

Senate Bill 100 Information Filing Presentation

December 18, 2008



Agenda

- **Introduction and purpose**
- **Energy Resource Zones**
- **Transmission Planning Process**
- **Transmission Projects**
- **Next Steps**



Purpose of Information Filing

- **Provide Commission and stakeholders with an update of Public Service's SB-100 activities**
- **Provide an interim plan for Commission input**
- **Provide additional transparency into the planning efforts under SB-100**
- **Opportunity to focus next steps**

SB-100 Informational Filing

- **Section I:** A description of the stakeholder process Public Service has conducted since the spring of 2008 related to its activities under SB 07-100
- **Section II:** A description of the current identified Energy resource Zones(“ERZs”)
- **Section III:** A description of Public Service’s overall transmission planning process
- **Section IV:** The transmission plans that Public Service has prepared pursuant to SB 07-100
- **Section V:** Next steps

I. Stakeholder process



SB-100 Process

- **March 2007: Senate Bill 100 become law in CO.**
- **Oct 31, 2007: PSCo submits first filing to PUC which includes the establishment of Energy Resource Zones and submits a CPCN for Pawnee to Smoky Hill(SH)345 kV line.**
- **Feb 2008: Hearing on CPCN Pawnee-SH 345 kV line.**
- **Feb 2008: PSCo agrees to accelerate SB-100 2008 process.**
- **March 4, 2008: Kickoff Meeting for 2008 SB-100 process.**
- **April – July 2008: Transmission Study Group meets.**
- **Sept 26, 2008: Stakeholder meeting to discuss transmission plans to all 5 energy resource zones.**
- **Nov 5-6th, 2008: Rehearing on CPCN(Pawnee –SH 345).**
- **Nov 24, 2008: Informational filing with PUC on energy zones and transmission plans for each zone.**

II. Energy Resource Zones

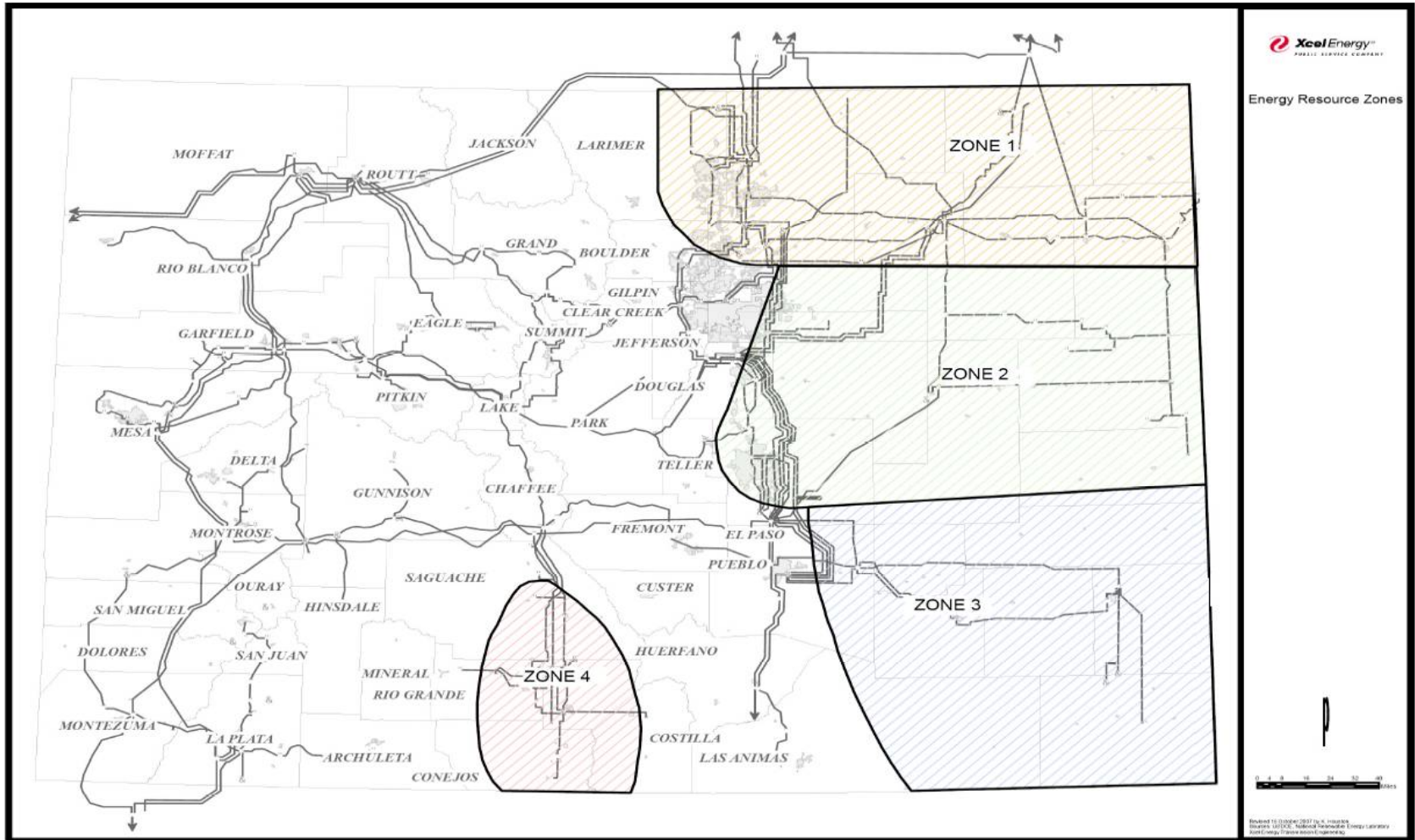


Determination of Energy Resource Zones

- **2007 Process**
- **Generator interconnection requests**
 - **Bids received in response to the 2005 All Source RFP**
 - **More detailed wind modeling by county**
 - **Stakeholder suggestions**
 - **Note: SB07-91 Report was not made public until early 2008**



Energy Resource Zones -- 2007

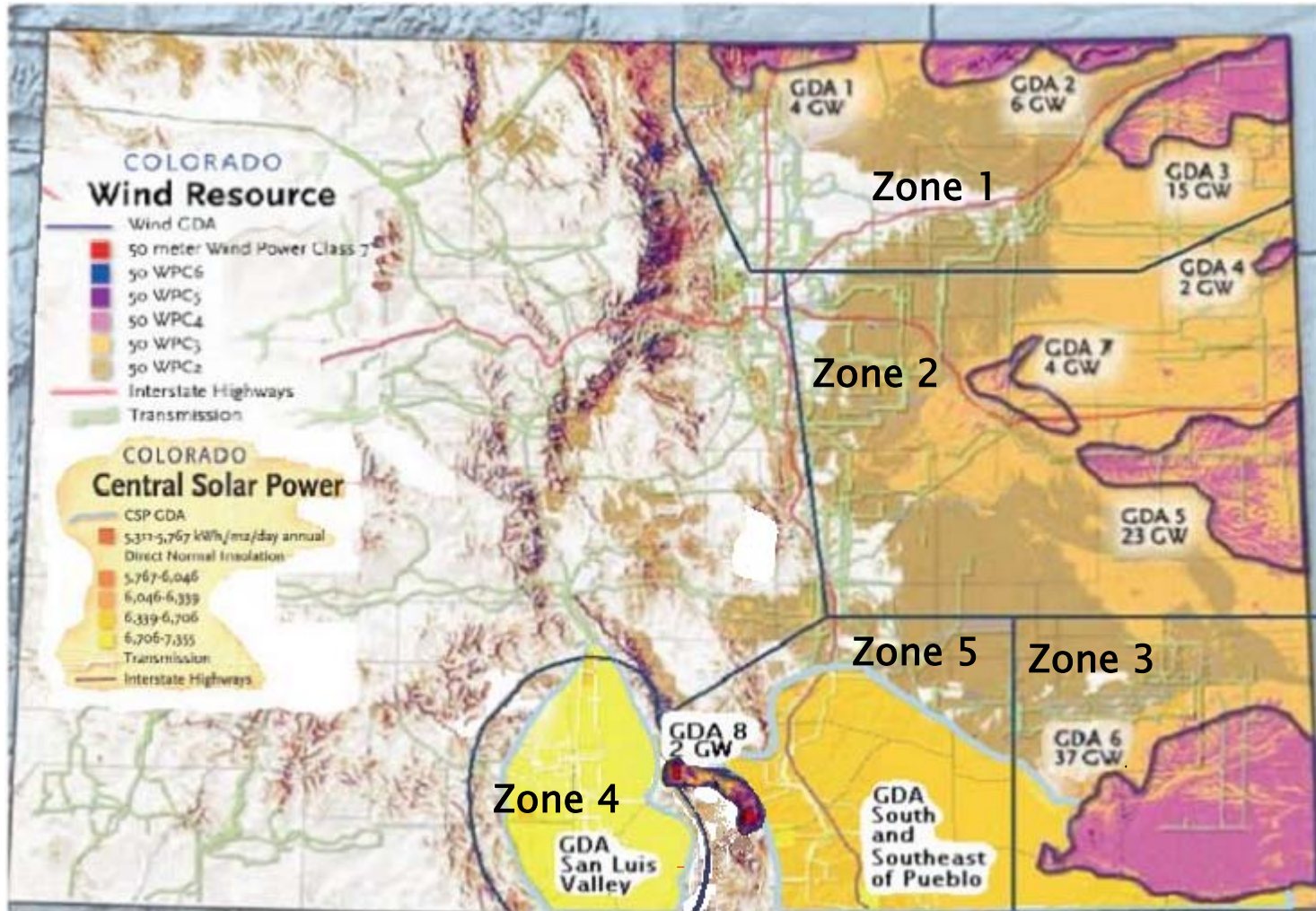


Changes for 2008

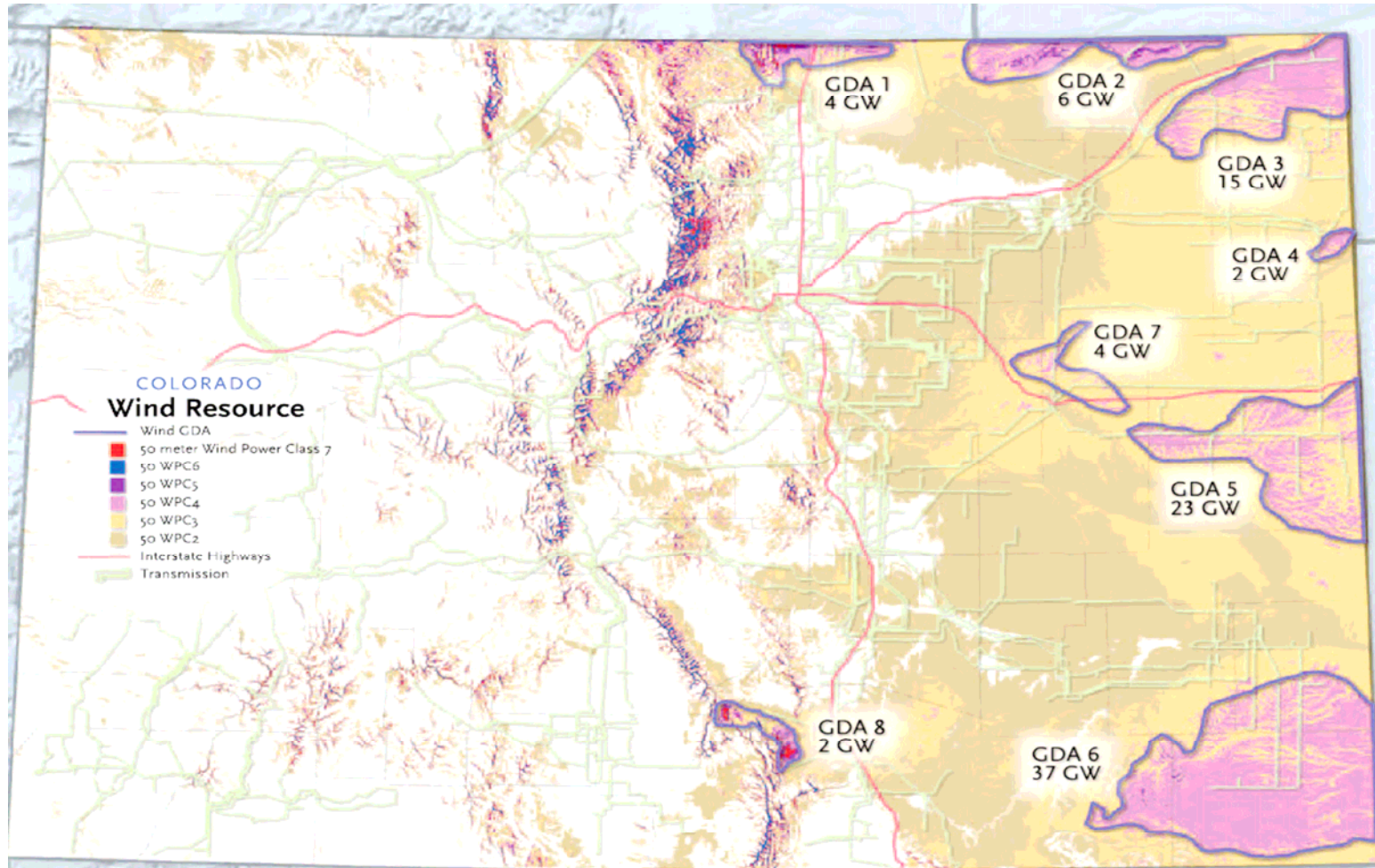
- **South central CO and some of the GDAs were not represented in a Zone**
- **Created Zone 5**
 - **Western portions of Zone 3 and the eastern portion of Zone 4**
 - **Boone, Walsenburg and Comanche interconnection in Zone 5**
 - **Access to Wind GDA 8 and the Solar GDA South and Southeast of Pueblo**
- **Positive feedback from stakeholders**



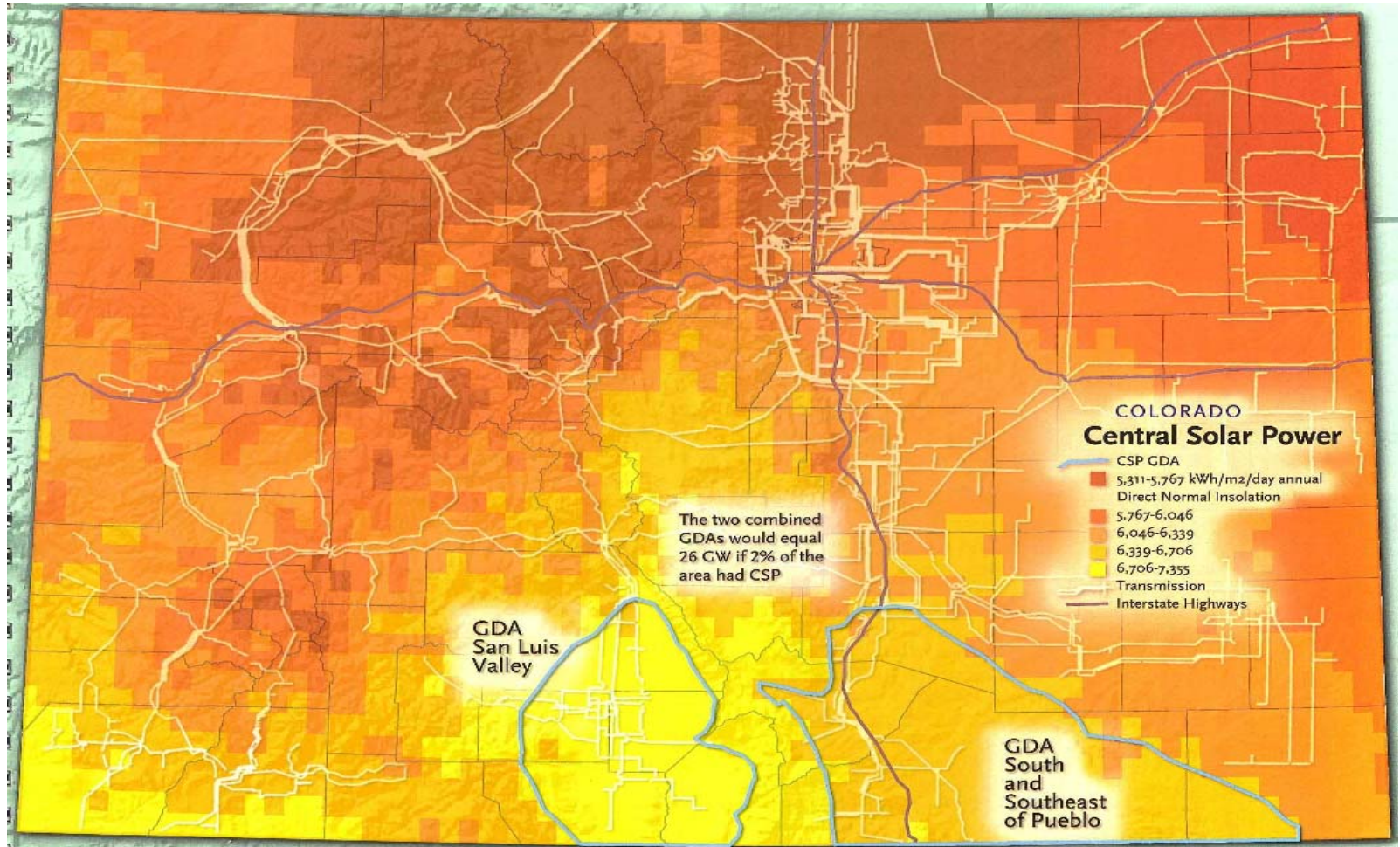
2008 Energy Resource Zones with GDA's



Wind GDA's (Generator Development Areas) SB-091

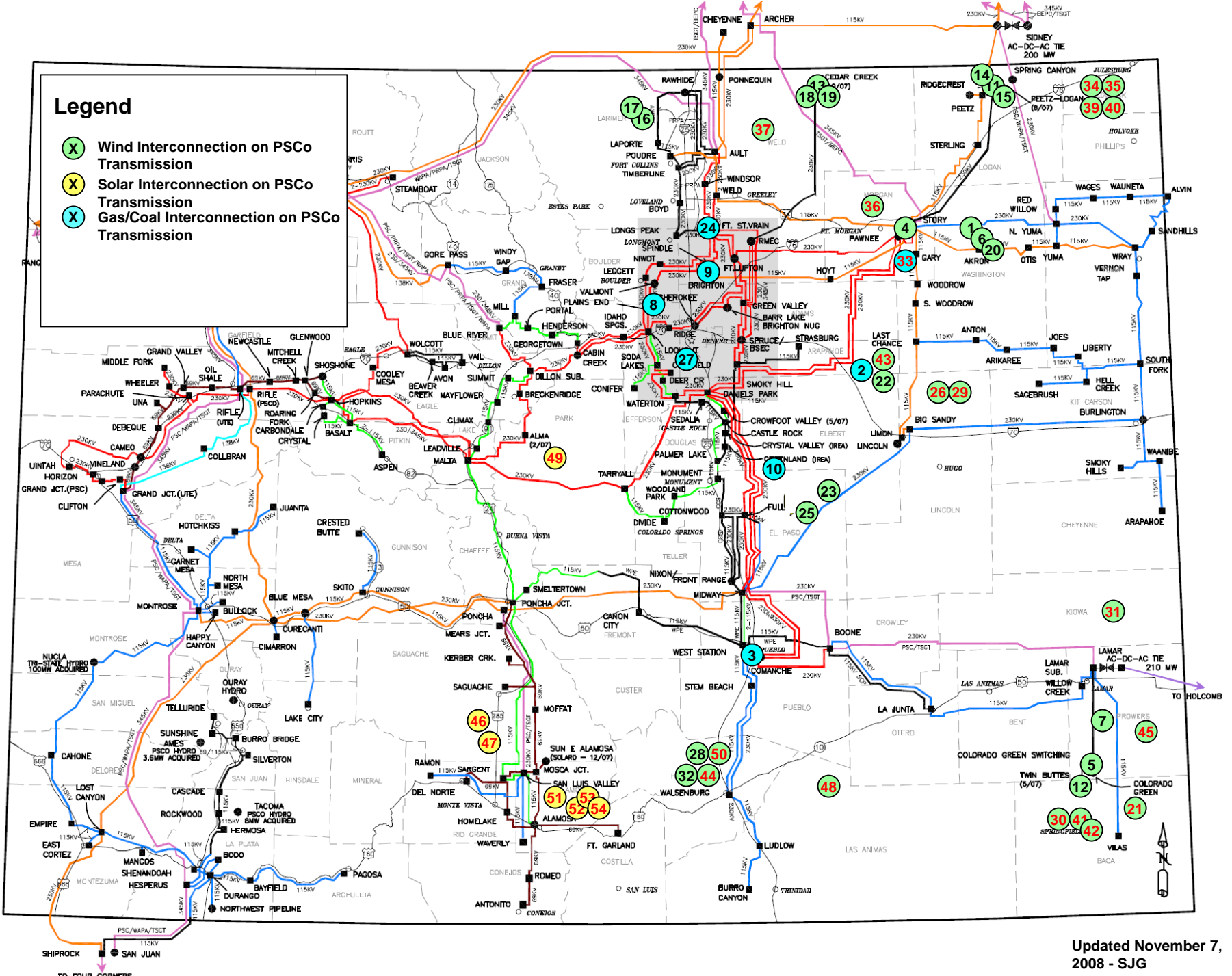


Solar GDA's SB-091



Legend

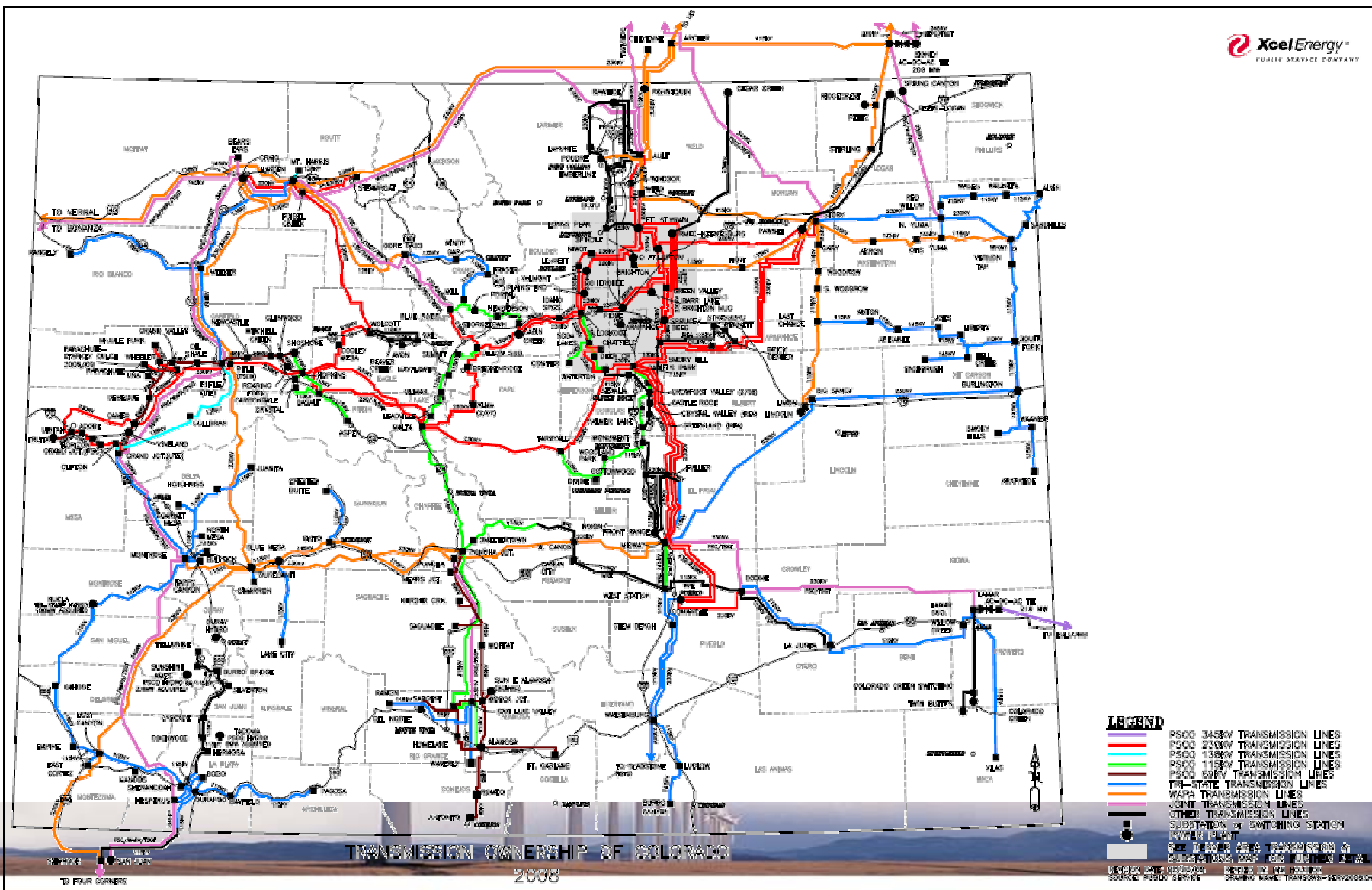
- ⊗ Wind Interconnection on PSCO Transmission
- ⊗ Solar Interconnection on PSCO Transmission
- ⊗ Gas/Coal Interconnection on PSCO Transmission



III. Transmission Planning



Transmission Map



Planning Objectives

- **Maintain reliable electric service.**
- **Improve the efficiency of electric system operations, including the provision of open and non-discriminatory access to its transmission facilities.**
- **Identify and promote new investments in transmission infrastructure in a coordinated, open, transparent, and participatory manner.**
- **Comply with FERC 890 principles.**

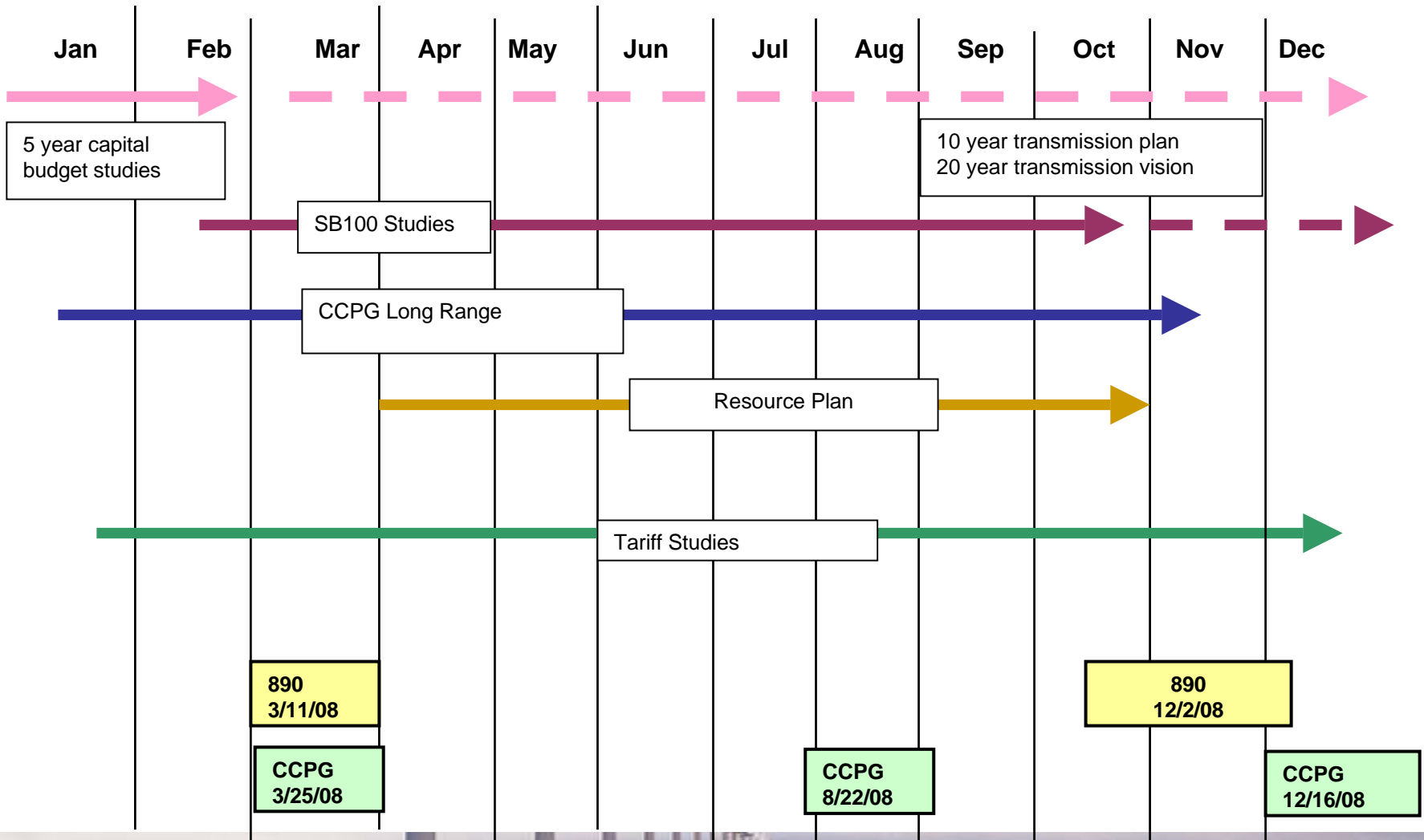


Coordinated Planning Process

- **Calendar**
- **FERC 890 coordinated planning**
- **SB-100 open stakeholder process**
- **Regional and sub regional coordination**



Planning Calendar



FERC 890 Process

- **Compliance filing Oct 15, 2008**
- **Open Stakeholders meetings twice a year**
- **Open, transparent and coordinated transmission planning process**



Colorado Coordinated Planning Group

- Forum for joint transmission planning
- Recognized WECC Sub-Region
- Three Open Meetings/Year
 - April, August, December (Joint with SWAT/Sierra)
- Denver TSGT Offices
- Multiple Subcommittee and Work Group meetings throughout the year
- Open to All Interested Stakeholders
- Meeting Notices/Materials Posted at:
www.westconnect.com

IV. Transmission Plans for Each Energy Zone



Overview of Plans

- **Midway to Waterton 345 kV**
- **Pawnee to Smoky Hill 345 kV**
- **Short term solutions**
- **Plans for each ERZ**



Midway to Waterton 345 kV Project

- **CPCN issued in September 2007**
- **Premise of CPCN was deliver 500 MW from the Squirrel creek project**
- **Squirrel creek Project Cancelled**
- **Midway to Waterton needed to delivery resources from energy zones 3, 4 and 5 to Denver load Center**
- **Proposal to have in service 2012.**



Pawnee to SH 345 kV CPCN

- **October 31, 2007: Filed CPCN for new 345 kV line**
- **Hearing on Feb 27-28, 2008**
- **94 mile 345 kV line to access renewables from Zone 1**
- **Cost estimated to be \$120 million in 2008 \$**
- **Scheduled ISD year end 2013**
- **Transfer approximately 500 MW of renewable resources to Denver load center**
- **Rehearing on Nov 5-6, 2008**
- **Expect final ruling end of 2008**

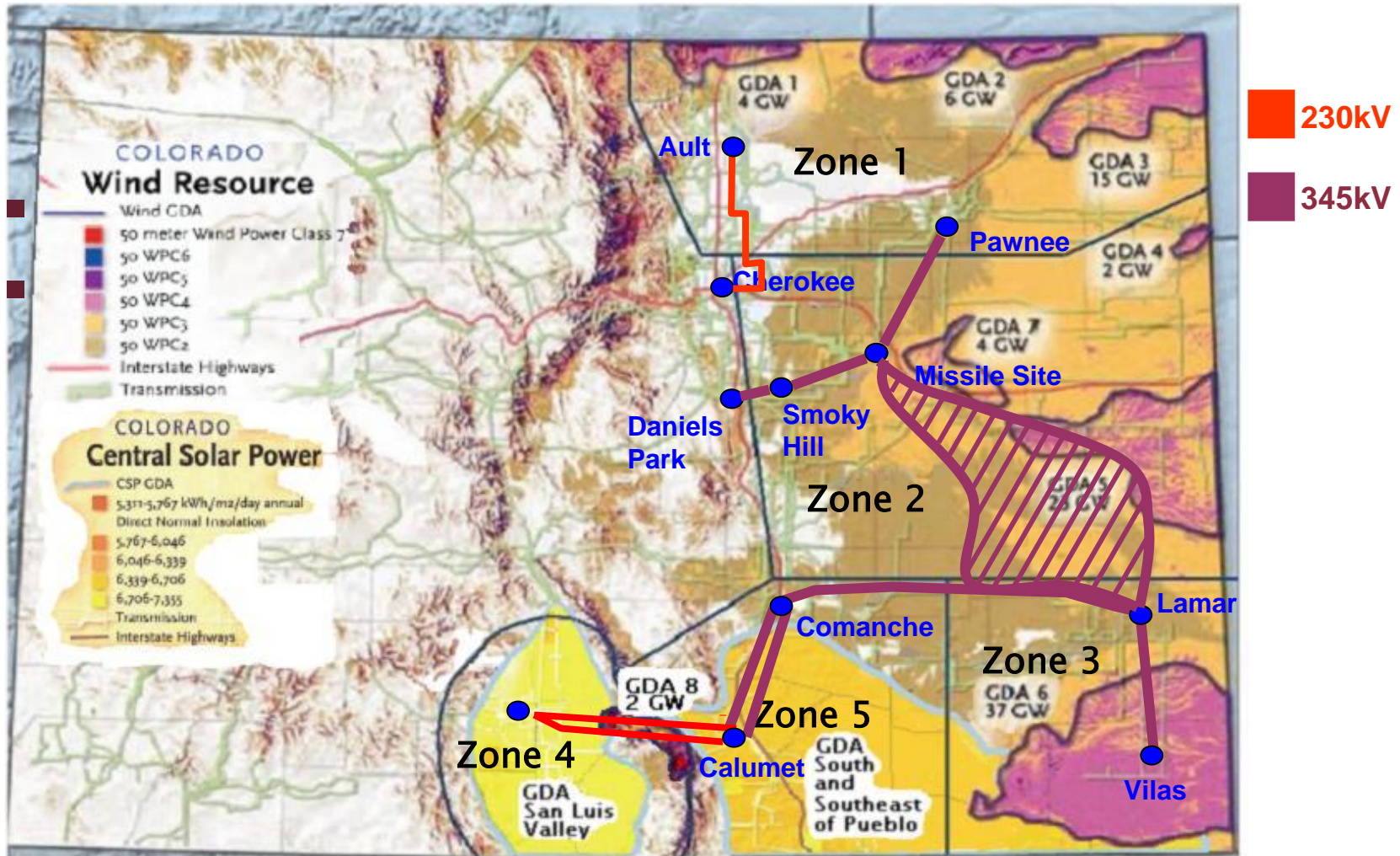


Short term Solutions

- **Upgraded the Pawnee to Smoky Hill and the Pawnee to Daniel Park 230 kV lines to allow for maximum simultaneous operation of existing resources in the Pawnee region.**
- **Both 230 kV lines upgraded to 636 MVA in 2008**
- **Both 230 kV lines will be further upgraded to 735 MVA by end of 2009.**



SB-100 Overall Transmission Plan



Proposed Senate Bill 100 Projects

Project	Description	Generation injection	Cost	Energy Zone	Priority
Pawnee – Daniels Park– 345 kV line	Second circuit 345 kV line in Energy zone 1.	300-500 MW	\$65,000,000	1	Medium -1
Ault to Cherokee 230 kV	New mile 230kV line in energy Zone 1.	300-600 MW	\$64,000,000	1	Medium -2
Missile Site	345/230 kV switching station on Pawnee to Daniel Park line in energy zone 2.	200-500 MW	\$13,500,000	2	High-2
Lamar to Comanche 345 kV line and Lamar	New 345kV lines to access energy zone 3.	800-1000 MW	\$240,000,000	3	High -3
Lamar to Vilas 345 kV line	New 345kV line in Energy Zone 3 to access wind rich area.		\$27,000,000	3	Low
San Luis – Calumet – Comanche Line	Double circuit 230 kV line(SLV to Calumet) and double 345 kv line(Calumet to Comanche).	600-1000 MW	\$150,000,000	4 and 5	High -1
Total			\$559,500,000		
	generation values are non simultaneous				

V. Next Steps



Policy Considerations

- **Seeking approval of transmission under SB 100 consistent with CPCN rules**
 - Approving transmission in advance of new generation
 - Streamline the CPCN approval process
 - Providing guidance on prioritizing projects
- **Future Transmission Planning**
 - 10 year horizon vs longer
- **Joint Planning/Projects**
 - High Plains Express



Next Steps

- **Dec 18, 2008 CPUC workshop on SB-100 plans to allow stakeholder input and feedback on priority.**
- **Jan 12, 2009 CPUC workshop for stakeholder response**
- **Feedback from CPUC on priority of CPCN's on transmission plans**
- **Future CPCN process for SB-100 projects**

Questions

