Comments from Stakeholders
In Response to Stakeholder Meeting #1
Q&A

Comprehensive Review of Utility Transmission Plans

1. In addition to FERC Order 1000, CCPG, and current transmission plans (ERPs' and independents'), what other reports, studies, and references will the study rely on to provide a comprehensive review? What about the REDI 2009 study, which depicted the original SB07-100 zones? And the previous applications in the San Luis Valley?

   A: The Colorado utilities have publicly available information about their projects and transmission plans. These include FERC 890 presentations and reports required by Commission Rules 3627 and 3206. Study reports related to the Large Generator Interconnection Process (LGIP) established by FERC also provide insight into transmission issues and potential upgrades. The REDI 2009 study and the documentation related to the San Luis Valley both point to challenges related to increasing transmission capacity in Colorado.

2. In utility resource plans, did renewable capacity accreditation (Effective Load Carrying Capabilities) vary by region?

   A: The study team decided not to vary capacity accreditation across Colorado resource zones because the framework employed for capacity expansion modeling (RESOLVE) is not sufficiently dynamic to simultaneously represent location-specific capacity accreditation as well as a three-dimensional surface capturing changes in ELCC in response to state-wide penetrations of wind, solar and storage. However, the study in both RESOLVE and nodal dispatch modeling will capture differences in hourly generation shapes consistent with the zonal location of each existing, planned, and candidate resource.

3. Will the team also review WestConnect's bi-annual reports? And those of the Colorado Coordinated Planning Group (CCPG)?

A: Yes, the team has reviewed WestConnect and CCPG reports. The CCPG reports, specifically, will be revisited when evaluating potential transmission solutions.

Generation Expansion Plan

4. Why are resources and busbars limited to Colorado only? Why is the study not including resources across the region in its scope?

   A: The study team is unaware of clear State policy guidance regarding how out-of-state generation and associated imports will be accounted for and contribute to compliance related to state greenhouse gas emission goals. As a matter of priority and to align the study with CETA's transmission focus, the study targets the identification of unmet transmission needs within Colorado by primarily siting new resources in-state, as well as exploring the potential for economic transmission upgrades between Colorado and neighboring states to facilitate economic interchange. These two transmission drivers are prioritized ahead of transmission issues that might, for example, require CETA to explore deliverability issues entirely outside of Colorado. In sum, the study focuses on Colorado seams and in-state transmission needs.

Scenario Development

5. Why is the study limited to three scenarios in addition to the reference case?

   A: Due to statutory timelines and budgetary constraints to complete the study, the project team proposed three scenarios in addition to a reference case, which can also be viewed as a scenario.

6. Stakeholders proposed factors to consider for scenario development (electrification, resource siting preferences, distributed energy resources deployment, extreme weather resiliency, SPP RTO integration/western markets, new energy intensive industrial loads, high load growth). When will scenarios be discussed and how can stakeholders provide input?

   A: See Stakeholder Meeting #2 materials and stakeholder questions.

Study Methodology

7. Will the study address transmission congestion? Or firm use requirements (e.g. SPP transmission reservations) that present contractual or institutional constraints that lead to the less than efficient use of transmission assets (see the WECC Seams Steering Committee—Western Interconnection 2006 study)?

   A: The study will evaluate the potential for economically driven transmission upgrades through congestion and corresponding transmission benefit analysis. The study does consider that future resource additions will require firm use or transmission reservations, which motivated the study methodology.

8. Will the study investigate the AC-DC-AC interties from Colorado to the SPP market?

   A: The study Reference Case will not focus on expanding AC-DC-AC interties between Colorado and the SPP market as resource plans do not call for such expansion at this time. However, a proposed scenario is structured to evaluate improving import and export capacity, including AC-DC-AC tie expansion.

9. Increasing the capacity and throughput of the existing transmission system would be both cost-effective and most efficient from a land use perspective (use existing right-of-way). How will the study incorporate Advanced Transmission Technologies? Non-Wires Alternatives? (see 2023 Energy Institute Study and 2024 GridLab & Berkeley Working Paper)

   A: The study will consider the fact that green-field transmission is always challenging. As the study uncovers the magnitude of transmission that may be required for various scenarios, existing corridors may be evaluated for their potential for increased capacity and other transmission technologies will also be considered based on how those technologies are likely to perform. However, criterion set forth by NERC, including performance under contingency conditions, does not always allow for use of certain advanced transmission technologies or non-wires alternatives. The objective of the study is to evaluate transmission alternatives based on the need identified.

10. What is the methodology for identifying transmission solutions? Will stakeholders be engaged in identifying issues on the system and developing solutions?

A: Solutions will first be developed by the Consultant using typical transmission planning tools, such as reliability and economic planning software. In general, this is done by evaluating system performance under stressed conditions. In this study, the stress will be due to congestion and line loading resulting from the implementation of new resources combined with assumptions on resource dispatch and system loading conditions. System performance issues based on NERC and WECC standards and criteria will guide the development of transmission solutions. The Consultant will present proposed solutions at a future stakeholder meeting and invite discussion, feedback, and written comments.

11. How will the study consider grid enhancing technologies (see GETting Interconnected in PJM for a suggested methodology to incorporate GETs into power flow and capacity expansion modeling).

    A: See response to #9

Study Assumptions

12. Please explain the rationale for assuming market operations will not significantly impact state transmission needs. Seams inefficiencies could be significant for Colorado.

    A: Based on experience of the study team, running congestion and powerflow models under varying market paradigms does not typically impact underlying reliability- or economic-driven transmission needs. However, due to stakeholder interest the study team will propose and explore such a scenario.

13. EIA fuel price projections do not have a strong track record of accuracy. Why is the study not using higher fuel price assumptions?

    A: The EIA Annual Energy Outlook is an internally consistent, reputable, and industry standard source for fuel forecasts. In addition, EIA's retrospective analysis suggests that EIA AEO commonly overestimates fuel prices impacting the electric sector (*see* EIA 2022 Retrospective).

14. Will the study be employing a discount rate? If so, at what rate?

    A: When estimating the present value of future costs or benefits associated with transmission projects, the study team will use a discount rate in line with those used by Colorado utilities.

15. Will the study consider the 345kV Colorado Ute line from Ault, CO to Bonanza, UT - both the potential to reconductor and increase capacity as a potential transmission conduit to the West?

    A: The study will consider transmission solutions in response to identified unmet transmission needs and the technical/economic nature of those needs. The study will consider the present capacities of existing corridors as well as greenfield development.

16. What import/export limitations (or interstate constraints) will be assumed? If imports/exports are limited in the study, how does this help to identify an optimal transmission solution?

    A: When performing nodal production cost modeling, import and export constraints for Colorado will be based on the physical limitations (transfer capabilities) of the planned transmission system. The study is not positioned to develop an optimal transmission plan for the state and is focused on identifying unmet transmission needs, identifying viable solutions, and perform gap analyses.

17. How will the study model extreme conditions such as winter storms, wildfire, or heat waves?

    A: Such conditions are being proposed as a scenario.

Busbar Mapping

18. Will the study consider wildlife migration corridors and known private landowner opposition in its land use screens?

A: Wildlife corridors are considered. The study team is not planning to internalize any private landowner preferences into the study given the lack of broad data on this topic. However, the study team will seek stakeholder input on viable solutions.

19. Busbar mapping should account for constraints in urban areas such as zoning and permitting, noise, residential setbacks, fire codes and standards, and building codes and standards. Will these constraints be considered in the busbar mapping exercise?

    A: Zoning ordinances can be taken into account to the extent possible; however, ordinances often change within a 5-yr timeframe and as such are not plausible to predict for the longer-term time frame of the study. If high-enough resolution spatial data representing these constraints become available in a format that is compatible with the spatial modeling, then they can be considered for incorporation.