

# **Comprehensive Transmission Planning: New Challenges To Coherence, Functionality, and Economic Efficiency**

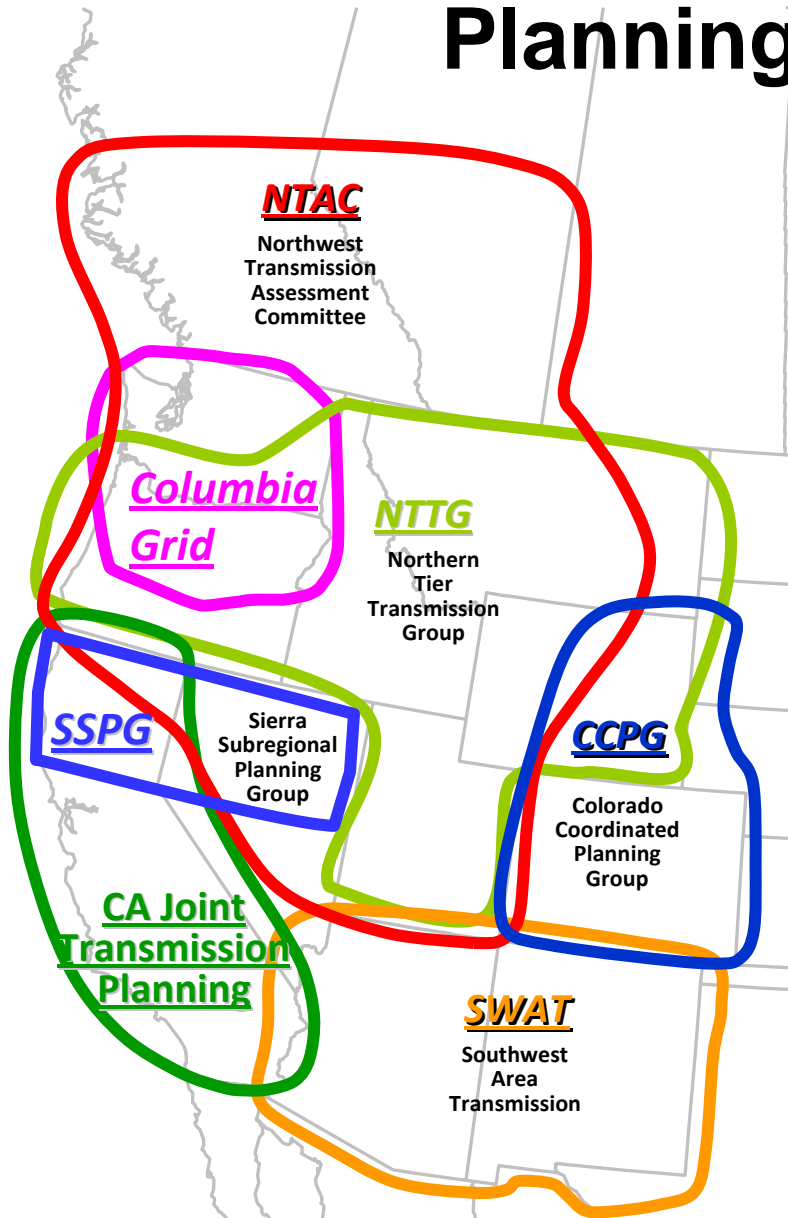
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Executive Vice President  
Southern California Edison

**Harvard Electricity Policy Group  
Fifty-Fifth Plenary Session  
Session Three: Comprehensive Transmission Planning  
Cambridge, Massachusetts  
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# Increasing Need for Transmission Planning Coordination

- **Increasing need to build large transmission projects driven by reliability and anticipated renewables requirements across the nation**
- **Multiple geographic transmission areas with different planning mechanisms & processes**
- **Multiple barriers to constructing transmission projects in a timely manner including:**
  - **Lengthy multi-agency siting and permitting processes**
  - **Obtaining timely federal land management agency decisions on licenses and permits**
  - **Planning models that require a “base case” for studying needed transmission – in this changing environment, what exactly is the “base case”?**

# Western Interconnection Transmission Planning Overview



Sub-regional planning groups formed into three regional groups to address common planning issues within Western Interconnection

- **Northwest Power Pool** (*NTAC, NTTG, Columbia Grid*)
- **Westconnect** (*SSPG, CCPG, SWAT*)
- **CA Joint Transmission Planning Group**
  - CA also has Renewable Energy Transmission Initiative

# Western Interconnection Transmission Planning Coordination

## *Transmission Expansion Planning Policy Committee (TEPPC)*

TEPPC guides the analysis and modeling for economic transmission expansion planning for the Western Interconnection

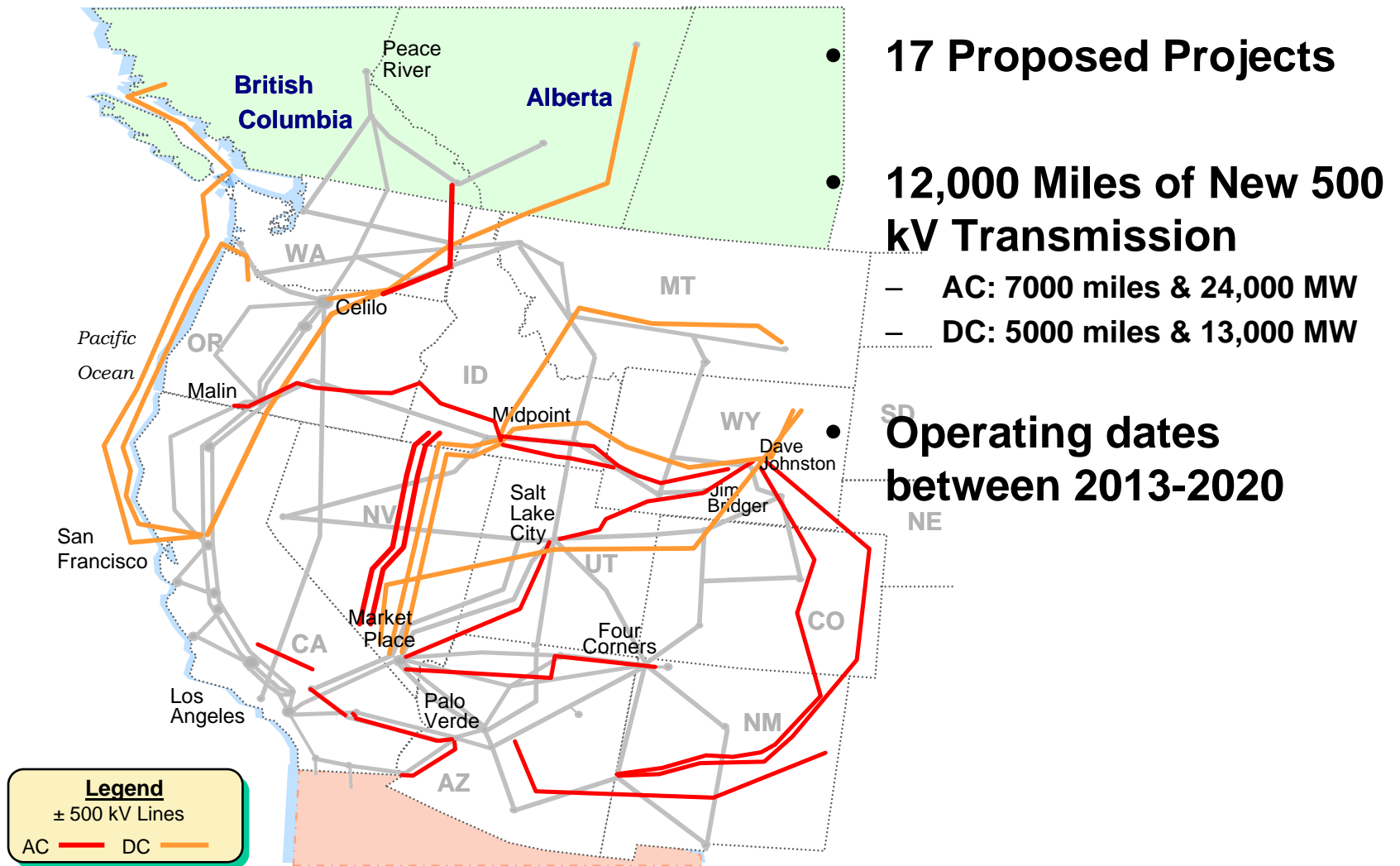
TEPPC also provides coordination among the sub-regional planning groups

## *Planning Coordination Committee (PCC)*

Required transmission needs identified by TEPPC may become transmission projects to meet the needs

Transmission project sponsors will follow the required reliability planning assessment that falls under WECC's PCC

# Transmission Projects in the Western Interconnection



# Transmission Planning Challenges

## *Planning Initiatives*

- **February 2006** – FERC Order 890 with nine principles required for transmission planning
- **March 2009** – Technical conference to address the interconnection of variable renewable resources
- **May 2009** – FERC announcement on regional conferences to assess existing planning efforts to integrate regional energy resources into the nation's power grid
- Congress is considering various transmission planning, siting, and cost allocation proposals

## *Challenges*

- Role of the federal government and regional authorities
- Bottoms-up approach or top-down process
- Traditional utility or merchant driven planning
- Regional and interregional planning
- Cost allocation

# Panel Participants

***Craig Glazer***

Vice President – Federal  
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PJM Interconnection

***Susan Tomaskey***

President – AEP Transmission

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***Bill White***

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***Stephen Whitley***

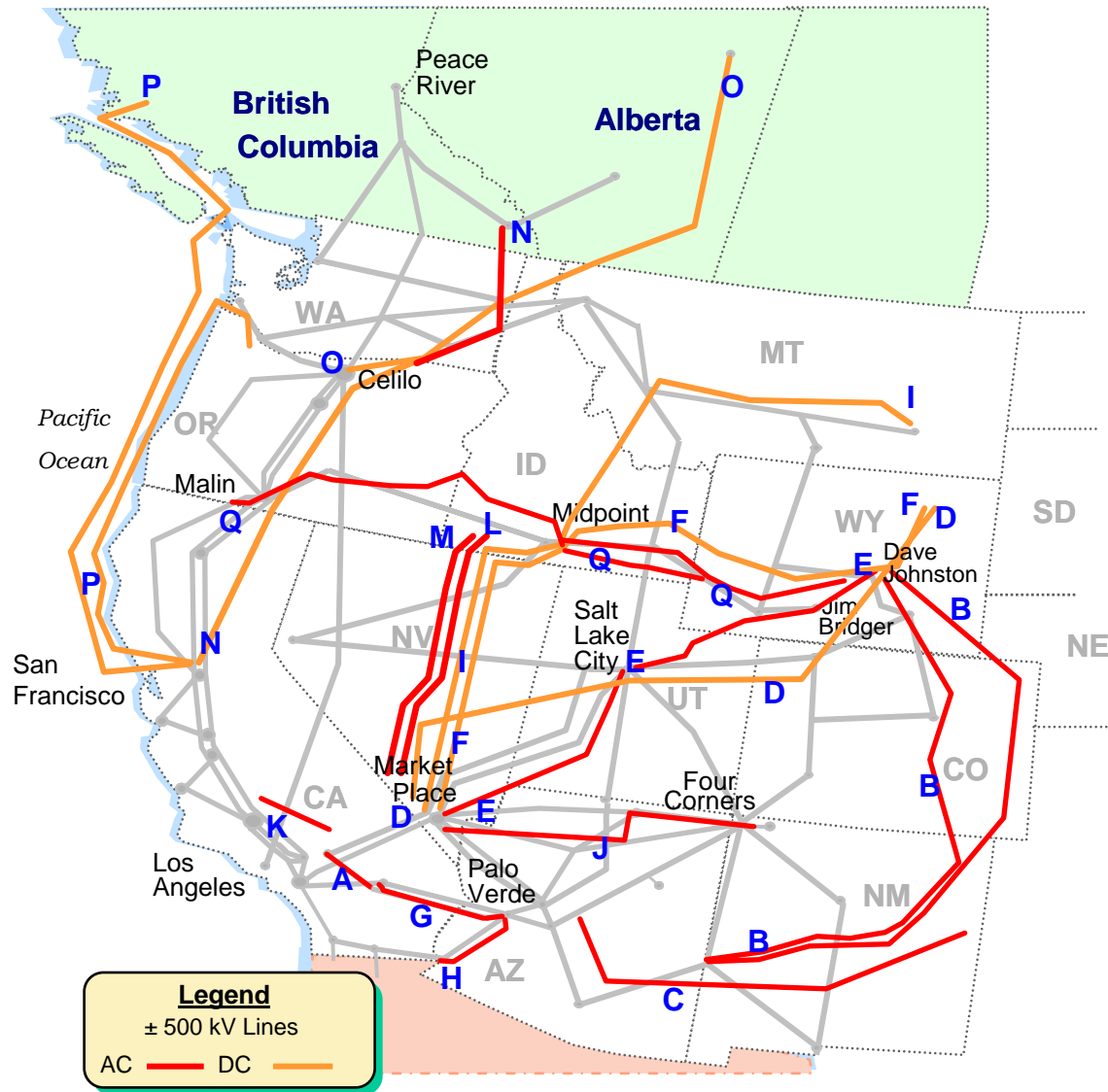
President and Chief Executive  
Officer

New York Independent System  
Operator

# APPENDIX



# Proposed Regional Transmission Projects



# Proposed Regional Transmission Projects

(Cont.)

## Rocky Mountain / Southwest Projects

	Project Name	Transfer Capability (MW)	Planned Operating Year	Resource Being Accessed	Sponsor (s)	Est. Miles
<b>A.</b>	Green Path – North	1,600	2011	Geothermal	LADWP, IID	100
<b>B.</b>	High Plains Express	3,500	2017	Wind/ Solar	WAPA, SRP, TSGT, Xcel, PNM	1,300
<b>C.</b>	SunZia Southwest	3,000	2013	Wind/ Solar	Southwestern Power Group LLC, SRP, TEP	340
<b>D.</b>	TransWest Express	3,000	2013	Wind/ Coal	Transwest LLC (Anschutz Corp)	900
<b>E.</b>	Gateway South	600-1,500	2010-2014	Wind/Coal	PacifiCorp	700
<b>F.</b>	Northern Lights Zephyr	3,000	2015	Wind/ Hydro/ Cogen/ Clean Coal	TransCanada	1,100
<b>G.</b>	Devers – Palo Verde No. 2	1,200	2012	Solar	SCE	270
<b>H.</b>	Hassayampa – North Gila #2	1,200	2010	Nuclear/ Nat. Gas	IID, APS	100
<b>I.</b>	Northern Lights Chinook	3,000	2015	Wind, Hydro, Cogen, Clean Coal	TransCanada	1,000
<b>J.</b>	Navajo Trans. Project	1,600	2010	Coal/Nat. Gas/Solar	Dine Power Authority	220
<b>K.</b>	C3ETP	1,400	2012	Hydro/ Wind	PG&E	150
<b>L.</b>	Eastern Nev. Trans Intertie (EN-ti)	2,000	2011-2013	Wind	NVEnergy	500
<b>M.</b>	Southwest Intertie Project (SWIP)	1,430	2011	Wind	LS Power	500

## Pacific Northwest Projects

	Project Name	Transfer Capability (MW)	Planned Operating Year	Resource Being Accessed	Sponsor (s)	Est. Miles
<b>N.</b>	Canada to CA (CNC) Project	3,000	2015	Wind/ Hydro/ Cogen	PG&E(Lead), Avista, PacifiCorp, BCTC	1,000
<b>O.</b>	Northern Lights Celilo	3,000	2014	Wind/ Hydro/ Cogen/ Clean Coal	TransCanada	1,000
<b>P.</b>	Seabreeze Projects (Underwater DC)	1,100	2013	Wind	Seabreeze	100 to 1,000
<b>Q.</b>	Gateway West	1,500	2012-2014	Wind/Coal	PacifiCorp	900