



**WECC Regional Planning  
Pacific Northwest/Canada to Northern California  
Transmission Project**

**Stakeholder Meeting of August 2, 2007**

**Loads and Resources Working Group  
Draft Recommendations**

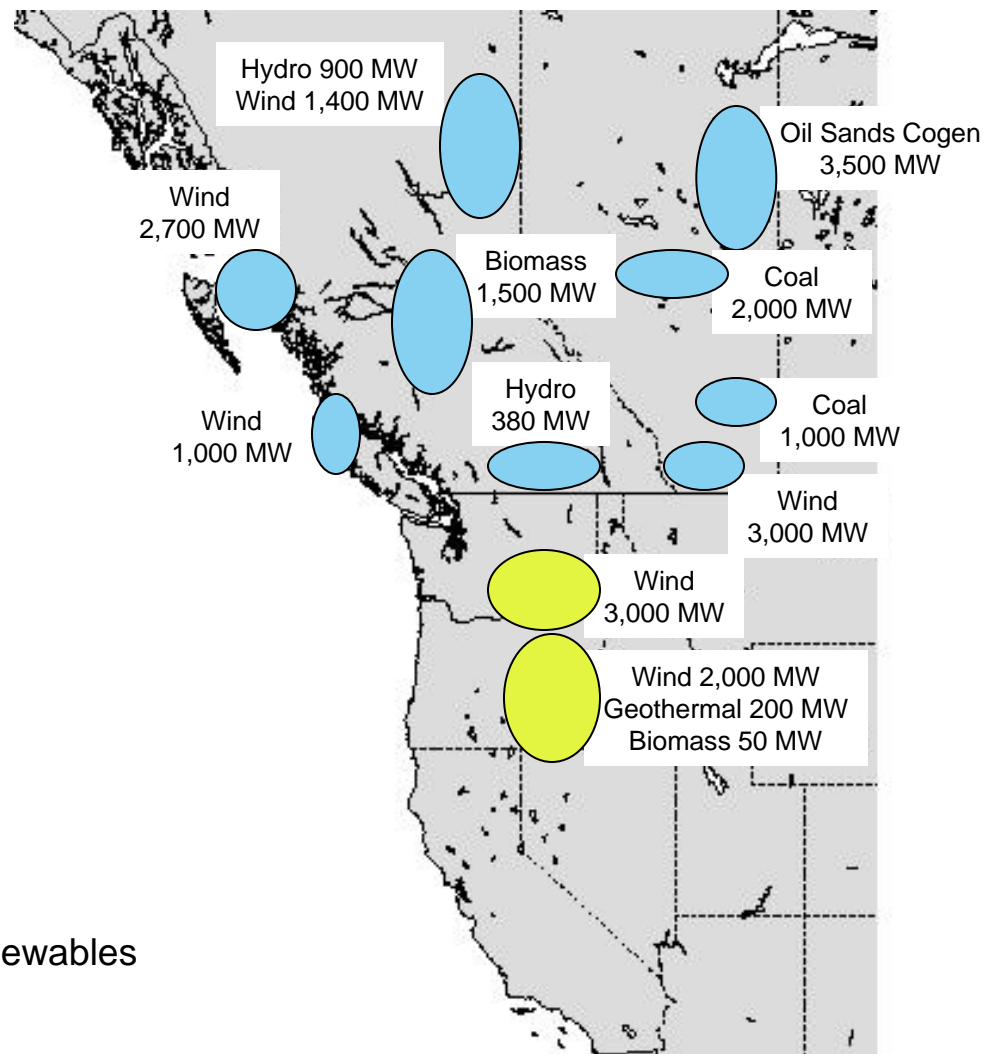
**Dennis Sullivan**



# Process

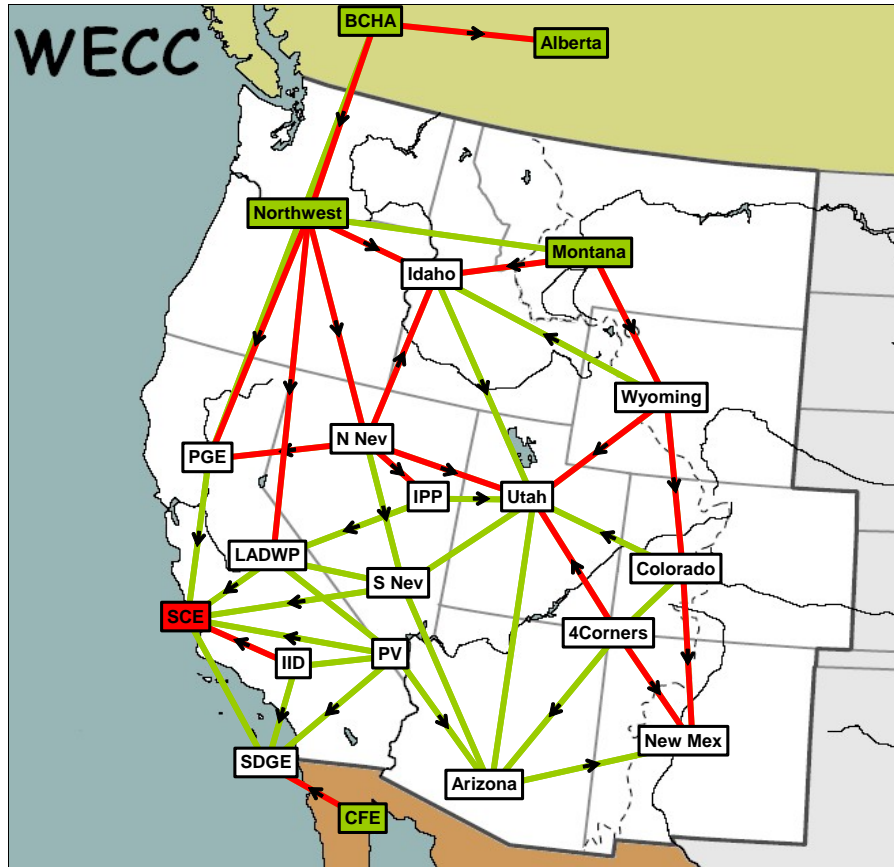
- Started with the adjusted WECC 2006 Power Supply Assessment Base Case used in the Frontier Line analysis
- Supplemented further with publicly available data and input from Working Group
- Developed scenarios to bound:
  - Range of renewables development and storage
  - Range of conventional resource development and retirement
  - Range of need in various sub-areas
- Used California Energy Commission's Supply Adequacy Model (SAM) to identify sub-areas with supply shortfall and areas with surplus
- Handed off results and recommendations to Technical Analysis and Economic Analysis Committees

# Scenarios - New Resource Potential for Year 2015

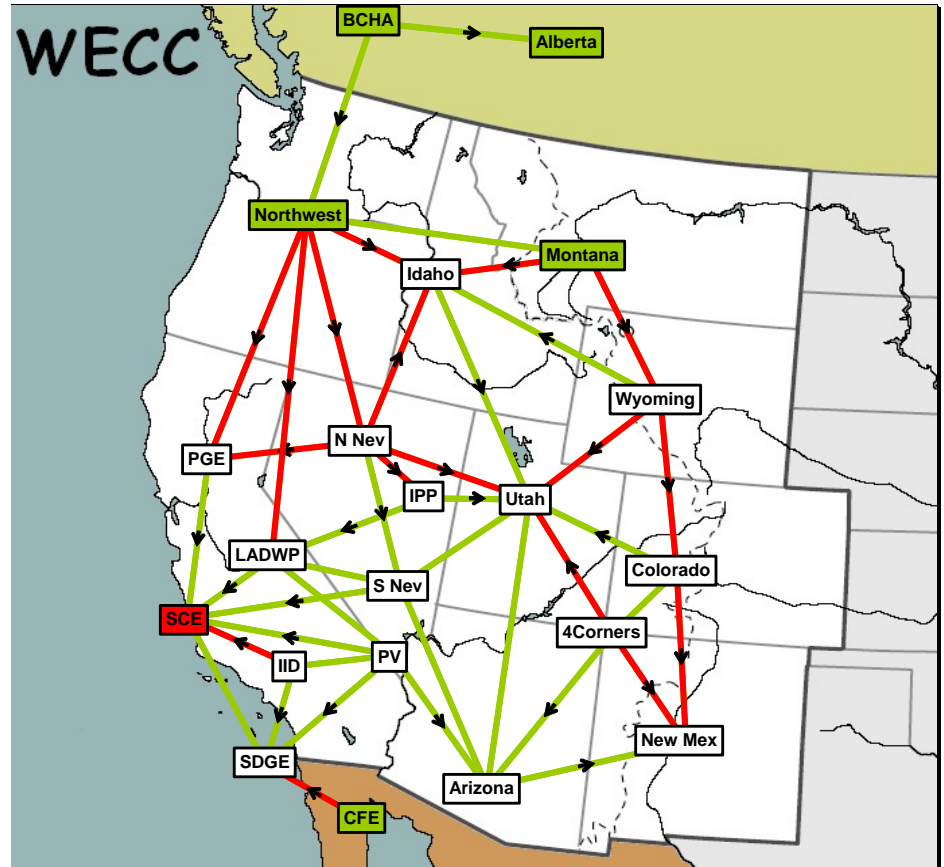


# Analysis Results – Need for Transmission

Canada Resources



Northwest Renewables



Key: Red zone – less than 15% reserve margin  
 Green zone – more than 15% reserve margin  
 White zone – exactly 15% reserve margin  
 Red line – path fully loaded in the direction of the arrow  
 Green line – path partially loaded in the direction of the arrow  
 Green line with no arrow – path with no flow



# **Renewable Energy Considerations**

- The SAM Model uses a transportation methodology to evaluate summer reliability in areas of the WECC
- This is a valid screening method used in other transmission studies
- For summer reliability purposes, the modeling does not show a need for transmission upgrades between B.C. and the Northwest
- However, a primary purpose for this line is to enable the flow of renewable energy. The transportation methodology cannot evaluate this benefit
- The L&R Working Group recommendations will include transmission options for the B.C. – Northwest path



# Recommendations

Recommended Incremental Transportation Options for Study by the Technical Analysis and Economic Analysis Subcommittees

Path	Total Path Capability, MW	
	Existing	Identified Options
Northwest-PGE	4,200	1,500
Northwest-PGE	4,200	3,000
Northwest-PGE	4,200	4,500
BCH-Northwest	3,150	1,500
BCH-Northwest	3,150	3,000
BCH-Northwest	3,150	4,500
BCH-PGE	0	3,000



## **Loads and Resources Working Group Members**

Dennis Sullivan - PG&E - Chair

Don Bain - Aero Power Service

Gavin Berg - Katabatic Power

Ed Chang - Flynn RCI

Tony Duggleby - Katabatic Power

Lindsay Fane - BC Hydro

Thom Fischer - Toll House Energy

Kurt Granat - PacifiCorp

Curtis A Hatton - PG&E

Bill Hosie - Transcanada

Renee Hull - Sierra Pacific Power

Eric Law - PG&E ET

Elliot Mainzer - BPA

Michael Margolick - Naikun Wind Development

Jim McMorran - SierraPacific Power

Thomas Miller - PG&E

Juergen Puetter - Aeolis Wind

Chris Reese - Puget Sound Energy

John Rich - BC Hydro

Ron Sanderson - BCTC

Rohan Soulsby - BCTC

Elroy Switliff - Jetson Consulting Engineers

Cam Matheson - BC Hydro