



WestTEC Study Plan: Public Comment

Study Plan: General Feedback

Please complete and send this document to Admin-WTEC@westernpowerpool.org to provide your comments and feedback on the WestTEC Study Plan by August 9, 2024

1. Does the Study Plan clearly describe the goals of the effort and the end result? Do you feel that it provides a solid foundation for a credible, high-confidence work product?
Yes, it is very clear, and it is relatively solid, for what it states will be considered. However, it may not be comprehensive or proactive enough as for instance no mention is made of planning for integration of aggregated distributed energy resources. I am particularly concerned with the lack of specific mention of ratepayer or consumer cost-benefits, including reducing outage times seen by vulnerable communities and critical infrastructure, and a societal discount rate for comprehensive life-cycle costing.
2. Does the Study Plan provide sufficient detail to understand the technical work that will occur over the next 2+ years?
Yes, it has some very good detail with the exceptions noted above.
3. What concerns do you have about the Study Plan or the effort in general?
My concern is that the cost-benefit methods applied may not be comprehensive enough, neglecting ratepayer and other societal cost-benefits in the analysis. It may also not be proactive enough in its approach to modernization as the Department of Energy and NARUC-NASEO have recommended.
4. Open Comment Opportunity
My concern with the cost-benefit methods presented specifically stems from citing the CETA Transmission Expansion Study 20-year plan presented on July 26th as an input for this work. That Study, as presented to date, concludes with a general under-valuation of planned and co-optimized integration of advanced transmission technologies (ATTs), including advanced carbon core conductors and grid enhancing technologies (GETs), with aggregated distributed energy resources (ADERS), such as microgrids and virtual power plants VPPs), as compared to other studies cited by both CETA Study commenters and the Department of Energy, or even the Colorado Microgrid Roadmap. [1]-[7]

I was particularly concerned with the treatment and discussion regarding DERs, which by that I mean aggregated DERs (ADERS) [3] like microgrids and

residential/C&I-owned solar and storage as opposed to simple demand response and utility-owned storage, as implied by the response during the CETA meeting in slide #10. This WestTEC Plan outline currently makes no mention of DERs or aggregated DERs, a keystone that should be a part of any long-term, holistic transmission and distribution plan. [2],[3], and [7] Simply put, while new, greenfield transmission is necessary in 20 years to support demand, it is not sufficient to support integration of ADERs and advanced NWAs [2] or the benefits they can confer to the ratepayers and society served, thus microgrids and ADERs (be they VPPs or whatever form) have a more significant net present value than zero [1]-[6], as implied on CETA meeting #4, slide #10 and during the discussions. Furthermore, they have a much bigger role to play in modernization of both transmission and distribution capacity and represent a far more reliable and resilient option as vulnerable communities and critical infrastructures can ride through extreme weather events like we experienced earlier this year here in Colorado. [2]-[4]

The good news here is that I think the CETA Study at least places a stake in the ground for a scenario that gives us a traditional transmission-centric, least-cost scenario, where a policy of co-optimizing NWAs like aggregated DERs, microgrids, or VPPs is not proactively pursued, thus opening the door for future studies, like the Colorado Microgrid Roadmap [4] and this WestTEC Plan, which I am confident will see the net benefit of a proactive policy regime that does include such an integrated and comprehensive long-term planning for co-optimization and modernization.

[1] Laws, Valuing distributed energy resources for non-wires alternatives, <https://doi.org/10.1016/j.epsr.2024.110521>

[2] The National Transmission Needs Study section V.d. Alternative Transmission Solutions, esp. pp91-95, <https://www.energy.gov/gdo/national-transmission-needs-study>

[3] NARUC-NASEO Distributed Energy Resource Integration and Compensation, esp. Aggregated Distributed Energy Resources in 2024: The Fundamentals. <https://www.naruc.org/core-sectors/energy-resources-and-the-environment/der-integration-compensation/>
<https://pubs.naruc.org/pub/89744C28-0070-B06C-20AC-ED118E49EF54>

[4] Colorado Energy Office, Colorado Microgrid Roadmap, Draft, <https://energyoffice.colorado.gov/microgrid-roadmap>

[5] Frick et al, Locational Value of Distributed Energy Resources,
<https://emp.lbl.gov/publications/locational-value-distributed-energy>

[6] DOE, The pathway to: Innovative Grid Deployment,
<https://liffenergy.gov/innovative-grid-deployment/>

[7] Office of Electricity - DOE, Integrated Distribution System Planning,
<https://www.energy.gov/oe/integrated-distribution-system-planning>

Study Plan: Comments

Please provide comments and feedback on the following sections of the WestTEC Study Plan by August 9th, 2024. Once completed, please email this document to Admin-WTEC@westernpowerpool.org.

5. Study Goals
6. Concept of “Actionable Transmission Plan”
7. Reference Case: Assumptions and Data Sources
8. Planning Assessment & Methodologies: Step 1: Area to Area
9. Planning Assessment & Methodologies: Step 2: Develop Resource Plan
10. Planning Assessment & Methodologies: Step 3: Busbar Mapping
11. Planning Assessment & Methodologies: Step 4: Hypothesis Map Development

12. Planning Assessment & Methodologies: Step 5: Powerflow Assessment
13. Planning Assessment & Methodologies: Step 6: Transmission Portfolio Refinement & Iteration
14. Planning Assessment & Methodologies: Step 7: Congestion Assessment
15. Planning Assessment & Methodologies: Step 8: Transmission Solutioning
16. Planning Assessment & Methodologies: Step 9: Value Proposition (Benefits & Costs)
17. Planning Assessment & Methodologies: Step 10: Synthesis of Transmission Portfolios
18. Scenario Planning and Sensitivities