

PSCo Senate Bill 100

Transmission Plans Update

July 26, 2007

Senate Bill 100 Transmission Plan Zone 1

- ◆ PSCo Transmission Planning has perform system studies for the four energy resource zones identified

Zone 1 (Northeast Colorado)

- ◆ **Pawnee Region:** (A) Short term transmission plan to add additional Available Transmission Capacity (ATC)
 - ◆ (A) Upgrade the existing 230 kV Pawnee – Quincy - Smoky Hill, and Pawnee – Daniels Park lines to 637 MVA.
 - ◆ In the 2008 Capital Budget –Has been approved to start in 2007
 - ◆ Capable of 200-300 MW injection at Pawnee. Amounts need to be finalized through technical studies.
 - ◆ Need to determine the System Operating Limit(SOL) from Pawnee to evaluate the Transmission Corridor in real time.
 - ◆ **Cost: \$1.54 million Time Frame: 9 months**
 - ◆ **No CPCN needed**

Senate Bill 100 Transmission Plan Zone 1

Zone 1 (Northeast Colorado – cont.)

- ◆ (B) Long term transmission plan for a new 345 kV switchyard at Pawnee and a new 345 kV transmission line between Daniels Park and Pawnee
- ◆ Capable of 600-800 MW injection at Pawnee. Amounts need to be finalized through technical studies.
- ◆ **Cost: \$102 million Time Frame: 65 months**
- ◆ **CPCN needed – future filing**

Zone 1 (Northeast Colorado – cont.)

◆ **Keenesburg Region:** Network upgrade requirements are presently being studied for injection into Keenesburg 230 kV. Ongoing studies include GI-2007-5 and GI-2007-6 for 50 MW and 200 MW expansion.

◆ Transmission studies could be complete by October 2007 but not mature enough for CPCN filing.

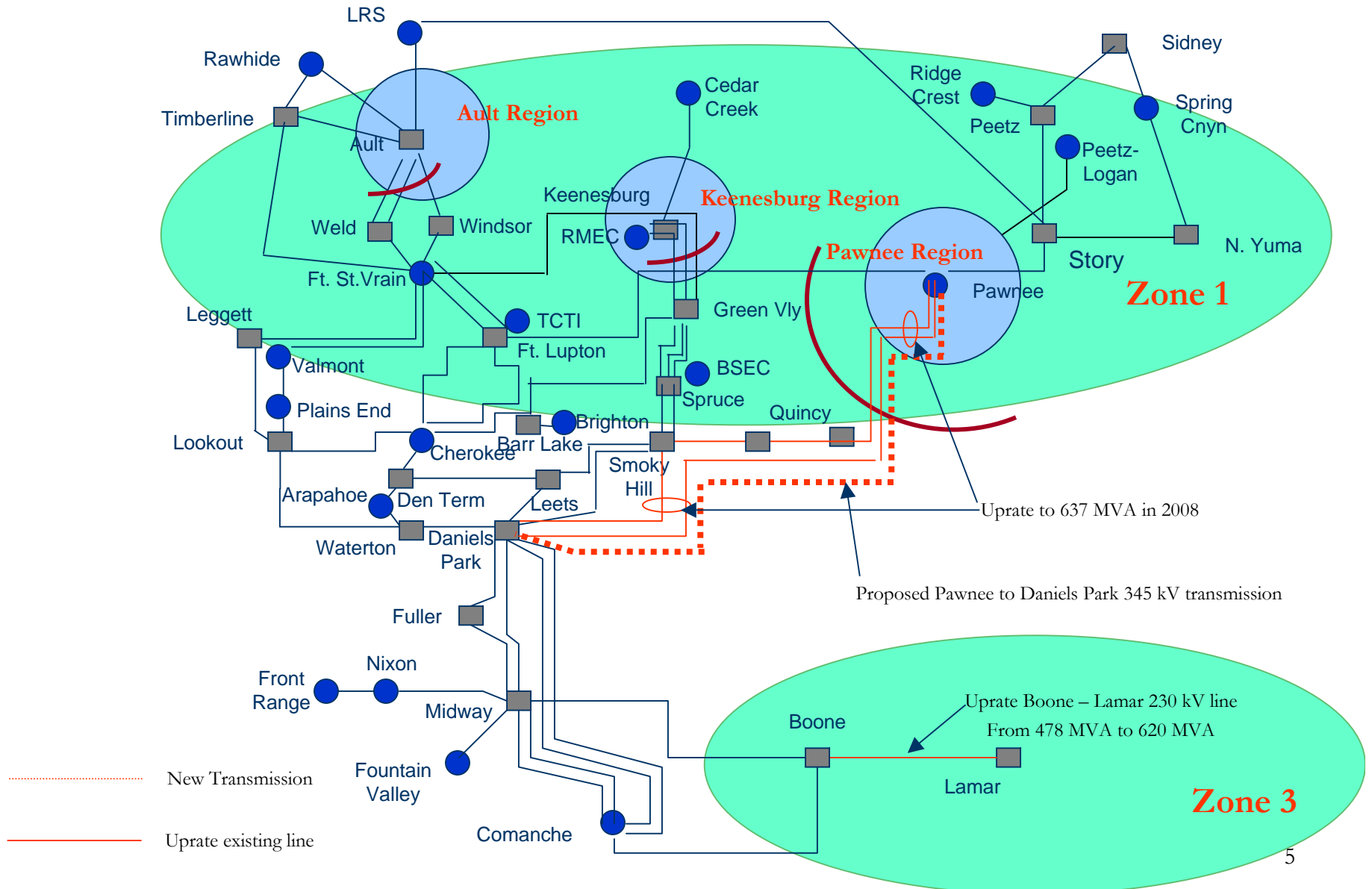
◆ **CPCN will be needed in subsequent filings**

◆ **Ault Region:** In process of evaluating the need for additional ATC to accommodate new alternatives of 300 MW (GI-2007-3, 2010) and additional 300 MW (GI-2007-4, 2013) injection into Ault area. Studies being coordinated with WAPA, PRPA and TriState.

◆ Transmission studies could be complete by October 2007 but not mature enough for CPCN filing.

◆ **CPCN will be needed in subsequent filings**

Transmission Plan: Zones 1 and 3

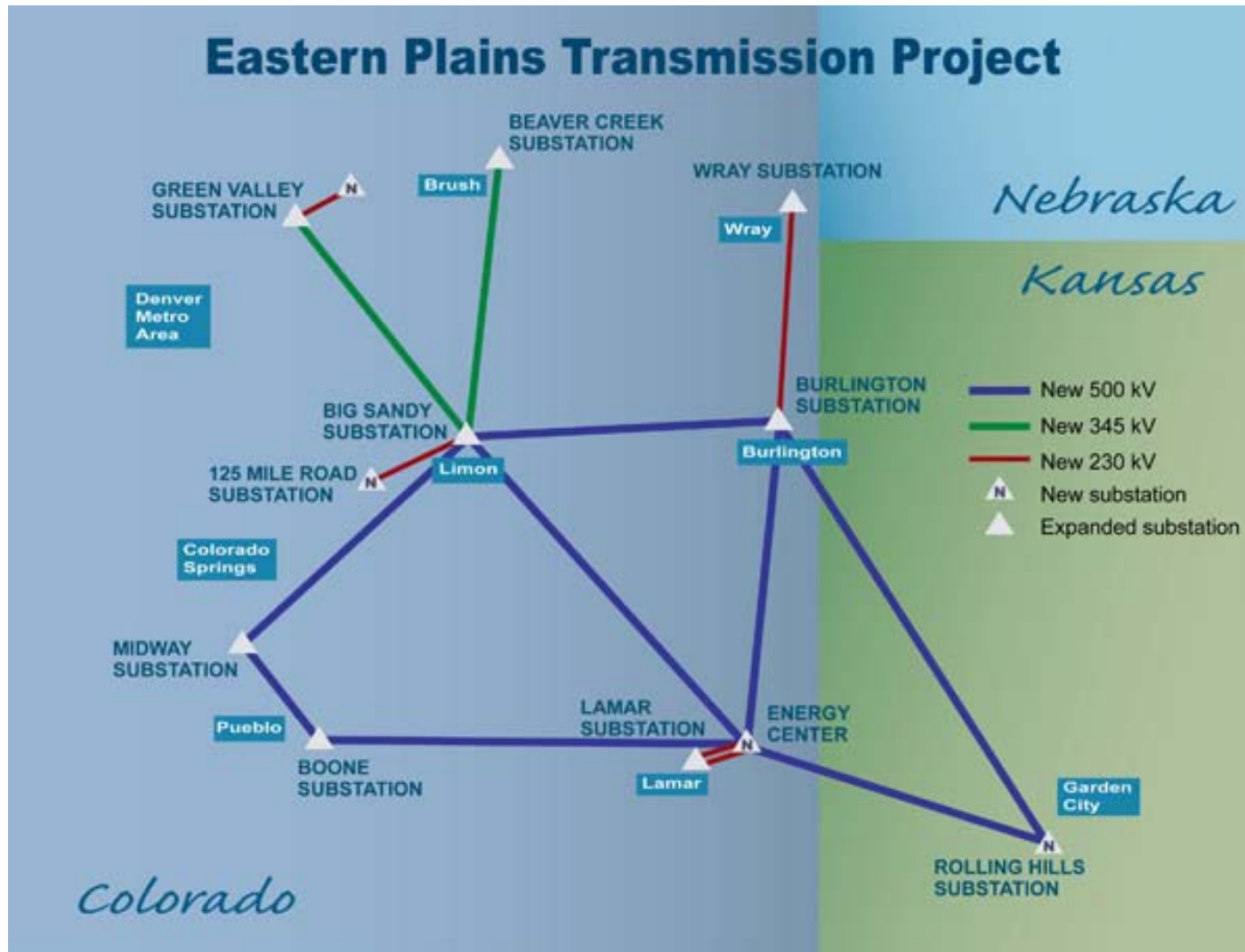


Senate Bill 100 Transmission Plan Zones 2&3

Zone 2 (East Central Colorado)

- ◆ Evaluate and incorporate the transmission study of the planned Eastern Plains Transmission Project (EPTP). **Discuss status of project with Tri-State and WAPA. Possibility of a partnership with TSG&T and Western Area Power Administration.**
- ◆ PSCo and TSG&T met on July 13th to discuss PSCo's participation in the EPTP to allow PSCo additional transmission capacity for generation projects in zone 2 and 3. TSG&T was receptive to the idea. No commitments have been made, but both companies will continue to discuss and determine if there are any synergies with PSCo participating as an equity owner in some portion of the EPTP. This would only involve the planned transmission assets.
- ◆ **CPCN would be needed - future filing**

Transmission Study Plan: Zone 2



Senate Bill 100 Transmission Plan Zones 3

Zone 3 (Southeast Colorado)

- ◆ Lamar Region: Transmission Plan to add addition ATC to relieve the current constraint from the South East area through Boone and into Denver Metro area.
- ◆ **Short-term:**
 - ◆ Boone/Lamar Substation: (1) upgrade terminations at Boone and Lamar to increase line rating from 478 to 620 MW (2) Joint transmission line with TSG&T (PSCo ownership is 56%) (3) The estimate for the Lamar and Boone terminations to allow 620 MWA is about \$900,000. Boone is a joint substation with TSG&T. This project was discussed with TSG&T on July 25th. They are evaluating their participation.
- ◆ **Long-term:**
 - ◆ EPTP – anticipate partnership with WAPA and TSG&T
 - ◆ Lamar Substation: (1) To gain access to rich wind resources in Baca County PSCo will need approximately 57 miles of new 230 kV transmission into area south of Lamar (2) The estimate for a new line and switching station is \$27 million.

Senate Bill 100 Transmission Plan Zone 4

Zone 4 (San Luis Valley - Colorado)

- ◆ Evaluate current system capacity of injection at San Luis Valley (SLV) substation with the existing Transmission System
 - ◆ Preliminary Studies show that generation at the SLV Substation can inject:
 - ◆ 175 MW for light load conditions (night, no irrigation load)
 - ◆ 200 MW for peak summer conditions (mid-afternoon, July , high irrigation loads)
 - ◆ SLV substation is a joint substation with TSG&T. An additional 230 kV terminal at SLV sub station was discussed with TSG&T on July 25th. They are proceeding with evaluating design and will provide an estimate. Preliminary estimate is \$1 million.