

Regional Transmission Planning

***Update on WECC TEPPC Efforts on Western
Interconnection Wide Planning***

**Arizona Corporation Commission
6th Biennial Transmission Assessment**

2010 Workshop 1

Phoenix, Arizona
June 3-4, 2010

Robert Kondziolka, P.E.
Salt River Project

What is Planning?

- Identification of future infrastructure needs:
 1. Serve the expected load reliably
 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

Reliability and Economic Planning

- System Reliability can be characterized as maintaining energy supply to load while responding in a predictable fashion to both planned and unplanned outages in generation and transmission.
- System Congestion is a measure of the economic performance which answers the question “while operating within the bounds of reliable operation, how well does the transmission system perform to deliver the lowest cost energy (or energy source of choice) to consumers?”

TEPPC

Transmission Expansion Planning Policy Committee

- TEPPC's analyses and studies focus on studies with Interconnection-wide implications
 - Reliability, Cost, Emissions
- TEPPC's role does **not** include
 - Detailed project-specific studies
 - Advocating projects
 - Identifying potential "winners" and "losers"
 - Siting and cost allocation
- Provides governance over the RTEP (Regional Transmission Expansion Project) process

RTEP

Regional Transmission Expansion Planning

- ARRA-funded via a \$14.5M DOE Grant to WECC
 - Corresponding \$12.0M Grant to WGA
- Activities managed by TEPPC
- WECC's proposal available at the RTEP website – www.wecc.biz

Funding Opportunity Announcement

Regional Transmission Planning

- Up to \$60 million in DOE funding for:
 - (A) Interconnection-level analysis and planning (Topic A)
 - (B) State cooperation on electric resource planning and priorities (Topic B)
- Responses were due September 14, 2009
 - WECC submission - August 13, 2009
- Funds available under DE-FOA0000068
 - www.doe.gov/recovery

Funding Opportunity Announcement

Key Provisions

- Create interconnection-wide, long-term, scenario-based transmission plans
 - Identify alternative transmission system configurations
 - Quantify reliability and cost implications
 - Address technology and policy uncertainties
- Deliverables due in June 2011 and June 2013
- Establish a multi-constituency steering group to guide scenario development
 - 1/3 State representatives
 - Non-traditional stakeholders
- Fund non-profit and non-governmental organization (NGO) participation in planning processes

Overview of WECC response

What the proposal is

- Extraordinary opportunity to expand the capability of planning processes in the West
- An extension of existing TEPPC planning process
 - Ability for broader input from other stakeholders into planning processes
 - Ability to study a broader range of scenarios
 - Determine impact of policy and technology drivers

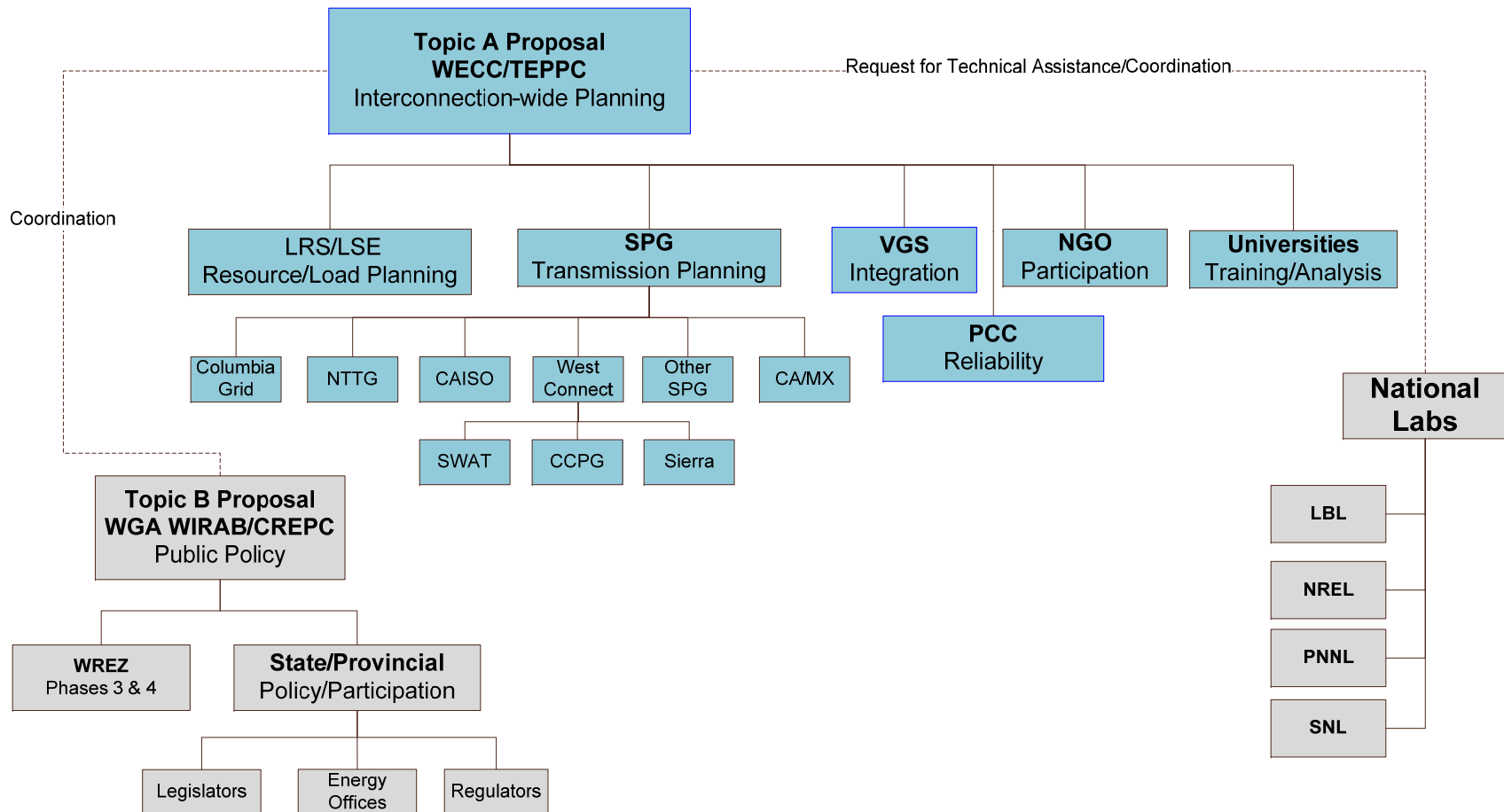
Overview of WECC response

What the proposal is NOT

- Radical shift in WECC processes
- Change in planning governance
- Significant long-term funding commitment by WECC and membership
- WECC involvement in siting or cost allocation processes
- No commitment to fund non-WECC activities beyond the DOE funding period

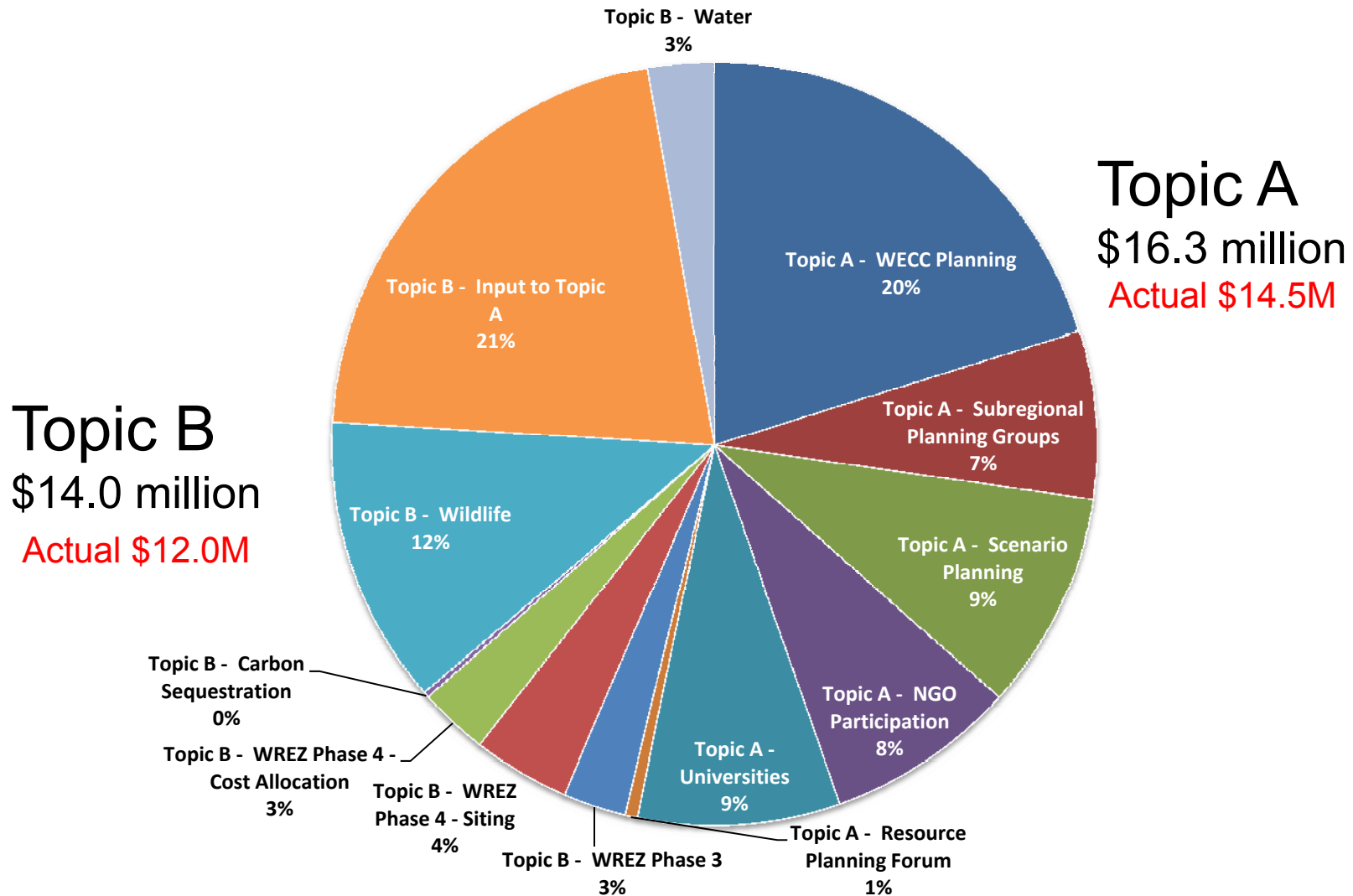
Overview of WECC Response

Funding Diagram



Funding of Tasks Under Topics A and B

4 Year funding period



RTEP Budget

Item	2010	2011	2012	2013	Total
WECC Activities	\$1,787,298	\$1,411,718	\$1,207,018	\$1,169,580	\$5,575,614
SCG Activities	\$476,150	\$476,150	\$476,150	\$476,150	\$1,904,600
SPSG Activities	\$630,476	\$630,476	\$630,476	\$630,476	\$2,521,904
NGO Participation	\$546,200	\$546,200	\$546,200	\$544,282	\$2,182,882
University Activities	\$637,013	\$758,846	\$919,141	\$0	\$2,315,000
Total, RTEP Project	\$4,077,137	\$3,823,390	\$3,778,985	\$2,820,488	\$14,500,000

Summary of changes from original proposal

1. Removed National Lab funding
2. Reduced all other budgets by 11%

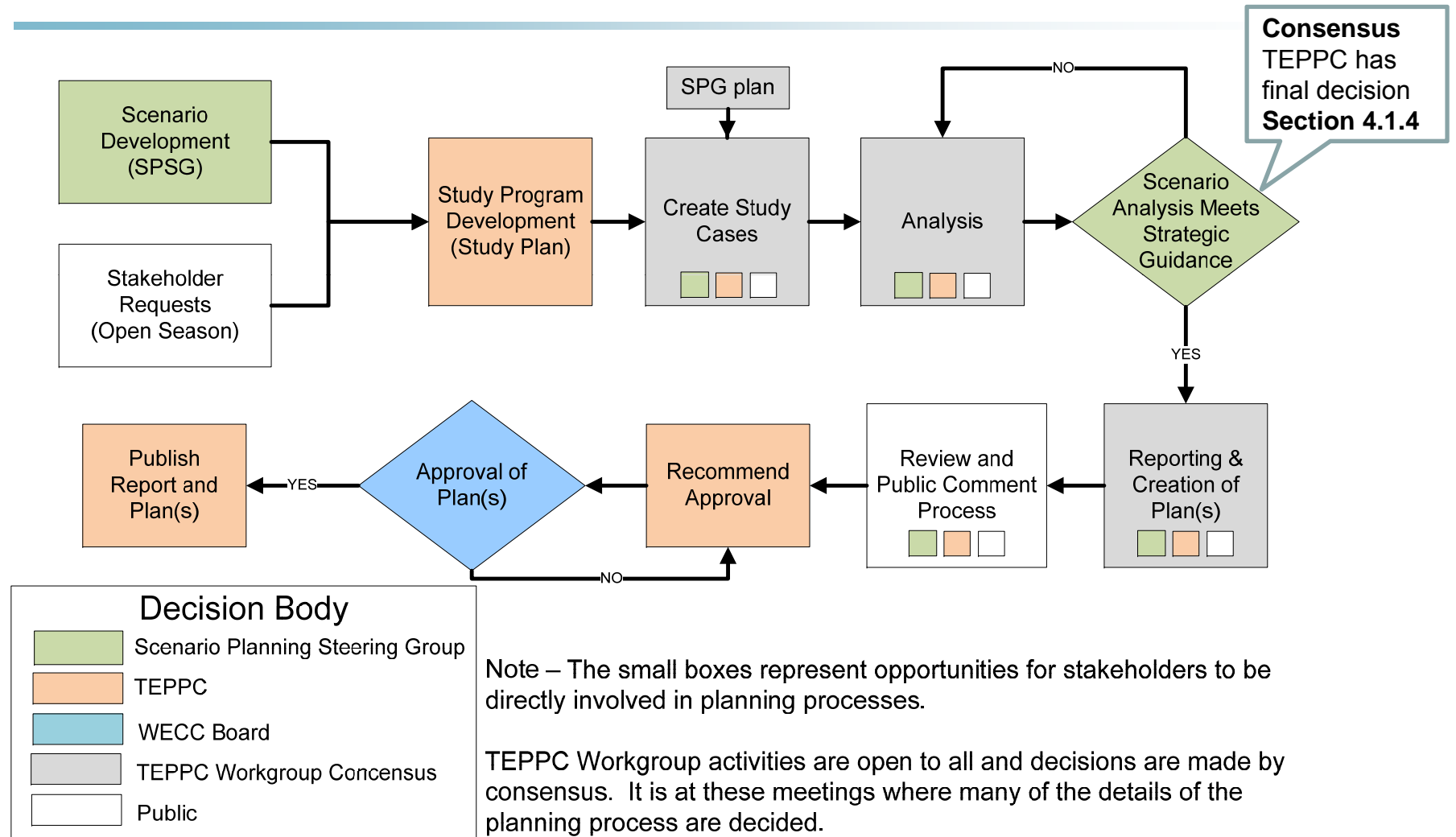
SPSG

Scenario Planning Steering Group Representation

Total Number	SPSG members on TEPPC	Representing
5	0	Technology Advocates (wind/solar/geothermal/nuclear/coal/EE/DSM)
1	0	Transmission Owner/Operator/Developer
1	0	Lands protection advocate
1	0	Wildlife advocate
8	2	State Officials (PUC, Energy Office)
1	0	Provincial Official
1	0	Canadian Utility Representative
2	1	Consumer Advocates – One from TEPPC
1	1	Environmental Representative from TEPPC
1	1	WECC Board member from TEPPC
1	1	SPG representative from TEPPC
1	1	LSE representative from TEPPC
1	0	Tribal Representative
25	7	TOTAL

Overview of WECC Response

Expanded TEPPC Regional Planning Process



WECC Proposal

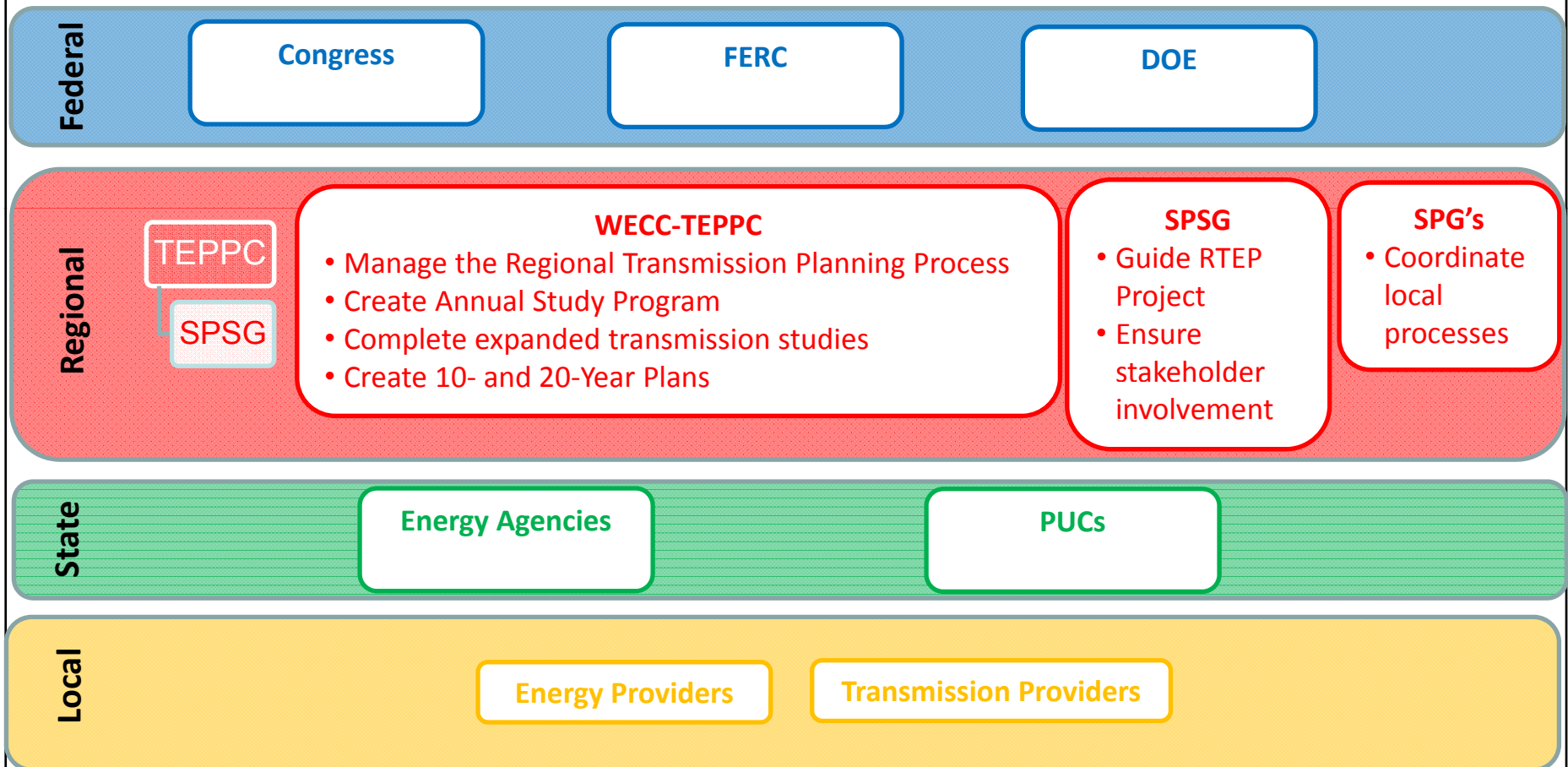
Planning Activities (new activities in Red)

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

Deliverables to DOE

- **September 2011**
 - 10-Year Regional Transmission Plan
 - SPG Foundational Project List
 - Planning Engineer Education Program
 - Technology Reliability Assessment
- **September 2013**
 - Updates to the June 2011 deliverables
 - 20-Year Regional Transmission Target Plan

Electricity Planning



RTEP Desired Outcomes

Value Propositions

- Increased coordination among entities in the Western Interconnection
- Increased awareness of how energy policy decisions impact reliability and cost
- Ability to answer key policy questions at State, Provincial and Federal levels
- Additional information for use by decision makers in siting and cost allocation proceedings

RTEP Update

- Board approved the RTEP project
- Scenario Planning Steering Group (SPSG)
 - Seated through Board consent on March
 - Request for a Tribal representative sent
- Contract with DOE
 - Final Contract nearly ready
- TEPPC document changes complete
- Close coordination of activities with the State and Provincial-led activities

Regional Transmission Planning

Update on WECC TEPPC Efforts on Western Interconnection Wide Planning

Questions?

Robert Kondziolka, P.E.
Salt River Project
602-236-0971

Robert.kondziolka@srpnet.com

Sources of Information – Previous presentations by:

Brad Nickell, WECC Director

Scott Cauchois, TEPPC Chair

Robert Kondziolka, TEPPC Member