

Stakeholder Feedback Summary In Response to Meeting #2, 3.22.2024

Scenario Scopes

- Extreme event:
 - Polar vortex at night would most stress the transmission system.
 - The extreme weather scenario should study both a polar vortex and a heat dome event as they are two different events that could impact the system differently.
 - If this is not possible, a prolonged winter event may be the worst-case scenario. This scenario could utilize the increased demand from heating electrification in the High Demand Scenario. Generation assumptions should follow a similar methodology to SPP's 2025 ITP Resiliency Criteria.
 - Extreme load events should be tested as a proxy for winter storms and heat waves.
 - Work with Colorado transmission owners to identify corridors and lines with high forest fire and icing risk. Test transmission and/or generation outage events for these highest risk lines.

- High demand:
 - The study should consider including a high DER penetration model to the High Demand scenario - this scenario is highly likely by 2045 due to Colorado PUC's interest in promoting demand-side solutions and the state's 2040 EV adoption targets.
 - This scenario should use the National Renewable Energy Lab's high electrification scenario for Colorado from the [Cambium 2023 dataset](#) or an equivalent aggressive load forecast that aligns with the state's targets to decarbonize the entire economy.
 - The study team should work with the state Energy Office to identify new loads resulting from decarbonization pathways from the [GHG Pollution Reduction Roadmap 2.0](#).

- Regional integration:
 - The reliability and deliverability cases should explore both the import and export capabilities and benefits of better integration with neighboring states.
 - Modeling better interconnection to the Western Interconnect or with Southwest Power Pool would both be illuminating. If there are time and resource limitations, the Western Interconnect might be preferable as it provides access to a larger range of diverse intermittent resources and more export opportunities than that provided by SPP.

Assessing Commercial Interest

- The [LBNL Queued Up study](#) relies on data through the end of 2022. For more current data, the study should also see PSCo, Tri-State, and WAPA OATT pages for interconnection requests.
 - [PSCo_Generation_Interconnection_Requests.pdf](#) (rmao.com). Note that a “withdrawn” status does not imply no commercial interest.
 - Since developers have been told by the state’s utilities not to enter interconnection queues until offtake interest has been expressed, the study should also look at bids into utility RFPs. This will be the most up-to-date source of development interest. The project team could request aggregated data from the utilities to protect confidential information.
 - The Federal Aviation Administration (“FAA”) filings for met tower and turbine permits is another useful source of data for wind projects.

- Wind expansion on the Western Slope:
 - Tri-State has never received a request for wind interconnection on the Western Slope.
 - The level of wind mapped onto Rifle and Montrose is unrealistic - developable potential and capacity factors in these zones are unlikely to be high enough to justify the expansion buildout.
 - Re-siting the Western Slope wind to the Eastern plains loses the diversity of generation and will result in lower capacity accreditation. The study should consider regional integration whereby neighboring states might be able to provide wind generation with diversity benefits, at a lower total cost, with a more practical transmission solution.

Busbar Mapping

- How does Montara plan to handle the busbar mapping in locations where existing substation(s) are absent from the HIFLD 2020 database?

- Shouldn’t the busbar mapping process be aligned with the substations included in the 10-year (2035) study model?

- The substation database used for the busbar mapping process should include Planned substations expected to be in-service by 2035. If this data isn’t publicly available, or cannot be added to the database, does Montara/Energy Strategies plan to develop a methodology for translating the Busbar Mapping’s substation-level results into the WECC Seed Case’s (2034 HS) buses?

Parameters for Using Advanced Technologies

- Reconductoring - appropriate for ANY existing line where increased capacity is needed regardless of existing ampacity or system voltage.

- Benefits of advanced conductors - higher ampacity ratings increase reliability; allows for longer ruling spans and/or shorter, lower-grade rated structures; despite modest premium for advanced conductor material, overall savings in capital expenditures by using less structures.
- Advanced conductors should be considered as the primary solution for transmission expansion due to: greater conductivity, ability to use existing structures reducing the project's overall capital cost, ~40% lower line loss, and 50% increase in capacity that can be used for future, unanticipated needs.

Specific Transmission Lines

- The May Valley – Longhorn Extension should be included in the base case since it has been considered in several regulatory proceedings and its construction application remains in place for the 2024 Just Transition solicitation expected by Xcel Energy.