

Western Transmission Expansion Coalition
Western Power Pool
August 9, 2024

RE: PIO Letter to WestTEC on Transmission Planning

The undersigned Public Interest Groups (PIO) welcome the opportunity to comment on the Western Transmission Expansion Coalition's (WestTEC) proposed use of scenario planning for the development of an actionable transmission plan that can support the evolving energy system in the Western Interconnection. The use of well-designed resource scenarios will help anticipate and enable possible futures and ensure that transmission infrastructure can cost-effectively meet changing energy needs and challenges.

We are in agreement that WestTEC is on the right course in identifying key drivers that are likely to shape the future energy landscape, including increasing renewable energy penetration, electrification of transportation and other sectors, the retirement of fossil fuel-based generation and evolving demand patterns and load shapes.

The challenge is to take these key drivers and develop plausible scenarios for transmission planning. Each scenario should represent different combinations of energy resources, electrification rates and demand growth. We are confident that the WestTEC has availed itself of sophisticated modeling and analytical tools that can simulate the impact of each scenario on the transmission grid. These tools will enable stakeholders to better understand potential bottlenecks, congestion points and reliability risks.

We are encouraged that WestTEC intends to evaluate various transmission options, including new lines, upgrading existing infrastructure and the use of emerging technologies such as advanced conductors, electronic power flow control devices and storage as a transmission asset. It is important that WestTEC consider not only costs and technical feasibility but also the environmental impacts of transmission options.

Based on the scenario analysis and evaluation of transmission options we anticipate that WestTEC will be able to develop an actionable transmission plan that will be a roadmap for future transmission investments, prioritizing projects that can accommodate a wide range of future scenarios.

An important concept used by other transmission planners in the United States and elsewhere has been the identification of targeted energy zones. This approach to planning offers a promising framework for coordinating the development of new energy resources and transmission infrastructure, maximizing efficiency, minimizing land-use conflicts, and fostering economic growth.

Several states in the West have already embraced the concept of energy zones, albeit with varying approaches.

Wyoming, for instance, has identified and prioritized specific areas for renewable energy development based on resource availability, transmission infrastructure, and land-use considerations. While not officially designated as "energy zones," these targeted development

areas have fostered responsible renewable energy development while balancing economic, environmental, and social considerations.

Colorado has also employed a similar approach by identifying Solar Energy Zones and Renewable Energy Resource Areas with high potential for renewable energy generation. Additionally, Colorado actively engages with stakeholders to ensure that renewable energy development is done responsibly and benefits all Coloradans.

The state of Washington has focused on mapping potential areas for geothermal power development through its Department of Natural Resources and the Washington Geological Survey. Their efforts have led to the creation of a geothermal favorability map, identifying promising areas for geothermal energy exploration and development.

New Mexico has taken significant steps to link transmission development to areas with abundant wind energy potential. The state has identified and mapped high-potential wind energy zones and is actively planning and approving transmission projects to connect these zones to population centers and the broader electric grid. Additionally, New Mexico is collaborating with neighboring states and regional transmission organizations to coordinate transmission planning and ensure the efficient delivery of wind energy to a wider area.

These examples demonstrate the interest and growing momentum for using energy zones for the planning of transmission infrastructure.

Energy zones are geographic areas identified for their high-quality energy potential for solar, wind, geothermal and other energy sources. By identifying these zones, WestTEC can minimize environmental impacts while maximizing the benefits of new energy resources.

A clear advantage of identifying energy zones is the facilitation of coordinated planning among project developers and load serving entities. The thorough assessments of energy development potential in different regions will enable the identification of the most suitable areas for long-term development.

This assessment involves analyzing factors such as wind speed, solar irradiance, land availability, and environmental considerations. With this information, transmission infrastructure can be planned strategically to connect these energy zones to the grid. Such a coordinated approach ensures that transmission development aligns with energy generation. This coordinated approach to generation and transmission planning can lead to greater efficiencies and lower costs.

Furthermore, energy zones can promote streamlined development by expediting permitting and regulatory processes. The concentration of development within energy zones can create economies of scale, making projects more cost-effective due to shared infrastructure, and reduced permitting costs.

Land-use optimization is another benefit of energy zones. By encouraging the co-location of different energy technologies within the same zone, land use efficiency can be maximized, and the overall footprint of renewable energy projects can be minimized. Moreover, prioritizing the development of energy zones in areas with low environmental impact and minimal conflict with other land uses helps preserve the natural landscape.

The identification and development of energy zones also brings community benefits. The construction, operation, and maintenance of renewable energy projects create jobs and stimulate local economies. Revenue sharing or community benefit agreements can ensure that local communities directly benefit from energy development.

By adopting a scenario approach to transmission expansion that uses energy zones as an organizing tool, WestTEC can frame an actionable transmission plan that optimizes the benefits of new resources, creates a more reliable and resilient energy system and creates thriving state economies that benefit local communities.

Sincerely,

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