



PUBLIC SERVICE COMPANY OF
COLORADO

SENATE BILL 07-100
DESIGNATION OF ENERGY
RESOURCE ZONES AND
TRANSMISSION PLANNING
INFORMATIONAL REPORT

November 24, 2008

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INTRODUCTION

The Sixty Sixth General Assembly passed Senate Bill 07-100 (“SB 07-100”) upon the recommendation of the 2006 Transmission Task Force on Reliable Electricity Infrastructure (“Task Force”). In its November 1, 2006 Report, the Task Force had recognized that “Colorado’s ability to ensure the continued supply of affordable, reliable electricity and to build a vibrant economy depends on sufficient transmission capability.” The Task Force also indicated that “[t]oday the system is strained and, if current trends continue, there will not be adequate transmission to meet the needs.”

To address these concerns, the Task Force made four recommendations, including: establishing a transmission cost recovery rider to create a robust and reliable transmission system to meet Colorado’s future energy needs; increasing governmental involvement with organizations like the Colorado Coordinated Planning Group (“CCPG”); and appropriating adequate funding for the Public Utilities Commission (“Commission”) to actively participate in regional electricity transmission planning, reliability, and regulatory forums.¹ In addition, the Task Force recommended identification of renewable generation resource development areas within Colorado:

In order to develop economic, safe, reliable, and low-cost renewable generated electric power for consumers, the Task Force recommends that the State identify renewable generation resource development areas that have potential to support competition among renewable energy developers for development of renewable resource generation projects.

¹ The Report on the Task Force on Reliable Electricity Infrastructure is available at: <http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/FinalTFReport11-01-2006.pdf>.

In response to these recommendations, the Colorado Legislature passed Senate Bill 07-100 (“SB 07-100”), codified, in relevant part at C.R.S. § 40-2-126. SB 07-100 implements measures to ensure the adequacy of Colorado’s electric transmission infrastructure. Of relevance here, SB 07-100 requires rate-regulated electric utilities, such as Public Service, on or before October 31 of each odd-numbered year, to do the following:

- (a) Designate Energy Resource Zones (“Zones” or “ERZs”);
- (b) Develop plans for the construction or expansion of transmission facilities necessary to deliver electric power consistent with the timing of the development of beneficial energy resources located in or near such zones;
- (c) Consider how transmission can be provided to encourage local ownership of renewable energy facilities, whether through renewable energy cooperatives as provided in section 7-56-210, C.R.S., or otherwise; and
- (d) Submit proposed plans, designations, and applications for certificates of public convenience and necessity to the Commission for simultaneous review.

As required by SB 07-100, Public Service Company of Colorado (“Public Service” or the “Company”) filed its first SB 07-100 Report on October 31, 2007 in Docket No. 07M-446E (“2007 Report”). Contemporaneous with that submission and also in compliance with SB 07-100, Public Service filed with the Commission a separate Application for a Certificate of Public Convenience and Necessity (“CPCN”) for the Pawnee – Smoky Hill 345kV Transmission Project, Docket No. 07A-421E.

The purpose of this informational report is to provide the Commission and interested parties with an update of the activities that Public Service has undertaken since submission of the 2007 Report. Specifically, this report will provide or address the following:

- 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 currently identified 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; and
- Section V: Next steps.

I. 2008 Stakeholder Process

Since filing the first SB 07-100 Report, and in accordance with the settlement agreement reached in the 345kV Pawnee-Smoky Hill CPCN proceeding, Public Service agreed to start the transmission planning and public stakeholder process well in advance of filing this report. Prior to developing the transmission plans presented herein, the Company and interested stakeholders reviewed the designation of ERZs to ensure all of the Generation Development Areas (“GDAs”) identified in the Senate Bill 07-091 (“SB 07-091”) Task Force Report² were included within the proposed ERZs so as to have transmission plans that provide transfer capability into the Colorado Front Range.

As discussed below, Public Service is required under Federal Energy Regulatory Commission (“FERC”) Order No. 890 to conduct transmission planning in a transparent and open process. While SB 07-100 did not require an open stakeholder process for purposes of

² SB 07-091, signed into law in 2007, established a task force to identify renewable resource generation development areas within Colorado that have potential to support the development of renewable resources. The SB 07-091 Task force issued its report, entitled “Connecting Colorado’s Renewable Resources to the Market” on December 31, 2007. Report of the Task Force on Renewable Resource Generation Development Areas pursuant to the Colorado SB 07-091.

developing transmission plans and designating ERZs, Public Service wanted to solicit input from stakeholders regarding both its designation of ERZs and its transmission plans for alleviating transmission constraints in each Zone, in a manner consistent with FERC under Order 890. Public Service announced stakeholder meetings through web postings and sent meeting invitations to stakeholders who previously indicated an interest in participating in the process. Meetings with Stakeholders were held on March 4, June 10, August 20, and September 26, 2008. Stakeholders were also invited to participate in transmission study group meetings that were held between April and August, 2008. Stakeholders in attendance included neighboring utilities, wind and solar generation developers, state regulatory representatives, and other interested parties associated with renewable energy GDAs. In addition, the Company provided all the materials presented in the stakeholder meetings on a public website. The Stakeholder meetings, presentations, and summaries of comments are posted at <http://www.rmao.com/wtpp/SB100.html>. Stakeholder input was considered in Public Service's decision making throughout this process.

II. Energy Resource Zones

C.R.S. 40-2-126(1) defines an Energy Resource Zone as “a geographic area in which transmission constraints hinder the delivery of electricity to Colorado consumers, the development of new electric generation facilities to serve Colorado consumers, or both.” In determining where to designate ERZs, Public Service looked at both electric transmission constraints across Colorado as well as the locations where new electric generation resources are most likely to be located.

Public Service has now identified five geographic zones in which transmission constraints adversely affect the ability to develop new generation resources where

development interest has been shown in the past, and where there is significant renewable generation potential for wind and solar.³ In preparation of the 2007 Report, Public Service utilized existing data to the extent possible to identify where the Company might expect to acquire additional resources, both renewable and non-renewable, in the future, and presented this geographically on maps. Based on this information, Public Service identified four ERZs. In the 2008 stakeholder process, Public Service also considered the location of GDAs into its decision-making, resulting in the identification of an additional ERZ.

Taking both years' efforts into account, the primary sources of information Public Service has used to determine the location of its ERZs are:

- Generator interconnection requests;
- Bids received in response to Public Service's 2005 All Source Request For Proposals ("RFPs");
- Suggestions provided to the Company by stakeholders in the stakeholder process leading up to the filing of the 2007 Report; and
- GDAs as detailed in the SB 07-091 Report.

Information on the first three sources of information listed above is described in detail in the Company's 2007 Report. The GDAs, developed under SB 07-091, contain a source of information that was not available to the Company in time for preparation of the 2007 Report. Now using this additional source of information and taking into account Stakeholder impact (discussed further below), the Company has refined its previously identified ERZs and identified an additional ERZ, Zone 5. Primarily, the Wind GDA #8 and the Pueblo-area Solar GDA are incorporated into the new Zone 5 in this report, and the geographic sizes of Zones 3 and 4 were reduced accordingly. Those GDAs, with the possible exception of GDA

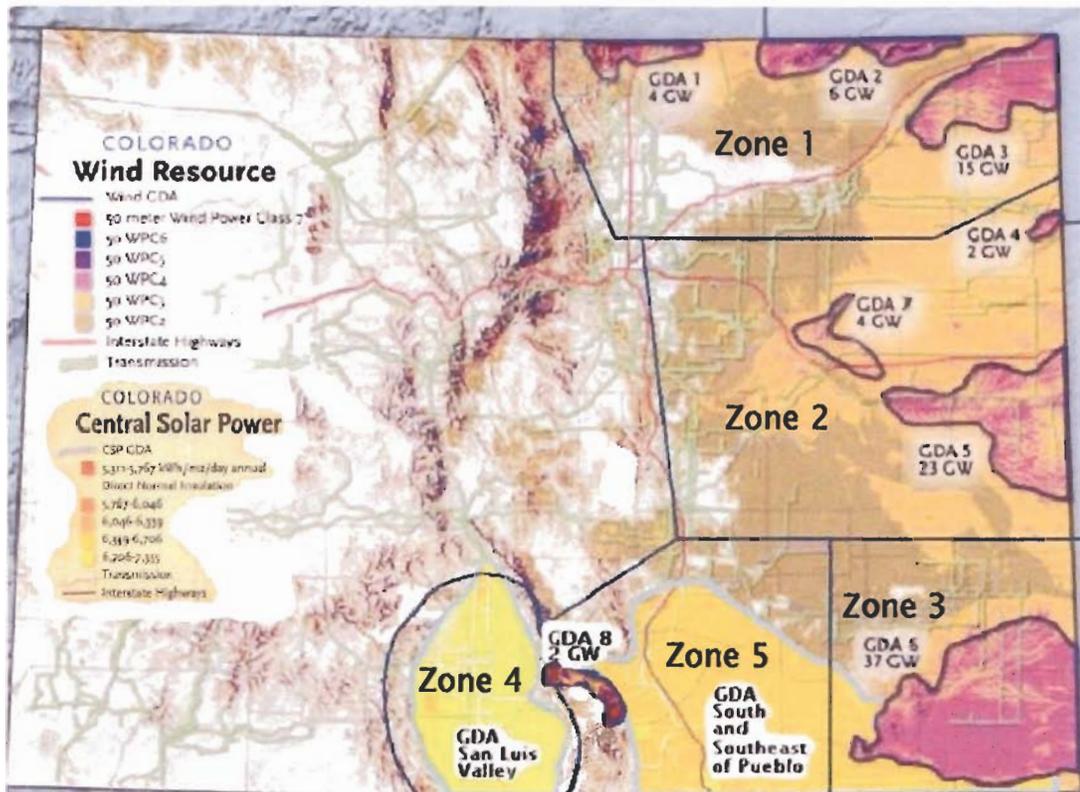
³ Id.

#8 (which could have been interpreted to be in Zone 4 in the 2007 Report), were not fully represented in the 2007 SB 07-100 filing.

A. Five Colorado Energy Resource Zones

In the 2007 Report, Public Service defined four ERZs. In this filing, Public Service has designated five large ERZs in the State of Colorado. Three of the Zones are in eastern Colorado and two in southern Colorado. The following map illustrates the five zones overlaid upon the wind and solar GDAs that were identified in the SB 07-091 Task Force Report:

2008 Energy Resource Zones with GDA's



Each Energy Resource Zone is described below:

Zone 1: In Northeast Colorado, Zone 1 includes all or parts of Sedgwick, Phillips, Yuma, Washington, Logan, Morgan, Weld, and Larimer Counties. The geography of this Zone is the same as described in the 2007 Report.

Zone 2: Zone 2 is in East Central Colorado, and includes all or parts of Yuma, Washington, Adams, Arapahoe, Elbert, El Paso, Lincoln, Kit Carson, and Cheyenne Counties. The geography of this Zone is also the same as described in the 2007 Report.

Zone 3: Zone 3 is in Southeast Colorado, and includes all of parts of Baca, Prowers, Kiowa, Crowley, Otero, Bent, Las Animas, and Pueblo Counties. This Zone is somewhat smaller than the Zone 3 that was described in the 2007 Report, as more fully described in the Zone 5 description.

Zone 4: Zone 4 is in the San Luis Valley, and includes all or parts of Costilla, Conejos, Rio Grande, Alamosa, and Saguache Counties. This Zone is somewhat smaller than the Zone 3 that was description.

Zone 5: Zone 5 is in South-Central Colorado, and includes all or parts of Huerfano, Pueblo, Otero, Crowley, and Las Animas Counties. This Zone is newly identified in this Report, and is more fully described below.

B. Description of the New Energy Resource Zone 5

During the stakeholder sessions earlier this year, the Company received feedback that a portion of south-central Colorado was not represented in a Zone, and further that portions of the existing Zones 3 and 4 should be redrawn to better reflect their transmission topography and GDA boundaries. After review of this feedback, the Company created Zone 5 for consideration. Geographically, this Zone contains the westernmost portions of the previously defined Zone 3, the easternmost portion of the previously defined Zone 4, and a new region down the I-25 Corridor from the Pueblo area to the state line.

From an electric perspective, defining this new Zone provides benefits as well. The new Zone 5 places the Boone, Walsenburg, and Comanche area interconnections into their own Zone.

From a GDA perspective, establishment of this Zone provides the ability to access Wind GDA 8, a strong wind Zone on the eastern side of the Sangre de Cristo mountain range, as well as the Solar GDA that encompasses the entire Zone. The Zone is now separate and distinct from Zone 4 and transmission will be proposed to increase capability from Zone 4 to Zone 5, from Zone 3 to Zone 5, and within Zone 5, for the reasons stated above.

Public Service presented the new five Zone package to stakeholders on numerous occasions during the spring and summer, and received positive feedback. Furthermore, the Company received proposals for wind projects located in GDA 8 in the wind RFP it issued in early 2008. In addition, the new Zone 5 as well as Zone 4 continue to offer locations for solar resources.

III. TRANSMISSION PLANNING

A. Introduction

The activities that Public Service has undertaken to comply with SB 07-100 have not been undertaken in isolation, but are part of a larger, joint transmission effort. The purpose of this section is to put the SB 07-100 transmission plans in the context of Public Service's overall transmission needs and planning. Public Service's transmission planning process is intended to facilitate the development of electric infrastructure that maintains reliability, responds to service requests, and meets load growth. This planning process is intended to achieve the following objectives:

- I. Maintain reliable electric service;

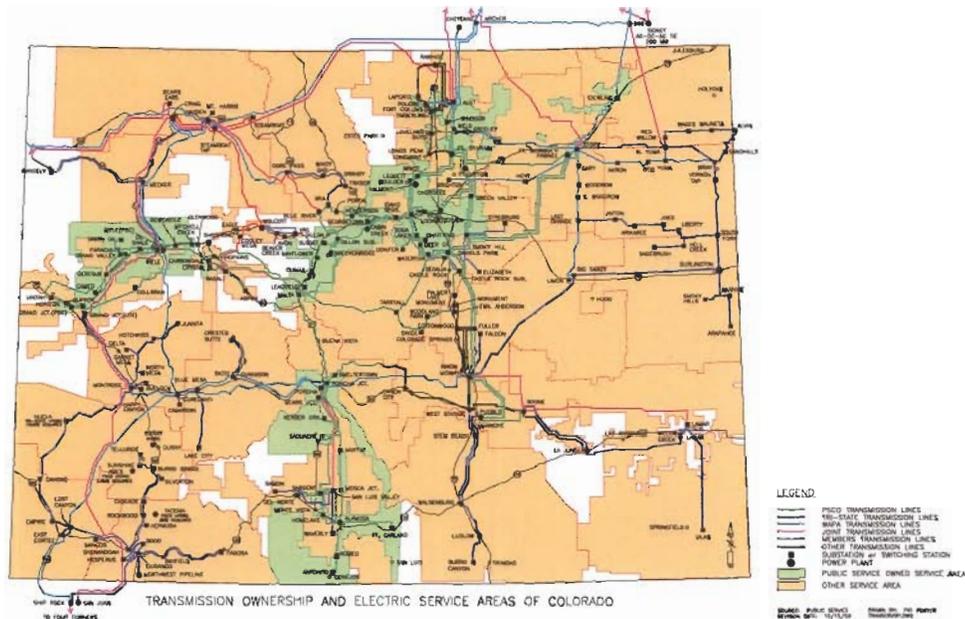
- II. Improve the efficiency of electric system operations, including the provision of open and non-discriminatory access to its transmission facilities pursuant to FERC requirements; and
- III. Identify and promote new investments in transmission infrastructure in a coordinated, open, transparent, and participatory manner.

Public Service is committed to improving the efficiency of its electric system planning and operations, including the provision of open and non-discriminatory access to the transmission facilities under its control. In addition, Public Service continually identifies and promotes new investment in transmission infrastructure through its planning function in a coordinated, open, transparent, and participatory manner.

B. Public Service Transmission System

The Public Service transmission network is located within the Rocky Mountain Region of the Western Electricity Coordinating Council (“WECC”). The figure below depicts Public Service’s service territory.

Service Territory



As depicted in this figure, the Public Service transmission network runs primarily along the Front Range of Colorado; however, it utilizes transmission across the entire state to bring generation resources to its load centers to serve load. The Public Service service territory includes the Denver-Boulder metro area, as well as the I-70 corridor to Grand Junction, the San Luis Valley, Greeley, Sterling, and Brush. Public Service also serves the following wholesale customers: Holy Cross Energy, Yampa Valley Electric, Grand Valley Rural Power Lines, Intermountain Rural Electric Association, and the cities of Center and Burlington. The neighboring transmission systems adjacent to Public Service include Arkansas River Power Authority, Black Hills Energy (formerly Aquila), Colorado Springs Utilities “CSU”), Platte River Power Authority (“PRPA”), Tri-State Generation and Transmission Association (“Tri-State”), and the Western Area Power Administration (“Western”).

C. Coordinated Planning

The transmission planning process conducted by Public Service includes a series of open planning meetings that allow interested parties, who might be sponsors of transmission solutions, generation solutions, solutions utilizing demand response resources, interconnected transmission providers, state and local regulatory bodies, input into and participation in all stages of development of the Public Service transmission plan.

In addition to its local transmission planning process, Public Service coordinates its transmission planning with other transmission providers and stakeholders in the Rocky Mountain region, and the Western Interconnection as a whole through its active participation in the Colorado Coordinated Planning Group (“CCPG”), membership in WestConnect, and membership in the WECC. This voluntary, transparent coordinated and open transmission planning process complies with the nine principles for transmission planning now mandated by FERC in Order No. 890. Public Service’s participation and experience in these planning organizations helped to support the open stakeholder planning process used to gain input for SB 07-100 implementation. Public Service coordinates the timing of its transmission planning study process with the development of the assumptions, database, and power flow cases performed within the CCPG, which is an open forum where any stakeholder interested in the planning of the transmission system in the CCPG footprint can participate and obtain information regarding base cases, plans, and projects, and provide input or express its needs as they relate to the transmission system. CCPG’s role is to promote subregional transmission planning and development in the CCPG footprint and to ensure that all of the transmission plans are coordinated in order to maximize use of the existing transmission system and identify the transmission expansion alternatives that most effectively meet future needs.

Public Service has coordinated the plans developed in the SB 07-100 process with the plans under development at CCPG.

IV. Transmission Plans Associated with Each Energy Resource Zone A.

A. Overview

Through study work, and in consultation with stakeholders during numerous study group meetings, Public Service has identified transmission expansion plans that will increase transfer capability congestion in or around all five of the ERZs identified above. Furthermore, the Company is focusing its SB 07-100 transmission expansion plans on first strengthening the core, or “backbone” of its network, not on presenting plans to build individual lines into each of the GDAs. It must be emphasized that while the Company is considering these plans, it is far from certain that all of them should be implemented or in what order. A number of factors enter into the decision whether to go forward with a transmission project, including generation resource availability, community and local government concerns, cost, capital funding requirements, comparison with alternative resources, regulatory approval, and neighboring utility participation. The greater the project in terms of cost, development timeline, and community impact, the more time that must be devoted to studying and evaluating the merits of a particular project.

In order to assess the viability of a transmission project, numerous studies must be conducted concerning the feasibility, impact, and reliability of the transmission project. The amount of time necessary to conduct these studies can be as much as six months, and then additional time is needed to develop the testimony, exhibits, and application needed to obtain a Certificate of Public Convenience and Necessity from the Commission. To ensure Public Service is spending time on projects that are deemed necessary and in the public interest,

Public Service is presenting plans for various transmission projects and suggests a prioritization for them since it is not possible to pursue all identified transmission projects simultaneously. Public Service's hope is that the Commission will give its preliminary views regarding whether it agrees with how Public Service would prioritize and schedule these projects prior to Public Service proceeding with CPCN applications. Public Service has given these projects prioritization rankings of "High", "Medium", or "Low". A project was given a High priority ranking if it was establishing backbone transmission into Zones other than Zone 1. Since the Pawnee – Smoky Hill Project currently being pursued alleviates constraints in Zone 1, projects into Zone 1 are given a lower priority for this 2008 filing. A project was given a Medium priority ranking if it was considered a bulk transmission improvement to supplement resource additions in Zone 1. A project was given a Low priority ranking if it was considered more of a radial, or feeder line into the bulk transmission network. Because there are multiple projects in the High and Medium categories, those projects were given additional numeric rankings. These priorities are provided as a suggestion to the Commission as to how Public Service might order the staging and scheduling of CPCN applications. Again, Public Service is interested in obtaining the Commission's views prior to the submission of CPCNs.

Public Service in its 2007 Report identified a number of transmission projects, one of which was submitted to the Commission through an application for a CPCN. The projects proposed at this time are summarized briefly in Table 1 below. The table lists the name of the project, the Zone that the project would serve, and how the Company would propose to prioritize the project based on a scale of High, Medium, and Low, and further ranked

numerically with “1” being the highest in that priority. The projects are described in more detail later in this section.

Table 1 Summary of Potential Transmission Projects

Project	Zone Served	Priority (High, Med, Low)
Pawnee – Daniels Park 345kV	1	Med-1
Ault – Cherokee 230kV	1	Med-2
Missile Site Substation	2	High-2
Lamar – Front Range: <ul style="list-style-type: none"> • Lamar – Comanche 345kV • Lamar – Missile Site 345/500kV 	3	High-3
Lamar – Vilas 230/345kV	3	Low
San Luis Valley – Comanche <ul style="list-style-type: none"> • San Luis Valley – Calumet 230kV • Calumet – Comanche 345kV 	4, 5	High-1

B. Underlying Study Assumptions

The goal of Public Service’s study efforts was to develop bulk transmission plans that fit the purpose of SB 07-100 and the needs of the state of Colorado given the anticipated load growth for new beneficial generation resources. Typical transmission planning studies were performed to evaluate the system and assess alternatives. The studies consisted of steady state (powerflow) analysis and modeled system intact and single contingency conditions. Public Service uses criteria set forth by the North American Electric Reliability Council (NERC), WECC, and other Company criterion.

1. Study Models

This study utilized powerflow models that represented 2015 peak summer loading conditions. The 2015 time frame was chosen to coincide with Public Service’s resource

planning. The base case modeling data was developed from a WECC-approved case, and was reviewed and updated based on input from study participants.

2. Midway – Waterton 345kV Transmission Project

The Midway – Waterton 345kV Transmission Project was granted a CPCN by the Commission in 2006. The project was planned to accommodate 500 MW of new generation on the transmission system south of the Denver-metro area. The project consists of 82 miles of 345kV transmission from the Midway Substation, near Colorado Springs, to the Waterton Substation, southwest of Denver. The specific generation project for which the plan was conceived did not materialize. However, the Midway – Waterton project remains a vital element of the Public Service transmission plan to accommodate additional generation resources south of Denver. Public Service expects to have the Midway – Waterton 345kV Transmission Project in service in 2011, and the project was included in study models for the SB 07-100 studies.

3. Generation Injection Sites

The study group agreed to evaluate a discrete number of generation interconnection points within each Zone. Based on an examination of the existing transmission system, resource Zones, and major load centers, a list of interconnection points was developed. Table 2 summarizes the interconnection points the group agreed to study.

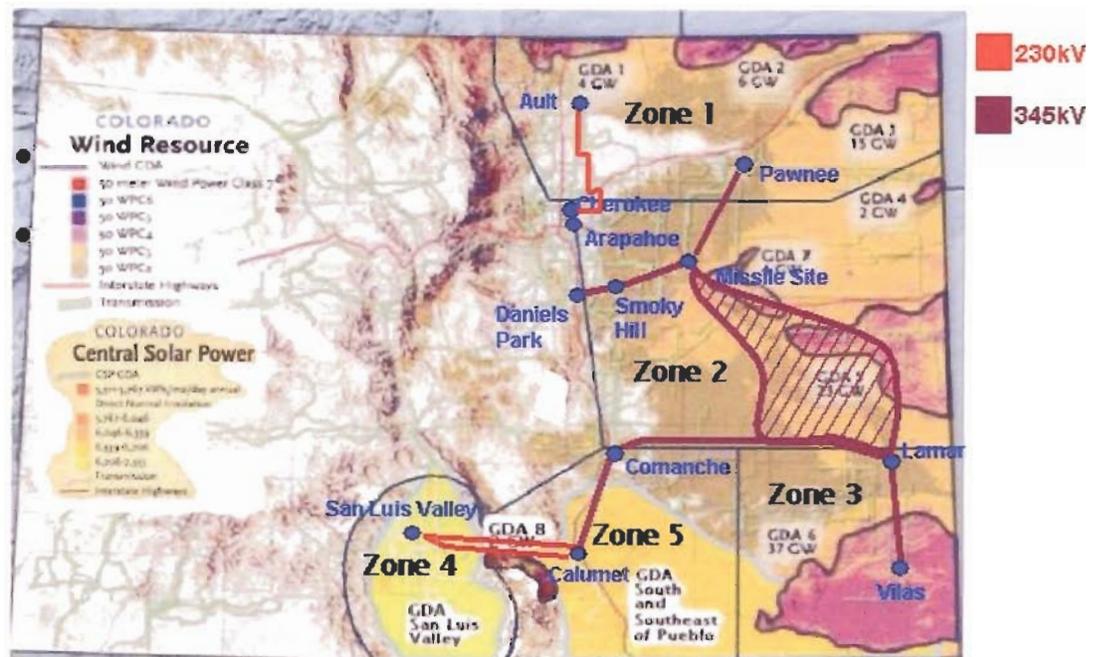
Table 2 Resource Addition Interconnection Points

Zone	Interconnection
1	Pawnee
1	Ault
2	Missile Site
3	Lamar
4	San Luis Valley
5	Walsenburg

C. Proposed Transmission Plans

A map of the proposed projects is shown in Figure 2.

SB-100 Proposed Projects



A detailed description of the projects follows:

1. Pawnee – Daniels Park 345kV Transmission (Zone 1)

Description: The Pawnee – Daniels Park 345kV Transmission Project consists of building 345kV transmission from the Pawnee Substation in northeastern Colorado to the Daniels Park Substation, south of the Denver-metro area. The project will also result in a new Smoky Hill – Daniels Park 345kV line. This project is expected to accommodate approximately 300-500 MW of resources in Zone 1, interconnecting at or near the Pawnee Substation.

The project would consist of approximately 124 miles of 345kV transmission between Pawnee Station and the Daniels Park Substation south of Denver. The first 95 miles of the project would expand the planned Pawnee – Smoky Hill 345kV Transmission Project, so that between Pawnee and Smoky Hill Substations, there would be double-circuit 345kV transmission. One of the circuits would be the Pawnee – Smoky Hill 345kV line, and the second would be one section of the Pawnee – Daniels Park 345kV line. For the remaining 29 miles between Smoky Hill and Daniels Park substations, new double-circuit 345kV transmission would be constructed. Of the two circuits, one would be the second portion of the Pawnee – Daniels Park 345kV line. The second circuit would create a new 345kV transmission line between Smoky Hill Substation and Daniels Park Substation.

Estimated Cost and Schedule: The cost of the project is estimated to be \$65 million, and would take approximately 60 months to construct following authorization to proceed.

Evaluation: This project was identified during system studies of additional generation interconnected at the Pawnee Substation. Studies indicated the potential for contingency overloads on the 230kV and 115kV transmission systems between Pawnee and the Denver-metro area, the 230kV transmission system west of Smoky Hill Substation, and the 115kV transmission system south of Story Substation. Transmission alternatives included infrastructure improvements west of Smoky Hill, and new transmission south of Story. The proposed project was identified as the preferred alternative.

Priority: This project was given a Medium ranking. It is a bulk transmission project that will allow additional generation resources, but supplements the Pawnee – Smoky Hill Project for Zone 1 from the 2007 filing.

2. Ault – Cherokee 230/345kV Transmission Project (Zone 1)

Description: The Ault – Cherokee Transmission Project would allow approximately 300-600 MW of additional generation from Zone 1, interconnected at or near the Ault Substation. The project would consist of approximately 90 miles of new transmission, starting at the Ault Substation and ending at Cherokee Station in Denver. The plan consists of a building a single 59-mile line from Ault Substation to a spot just outside of the Ft. Lupton Substation. From this point the existing 115kV line from Ft. Lupton to Cherokee would be rebuilt such that one circuit would continue to operate at 115kV (for Tri State load serving), and the other circuit would operate as a 26-mile double circuit 230kV line, completing the circuit from Ault to Cherokee.

Estimated Cost and Schedule: The cost of the project is estimated to be \$64 million, and would take approximately 60 months to construct following authorization to proceed.

Evaluation: This project was identified through the assessments of several Generator Interconnection requests in the region. Studies indicated that this project could accommodate up to 600 MW of new generation at or near the Ault Substation. The proposed project was identified as the preferred alternative.

Priority: This project was given a Medium ranking. It is a bulk transmission project that will allow additional generation resources, but supplements transmission in Zone 1, the need for which was addressed in the 2007 filing.

3. Missile Site Substation (Zone 2)

Description: The project would consist of a new substation, near Deer Trail, Colorado. The substation could connect to existing 230kV transmission as well as the proposed 345kV transmission between Pawnee and Smoky Hill. The Missile Site Substation would allow 200-500 MW of additional generation from Zone 2. In addition to allowing for interconnection of resources from Zone 2, the Missile Site Substation would also provide a connection point for future high voltage transmission to the south, such as to Big Sandy and Lamar.

Estimated Cost and Schedule: The cost of the project is estimated to be \$13.5 million for a 345/230kV substation, and would take approximately 24-36 months to construct, following authorization to proceed.

Evaluation: The Missile Site Substation has been identified in Rule 3206 filings to the Commission. The project can be established as a 230kV interconnection if generation resources are implemented prior to the 345kV system being in place. No alternatives were considered for this substation project.

Priority: This project was given a High ranking. It would allow additional generation resources from Zone 2 to interconnect to the bulk transmission system.

4. Lamar – Front Range 345/500kV Transmission (Zone 3)

Description: The Lamar to Front Range Transmission Project would consist of approximately 350 miles of high voltage transmission and would consist of two major components: a Lamar – Comanche 345kV line, and a Lamar – Missile Site 345kV line. The project would allow approximately 800-1000 MW of additional generation in Zone 3, interconnected at or near the Lamar Substation.

Estimated Cost and Schedule: The cost of the project is estimated to be \$240 million, and would take approximately 60 months to construct, following authorization to proceed.

Evaluation: This project was identified during system studies of additional generation interconnected at the Lamar Substation, and also through the CCPG Long Range Planning process. CCPG preliminary studies identified the need for up to three new high-voltage lines built from Lamar. The preliminary plan consists of lines from Lamar to Comanche, Burlington, and Big Sandy (and on to Missile Site) substations. Studies have shown that the Lamar area is deficient in transmission and requires a robust backbone network to deliver potential and anticipated generation to load centers in Colorado. Alternatives evaluated include upgrades to existing infrastructure, and new transmission consisting of either 345kV or 500kV voltages. Based on studies and discussions with CCPG participants, the proposed project, consisting of two high-voltage lines from Lamar, is the preferred first phase project to accommodate resources in Zone 3. The overall plan is to eventually develop a third line from Lamar. The proposed project can be developed to accommodate Tri-State potential plans for an “Energy Center” in the area, which would allow additional generation interconnection for their resource needs. The transmission lines could be constructed to be capable of 500kV operation to increase transfer capacity for the High Plains Express project, or other additional resources in the area.

Priority: This project was given a High ranking. It is a bulk transmission system upgrade that would allow interconnection of additional generation resources from Zone 3.

5. Lamar – Vilas Transmission (Zone 3)

Description: This project consists of approximately 57 miles of transmission from the Lamar Substation to a new substation near the town of Vilas, Colorado. The project could not accommodate any new generation unless the Lamar – Front Range Transmission project was also in place.

Estimated Cost and Schedule: The cost of the project is estimated to be \$27 million, and would take approximately 36-48 months to construct, following authorization to proceed.

Evaluation: This project was identified during the 2007 Filing as a means to accommodate generation resources in Baca County. However, system studies indicate that any additional generation at Lamar will require significant upgrades, such as the proposed Lamar – Front Range Transmission plan.

Priority: This project was given a Low ranking. It is a feeder system that would allow interconnection of additional generation resources from Zone 3.

6. San Luis Valley – Comanche 230/345kV Transmission (Zones 4-5)

Description: This project consists of building high voltage transmission from the San Luis Valley Substation in south-central Colorado to a new Calumet Substation, near Walsenburg, and then to the Comanche Substation, in Pueblo, Colorado. The project would facilitate 600-1000 MW of potential generation resources in Zones 4 and 5, interconnected at or near the San Luis Valley Substation or the Calumet Substation. The project consists of two basic sections. The first section consists of approximately 93 miles of new, double-circuit 230kV transmission, built from the San Luis Valley Substation to a new Calumet Substation, which would be located approximately six miles north of the existing Tri-State Walsenburg Substation. Calumet would tie into the Walsenburg Substation with 230kV transmission.

Estimated Cost and Schedule: The cost of the project is estimated to be \$130 million, and would take approximately 48-60 months to construct, following authorization to proceed.

Evaluation: This project was identified during system studies of additional generation interconnected at the San Luis Valley Substation, and also through the CCPG Long Range Transmission Planning process. Public Service and Tri-State have agreed to jointly pursue the implementation of this project, including filing companion applications for CPCNs. Numerous transmission alternatives were considered and this project was chosen as the preferred alternative.

Priority: This project was given a High ranking. It is a bulk transmission system upgrade that would allow interconnection of additional generation resources from Zones 4 and 5. Public Service is working with Tri-State to advance this project.

C. Status Of Other Projects Proposed In October 2007

In the 2007 Report, Public Service presented transmission plans. These included both “short-term” and longer-term plans to address the identified four ERZs.

1. Pawnee – Smoky Hill and Pawnee Daniels Park Uprate (Short Term)

Description: This project would allow maximum simultaneous operation of the existing generation resources in the Pawnee region for delivery of electrical power to Denver-metro area loads. The plan included raising structures and replacing termination equipment to increase the continuous rating of each line to 735 MVA. These minor upgrades were estimated to cost approximately \$3.54 million.

Status: In 2008, the lines were upgraded to increase their continuous rating to 636 MVA. The lines will be upgraded to 735 MVA in 2009.

2. Pawnee – Smoky Hill 345kV Transmission

Description: This project consists of developing approximately 95 miles of 345kV transmission between the Pawnee Substation near Brush, Colorado, and the Smoky Hill Substation, east of Denver. The project will allow for approximately 500 MW of additional resources in Zone 1, interconnected at or near the Pawnee Substation. The project was estimated to cost approximately \$120 million

Status: An application for CPCN was presented to the Commission for this project in October 2007. At this time, it is anticipated that the project can be constructed by the summer of 2014.

3. Keenesburg – Cherokee 230kV Project

Description: Generator interconnection studies indicated that this project could feasibly accommodate approximately 200 MW of additional generation in Zone 1, at the Keenesburg Substation. The plan consisted of new 230kV transmission line from the Keenesburg Substation to the Cherokee Substation, which can be divided into two sections: 1) a 20-mile, 230kV line from Keenesburg to Ft. Lupton Substation, and 2) a 26-mile, 230kV line from Ft. Lupton to Cherokee Substation. The project was estimated to cost approximately \$38 million.

Status: To limit the generator interconnection sites in each Zone, the Keenesburg site was not included in the 2008 studies. However, the Keenesburg – Cherokee project remains a viable plan for generation additions at or near Keenesburg.

4. Eastern Plains Transmission Project (“EPTP”)

Description: In the fall of 2007, Tri-State and Western had plans for constructing over 1000 miles of high voltage transmission out of southeast Colorado to accommodate a potential generation project in Holcomb, Kansas. Public Service identified the EPTP as having potential for interconnecting additional generation resources in Zones 2 and 3.

Status: Due to the Holcomb generation project being postponed, TSGT, Western, and Public Service, along with other participants of the CCPG, have been re-evaluating the transmission plans for eastern Colorado. A new plan have been developed that would implement high voltage transmission from the Lamar Substation to the Front Range transmission system. The new plan replaces the original EPTP plan. The Lamar – Front Range Transmission Project is discussed in this report.

5. Lamar – Boone 230kV Transmission Upgrade (Short Term)

Description: The plan included upgrading termination equipment at the Lamar and Boone substations to increase the continuous rating of the line from 478 to 620 MVA, and was conceived to allow additional generation resources in Zone 3, at the Lamar Substation. These upgrades were estimated to cost approximately \$1 million.

Status: This project is not being actively pursued, since studies indicated that this project would not significantly increase the transfer capability of the system. Instead, Public Service has proposed new transmission lines out of Lamar to the Front Range.

V. NEXT STEPS

Public Service has set forth within this filing long term transmission expansion proposals to relieve transmission constraints for each of the five ERZs, most of which will require an application for CPCN with the Commission if the Company decides to move forward with a proposal. It is the Company's expectation to go forward with one or more CPCN applications as early as Spring 2009, and to file the formal SB 07-100 report on October 31, 2009.

Going forward, Public Service will utilize comments and direction received from feedback on this report and from the Commission's Transmission Investigatory Docket, as appropriate. Through these and other efforts, Public Service expects wind, solar, and other resources to be developed in the ERZs, consistent with the Colorado Legislature's goals of a robust electric transmission system, and the continued availability of clean, affordable, and reliable electricity.

Dated this 24th day of November, 2008.

Respectfully submitted,

By: 
Roy Palmer
Executive Director, State Government
and Regulatory Affairs

CERTIFICATE OF SERVICE

I hereby certify that on this 24th day of November 2008, the original and ten (10) copies of the foregoing **“PUBLIC SERVICE COMPANY OF COLORADO SENATE BILL 07-100 DESIGNATION OF ERZS AND TRANSMISSION PLANNING INFORMATIONAL REPORT”** were hand delivered to:

Doug Dean, Director
Colorado Public Utilities Commission
1560 Broadway, Suite 250
Denver, CO 80202

and a copy was hand delivered to:

James Greenwood
Director, Office of Consumer Counsel
1560 Broadway, Suite 200
Denver, CO 80202

and a copy was delivered via U.S. Mail to:

Bill Vidal
Manager of Public Works
201 W. Colfax, Dept. 608
Denver CO 80202

