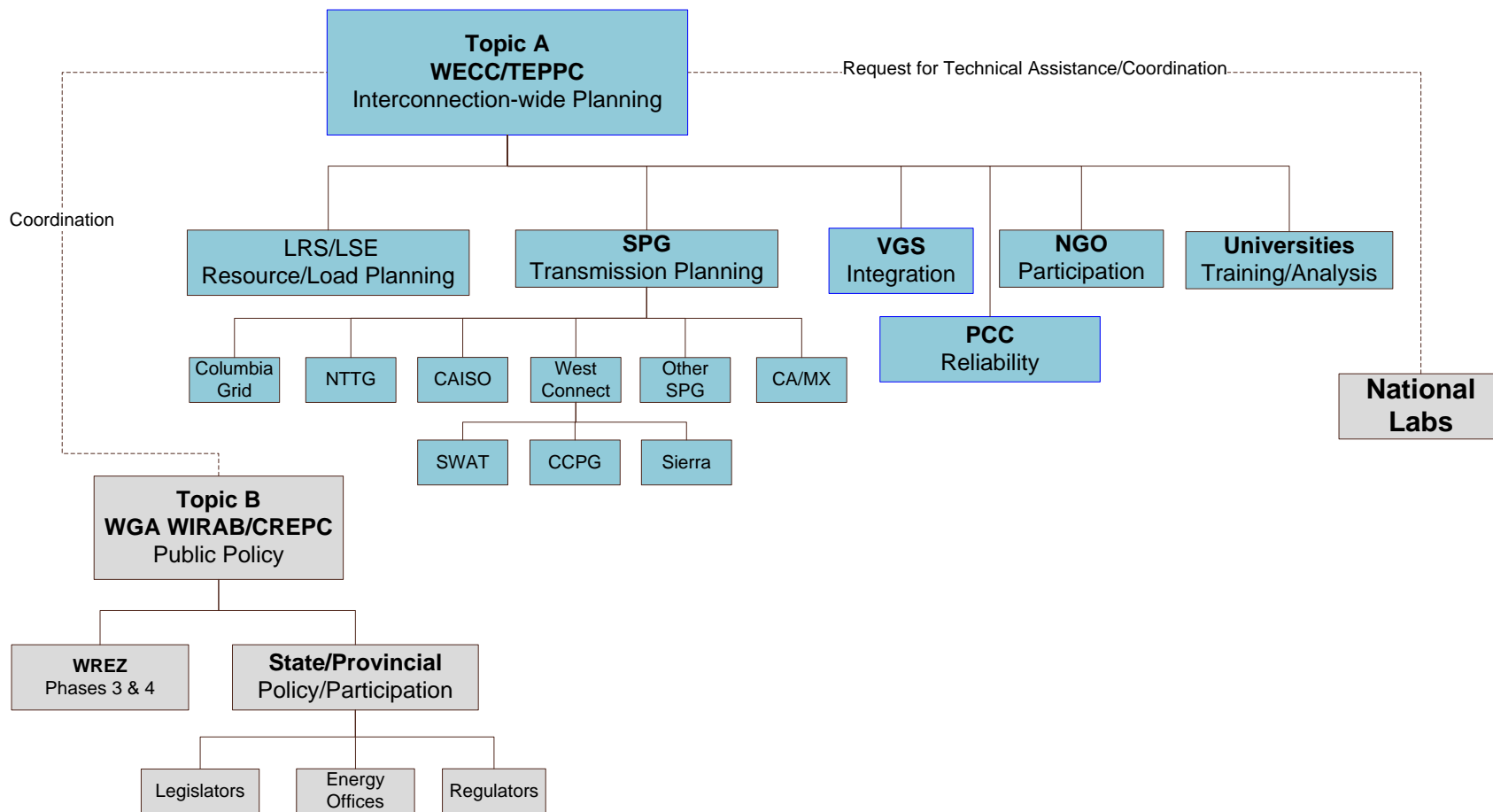
- Up to \$60 million in DOE funding for
 - Topic A – Interconnection-Level Analysis and Planning
 - Topic B - Cooperation Among States on Electric Resource Planning and Priorities
- WECC awarded \$14.5M under Topic A on 12-18-09 (\$16.3M request)
 - WECC's proposal available at the RTEP website – www.wecc.biz
- Referred to as the Regional Transmission Expansion Planning (RTEP) project

Funding Opportunity Announcement

Topic A

- Creation of Interconnection-level Transmission Plans
 - A body of analysis that identifies new or greatly-upgraded lines required under a wide range of potential futures
 - Include operational implications, emissions, and cost
 - Analyses must be transparent, and produced through collaboration among industry experts and representatives from states, federal agencies, and relevant NGOs
 - Requires multi-constituency steering group to provide strategic direction; at least 1/3 of steering group to be state officials

Overview of WECC Response Funding Diagram

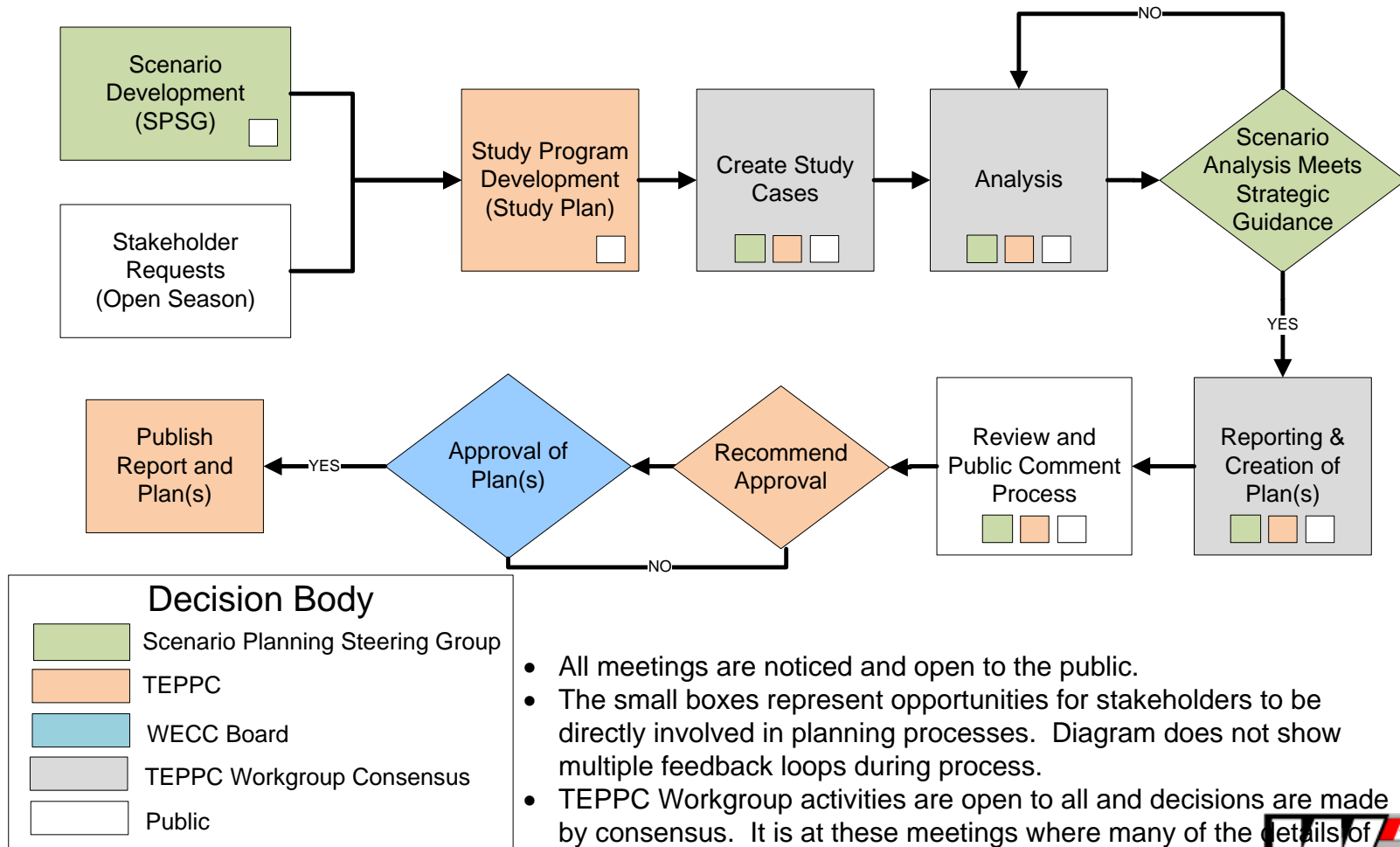


Planning Activities (new activities in Red)

	Short Term (0-5 Years)	Medium Term (5-10 Years)	Long Term (20 Years)
Regional (WECC)	<ul style="list-style-type: none"> • QTC, ITC • Rating Process • TEPPC (5yr) 	<ul style="list-style-type: none"> • TEPPC Congestion Analysis • 10yr Regional Plan • Project Planning & Rating Process • Reliability Assessment 	<ul style="list-style-type: none"> • 20yr Regional Trans. L • Target Plan • LSE Planning • Coordination (WIRPF)
Subregional (SPG)	<ul style="list-style-type: none"> • QTC, AEC • Short-term Design Assessment • Short-term Design Planning 	<ul style="list-style-type: none"> • Sub-Reg Trans • Biennial Cap • Annual Econ Study • SPG 10yr Att K Plan • 10yr SPG Coordinated Reliability Plan 	
Local (Utilities)	<ul style="list-style-type: none"> • QAT studies • Operating Studies • Compliance Studies 	<ul style="list-style-type: none"> • Attachment K or equivalents • Compliance Studies 	<ul style="list-style-type: none"> • Long-range studies

Overview of WECC Response

Expanded TEPPC Regional Planning Process



- All meetings are noticed and open to the public.
- The small boxes represent opportunities for stakeholders to be directly involved in planning processes. Diagram does not show multiple feedback loops during process.
- TEPPC Workgroup activities are open to all and decisions are made by consensus. It is at these meetings where many of the details of the planning process are decided.

What Changes?

- Increase the breadth and depth of TEPPC regional transmission planning activities
- Breadth
 - Scenario planning approach
 - Larger matrix of generation/load scenarios
 - Additional tools and study methodologies
 - More involved parties
- Depth
 - Direct tie back to policy and technology drivers
 - Total cost comparisons

What Won't Change?

- Evolving TEPPC coordination with other committees and organizations
- Process compliance with applicable planning principles of FERC 890
- No endorsement of specific projects
- No Involvement in siting and cost allocation

Participation Opportunities

- All WECC planning activities are open and noticed – see the WECC Web site
- SPSG
 - Lead scenario planning activities for long-term planning
- TEPPC & its Working Groups
 - Lead analysis activities
- Non-profit and NGO organizations
 - Provisions in the FOA provide funding for participation in planning activities

Questions

Bradley Nickell
Director of Transmission Planning
Western Electricity Coordinating Council
615 Arapeen Drive, Suite 210
Salt Lake City, Utah 84108-1262
801.455.7946
bnickell@wecc.biz



All information on the RTEP project can be found on the WECC website at
<http://www.wecc.biz/Planning/TransmissionExpansion/RTEP/Pages/default.aspx>

Glossary

- DSM – Demand-Side Management
- EE – Energy efficiency
- FERC – Federal Energy Regulatory Commission
- FOA – Funding Opportunity Announcement
- NERC – North American Electric Reliability Corporation
- NGO – non-profit, Non-governmental Organization
- RTEP – Regional Transmission Expansion Planning
- SPG – Subregional Planning Group
- SPSG – Scenario Planning Steering Group
- SPSC – State and Provincial Steering Committee
- TEPPC – Transmission Expansion Planning and Policy Committee
- VGS – Variable Generation Subcommittee
- WREZ – Western Renewable Energy Zone