

Comments on Western Transmission Expansion Coalition Study Plan

August 9, 2024

We commend the efforts by WestTEC during the past year on the progress made to date in addressing the critical issue of Western Interconnection wide transmission planning. We recognize the many challenges to address the various views and perspectives of the many regional partners that are participating in the effort. We appreciate the opportunity WestTEC is providing to comment on the draft WestTEC study plan.

In general, we believe the study plan is thorough, complete, and adequately defines the proposed interconnection wide study. Although addressed in the study plan, there are two areas we believe the study plan could be improved upon with additional emphasis or detail:

Hydrogen

The study plan could more clearly identify hydrogen as both a load and resource. As a load, hydrogen can be managed as an off-peak load, or produced from dedicated zero carbon (renewable or nuclear) resources. As a fuel, hydrogen can be stored for peak load, load following and rapid ramping generation. As a storage capable fuel, hydrogen also provides an opportunity to reduce the impacts (both demand and energy) of electrification in industrial applications. Hydrogen can provide efficiency and emission reduction benefits. Use of hydrogen as a fuel in transportation, and specifically heavy and long haul transportation, may be an essential part of improved efficiencies and reduction strategies and, therefore, an important, significant growing load to be served.

Regional Planning

Although the WestTEC study states that FERC order compliance regional plans are not part of this scope, the study relies on regional information, plans, and projections. As there is a mutual relationship between regional information and interregional plans and vice versa, we believe there is value in coordinating and synchronizing processes with the Western Planning Regions (WPRs) so there is consistency with efforts and outcomes. We also suggest the WestTEC plan consider identifying regional outcomes from the WestTEC efforts for WPRs consideration in their subsequent planning cycle.

Lastly, attached for WestTEC's consideration, are more specific and detailed comments or suggested edits that more explicitly address how hydrogen and regional planning can be thoroughly addressed in the study plan.

Thank you for considering our suggestions and recommendations as part of the WestTEC efforts to improve the proposed draft study plan.

Sincerely,

Ron Belval¹

Jeff Serfass²

Robert Kondziolka³

¹ Mr. Belval is familiar with the regional planning processes in the Western Interconnection and has participated in coordination among the Western Planning Regions, most recently as chair of the WestConnect Planning Management Committee from 2010 through 2015. He has a strong interest in commercialization of clean and efficient fuel cell and biomass gasification technologies. He served as chair of the United Biomass Energy Commercialization Board and was sponsored by DOE to present a sustainable renewable energy conversion technology proposal to energy ministers at an APEC conference in Australia. He also chaired the American Public Power Association sponsored Fuel Cell Commercialization Group effort to demonstrate a commercially viable project in the 1980s.

² Mr. Serfass has worked for the commercial expansion of hydrogen and fuel cells as a solution for energy and environmental issues in transportation and power for over 30 years including as founding President of the National Hydrogen Association for 12 years, former Executive Director of the California Hydrogen Business Council for 8 years., and Executive Director of two fuel cell commercialization organizations.

³ Mr. Kondziolka is an executive consultant to NERC and a Governing Body Member of the of the CAISO Western Energy Markets (WEM). He currently serves as Chair of the Governing Body. Prior to becoming an independent Governing Body Member in 2020, Mr. Kondziolka worked at Salt River Project where he held a wide variety of Power Delivery executive positions. Over the past 25 years he has been involved in efforts to achieve a more coordinated and unified Western Interconnection to improve reliability, resiliency, and economics.

Attachment

Comments on WestTEC Study Plan

Comment 1: Section 1, Introduction, “The Western Transmission Expansion Coalition (WestTEC) West-Wide Transmission Study (or “the Study”) is an industry-led effort that seeks to address long-term interregional and interstate transmission needs spanning the Western Interconnection”.

We believe that WestTEC does not intend to ignore potential regional needs and solutions in the Study Plan. However, the draft Study Plan states that it “is an industry-led effort that seeks to address long-term interregional and interstate transmission needs”, without reference to “regional” needs. First, “regions” must be clearly defined in order to address “interregional” transmission needs. In addition, there is a high likelihood that significant projects that do not cross regional boundaries will be identified in the WestTEC study. Therefore, we respectfully request that WestTEC consider including "regional" needs in the introduction as well as in other sections that address interregional needs, and solutions, throughout the Study Plan.

Comments 2: Footnote 1 states, “Regional partners refer to an individual or organization with an interest related to WestTEC. This term replaces the term “stakeholder” which has origins that may be offensive to community members”.

What are WestTEC’s requirements for “an individual” “with an interest related to WestTEC” to become a “regional partner”?

Comment 3: Page 2, Lines 22 – 25. “WestTEC is informational and voluntary and is not meant to replace existing transmission processes, such as local, regional, or interregional transmission planning required by orders of the Federal Energy Regulatory Commission (FERC), although it is hoped that WestTEC could complement those efforts.”

Specifically, how could WestTEC’s efforts complement existing transmission planning processes? Transmission Owners with Load Serving Obligations (TOLSOs) have been and will continue to develop 10-year transmission plans, most of which are required as well as reviewed and approved by their respective state regulatory bodies. For example, will WestTEC coordinate selection of WECC ADS seed cases, development of study assumptions and models, and analysis results for 10-year studies with the TOLSOs?

TOLSOs are required, by Order 1000 to join and participate in western transmission planning regions (WPRs) including CAISO, NortherGrid and WestConnect. Regional transmission planning and interregional coordination has evolved. As a result,

WestConnect has included a 20-year scenario in its current study plan along the same timeline as that for WestTEC. It is anticipated that insights gained through 20-year regional scenario planning will be reflected in subsequent local 10-year transmission plans. Also, there exists a possibility for inconsistent study results between these similar efforts. How may these potential inconsistencies be resolved? Will WestTEC coordinate development of its 20-year scenario(s) and evaluation of results with WestConnect and the other WPRs?

Will jurisdictional transmission provider revisions needed to satisfy Order 1920 ultimately be addressed in some manner in the WestTEC study? TOLSOs will be bound to follow their respective Order 1920 compliance filings once they are approved by FERC. Moreover, the TOLSOs will continue to be responsible for preparing and obtaining state regulatory approvals of their respective local 10-year transmission plans.

Comment 4: Hydrogen was referenced but perhaps additional information on hydrogen production, storage, transportation and utilization would be helpful.

The study itself anticipates uncertainties in the future. However, there are two items that are somewhat certain:

1. Transportation is likely to be electrified, either with batteries or hydrogen and fuel cells. Either is likely to cause significant impacts on the magnitude and timing of loads including transmission requirements. Transportation is a large energy market, and it is very uncertain which of the electric energy options will become most important. The cost of serving a large EV market will in part determine the cost of the electric fuel and the market acceptance of that option.
2. Emission reduction requirements in certain manufacturing industries like cement and steel will drive demand for electrification and, in some cases, hydrogen.

Hydrogen is an expanding energy option that can serve as a load if produced by grid resources and can also serve as a generating resource, particularly if produced from renewables. A couple of scenarios that examine the possibilities and their impacts would be advisable.

Resilience could be added to the study, for example, by exploring opportunities for hydrogen production taking advantage of solar, wind and nuclear available (e.g. off-peak or load shifting) capacity may increase as related technologies become more commercially viable. Hydrogen produced by the electrical industry sector may be leveraged to reduce emissions in the larger transportation and industrial sectors. Resilience could be defined as able to accommodate significantly different events or outcomes, particularly related to the impact of markets like transportation electrification (batteries and/or hydrogen) and industry emissions reduction but it can't predict these market outcomes.

Blending hydrogen with other fuels for intermediate term application may be of interest. Options include but are not limited to injecting hydrogen into gas pipelines in sufficient quantities that allow pipeline storage and use in existing gas fired electrical or industrial applications.