WELCOME

PUC Rule 3627 Stakeholder Meeting
August 10, 2017
Meeting Logistics – Webinar Participants

- Due to feedback problems that prevent webinar participants from hearing the presentation clearly, we have muted all call in lines.

- If you are attending via webinar and would like to submit a question or comment, please do so using the typewritten comment box available to you.

- Staff is monitoring these written comments and we will address them during the meeting.
Today’s Presentation

- Introduction and Overview
- Transmission Planning Basics
- Rule 3627
- Review Transmission Plans
- Solicit Feedback
Xcel Energy Inc.

- No. 1 wind energy provider for more than a decade (AWEA)
- No. 4 for renewable energy sales in 2016 (Ceres)
- 2016 Climate Leadership Award for Excellence in Greenhouse Gas Management (EPA)
- Industry-leading voluntary emission reductions
- Leader in pursuit of new technologies

Gas Customers: 2.0 M
Electric Customers: 3.6 M
Xcel Energy Transmission

- Over 20,000 transmission line miles
- More than 1,200 substations
- Serving customers in 8 states
- 3 NERC Regions; 2 RTOs; Non-RTO west
Power is generated and transmitted over transmission lines to distribution lines to customers. Voltage is changed at substations to efficiently deliver electricity to customers.
Rule 3627

- **Source:**
  - Colorado Department of Regulatory Agencies
  - Public Utilities Commission
    - 4 Code of Colorado Regulations 723-3
    - Part 3 Rules Regulating Electric Utilities

- **Rule 3627 Adopted in 2011**

- **Applies to Black Hills, Tri-State, Public Service**

- **Filing:** 10-Year Transmission Plan & 20-Year Scenarios

- **Two-Year Cycle**
  - File in February of Even Years

- **Stakeholder Opportunities for Participation**

- **Commission Determines Adequacy**
Rule 3627

Planning Process:
- Public Service Studies
- Colorado Coordinated Planning Group Studies
- Stakeholder Outreach
- Develop Report

Report Content:
- Transmission Plan
  - Projects > 100 kV
- Methodology, Criteria, Assumptions
- Related Reports and Studies
- Summary of Stakeholder Participation
Rule 3627 Filing History

- 2012 and 2014 Reports Deemed Adequate
  - PUC Held Workshops to Aid Decision

- 2016 Report Filed February 2016

- Proceeding Consolidated with SB07-100

- PUC Assigned to Administrative Law Judge (ALJ)
  - ALJ Requested Evidentiary Hearing
  - Hearing: December 6, 2016
  - Recommended Decision: July 31, 2017
  - Final PUC Decision Pending

- Next Filing: February 2018
Transmission Planning Process
Transmission planning is the art of identifying future transmission infrastructure for delivery from forecasted resources to forecasted load centers without violating mandatory compliance standards.
Transmission Timeframe

Planning
• 1 to 2 years

Development
• 3 to 5 years

Construction
• 2 to 3 years

It takes 7 to 10 years to plan, develop and construct
Transmission Planning Process

- Data Gathering and Assumptions
- Transmission
- Loads
- Generation

- Timeframes & Analysis
  - 5-year
  - 20-year
  - 10-year

- Proposal of solutions

- Transmission Plan
Planning Process Calendar 2017

Jan
- 5 year capital budget studies
- CPCN Project Studies
- Rule 3627 (10 year studies) 20 year conceptual scenarios (Due 2/1/18)

Feb
- SB100 Studies
- CCPG 2/16/17
- Rule 3627 (10 year studies) 20 year conceptual scenarios (Due 2/1/18)

Mar
- CCPG 5/11/17
- PSCo Resource Plan
- Generation Interconnect, Load Interconnect & Transmission Service Studies

Apr
- CCPG 8/17/17
- WECC Plans
- WestConnect

May
- 5 year budget approved
- FERC 890 Rule 3627 03/27/17

Jun
- 10 year plan completed
- WestConnect

Jul
- FERC 890 Rule 3627 Dec 6 2017
Transmission Planning Drivers

- Load Service
  - Normal Growth
  - Customer Requests

- Resource Accommodation
  - Generator Interconnection Requests
  - Electric Resource Plans

- Public Policy
  - Senate Bill 07-100 (SB-100)
  - Clean Air Clean Jobs Act (CACJA)
  - Colorado Energy Plan

- Other
  - Tariff Studies
  - Transmission Service
Planning Study Process

- Prepare Study Models
  - Western Electricity Coordinating Council (WECC) Models
  - Incorporate Company Forecasts
  - Reflect Time Frame:
    - Near-Term (1-5 Years); Longer-Term (5-10 Years)
  - Area Coordination

- Perform Studies
  - Steady State, Transient Stability, Short Circuit
  - Reliability (Performance) Criteria
    - North American Electric Reliability Council (NERC) Standards
    - Company Criteria

- Inform Stakeholders

- Make Recommendations
  - Plans, Projects, Upgrades, Procedures
Generation Projects
## Generation Additions/Reductions

<table>
<thead>
<tr>
<th>Name</th>
<th>Interconnection</th>
<th>Owner</th>
<th>Net MW</th>
<th>Type</th>
<th>ISD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zuni 2 (retired)</td>
<td>Zuni</td>
<td>PSCo</td>
<td>-65</td>
<td>Coal</td>
<td>2015</td>
</tr>
<tr>
<td>Golden West</td>
<td>Fuller 230 kV</td>
<td>Golden West</td>
<td>250</td>
<td>Wind</td>
<td>2015</td>
</tr>
<tr>
<td>Hooper 1</td>
<td>San Luis Valley 230 kV</td>
<td>Solar Star</td>
<td>52</td>
<td>Solar (PV)</td>
<td>2015</td>
</tr>
<tr>
<td>Comanche Solar</td>
<td>Comanche 230 kV</td>
<td>Comanche Solar</td>
<td>120</td>
<td>Solar (PV)</td>
<td>2016</td>
</tr>
<tr>
<td>Cherokee 3 (retired)</td>
<td>Cherokee 115kV</td>
<td>PSCo</td>
<td>-152</td>
<td>Coal</td>
<td>2016</td>
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<tr>
<td>Cherokee 5,6, 7</td>
<td>Cherokee 115kV</td>
<td>PSCo</td>
<td>570</td>
<td>Gas (CC)</td>
<td>2016</td>
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<tr>
<td>Rush Creek</td>
<td>Missile Site 345 kV</td>
<td>PSCo</td>
<td>600</td>
<td>Wind</td>
<td>2018</td>
</tr>
<tr>
<td>2016 Electric Resource Plan</td>
<td>????</td>
<td>????</td>
<td>????</td>
<td>????</td>
<td>????</td>
</tr>
</tbody>
</table>
10-Year Transmission Plans
Substations

- **Completed**
  - Ridge 230 kV Uprate
  - Happy Canyon (IREA Wholesale Load)
  - Cloverly (Pleasant Valley - Retail Load)
- **2018**
  - Harvest Mile
  - Bluestone Valley
- **2020**
  - Husky (Ault 44kV Replacement)
  - Graham Creek (Easton 44kV Replacement)
- **TBD**
  - Box Elder Replacement
  - Reliability:
    - Bluestone Valley Phase 2

- **Distribution**
  - Moon Gulch (2017)
  - Avery (2019)
  - Thornton (2019)
  - Barker (2021: Banks 1,2; 2023, Bank 3)
  - Conceptual:
    - New Castle
    - Wilson
    - Titan
      - Formerly Sterling Ranch
    - Dove Valley
      - Formerly Surrey Ridge
    - High Point
      - Formerly Pena Station
    - Stock Show
      - Formerly National Western
    - Solterra
    - Superior
    - Sandy Creek
Transmission

Completed
- 2016
  - Cherokee – Ridge 230 kV Uprate
  - Rifle – Parachute 230 kV #2
  - DCP Lucerne 2 – Cloverly 115 kV

Planned
- 2018
  - Rush Creek – Missile Site 345 kV
- 2019
  - Pawnee – Daniels Park 345 kV
- 2020
  - Ault – Cloverly 230/115 kV
- 2021
  - Gilman – Avon 115 kV
- 2022
  - South of Greeley Plan

Conceptual
- Glenwood – Rifle Upgrade
- Parachute – Cameo 230 kV
- Lamar – Front Range
- Hayden – Foidel – Gore Pass 230 kV Loop
- San Luis Valley – Poncha 230kV #2**
- Poncha – W. Canon – Midway 230kV #2

** TSGT lists SLV as 2022
Denver/Boulder

<table>
<thead>
<tr>
<th>#</th>
<th>Project</th>
<th>Comments</th>
<th>ISD*</th>
<th>Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cherokee-Arvada-Ridge 230kV Conversion</td>
<td>Convert the existing 115kV line between the Cherokee and Ridge substations to a 230kV line.</td>
<td>2016</td>
<td>Reliability and Distribution</td>
</tr>
<tr>
<td>2</td>
<td>Moon Gulch Substation</td>
<td>Proposed new Distribution Substation in either the City of Arvada or Jefferson County to serve distribution loads</td>
<td>2017</td>
<td>Distribution</td>
</tr>
<tr>
<td>3</td>
<td>Thornton Substation</td>
<td>New substation in Thornton to serve distribution loads. Replaces the Brantner Substation project.</td>
<td>2019</td>
<td>Distribution</td>
</tr>
<tr>
<td>4</td>
<td>Barker Substation</td>
<td>New Substation in Denver Area to serve distribution load growth in Historic Ballpark Area</td>
<td>2021</td>
<td>Distribution</td>
</tr>
</tbody>
</table>

*All project in-service dates subject to change*
### East Plains Area

<table>
<thead>
<tr>
<th>#</th>
<th>Project</th>
<th>Comments</th>
<th>ISD*</th>
<th>Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Missile Site – Rush Creek 345 kV Transmission Line</td>
<td>New generation tie-line for the Rush Creek Wind Project</td>
<td>2018</td>
<td>Generation</td>
</tr>
<tr>
<td>2</td>
<td>Pawnee – Daniels Park 345 kV Transmission Line</td>
<td>Add an additional 345 kV line between the Pawnee and Daniels Park substations. Add Harvest Mile Substation near Smoky Hill</td>
<td>2019</td>
<td>Reliability</td>
</tr>
</tbody>
</table>

*All project in-service dates subject to change*
Rush Creek Wind Project

- CPUC Rule 3660
- 600 MW of New Wind Generation
- 90 Miles of 345 kV Transmission (Gen-Tie)
- PSCo-Owned
- Interconnect at Missile Site
- In-Service Date: October 2018
- Filed with the Commission on May 13, 2016
- Combined Rush Creek and Pawnee – Daniels Park
- Settlement Agreement
- Received PUC Approval October 20, 2016
Rush Creek Project

POI: Missile Site 345 kV bus
345 kV bundled 1272 ACSR conductor
Single circuit steel H-frame structures
Line Capacity: 1637 MVA
Length: ~82 miles
In-service: October 2018
Rush Creek I: 380 MW (190 turbines)
Rush Creek II: 220 MW (110 turbines)
Rush Creek Task Force (RCTF)

- Process
  - CCPG Task Force

- Scope:
  - Evaluate Alternative Proposals to “Network” the Gen-Tie
  - PSCo Facilitation

- Status:
  - RCTF Kicked off December 2016
  - Over 20 Proposals Considered
  - Fourteen Alternatives Studied
  - Final Report Drafted

- Plan
  - Publish Report in September 2017
  - Document Results in 2018 Rule 3627 Report (PSCo)
Pawnee – Daniels Park Project

- **Purpose**
  - Accommodate Resources
  - SB07-100
  - Reliability

- **Project Components**
  - Pawnee – Missile Site – Daniels Park 345 kV (115 miles)
  - Smoky Hill – Daniels Park 345 kV line (21 miles)
  - Entire Project within existing PSCo corridors
  - About 51 miles already constructed
  - New Harvest Mile Substation
  - Cost Estimate ~ $180 M

- **Plan**
  - CPCN Filed 3/28/14
  - CPCN Approved March 2015
  - ISD 2019 (approved by PUC in Rush Creek Proceeding)
Location: Morgan, Adams, Arapahoe, Elbert and Douglas counties

Infrastructure: 115-mile transmission line from Pawnee Substation to Daniels Park Substation and from Smoky Hill Substation to Daniels Park Substation
### Western Slope / Mountain Area

![Map of Western Slope / Mountain Area](image)

<table>
<thead>
<tr>
<th>#</th>
<th>Project</th>
<th>Comments</th>
<th>ISD*</th>
<th>Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bluestone Valley Substation</td>
<td>Phase 1: Construct the Bluestone Valley 69kV Switching Station with 69kV bus work, switches, breaker, and a 1.4-mile double circuit 69kV line from Bluestone Valley to an in-and-out tap of DeBeque-Cameo 69kV line. Phase 2: Construct the 230kV Bluestone Valley Substation that taps the Parachute-Cameo 230kV line, 230kV yard with 230kV ring bus, 230/69 kV transformer, bus work breakers, switches, etc.</td>
<td>TBD</td>
<td>Reliability</td>
</tr>
<tr>
<td>2</td>
<td>Foidel Creek 230kV Line Tap</td>
<td>Loop the Hayden-Gore Pass 230kV line into Foidel Creek Substation creating a Hayden-Foidel Creek 230kV Line #2 and a Foidel Creek-Gore Pass 230kV line.</td>
<td>TBD</td>
<td>Reliability</td>
</tr>
<tr>
<td>3</td>
<td>Glenwood-Rifle 69 to 115kV</td>
<td>Upgrade the Glenwood-Rifle 69 kV line to 115 kV.</td>
<td>TBD</td>
<td>Reliability</td>
</tr>
<tr>
<td>4</td>
<td>Gilman–Avon 115kV Line</td>
<td>Add a new 10-mile 115kV line in Eagle County for reliability and alternate source to Holy Cross customers.</td>
<td>2021</td>
<td>Reliability</td>
</tr>
<tr>
<td>5</td>
<td>Parachute – Cameo 230kV Line</td>
<td>New 230 kV line from the Parachute substation to Cameo substation.</td>
<td>TBD</td>
<td>Reliability</td>
</tr>
<tr>
<td>6</td>
<td>New Castle Substation</td>
<td>Construct a new 115 kV substation to serve Distribution loads in New Castle</td>
<td>TBD</td>
<td>Distribution</td>
</tr>
</tbody>
</table>

*All project in-service dates subject to change*
*All project in-service dates subject to change

South Denver/CO Springs Area

<table>
<thead>
<tr>
<th>#</th>
<th>Project</th>
<th>Comments</th>
<th>ISD*</th>
<th>Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IREA Happy Canyon</td>
<td>Construct a new 115 kV substation for IREA</td>
<td>2016</td>
<td>Wholesale Customer</td>
</tr>
</tbody>
</table>
## Proposed Transmission Projects
### San Luis Valley Area, 2016-2020

<table>
<thead>
<tr>
<th>#</th>
<th>Project</th>
<th>Comments</th>
<th>ISD*</th>
<th>Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alamosa Bank #4 115/69kV Autotransformer</td>
<td>Installing a new 84 MVA 115/69kV at Alamosa Terminal to replace the aging 25 MVA bank.</td>
<td>1Q 2017</td>
<td>Reliability</td>
</tr>
<tr>
<td>2</td>
<td>Motor Operated Gang Switches at Otero Pump and Buena Vista Substation</td>
<td>Installing MOGs at Otero Pump and Buena Vista 115kV line to minimize restoration time.</td>
<td>2Q 2017</td>
<td>Reliability</td>
</tr>
<tr>
<td>3</td>
<td>Rebuilding 69kV lines (SLV-Poncha, Villa Grove-Kerber Ck, and Alamosa- Ft. Garland)</td>
<td>Rebuilding 69kV lines in the SLV area due to aging.</td>
<td>4Q 2017</td>
<td>Reliability</td>
</tr>
</tbody>
</table>

*All project in-service dates subject to change*
San Luis Valley
San Luis Valley 50 miles wide
San Luis Valley Subcommittee (CCPG)

- Objectives
  - Phased Approach
  - Increase Reliability
  - Load Serving Capability
  - Resource Accommodation

- Phase 1
  - Conclusion: New 230 kV line from San Luis Valley – Poncha
  - Report Posted

- Phase 2
  - Conclusion: New 230 kV line from Poncha to Midway or Malta
  - Report Posted 2016

- Phase 3
  - Scope Under Development
  - Existing Infrastructure Upgrades
*All project in-service dates subject to change

<table>
<thead>
<tr>
<th>#</th>
<th>Project Description</th>
<th>Comments</th>
<th>ISD*</th>
<th>Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Monfort – Cloverly 115 kV</td>
<td>Radial load serving 115 kV line to retail Customer facility</td>
<td>2016</td>
<td>Load Growth</td>
</tr>
<tr>
<td>2</td>
<td>Avery Substation</td>
<td>New distribution substation to serve loads in the area</td>
<td>2018</td>
<td>Distribution</td>
</tr>
<tr>
<td>3</td>
<td>Southwest Weld Transmission Project (SWEP)</td>
<td>Participate with Tri-State Project to improve reliability, increase load-serving and resource injection capability</td>
<td>2018</td>
<td>Reliability, Load Growth, Resource</td>
</tr>
<tr>
<td>4</td>
<td>Milton–Rosedale 230 kV</td>
<td>New line from Rosedale Substation to Milton Substation</td>
<td>2022</td>
<td>Reliability, Load Growth</td>
</tr>
<tr>
<td>5</td>
<td>Ault – Cloverly 230/115kV Subs: Husky, Graham Ck.</td>
<td>New line from Ault Substation to Cloverly Substation. Create new substations near PSCo Ault and Eaton to move 44 kV loads to higher voltage.</td>
<td>2019</td>
<td>Reliability, Load Growth, Resource</td>
</tr>
<tr>
<td>6</td>
<td>Weld – Rosedale 230 kV Beebe Draw Substation (LaSalle Upgrade)</td>
<td>New line from Rosedale Substation to Ault Substation. Build a new 230 kV substation (Beebe Draw) to replace the existing 44kV La Salle Substation. Combined with Milton – Rosedale 230kV to create 230kV backbone south of Greeley.</td>
<td>2022</td>
<td>Reliability, Load Growth</td>
</tr>
<tr>
<td>7</td>
<td>Weld County Expansion</td>
<td>High voltage transmission from Ault to Greeley</td>
<td>TBD</td>
<td>Reliability, Resource</td>
</tr>
<tr>
<td>8</td>
<td>Wilson Substation</td>
<td>New 115kV substation to serve distribution loads. This project will tap PRPA’s 115kV Horseshoe – West transmission line</td>
<td>TBD</td>
<td>Distribution</td>
</tr>
<tr>
<td>9</td>
<td>Box Elder Replacement</td>
<td>Convert 44kV Box Elder Substation to a 115kV substation to service growing loads in the area. Might tie into SWEP</td>
<td>TBD</td>
<td>Load Growth</td>
</tr>
</tbody>
</table>
Northeast Colorado
Northern Greeley Area Plan (2016)
Ault – Cloverly 230/115 kV

Study Objectives
- Replace 44 kV transmission system
- Improve reliability
- Increase load serving capability
- Increase resource accommodation
- Align with other transmission plans

Status
- CCPG Acceptance February 16th, 2017
- CPCN Filed with CPUC March 9th, 2017
- Awaiting PUC ruling on motion to vacate schedule
NGAP
Proposed Plan

- Ault – Cloverly 230/115 kV
  - Husky Substation
  - Graham Creek Substation
- Double Circuit 230 kV Capable
- ISD: 2020
- Cost: $65M
2017 Scope – South of Greeley Plan

- Objectives (Similar to North of Greeley Plan)
  - Replace 44 kV Transmission System
  - Improve Reliability
  - Increase Load Serving Capability
  - Increase Resource Accommodation
  - Align with Other Transmission Plans

- Status:
  - Kick-off Meeting March 8th, 2017
  - Study Scope Drafted
  - Models Developed
  - Studies Underway
Public Policy Planning
Senate Bill 07–100
Designate “Energy Resource Zones (ERZ)”

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.

Consider how transmission can be provided to encourage local ownership of renewable energy facilities.

Submit proposed plans, designations, and applications for certificates of public convenience and necessity to the commission.
Public Service Company of Colorado  SB-100 Projects
<table>
<thead>
<tr>
<th>Item</th>
<th>Project Name</th>
<th>Zone</th>
<th>In Service Date*</th>
<th>Project Status</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>Planned</strong></td>
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<tr>
<td>1.</td>
<td>Missile Site 230kV Switching Station</td>
<td>2</td>
<td>Nov 2010</td>
<td>In Service</td>
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<tr>
<td></td>
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<td>No CPCN Required</td>
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<tr>
<td>2.</td>
<td>Midway - Waterton 345kV Transmission Project</td>
<td>3, 4, 5</td>
<td>Jun 2011</td>
<td>In Service</td>
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<tr>
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<td>CPCN: July 2009</td>
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<tr>
<td>3.</td>
<td>Missile Site 345kV Switching Station</td>
<td>2</td>
<td>October 2012</td>
<td>In Service</td>
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<td>CPCN: June 2010</td>
</tr>
<tr>
<td>4.</td>
<td>Pawnee-Smoky Hill 345kV Transmission Project</td>
<td>1</td>
<td>June 2013</td>
<td>IN Service</td>
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<tr>
<td></td>
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<td>CPCN: Feb 2009</td>
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<tr>
<td>5.</td>
<td>Pawnee-Daniels Park 345kV Transmission Project</td>
<td>1</td>
<td>2019</td>
<td>CPCN: April 2015</td>
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<tr>
<td></td>
<td><strong>Conceptual</strong></td>
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</tr>
<tr>
<td>6.</td>
<td>Lamar-Front Range 345kV Transmission Project</td>
<td>2, 3</td>
<td>TBD</td>
<td>Studies Complete.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No plans for full build-out at this time</td>
</tr>
<tr>
<td>7.</td>
<td>Lamar-Vilas 230kV Transmission Project</td>
<td>3</td>
<td>TBD</td>
<td>See Lamar – Front Range</td>
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<tr>
<td>8.</td>
<td>Northeast Colorado (Weld County Expansion)</td>
<td>1</td>
<td>TBD</td>
<td>Studies Ongoing</td>
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<td>CCPG – NECO Subcommittee</td>
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<tr>
<td>9.</td>
<td>San Luis Valley</td>
<td>4</td>
<td>TBD</td>
<td>Studies Complete</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tri-State Lists 2022 ISD</td>
</tr>
</tbody>
</table>

*All project in-service dates subject to change*
Colorado Rule 3627 – Ten Year Transmission Plan

*All projects are subject to change and routes have yet to be determined.*
Colorado Coordinated Planning Group
2017 DRAFT Organization Chart

Overview:
- **Subcommittees**
  - Specific Geographic Portion
    - multi-year
- **Work Groups**
  - Entire Footprint
    - multi-year
- **Task Forces**
  - Portion or Entire Footprint
    - 1-2 year duration
    - (includes potential joint projects)
- **CCPG Liaisons**

**Subcommittees**:
- **Foothills**
  - Chair: Jeremy Brownrigg (PRPA)
- **DEEP**
  - Chair: Gary Simonson (CSU)
- **WY/SD Common Use**
  - Chair: Charles Shue (BHC)
- **Western Slope**
  - Chair: Chris Pink (TSGT)
- **Northeast Colorado**
  - Chair: Mike Rein (Xcel)
- **San Luis Valley**
  - Co-chair: James Nguyen (Xcel)
  - Co-chair: Jonathan Fidrych (TSGT)
- **Southeast Wyoming**
  - Chair: TBD

**Work Groups**:
- **3627 Compliance**
  - includes Long Range & SB 100
  - Co-chair: Tom Green (Xcel)
  - Co-chair: Chris Pink (TSGT)
- **Conceptual Planning (20-year)**
  - Co-chair: Paul Caldara (CPUC)
  - Co-chair: James Nguyen (Xcel)
- **Base Case Coordination Updates**
  - Chair: Sirisha Tanneeru (Xcel)
- **TOT 3 Study Methodology**
  - Chair: David Gustad (TSGT)
- **Rush Creek**
  - Chair: Patrick Corrigan (Xcel)
- **CCPG Charter Update**
  - Chair: Chris Pink (TSGT)

**Task Forces**:
- **TOT 3 Study Methodology**
  - Chair: David Gustad (TSGT)
- **Rush Creek**
  - Chair: Patrick Corrigan (Xcel)
- **CCPG Charter Update**
  - Chair: Chris Pink (TSGT)

**CCPG Liaisons**:
- **Colorado Regulatory**
  - Chris Neil (OCC)
  - Paul Caldara (CPUC)
  - Chris Worley (CEO)
- **WECC**
  - TEPPC: Mike Rein (Xcel)
  - PCC: Bob Easton (WAPA)
- **WestConnect**
  - PMC Chair: Blane Taylor (TSGT)
  - PS Chair: Tom Green (Xcel)
- **Rocky Mountain Operating Study Group**
  - Frank Li (WAPA)

**Oversight Committee**
- Chair: Susan Lovejoy (CSU)
- Vice Chair: Jeremy Brownrigg (PRPA)

Updated: 12/08/2016
CCPG Typical Agenda (all in Denver at TSGT)

1. Project Updates
   - Utility Specific
2. Work Group Status
3. Subcommittee Status
4. Task Force Status
5. Regulatory Reports
   - PUC, OCC, CEO
6. Regional Updates
   - WestConnect, WECC
7. Stakeholder Input
CCPG EVENTS

- CCGP Meetings
  - August 17, 2017
  - December 7, 2017

CCPG Contacts:
Susan Lovejoy – Chair
slovejoy@csu.org
(719)-668-8384
Jeremy Brownrigg – Vice-Chair
brownriggj@prpa.org
(970) 266-7979
WestConnect
PMC Organization and Activities

- FERC Order 1000 Compliance
- Manage Regional Transmission Planning Process
- Currently comprised of 26 Members
- Monthly Meetings
WestConnect Planning Region

WestConnect Subregional Planning Groups

WestConnect Planning Region

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WestConnect PlanningRegion
2016-17 Planning Cycle Schedule

- Study Plan Development
- Model Development
- Identify Regional Needs
- Evaluate & Identify Alternatives
- Allocate Costs
- Draft Regional Plan

- Scenario Submittals
- Project/NTA Submittal Window
- ITP Submittal Deadline

Timeline:
- 2015: Nov, Dec, Jan, Feb
- 2016: Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec, Jan, Feb
- 2017: Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec, Jan, Feb
- 2018: Mar, Apr, May

Key Dates:
- 3/31/2016: ITP Submittal Deadline
- Today
Stakeholder Opportunity for Comment
Feedback Requested

- Alternative Solutions
- Termination points
- Public Policy Concerns
- Environmental / Societal
- Renewable Energy Policies
- Significant Load Impacts
Comment Form

CCPG Comment Form

(For Stakeholder Comments, Requests for Clarification, Reliability Studies, Alternative Evaluation, and other General Feedback)

Provide the information in the yellow boxes. If the information is unavailable or unknown, please indicate.

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<td>Load and Resource Modeling</td>
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<td>Suggested Participants (TP's, LSE's, Work Groups)</td>
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<td>Policy Issues to be Addressed (SB100, RES, FERC, NERC, etc)</td>
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<td>Other Factors to be Considered</td>
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<td>Type (Powerflow or Stability)</td>
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Return To: CCPG Chair Wes Wingen
In care of: Black Hills Corporation
Address: PO Box 1402
City, State, Zip: Rapid City, South Dakota, 57709
Phone: 605-721-2268
Email: Wes.Wingen@blackhillscorp.com

All study requests received from stakeholders will be reviewed and evaluated to determine the appropriate process for addressing. This planning process does not replace the System Impact Study process. Specific requests for transmission service or generation interconnection will continue to be studied pursuant to existing OATT processes.
PSCo PUC Rule 3627 Information

- On the Xcel Energy website at:

- WestConnect website for all regional projects:
  - http://regplanning.westconnect.com/ccpg.htm
Contact Information

Transmission Planning:

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