

Meeting Minutes (FINAL)

COLORADO COORDINATED PLANNING GROUP

Thursday, December 12, 2019 - 9:00 AM - 12:00 PM MST

PICTURE ID REQUIRED FOR SECURITY

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Tri-State Generation & Transmission
1100 W. 116th Avenue, Westminster, CO 80234

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1) Introductions and Meeting Arrangements Brownrigg

Called to order at 9:02 am.

2) Agenda Overview/Changes Brownrigg

Mr. Brownrigg mentioned that there were minor changes to the agenda; updated version has been posted. Asked for any changes or suggestions that need to be discussed; none were noted.

3) Approval of Minutes From Last Meeting [Link to Minutes](#) Mirzayi

Ms. Mirzayi mentioned there were a few minor changes; will get them corrected and posted. Minutes were approved.

4) 2020 – 2021 CCPG Officers [Link to Presentation](#) Brownrigg

- a) Nomination for Chair..... Roy Gearhart, WAPA
- b) Nomination for Vice-Chair..... Chris Pink, TSGT
- c) Nomination for SecretaryJeanine Hogan, TSGT

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Last week the CCPG management committee meeting held a meeting. The committee consists one (1) representative from each utility.

Slide 2 – Responsibilities: Listed in the CCPG Charter. The CCPG Management Committee is responsible for the following:

- Ensuring CCPG adheres to its core mission
- Nominating and electing officers (Chair, Vice-Chair & Secretary)
- Has final accountability for CCPG work products and as necessary
 - Need to insure that participation and input from all participants are included in studies
 - Met the objective of the effort
 - Is accurate
 - Is technically adequate
- If necessary, resolve any issues that may come up in subcommittees, task forces and work groups

Slide 3 – Responsibilities: The committee met to select new chair and vice chair, which are typically two-year terms. The Chair is to facilitate the meetings, coordinate Annual Study/Work Plans and represent CCPG at different venues (CPUC, WECC, WestConnect and other regulatory bodies).

The Vice-Chair is responsible for assisting the Chair with meetings, maintaining CCPG mailing list, producing the meeting minutes and forwarding pertinent information from WECC, WestConnect, etc. to all of CCPG.

Mr. Brownrigg stated that it was a pleasure to serve such a fine group of people as an officer of CCPG over the past four (4) years.

Slide 4 – CCPG Officers: List showing officers starting in 1991 thru 2021. It was determined by unanimous vote that Mr. Gearhart would assume the Chair position of CCPG. It was noted that CCPG appreciates Mr. Gearhart taking the initiative to serve the next two-year term as well as Mr. Pink from Tri-State offering to be Vice-Chair. Ms. Hogan was recognized for her administrative work and logistics associated with CCPG, which is quite an effort and never gets the appreciation that it should - she will continue her role as Secretary. Mr. Friesen from Tri-State was also recognized for all his work with CCPG with technical and audio needs over the past several years.

Mr. Brownrigg asked if there were any objections regarding the new officer nominations, none were given. Mr. Rein volunteered to bring the meeting refreshments going forward. Mr. Brownrigg gave thanks to Tri-State for providing the venue for CCPG meetings four (4) times a year and to PSCo for providing the treats.

Mr. Brownrigg asked someone from Tri-State to go over building safety procedures. Mr. Pink reminded everyone if there is a fire alarm, everyone is to exit the same doors you came in and go to parking lot in order to account for everyone who is in this room for safety reasons. If there is a tornado alarm, stay in the building and go towards to the bathrooms or the conference rooms, which are designated as tornado shelters. Noted the restroom locations and the kitchen location. If anyone has any questions, ask someone from Tri-State for help.

5) CCPG Organizational Items [Link to Org Chart](#) Brownrigg

- a) Slide of 2020 Draft CCPG Org Chart showing most of the different task forces, work groups and subcommittees as well as the liaisons for CCPG. Asked everyone to review and see if there are any changes needed. Due to formatting issues with PowerPoint, the Short Circuit Work Group was not shown on the slide. Asked that new CCPG officers fix the formatting issue. The committee rarely talks about short circuit, not that it is not important, but there is not usually a lot of discussion associated with this group. Again, Mr. Brownrigg asked if there are edits needed to the chart.

Mr. Gearhart: Stated there will be one under WestConnect; they are going to find a new PS Chair. Mr. Brownrigg stated he would send the PowerPoint slide to Mr. Gearhart to manage going forward.

Mr. Josh Korth from CDPHE: He asked to be added to Colorado Regulatory. He will be taking over that responsibility from Curt Taipale.

Mr. Pink: Requested that Mr. Korth send an e-mail to that effect to get the correct spelling of his name.

Mr. Green: Asked what was the group

Mr. Korth: Colorado Department of Public Health and Environment and Air Pollution Control

Mr. Brownrigg: Will get that fixed on the Agenda; Item 11

- b) Proposed/Reserved 2020 CCPG Meetings (Thursdays at Tri-State Generation & Transmission Association, Inc.):

- February 20
- May 21
- August 20
- December 17

Attendees were told to put these dates on their calendars.

ACTION ITEM: Fix formatting issues on CCPG 2020 Organization Chart – New Committee Officers

6) Project Updates

a) BEPC

Carlson

No updates. Basin currently does not have ongoing projects in the western interconnect.

b) BHC [Link to Presentation](#)

Kuhn for Cooper

Mr. Kuhn reviewed slides for planned and conceptual projects for South Dakota, Wyoming and Colorado.

Slide 2 – BHE-SD 10-Year Transmission Projects: Slide showing South Dakota system projects. Finished a couple projects – Westhill-Stegall 230 kV Rebuild and built a new 230 kV Sagebrush Substation. In the process of actually building the West Rapid City Substation, currently doing initial groundwork. The Lange-South Rapid City 230 kV Rebuild projected in 2020 and everything else will be in 2021.

Slide 3 – BHE-SD 10-Year Transmission Projects: Map of South Dakota system. Highlights of what is being planned to be rebuilt or added.

Slide 4 – BHE-WY 10-Year Transmission Projects: Slide showing Wyoming system projects. Installed Cheyenne Prairie-East Business Park 115 kV Rebuild. Planned for 2020 are the East Business Park-Skyline 115 kV Rebuild and West Cheyenne 115 kV Substation & Transmission. Everything else is planned for 2021 or later. There are a lot of conceptual projects they have listed that were pushed back a year. Still trying to figure out what their plans are there. Still looking at those projects and some other alternatives to see what they plan on doing in their Cheyenne area.

Slide 5 – BHE-WY 10-Year Transmission Projects: Map of Wyoming system. Highlights planned and conceptual projects.

Slide 6 – BHE-CO 10-Year Transmission Projects: Slide showing Colorado-Pueblo system. Completed rebuild of their West Station 115 kV Substation. Two (2) projects currently under construction, line rebuilds to increase ratings. Another planned rebuild on the Desert Cove-Fountain Valley 115 kV line to bump the rating. Reviewed planned projects along with additional rebuilds in 2022.

Slide 7 – BHE-CO 10-Year Transmission Projects: Map shows Colorado planned projects.

Slide 8 – Questions/Comments/Suggestions: Recently created new Black Hills Transmission Planning email – shown on slide. All requests for TPL standards and their methodologies should go to that e-mail specifically because it is a catch all for everything. If you do not send it to that e-mail, they will send you an e-mail to remind you to send it to that e-mail.

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Mr. Gearhart: Asked to go back to Slide 5. West Station has a 2020 date and some around it has a 2021 date – have those been submitted for inclusion in the 10-year models beyond 2020?

Mr. Kuhn: The West Cheyenne 115 was included, but the all the conceptual projects were not included, not sure if they are moving forward with those or not.

Mr. Gearhart: Asked if West Cheyenne 2020 is conceptual or not.

Mr. Kuhn: Per slide, it was listed as a planned project.

Mr. Gearhart: Stated that they will coordinate directly for verification.

Mr. Kuhn: Mentioned they split up their utilities. He is doing their Colorado system, Tyler is doing their Cheyenne system and Trevor is doing their South Dakota system. He was not familiar with all the planned and conceptual projects within Cheyenne.

Mr. Brownrigg: Asked if the new email address goes to entire group and their structure.

Mr. Kuhn: Mr. Wes Wingen left a couple months ago. Their supervisor is Lindsay Briggs. There are three (3) transmission planning engineers: himself, Tyler Cooper and Trevor Rombaugh who report to Lindsay. They are currently looking for a replacement for Mr. Wingen.

c) CSU [Link to Presentation](#)

Hanson

Mr. Hanson on the phone.

Slide 2 - CSU 10-Year Planned Projects: Had a replacement of a small autotransformer at their Cottonwood Substation in the fall; now in service. Working on Nixon-Kelker 230 kV Line Upgrade to be completed in Spring 2020. Brought on a 35 MW Grazing Yak Solar Project east of their system, came in service at the end of November. Another new 60 MW Palmer Solar Project located on southeast of their system, scheduled ISD January 2020. Another solar project 150 MW Pike Solar/Storage Project in same area planned ISD 2023. Working on PPA negotiations and within the next year will kick off the system impact studies and LGIA process.

Running a lot of transmission scenarios looking at what impact removing coal fired generation and gas fired plant in the center part of their system, which will happen within the next five (5) years. They have preliminary results of that study; hope to share the details early next year. There is going to be quite a bit of transmission and substation work that will be required to retire those plants. Looking forward to sharing this with CCPG next year.

Mr. Gearhart: Not familiar with Williams Creek – asked where is that.

Mr. Hanson: Where their east-west 230 kV lines from Nixon Substation going up to Claremont and eventually up to Fuller down in the southeast part of that

line where they intersect with the big 345 corridor. Right at that point is where the new solar project will go.

Mr. Green: Asked if they had any specific dates for their coal retirements.

Mr. Hanson: They do not have specific dates right now; they are in their IRP process and will know by mid-next year because their city council will need to approve.

Mr. Green: Asked what the overall level for their coal plants is.

Mr. Hanson: He does not know what ends up being identified. They are running those scenarios now through the IRP. They know they have to get rid of their 208 MW Drake Plant and their 57 MW Birdsall Plant, which is a gas fired plant just there for reliability. In order to meet the emissions standards, they do not know if their 200 MW Nixon Plant will be impacted or not. If they get rid of Drake and Nixon, they would not have any more coal.

Mr. Green: Asked if they were going to start modeling that in the WECC cases.

Mr. Hanson: In their TPL, they will be looking at the retirement of the Drake Plant this year. Beyond that, the others are just sensitivities they have been running and figuring out what impact that would have

Mr. Green: But it would be reasonable for us to show those out in the 10-year case?

Mr. Hanson: Yes. If the Drake and Birdsall Plants will be shown out in the 10-year case in this upcoming year.

d) PRPA Brownrigg

They have the wind and solar projects up at Rawhide, which totals 225 MW scheduled for next year. Other than that, it is relatively quiet on their system from a transmission perspective.

e) PSCo [Link to Presentation](#) Green

This is the same information as their FERC 890 recent presentation.

Slide 4 – Generation Additions/Reductions: The Titan Solar and Rush Creek projects have gone into service recently. They have a 50 MW solar plant at Missile Site and in addition, the Rush Creek project has gone into service with 600 MW of wind. The remainder of the projects they plan to implement through Colorado Energy Plan. They had a developer that they did not pursue and went out for another solar RFP. The bottom two projects are what their preferred options are for replacing those solar projects. No final approval yet and will not have a final decision until March.

The Cheyenne Ridge and Bronco Plains projects are another 800 MW of wind going in on the Rush Creek gentie. This is going out from Missile Site to Cheyenne Ridge, which is close to the eastern edge of Colorado. The rest is

implementing more solar. Also noted is the retirement of Comanche 1 and they plan on retiring Comanche 2 later.

Slide 5 – Rush Creek Wind Project: Rush Creek has already been implemented; 600 MW currently out there. If you drive east on I70 you will see a lot of wind projects for PSCo and Tri-State.

Slide 6 – Rush Creek Wind Project: Slide shows a map of Rush Creek; it all comes into Missile Site. As you go out to Rush Creek, starting around the Limon area, they will be extending the 345 all the way out there.

Slide 8 – Generator Queue Status: Slide shows the dynamics of what has been happening in their queue. They just received approval for their queue reform; asked if someone could speak on this topic.

Ms. Mirzayi: Stated that they just did a comprehensive queue reform on their large generator interconnection process. They are going from the serial cumulative, which was the *Pro Forma* FERC OATT that they were under to the cluster study process. There will be “open windows” rather than anyone being able to apply at any time. The transitioning is happening now, they have informed everyone in the queue to make a determination on how they want to move forward. If anyone needs information and further details, it is listed on their website and OASIS site.

Mr. Green: Mentioned that it will be interesting how this table changes in the spring. They expect the 22.7 MW will drop off significantly once they start implementing the cluster study process.

Mr. Taylor: Made a comment that there is a discussion this afternoon from 2-4 p.m. about queue reform. If anyone wants access to this meeting, just ask Tom Green and Betty Mirzayi they can get the meeting information to anyone who is interested.

Mr. Green: Asked if this was like a Stakeholder meeting.

Mr. Taylor: Yes

Slide 10 – Substations: Slide listed substations that they have been working on. Harvest Mile is associated with the Pawnee-Daniels Park 345 project, which is an expansion of Smoky Hill. Bluestone is on the western slope for reliability. Wolcott - adding reactors for voltage performance. New interconnection in 2020 at the NREL location. Shortgrass 345 kV Switching Station is part of the Colorado Energy Plan expansion interconnecting additional wind. In 2021 and 2022, substations are planned for north and south of the Greeley area. Identified Badger Hills as an interconnecting substation as part of the CEPP located just north of Comanche. In addition to Badger Hills, they will have other interconnecting switching stations for the remainder of the CEPP projects. Slide also listed distribution projects and dates.

Slide 11 – Transmission: Slide shows transmission projects. Pawnee-Daniels Park will be energized by the end of this year. In 2020 the extension of the

Rush Creek gentie out to Cheyenne Ridge. They had to implement a lot of voltage control because of the gentie and the amount of renewables being added. Also listed are conceptual projects, hope to move forward with these projects in the next several months especially around the Greeley area. As we move towards carbon free goals, many of these projects will be part of the toolbox.

Mr. Hubbard: Box Elder and Ennis show as both planned and conceptual.

Mr. Green: That was an error should have been moved from conceptual to planned project. It is somewhat distribution related and somewhat gas load related, no definite ISD.

Mr. Hubbard: Asked the Rosedale-Box Elder portion still conceptual at this point.

Mr. Green: Not sure, if Gilbert has a slide deck to talk about it later in the meeting.

Mr. Flores: Confirmed that he does not have a slide deck for NECO.

Mr. Green: Stated they would address that under that discussion item later in the agenda.

Slides 12 – 25: Maps showing project locations.

Slide 26 – Senate Bill 100 Project List: Main intent to show Pawnee-Daniels Park project will be in service this year. They are moving forward with the Northern Greeley Area Plan, they see it as having potential to accommodate additional resources. As the Greeley projects materialize, they will be considered SB100 related as well. Rule 3627 - every two (2) years PSCo, Black Hills and Tri-State files a 10-year transmission plan and 20-year scenario report with PUC. Next filing will be February 1, 2020. The three (3) utilities are actively working on these two (2) documents and have initiatives addressing carbon free goals and adding renewables to their systems, which will be included in the filing.

Mr. Sickler: Asked which solar projects are being replaced.

Mr. Green: Midway and Boone are the two (2) preferred projects.

Mr. Sickler: Asked which of the two (2) were replaced.

Mr. Taylor : One was near Badger Hills and the other was north and east of Denver (Barr Lake).

- f) Tri-State [Link to Presentation](#) Sickler for Pink

Slide 2 – Transmission System: Slide shows a map of their transmission area. For this discussion, they will focus on the CCPG footprint. Most of their projects were the same as their last presentation and will focus on the changes, which are tied to ISDs.

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Slide 3 – Projects: Under Construction: The Lazy Dog Delivery Point ISD is 2020. The Sunshine-Telluride 115 kV Line and Reactor Addition is now in-service.

Slide 4 – Projects: Under Construction: The Pierce Delivery Point is now in-service. The Iron Creek Delivery Point in Wyoming has been moved to 2020. The Arnold Delivery Point, Henry Lake Sub Expansion and Silver Saddle Transformer Additions are all in-service.

Slide 5 – Projects: Planned: The Jackson Fuller T2 Addition ISD has been moved to 2023. The Lost Canyon – Main Switch second line ISD has also been moved to 2023.

Slide 6 – Projects: Planned: The Spanish Peaks Interconnect project that will connect a new 100 MW solar facility to their system that ISD has been moved to 2023 to align with the ISD of the solar facility. The La Junta Transformer Addition has been pushed to 2022. The Lime Road Delivery Point ISD is 2023 and the Rolling Hills Delivery Point now has an ISD of 2025.

Slide 7 – Projects: Conceptual: the only conceptual project is Lamar Front Range which will be discussed in that task force update.

g) Western [Link to Presentation](#)

Gearhart

Slide 2 – Projects in Western's 10 Yr Plan: Big George-North Cody project improves reliability in the Big Horn area is under construction; ISD 2021. The Badwater 30 MVAR Reactance project for voltage control; ISD 2021. Both projects are new ISDs due to transformer order dates.

Slide 3 – Projects in Western's 10 Yr Plan: Replacing one of the Ault Transformers is in construction; ISD also changed to 2021 due reordering a transformer. They are replacing their transformer at Midway due to condition/age and increasing size with an ISD 2021.

Slide 4 – Projects in Western's 10 Yr Plan: They are moving forward on their Estes-Flatiron Rebuild of their two 115 kV lines. They received a record of decision on environmental impact statement. The project is currently in design and intend to have it under construction next summer. The Lovell-Yellowtail Phase 3, which is the segment that goes across Crow Reservation, they are working to get one of the right-of ways, approved that had expired. There is a taskforce working on pursuing resolution on this project.

Slide 5 – Projects in Western's 10 Yr Plan: Presented a new project to change the configuration at West Stegall Bus for both 230 kV and 115 kV to convert to 1.5-breaker configuration with an ISD 2024. They have a project to sectionalize their three terminal line at Erie-Hoyt-Willoby at Sand Creek Tap with a substation – ISD 2024.

Slide 6 – Projects in Western's 10 Yr Plan: Blue Mesa 30 MVAR Reactor is joint project with Tri-State and also establish a delivery point for one of Tri-State's members. The ISD states 2025 but Roy will check because that seems

long. It requires adding a transformer and configuration of the bus. The Golden Prairie Project – Archer-Stegall line is to sectionalize a long 115 kV line that has four (4) taps; to sectionalize at one of the taps at Pole Creek (middle tap) – ISD 2027. This is strictly a reliability project.

Mentioned one project coming is one of their 115 kV lines in Wyoming from Casper to Stegall and then a line from Stegall through Gehring and Sidney. One of those lines built in the 40's is experiencing conductor failures. They have an emergency project to re-conductor one of those lines this year. Because of that, it will not likely be a CCPG project but may impact Tri-State and its members. They already did one segment a few years ago but now doing from DJ Tap to Sidney. It is 397 conductor now being replaced with 477 conductor. Planning did not see any justification for a full rebuild so it is strictly a re-conductor and some slight modeling and rating changes eventually.

Mr. Brownrigg: Had a question on Ault – you mentioned that the transformer was being replaced or reordered, was it faulty?

Mr. Gearhart: It was not faulty. One was not taken possession of; it is not a WAPA issue.

h) Other

Nothing reported.

7) Work Group Updates

a) 3627 Compliance (LRTS & SB100) Pink/Green

Mr. Pink: Reminded everyone that the 3627 Compliance Work Group is a standing body. Their role is to vet, evaluate or shepherd through the CCPG process with stakeholder input for requests to study alternatives. No requests to evaluate alternatives have been received; nothing to report at this time. Each company individually, PSCo, Black Hills and Tri-State, are complying with the Rule 3627 and plan on filing in February 2020. That document is not being developed in this CCPG work group.

b) Conceptual Planning Green for Nguyen/Gribb

This work is in line with 3627 but the Conceptual Planning Work Group was meant to look at beyond a 10-year horizon. Mr. Nguyen and Mr. Gribb are working on this but we have been trying to get others involved. Preparing a 20-year model if anyone wants to use for conceptual type planning.

Mr. Rein: James emailed that the 2040 Model HS was sent out and requested comments back by 12/13/19.

ACTION ITEM: Comments requested on 2040 Model HS by Friday, December 13, 2019 – Everyone

c) Base Case Coordination Rein for Tanneeru

The SDWG Group completed 2019 base case compilation schedule and has started building cases in the 2020 base case compilation schedule. First two (2) cases, 2021 heavy winter and 2021 light winter cases due 12/13/19. Group is trying to complete the compilation schedules early by November and have all the cases released before the end of the year. In addition, they are building twelve cases annually rather than the eleven cases the group historically built.

d) TPL Studies Hirning

They managed to get through the powerflow on the 21 heavy summer, 21 light summer and 29 heavy summer cases. They completed the voltage stability on all three (3) cases. Just finished the transient stability run on 21 heavy summer; working on 21 light summer. Shawn is working on the 29 heavy summer stability. They received responses back from most on the powerflow. They did not receive information on 2024 heavy summer case. Told Jeremy that if he had any problems to send it to him and he will run it.

Mr. Brownrigg: Said he should not have any issues; hopes to have it done this weekend and sent out.

Mr. Hirning: Hopes to send it out Monday so they can get the redline comments back next Friday and send it out for signatures.

ACTION ITEM: Working on completing the 2024 Heavy Summer Case. Jim noted that if it is sent out on Monday we could get the red lines back on Friday and have it sent out for signature – Jeremy Brownrigg

e) Voltage Coordination Brownrigg for Anderson

Bill sent out the final version of the VCWG guidelines with signature page. There are three (3) signature pages; stated that he still needs to return the signature page. Once pages are done that effort is complete for the year.

f) Short Circuit Hanson for Loftis

He did not recall when last meeting was held. No updates.

g) Model Validation Gilden

No updates and recent events.

h) Energy Storage Flores

Newly formed work group. Received a positive response for forming this group with a handful of people who have joined. If anyone would like to be included, notify Mr. Flores. They anticipate to kickoff this group in January. The scope and charter have been drafted. The objective to understand how these energy storage projects would be incorporated into the transmission system; looking at modeling, feasibility and any application issues, they may run into.

Mr. Gearhart: The timing of this topic is very optimal, they have been directed in their group to get educated, knowledgeable and to get ready for this technology on the planning side. Understanding how to tackle it from the planner's perspective is a good goal initially to kick it off. Stated that they are lined up well with WAPAs needs.

Mr. Flores: Noted that a better understanding of the battery technologies will help them moving forward and specifically how to model.

ACTION ITEM: Kickoff to the Energy Storage Work Group in January. Information will be sent and asked if anyone wanted to be involved, to let him know – Gilbert Flores

BREAK (10:10 – 15 minutes | Reconvened at 10:25 a.m.)

8) Subcommittee Updates

a) Foothills

Brownrigg

Conference call meeting held September 11, 2019. Notes are posted for those interested. Nothing stands out from that meeting. No additional meeting scheduled yet; assumed one will be scheduled First Quarter 2020. Projects have already been vetted within Foothills during this meeting.

Mr. Gearhart: Asked Mr. Hubbard about one of their 10-year presentations, the Erie tie, if it would be coordinated through Foothills and see some information on that.

Mr. Hubbard: Mr. Fate has done a lot of analysis and been shared with PSCo. PSCo will be doing analysis on it also.

Mr. Brownrigg: A long-term project Slater-Erie Loop and JG Kalcevik Substation coordination to bolster that loop. At Isabel, they were going to tie into a PSCo 230 kV line to reinforce the 115 loop out of Erie up to Slater and Del Camino tap to feed United Power System.

Mr. Hubbard: There has definitely been extensive analysis and more to be done with PSCo.

Mr. Brownrigg: They have evaluated several alternatives and nailed down one that Tri-State and PSCo are pursuing.

ACTION ITEM: Schedule Foothills Subcommittee Meeting First Quarter 2020 – Jeremy Brownrigg

b) DEEP

Tanneeru/Hanson

Mr. Hanson spoke with Ms. Tanneeru. Study report in the works since late last year and early this year that identified the series reactor that was shown in the PSCo 2021 update. They will issue the final report; there is likely to be an addendum that considers plant retirement and other changes to CSU system.

They will also kick off a new DEEP project in early 2020. Preliminary, they discussed looking at Midway Substation coordination. He appreciated Sirisha's work on the DEEP report and looking forward to issuing the report.

Mr. Gearhart: Asked if he had an example on Midway Substation what that coordination issue might be there?

Mr. Hanson: The bus tie at Midway, PSCo mentioned that one of their new interconnections will be coming into Midway, we might require an extra line into Midway – potential expansion. There are quite a few different things going on at Midway that might be worth studying as a regional group.

Mr. Gearhart: Per their 10-year plan, they are replacing their transformer and minor reconfiguration on the 230/115 buses in order to add breakers that were not there previously. He doubted there is any conflict there but I wanted to understand the issues.

Mr. Green: He appreciated the report is being completed and they may be adjusting the conclusions to show what they did look at and what some of the beneficial alternatives were and leave it open for future studies. In 2020, would the DEEP team meet again, discuss the recent alternatives, and then create the addendum?

Mr. Hanson: Yes that would be the plan.

ACTION ITEM: Report will be done in 2019 and then an addendum considering additional changes on CSU system will be sent out in 2020 – Sirisha Tanneeru

- c) WY/SD Common Use Todd Kuhn for BHPC

No update, waiting on some cases.

Mr. Brownrigg: What kind of activities are going on there?

Mr. Kuhn: This is a subcommittee designed to keep people updated with TCPC reports for their Common Use System. They are waiting for the newest cases to start our 2019 process.

Mr. Brownrigg: From a logistical standpoint, is there a single point of contact that chairs that group?

Mr. Rombough: He stated that he will be the single point of contact for this team.

ACTION ITEM: Waiting to get their group started in 2020; no timeframe was given – Trevor Rombough

- d) Western Slope Pink

Nothing new just to let everyone know on what he thinks they should be doing in that group the next year, year and a half. He believes at the last meeting, he committed to setting up a meeting before today, but Tri-State and PSCo are

both going through their resource planning process. Rather than study ways to increase the transfer capability in western Colorado, it would be more useful to hear what the final resource plans are regards to the coal units at Craig and Hayden and have that be the new starting place for the western slope. Otherwise, the date might be moot if those plans change. Waiting to hear on what the plans are for Craig and Hayden first before doing anything there.

Mr. Green: We might need to think about that.

ACTION ITEM: No meeting scheduled but Chris and Tom will discuss the Craig/Hayden retirements – Chris Pink / Tom Green

e) Northeast Colorado Mike Rein for Nguyen

There are no updates; still reviewing first draft of the report.

Mr. Hubbard: Asked when the draft report will be distributed?

Mr. Rein: No, he did not know.

Mr. Hubbard: Was there any analysis done? Because as soon as you start building the South Gap portion it turns into a parallel path at TOT 7. With the North Greeley project coming in from the north and Greeley South Gap connecting in; it looks like a parallel path to TOT 7. Was not sure if there were going to be any TOT 7 sensitivities studies or impacts looked at.

Mr. Green: They recognized there might be impacts to TOT 7; personally would like to delist it. They had a meeting and discussed additional alternatives. Suggested they meet one more time in January to button that up.

Mr. Brownrigg: They had an operations meeting with PSCo on TOT 7 because the last two (2) seasonal assessments where Bill ran the studies for the path, he had Godfrey Tap open in the case; the limits change with that closed. Bill was going to rerun that analysis to redefine the points – not from this last summer but for a study plan for this next summer. He recognized that line was miss-modeled because it had been closed for a couple years. Claire, Bill and Jeremy met to discuss definition of the path, looked at different scenarios. In some cases, Bill did preliminary work in it; it impacted the 115 kV line on TOT 7 by 300 MW. To Ryan's point on the SGap part of NECO and tying it in, it does change the path. To Tom's point, I would not have an objection to delisting TOT 7 because there is a lot of capacity with these projects coming into play and actually when they are built, I do not know if you will have a huge problem there.

Mr. Hubbard: Arizona recently delisted several paths related to retirements of coal facilities. Some of these paths might not be needed. Will there be a separate study to look at TOT 7?

Mr. Brownrigg: He thinks there should be as an alternative but it comes down to resources, importance, etc. If it happens great, if not then they will deal with it.

ACTION ITEM: Schedule meeting in January to finalize NECO Study Report – James Nguyen

- f) San Luis Valley Mike Rein for Nguyen
No updates; the group is dormant.
- g) Southeast Wyoming Stringer
Not working on any specific issue at this point, nothing to report.

9) Task Force Updates

- a) Colorado Energy Plan (CEP) [Link to Presentation](#) Green/Mirzayi

Mr. Green: The purpose of the task force was to keep CCPG informed of what was going on with the Colorado Resource Plan, which came out of their 2016 Resource Plan and was modified in 2017 now called Colorado Energy Plan (CEP). It was to ask the Commission for permission to retire Comanche 1 and 2 early and add additional solar and wind resources. Had several meetings providing that information and took feedback from stakeholders for running some of the alternatives.

Slide 3 – 2016/17 Resource Plan: Slide shows the background. When they filed the CEP, they issued a 120 Day Report. PUC approved CEP back in September 2018.

Slide 4 – Colorado Energy Plan Portfolio (CEPP) Map: General map showing the overall plan and new proposed options for replacing solar projects.

Slide 5 – CEEP Resources: The table shows CEPP projects; in yellow are the replacements.

Slide 6 – Study Results: They did a lot of studies looking at the implementation of the CEP; had concerns with stability from retiring Comanche 1 and 2. They did a lot of internal, consultant and university studies if they would maintain system integrity. It showed that PSCo has a pretty tight system thanks in part to the establishment of the 345 kV backbone from Pueblo up to Brush and also the other thermal units in the area. They believe they can retire those two (2) units without transient stability issues. One thing they did run into with was their largest customer, which is a steel mill, and steel mills tend to cause issues on the system. When they retired the two (2) coal units, they found some issues with the steel mill. They are planning to implement a STATCOM to mitigate them. Wherever generation is connected directly at the Backbone, it hammers the metro area since that is where most of the load is. They are addressing the voltage issues because of the long gentie but some of the other generation that has been added.

Mr. Baghsorkhi: You mentioned the backbone can accommodate 4 GW of renewables – how does that cover the discussion the Lamar Front Range Task

Force issues? There are still discussions at the Lamar Front Range Task Force.

Mr. Green: Not sure what you mean by the 4 GW.

Mr. Baghsorkhi: Asked to go back to Slide 6 – Study Results.

Mr. Green: Acknowledged that it should not have been added to the slide. It is their existing generation, not new. The CEP and existing generation that is on the Backbone. It is able to accommodate what they have plus what is being added. As they move into Lamar Front Range, they will be adding more transmission out there.

Slide 7 – Portfolio Injection: The map shows the Backbone indicated in purple – the 345 from Pawnee down to Pueblo. The yellow bubble “Limits” is the Denver Metro area.

Slide 8 – CEPP Network Upgrades: Slide shows all the voltage control devices being added. Then on transmission, it shows proposed alternative to meet the network upgrade needs for the Denver Metro area is a Greenwood-Arapahoe-Denver Terminal 230 kV line.

Slide 9 – Voltage Control Facilities Map: Map shows location of voltage control devices.

Slide 10 – Network Upgrade Map: Number 1 is the preferred alternative. They looked at a lot of alternatives through the CEP Task Force; had a lot of suggested alternatives. Number 2 was what they originally thought about with upgrading a lot of existing lines and many are located underground but it turned out to be a more expensive alternative. Number 3 was an old Inez Dominguez project, which is upgrading an old 115 kV system from Smoky Hill to Denver, which is also a very expensive project but it would probably work. They are moving forward with the Greenwood to Denver Terminal 230 kV line.

Slide 11 – CEP Regulatory Activity: They have already received a CPCN for the Shortgrass Switching Station (point of interconnection for some wind facilities). They received a CPCN for the Cheyenne Ridge project, which is adding another 500. The other project interconnecting at Shortgrass is Bronco Plains, which is 300 so in addition to the 600 they will have 800, which bring it up to 1400 MW on the gentie.

They recently went through focused RFP to replace solar developer who dropped out. They are looking at a 100 at Midway and Boone with approval in March. They have three (3) more CPCNs coming up. One for the voltage control facilities, one for the network upgrades and one for the interconnection facilities. The voltage control CPCN may be filed this week and the network upgrades will be shortly thereafter. In early 2020, they plan to file another CPCN for Badger Hills any other interconnection switching stations they made need.

Mr. Hubbard: Asked to go back to Slide 10. Mentioned in previous talks they looked at the Greenwood, the Denver Terminal (Option 1) and line upgrades between Leetsdale-Monaco, Monaco-Greenwood, is that Option 2 that is not being pursued?

Mr. Green: Some of the slides had little arrows and they replaced them with one big arrow. There were about a half dozen upgrades that were included in Alternative 2.

Mr. Corrigan: Alternative 1 has some minor facility replacements on that Number 2 path that will increase the ratings of those existing lines but no real work like Number 2 to replace the whole line.

Mr. Green: They can do minor upgrades like termination equipment but to get the project to really work like the Number 2, major upgrades are needed.

Mr. Gribb: Asked if they had the interconnection CPCN for Q1 next year is that coming in before, after or concurrent with 3206 filing.

Mr. Green: Stated before

Ms. Mirzayi: The 3206 is due in May

Mr. Pink: Asked if the CPCN is for their voltage control equipment going to be a package or a project by project – is this going to be multiple CPCNs.

Mr. Green: No, a single CPCN, which covers the whole fleet of voltage control. Normally they consider the voltage devices to be normal course. The decision that was made for CEP was for any additional transmission facilities they would file CPCNs.

b) Lamar Front Range (LFR) [Link to Presentation](#) Hubbard

Slide 2 – Background: Task Force was formed to improve system reliability and operational flexibility and to accommodate the addition on new resources up to 2000 MW. The instigator for the initial studies was to meet Colorado's renewable energy standards and meet SB07-100.

Slide 3 – Task Force Scope: What instigated the Lamar Front Range Task Force to restart was those studies were 7–8 years old; been a lot of new transmission additions and the study needed to be refreshed. Similar goals to facilitate new resources; improve reliability to the system in Eastern Colorado (Burlington to Lamar) and increase operational flexibility.

Slide 4 – Study Methodology: Cases benchmarked were a 2029 Heavy Summer Case and created a 2029 Heavy Spring Case. Looked at what they can inject on the system today as well as different transmission alternatives that were proposed by numerous stakeholders. Currently working on the report to summarize the results and provide cost estimates for the alternatives.

Slide 5 – Status Updates: All steady state analysis complete, transient stability studies show more detailed analysis required. In the Light Spring Case they

are injecting so much generation in Eastern Colorado that Colorado was turning into a net export. TOT3 was flowing in the opposite direction. They saw interesting transient stability results that indicate once transmission plans get better developed and know locations of resources that are developed in the future. If they start running into these scenarios where they can have an open generation scenario, it would definitely warrant further study and additional coordination once they know the inverter technologies out there. They also did injection sensitivities at the request of a stakeholder. Initial studies looked at injecting were in the Cheyenne Ridge/Burlington Area/Lamar; they split the injection to include Story and Badger Hills. They determined that the results were very similar. The transmission alternative showed similar results as long as there is a backbone system in the East the results did not vary too much. Completed on the preferred alternatives 3B and 7B and 4B and 7B.

Slide 6 – Diagram-Alternative 3B + 7B: A 345 kV path on Eastern Colorado connecting at Story, Pawnee, Missile Site and Badger Hills.

Slide 7 – Diagram-Alternative 4B + 7B: One variation was networking the gentie or not networking the gentie. The preferred alternatives that performed the best and allowed the most generation injection had the Lamar line at 345 kV, which was an interesting observation. Maybe the Lamar-Burlington at 230 made sense five (5) years ago but 345 makes sense for the future but no firm plans at this time just observations from the study.

Slide 8 - Next Steps: Currently working on draft report since September, goal to have a draft report by early 2020 and have a meeting to discuss the results and then eventually approve report in 2020. Task force groups typically have a one to two year lifespan; would like to keep it within that lifespan. Apologized for not having a study group meeting within the last couple of months but the report is underway.

ACTION ITEM: Complete draft report in early 2020 and schedule study group meeting to discuss results – Ryan Hubbard

- c) Midway-Poncha (MP) Todd Kuhn for BHPC

Todd Kuhn working on draft scope; will send it out once it is complete.

Mr. Brownrigg: Asked who will be the Chair.

Mr. Kuhn: Confirmed he will be the chair.

10) Stakeholder Input

- a) Status of Requests

None pending.

11) Liaison Action Plans

- a) Colorado Regulatory (CPUC, CDPHE, OCC) Gribb/Taipale/Neil

Mr. Gribb: The 3627 due February 1. They have a commissioner whose term is ending and have not heard anything officially moving forward on that.

Mr. Korth: The Air pollution control division has formed a climate change planning and policy team; as of Monday, it has been fully staffed. Clay Clark, formally of the Attorney General's office, is going to be the supervisor of that team. They will have a Communications Outreach Coordinator, Lauren McDonald who came from the Department of Health and Safety. They will also have a technical writer and inventory position, Tim Taylor, from the oil and gas group. Mentioned that he will be the Lead Technical Analyst. He was formerly with PSCo for the last eight (8) years doing air quality permitting and compliance work. Will be working very closely with the Energy Office, CDOT, DNR, the PUC and other agencies or departments as necessary to develop a statewide climate planning strategy going forward.

Out of the legislation this past April, a couple rulemakings are required. Undertaking a climate change rulemaking new regulation 2022; currently scheduled for May 2020. Planning to do a stakeholder outreach starting in January. The request for rulemaking will be submitted to the Air Control Commission end of February next year. Rulemaking is going to address reporting requirements that came out of the SB19-096 and planning strategies that were part of HB 19-1261. Touches utilities quite a bit and are working with the planning and air quality staff of the various utilities on how that rule will be drafted. Regional Haze State Implementation Plan there will be rule making late in 2020. The Ozone Non-Attainment they are expecting to get formally designated as serious non-attainment here before the end of the year there will be a rulemaking to address that towards the middle of next year.

Mr. Brownrigg: I assume you have ties into most of the local utilities' environmental programs.

Mr. Korth: Yes, that is correct.

Mr. Brownrigg: Planners do not account for most environmental things unless they come to us and let us know. From a CCPG perspective, curious if the stakeholder body has an interest with environmental stuff; is it applicable to other people's shops in transmission planning?

Mr. Korth: His perspective is that everybody recognizes the transition that this industry is going through right now and air quality regulations and economic factors are pushing towards a renewable set of resources, so the impact of regulations has an impact on both transmission and distribution system planning. To the extent that it is useful to your planning group, keeping up to date on what is going on at a high level from a regulatory standpoint may help you be informed for future scenarios.

Mr. Gearhart: May not apply to WAPA but had the same question Jeremy had where it comes back to them is the assumptions they have in their out year studies on resources and resource assumptions. Not a direct link to these to the transmission system so it is going be through the resources. They are already doing some mini what ifs on these.

Mr. Korth: He thinks the intersection of the rules next year, specifically the regional haze and greenhouse gas rules, you will see companies make and announce decisions on those future resources. That directly feeds back into your planning process as those commitments to future resources are made and codified in the regulations.

b) WECC Gearhart/Green/Rein

Mr. Baghsorkhi: The upcoming meeting is in Tucson, Arizona scheduled for January. The next one will not be in Salt Lake City but in Tucson hosted by TEP.

Mr. Hubbard: He saw an interested survey hosted by RAC, they are considering restructuring RAC by consolidating some of subcommittees and task forces.

Mr. Brownrigg: Mentioned that it was an improvement survey on effectiveness and usefulness of that group. In reading through the survey, it mentioned restructuring of organization. Asked Mr. Baghsorkhi if the Modeling Subcommittee was meeting in Tucson.

Mr. Baghsorkhi: All the RAC subcommittees will be meeting the third week of January. It was brought up at previous subcommittee meetings that some areas do not have in person participation or contribution so we need to participate more.

c) NERC - Transmission Related Standards Brownrigg

No updates.

Mr. Rombaugh: He saw CIP014 standard that there was a CCPG methodology that was created a while back. That was created for CIP014-1 but the standard is now CIP014-2 and has different wording. Asked if there is an updated version of that methodology?

Mr. Brownrigg: Stated that he was not aware of an updated version. He recalled that it was borrowed from PACE. They did not see an objection, as CCPG, to that particular methodology at that time. He is not aware of any effort to maintain that methodology within CCPG.

Mr. Gearhart: He believed each company adopted their own methodologies.

Mr. Gearhart: He was curious if that was out on the CCPG site. Should we obsolete it and remove it? Asked Mr. Rombaugh where he found it.

Mr. Rombaugh: He found it in their old internal files – it does not say CCPG in the header, but it was saved as CCPG CIP014-1 Risk Assessment Methodology Version 6 dated June 2015. Suggested that it was created somewhere else. They use that PACE methodology for their first assessment; they have not had an assessment since then but will have one coming up next year.

Mr. Hubbard: The labeling was correct. There was an effort by CCPG four (4) or five (5) years ago to review and help coordinate what methodology makes sense. Tri-State incorporated the PACE methodology into their documentation; no need to update CCPG.

Mr. Brownrigg: Does not believe it was on the WestConnect's site, it was just an email with an attachment. Does not believe it is anything formal. He offered to try to find it. If it is there, he will remove it since most companies have their own methodology.

ACTION ITEM: Check to see if CIP014 methodology is posted; if posted will remove it. – Jeremy Brownrigg

d) WestConnect Gearhart/Green

Mr. Green: They are wrapping up their 2018-2019 planning cycle; there were no regional needs identified. Next week they will be approving the regional plan report. Roy Gearhart was voted to be the new Planning Management Committee chair. They are looking for a new planning subcommittee chair as well.

As they start looking forward to the next cycle, CCPG gets involved in working with the Transmission Plan Project List (TPPL) and WestConnect will reach out to all CCPG members asking for updates on the spreadsheet of projects that they plan to put in service over the next 10 years and that will feed into the base transmission plan. The window has been extended through January.

Mr. Gearhart: Mentioned that Tom Green is vice chair.

e) RMOSG Al Sudani

No updates given; currently working on summer.

12) Other Items

Mr. Hubbard: Tri-State took on a new member in early September; they are operating under the FERC *Pro Forma* tariff now slowing converting all their interconnection customers in their queue to a serial cumulative process.

Mr. Green: Asked what the ruling on being FERC jurisdictional is.

Mr. Pink: Tri-State is FERC jurisdictional as of September 3 the date they added a non-utility member. Per the rules, they were not FERC jurisdictional because their US borrowers and made entirely up of small distribution cooperatives. As of

September 3 that is no longer the case; they are FERC jurisdictional. They made a filing to become FERC jurisdictional at the end of the July, which was rejected on technical grounds. The rate spreadsheet was not in editable format. Because of that, FERC had to reject the entire filing. They are working with FERC staff on the next filing, which will be forthcoming very soon. Because of their new member, they are not exempt from the Federal Power Act of 2003 (from being FERC regulated).

Mr. Green: Asked Shawn Carlson to speak what is happening at Basin.

Mr. Carlson: Tri-State is a member of Basin Electric and when they became FERC jurisdictional Basin also became FERC jurisdictional. They are working through the details of the FERC filings. Right now, they are under the assumption they are FERC jurisdictional.

Mr. Baghsorkhi: Asked if that would complicate the cost allocation process.

Mr. Pink: Per the FERC *Pro Forma* Large Generating Interconnection Process (LGIP), it is a first in, first served basis. The people higher in the queue can make modifications, drop out and whatever happens it trickles down and impact other projects. We previously had ways to ignore people in the queue but did not have mature projects, no PPAs, etc. Under FERC *Pro Forma*, it is first in, first served.

Mr. Baghsorkhi: His question is when FERC first adopted this rule did they not get feedback from all the utilities? This complicates things even further for everyone.

Mr. Pink: Agreed – when FERC first recommended when they had the stakeholder input that entities proposed methods to propose queue reform because it was not a good situation. He imagines that Tri-State will need to do the same thing but the process for queue reform is probably a multi-year process.

Mr. Brownrigg: From a Platte River perspective we have 10 projects in the queue; not on the level with Tri-State or PSCo.

Ms. Johnson: She has reached out to most companies here. She is getting together the transmission and service providers to talk about their wildfire mitigation plan and to learn what others entities in their footprint are doing for wildfire mitigation. They filed their plan as part of Phase 1 electric rate case, ended up with a partial settlement on that plan, and will be filing again with the PUC on August 1, 2020. The intent of the meeting is share what they are doing with you given they have some joint transmission, ownership and maintenance and learn what you are doing. First meeting will be utility only; this is not an open stakeholder meeting. As part of their settlement, they are required to hold multiple stakeholder meetings. This first meeting scheduled for January 10 will be an open forum and to discuss details of their plan.

Mr. Baghsorkhi: Asked if the PSCo queue reform meeting this afternoon is at Xcel or at Tri-State.

Mr. Corrigan: It is conference call.

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Mr. Gilden: Asked if anyone is applying breaker node studies or has a want or need to do that. Tri-State does; they have developed in-house already. Would like to start using it but no one else is using it.

13) Review Action Items**Mirzayi**

No.	Action Item	Owner	Status
1	Fix formatting issues on CCPG 2020 Organization Chart	New Committee Officers	NEW
2	Conceptual Planning Work Group: Comments requested on 2040 Model HS by 12/13/19	Everyone	NEW
3	Energy Storage Work Group: Kickoff for new work group in January 2020. Information will be sent out.	Gilbert Flores	NEW
4	Foothills Subcommittee: Schedule meeting First Quarter 2020.	Jeremy Brownrigg	NEW
5	DEEP Subcommittee: Report will be done in 2019; addendum considering additional changes on CSU system will be sent out in 2020.	Sirisha Tanneeru	NEW
6	WY/SD Common Use Subcommittee: Waiting to get their group started in 2020; no timeframe was given.	Trevor Rombough	NEW
7	Western Slope Subcommittee: No meeting scheduled; Chris Pink & Tom Green to discuss the Craig/Hayden retirements.	Chris Pink / Tom Green	NEW
8	Lamar Front Range Task Force: Complete draft report in early 2020 and schedule study group meeting to discuss results.	Ryan Hubbard	NEW
9	NERC – Transmission Related Standards Liaison Action Plans: Check to see if CIP014 methodology is posted; will remove if posted.	Jeremy Brownrigg	NEW

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No.	Action Item	Owner	Status
10	Northeast Colorado Subcommittee: Schedule meeting in January to finalize NECO Study Report.	James Nguyen	Carry Forward
11	TPL Studies Work Group: Complete the 2024 Heavy Summer Case by 12/16/19.	Jeremy Brownrigg	NEW
12	Add resource plan item to the CCPG Agenda going forward.	Jeremy Brownrigg	Carry Forward
13	Include GIAs in their project updates.	Everyone	Ongoing

Mr. Brownrigg thanked Betty for her service to CCPG the past couple years.

Mr. Gearhart officially thanked Betty and Jeremy for their service; they did a great job.

14) Adjourned at 11:37 a.m.

Next meeting:

- Thursday, February 20, 2020 (Annual Scoping/Planning Meeting) at Tri-State Generation & Transmission in the Hub Thompson Conference Center

15) Attendees

**Participated via webinar/phone only

Last Name	First Name	Company
Al sudani	Wisam	Western Area Power Administration
Albrecht	Sue	Tri-State Generation and Transmission
Anderson	William	Xcel Energy
Avanzi	Michael	Colorado Springs Utilities
Baghsorkhi	Sina	Black Hills Corporation
Albrecht	Sue	Tri-State Generation and Transmission, Inc.
Baghsorkhi	Sina	Juwi Solar
Berthelot**	Cliff	Colorado Springs Utilities
Breihan	David	Intermountain Rural Electric Association
Briggs**	Lindsay	
Brownrigg	Jeremy	Platte River Power Authority
Buck	Kurtis	Tri-State Generation and Transmission, Inc.

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Last Name	First Name	Company
Carlson**	Shawn	Basin Electric Power Cooperative
Cooper**	Tyler	Black Hills Corporation
Corrigan	Patrick	Xcel Energy
Fate	Dylan	Tri-State Generation and Transmission
Feinberg	Curt	Tri-State Generation and Transmission, Inc.
Flores	Gilbert	Xcel Energy Transmission Planning West
Foster**	Stephen	
Gearhart	Roy	Western Area Power Administration
Gilden	Chris	Tri-State Generation and Transmission
Green	Tom	Xcel Energy
Gribb	Adam	DORH PUC
Hanson**	Jeff	Colorado Springs Utilities
Hirning	Jim	Western Area Power Administration
Hogan	Jeanine	Tri-State Generation and Transmission
Hosie**	Bill	Shaw
Hubbard	Ryan	Tri-State Generation and Transmission, Inc.
Huslig**	Carl	Grid Reliability LLC
Israel**	Matt	Colorado Springs Utilities
Johnson	Sandra	Xcel Energy
Korth**	Josh	CDPHE
Kuhn	Todd	Black Hills Corporation
Kurnik**	Michael	Orion Renewables
Lindquist**	Kevin	Tri-State Generation and Transmission
Maxwell	Robert	United Power
Mirzayi	Betty	Xcel Energy
Parker	Jason	WAPA-RMR
Pink	Chris	Tri-State Generation and Transmission
Reasoner**	John	Tri-State Generation and Transmission, Inc.
Rein	Michael	Xcel Energy
Reinhold**	Charles	WestConnect
Rombough**	Trevor	Black Hills Corporation
Sickler	Cody	Tri-State Generation and Transmission
Slagle	James	Kiewit Power Engineering & Construction
Stoneham	Elizabeth	Tri-State Generation and Transmission
Stringer**	Brian	WAPA
Taylor**	Joe	Xcel Energy
Twardy	Matt	Xcel Energy
Weeks	Jared	United Power