

Rush Creek Task Force (CCPG)

December 1, 2016

1. Introduction

- ❖ See Attendance list
- ❖ Noted that invitations to join RCTF were sent to CCPG. These meetings will be open, but future invitations and materials will be sent to the RCTF contact list.
- ❖ Task Force Chair: Patrick Corrigan; Tom Green will co-chair

2. Overview

- ❖ The following was discussed from the PowerPoint:
 - Background of Rush Creek Project (slides)
 - Settlement Agreement Scope was reviewed
- ❖ PSCo noted that the RCTF would focus on technical transmission studies. Commercial issues may also be important, but the RCTF is not meant to address those issues. An example would be how costs of future interconnections will be handled. PSCo can direct those types of questions to the appropriate individuals.
- ❖ PSCo reiterated that PSCo will provide leadership and resources to conduct the studies
- ❖ Blane Taylor (Tri-State) commented that Tri-State could provide resources to help with the study effort.

3. Process Discussion:

- ❖ A report needs to be completed by Fall 2017 (September)
- ❖ The following schedule was discussed:
 - January 2017 deadline for scope
 - Studies completed by July 2017
 - Report by September 2017
- ❖ A RCTF web page will be established under the WestConnect CCPG page

4. Alternative Considerations

- ❖ Based on the Settlement Agreement, the RCTF will look at how to integrate the planned Rush Creek project with the planned transmission system.
- ❖ Q: Chris Neil (OCC) stated that he has a big problem with accepting the gen tie line as planned and not considering GI-2015-1, he will talk more to this as the presentation continues.
- ❖ PSCo Reviewed the Transmission System Map; note that:
 - ◆ Burlington - Wray has been completed and is in-service as of Q4 2016
 - ◆ Burlington - Lamar: CPCN has been granted and line is planned for 2020 ISD
- ❖ Q: Lisa Hickey (IEA): Is what's being shown a complete list of alternatives or is there a possibility of more? Response:
 - The maps are intended to capture the proposals that have been presented to date.
 - The intent of this exercise is to review the proposals, and discuss any additional proposals presented at this meeting.

- The goal is to narrow the proposals down to a reasonable number of alternatives for studies. By reviewing the proposals, we hope to eliminate any that may be redundant from an electrical perspective.
 - An alternative is an agreed plan for electrically integrating the planned project to the planned transmission system.
 - We may also agree to perform “sensitivities” which contemplate changes other than topology, such as generation dispatch or loading.
- ❖ Q: Jeremy Brownrigg (PRPA): Asked about the transmission configurations and ratings in the area. Responses:
- Lines from Missile Site to Limon 1-3 generation are radial single circuit, wood pole, build by developer
 - Line to Cedar Point is radial single circuit, wood pole, build by developer
 - Limon and Cedar Point lines were built to only accommodate the installed wind generation
 - Rush Creek line planned to be more robust
 - Big Sandy - Midway: 576 MVA
 - Big Sandy - Burlington: 274 MVA (conductor limited)
 - Burlington - Wray: Switch limited to just under 500 MVA (conductor higher)
 - Big Sandy - Last Change: 150 MVA
 - Other 115 kV lines do not have robust ratings
- ❖ Q/C: Mark Detsky (DD): does not see 14 alternatives as an unreasonable number of alternatives and does not want to combine any of them at this time. Response:
- Tom: let’s go through the proposals and discuss the potential for refinement.
 - Blane: also believes we’ll see common elements in the proposals that may reduce the number of proposals.

5. Alternative Discussion

- ❖ Review of alternatives that have been submitted. Drawings for each of the alternatives were presented and discussed one at a time.
- ❖ Key Decisions:
- All alternatives to be studied will be in addition to the proposed Rush Creek and Pawnee – Daniels projects. Alternatives will not contemplate replacing existing plans. (OCC does not agree.)
 - It is electrically the same to build a new sub south of Burlington and connect there vs connecting directly at Burlington, but it would likely cost more to build a new sub. Mark is ok with this but would like to see that captured in the analysis.
 - Some alternatives contemplated two connections. Group agreed to study both single and multiple interconnection points.
 - Big Sandy / Limon / Lincoln. Lincoln is a generating station. Limon is a radial load feed. Suggested connections at Lincoln or Limon would be better suited to Big Sandy bus.
 - Pawnee – Story: some proposals showed new 345 kV transmission between the two subs. There is a single 230 kV line between them now: Should not add additional transmission unless studies show a need.

- Siting: some alternatives may be problematic from a siting perspective (lines to Daniels Park, Boone, or Lamar), but the RCTF will evaluate some anyway, from a technical perspective. Also, may be possible to utilize Midway – Big Sandy corridor.

6. Process / Methodology Discussion

- ❖ Powerflow (steady state studies)
- ❖ Might perform some limited transient stability analysis
- ❖ Sensitivities may be run on a single case instead of on every alternative case
 - An example of this would be the retirement of Craig Unit 1
- ❖ 10-Year models will likely be used.
- ❖ Focus on peak loading, but may perform some light load sensitivities.
- ❖ Studies will evaluate impacts to CCPG (Area 70, 73) footprint.

7. Stakeholder Comments:

- ❖ Tom asked the attendees what they were hoping to gain from the RCTF and what was expected.
 - Mark: Would like to see a CPCN application from one or more partners that has a line that has an ISD that is in the ideal world aligns with development of resources and transmission plans for the state. Believes the existing project is only "half a loaf." Believes Rule 3627 should facilitate joint planning rather than radial lines. The system has seemed to stop growing in an interconnected fashion. We should be planning for the next 2-3 generations of resources. Wants a backbone system in place integrating the eastern plains. Get the wind generation to load to help the state and incorporate new developments (generation to load) in the area over the next 100 years. Take advantage that we are all here with a common purpose.
 - Lisa: Believes needs will change over the next 40 years and more generation will be needed. More loads and regulatory expansion.
 - Chris: Large amounts of generation to load at the least cost in a reliable manner. Another thought, if 1600 MW of wind is added on the Rush Creek line and the line is made into a network element, when the line is open end it may blow up the whole system. Radial line may be the best option.
 - Paul: Looking at Process is his priority - not advocating for new lines or wind. Wants to make sure that the coordinated transmission process stays intact and that other parties have a say in the process.
 - Tom/Blane: Want to develop a project that will achieve the three objectives; bring new generation to load that is economic and reliable.
- ❖ Chris: Has anti-trust law concerns and believes the group may be conspiring to fix costs at a higher level by not evaluating his lower cost alternative. Indicated that the PSCo plan to implement the Rush Creek Project is a higher cost option than other alternatives. Chris stated that connecting the Rush Creek generation to the Comanche – Daniels Park 345 kV line instead of at Missile Site would only cost \$9.2 million. Chris stated that parties convicted of anti-trust violations could face financial penalties and be 3x multiplier of the difference in costs.
 - Response: Tom's response – the scope of the RCTF is spelled out in the Settlement Agreement. There are no collusion or anti-trust issues.

- Blane mentioned the possibility of including an anti-trust overview paragraph at the beginning of all CCPG meetings along the lines of what is covered at the beginning of WestConnect meetings.
- Tom note: No studies were provided to supplement this opinion.

8. Next Steps

- ❖ Develop draft study scope (alternatives will be listed in the scope)
- ❖ Next meeting in January (2nd week) - January 10th at 1PM (rescheduled to January 24th)
- ❖ Set up RCTF web page
- ❖ Prepare Meeting Notes

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