

FERC Technical Conference May 13, 2005
Promoting Regional Transmission Planning and Expansion to
Facilitate Fuel Diversity Including Expanded Uses of Coal-
fired Resources

9:50 a.m. Panel: The Current Initiatives for Regional Transmission Planning and Improving the Existing Efforts

Speaker: Bob Smith, Transmission Planning Manager, Arizona Public Service Company

This panel will discuss the current transmission planning efforts and public policy issues from a state and federal level, including how the current processes address the potential for coal power projects and the identification of obstacles to coal development. The focus will be on processes from the existing RTO/ISO standpoint and on the processes from regions without an existing RTO or ISO. Questions intended to be addressed include:

Q1: What is the current state of existing intra-state and inter-regional planning efforts?

Transmission providers and other interested stakeholders in the Southwest have formed two regional planning groups, the Southwest Transmission Expansion Plan (STEP) planning group, and the Southwest Area Transmission (SWAT) planning group. Both STEP and SWAT coordinate with the Seams Steering Group - Western Interconnection (SSG-WI) Planning Work Group which is the group that coordinates overall transmission planning throughout the Western Interconnection. APS has played a key role in all three of these transmission planning groups and is co-chair of STEP along with the CAISO.

STEP coordinates transmission planning in Western Arizona, Southern Nevada, and Southern California with the primary goal to develop transmission plans to increase the capability of Southern California to access the recently built gas-fired IPP generation built in Western Arizona near the Palo Verde Nuclear Generating Station. STEP has been successful in developing a four part transmission plan consisting of two transmission upgrades, a new 500kV line into Los Angeles, and two options for a new 500kV line into San Diego. The result of these plans will be to increase the transfer capability from Western Arizona into Southern California and Southern Nevada by nearly 3000 MW.

SWAT coordinates transmission planning in Arizona, New Mexico, Western Texas, Southern Colorado, and Southern Nevada. There are several technical sub-groups within SWAT that concentrate on transmission planning studies in sub-areas such as the Central Arizona Transmission Area (CATS). SWAT has been successful in developing a number of joint participation 500kV projects in the Central Arizona Area and one of these

projects is presently in the permitting process. APS alone has over \$1 billion committed to transmission infrastructure improvements within Arizona over the next ten years and the other Arizona transmission providers also have significant improvement plans. The Arizona transmission provider's ten-year plans are reviewed biennially by the Arizona Corporation Commission to determine the adequacy of the existing and planned transmission facilities to meet the present and future energy needs of Arizona in a reliable manner.

Q2: Which intra-state and inter-regional planning efforts are working the best and what are the best practices from these efforts?

The success of both STEP and SWAT is based on the open stakeholder process. Both planning groups have achieved best practice results as a forum for participation of all stakeholders in the development of study plans, obtaining feedback, and presenting results of state regulatory required studies such as the ten-year transmission plans and RMR studies required by the Arizona Corporation Commission and Arizona law. STEP has been successful in developing upgrade projects among the various owners to increase transfer capability from Western Arizona into Southern California. SWAT has been successful in providing coordinated transmission plans in response to local area load growth within Arizona.

Q3: What issues or factors are specific to each region that necessitate different planning requirements?

Historical development of the EHV transmission system in the Southwest was based on development of jointly owned transmission projects which would benefit multiple owners. The ownership of these projects is frequently divided between FERC jurisdictional transmission providers and non-jurisdictional public power transmission providers. This historical ownership and operational model is very different than the tariff driven RTO/ISO model and this has led to challenges in coordinating the planning of projects which have potential involvement of both transmission providers who are members of CAISO and those who are not.

Q4: What are overall economic challenges faced by regional planning bodies?

The greatest economic challenge is determining the entity with financial responsibility to build a transmission project that has been deemed by the regional planning body to be a viable economic project. The CAISO has some ability to direct the Participating Transmission Providers (PTOs) to build but there is no such authority within STEP or SWAT outside of CAISO. There are also a number of modeling challenges in the studies to determine the economic viability of projects including modeling hydro dispatch, gas price assumptions, transmission charges, and bilateral contracts.

Q5: What new initiatives to infrastructure expansion are being developed and what are the obstacles to these initiatives success?

The open stakeholder process has facilitated coordination of transmission needs and plans and several projects have resulted from this coordination. However, the process for planning, analyzing, negotiating cost responsibilities, permitting and building new transmission infrastructure takes years and transmission owners must make prudent decisions, otherwise cost recovery is not assured.

Q6: What are short-term and long-term goals for regional and inter-regional planning efforts?

The short-term goal is the development of functional regional planning groups and inter-regional coordination to provide coordinated system studies to determine economically viable projects and facilitate the voluntary joint development of these projects.

The long-term goal is to develop more structure to these groups and processes in order to continue the momentum and successes we are presently experiencing.

Q7: Can current regional planning efforts be refocused to identify opportunities for increased utilization of the current transmission infrastructure?

The existing groups (STEP and SWAT) are already looking at potential capacity upgrades of the existing system. These groups could also be used to examine institutional changes that could increase the utilization of the existing system. These changes would likely begin as initiatives by CAISO or WestConnect.

Q8: Should greater regulatory initiatives be considered in order to complement the current transmission and generation planning processes?

Regulatory initiatives that could provide greater accuracy and longer horizons for generation planning information would be beneficial to the transmission planning process.

Q9: Can generation planning be refocused to match resource to benefit greater use of the existing grid (e. g., through joint ventures)?

The open stakeholder planning process embraced by both STEP and SWAT allow for input from generation developers to be part of the transmission planning process. One coal developer is working with SWAT with plans for the development of coal-fired generation in the Four Corners Area.

Q10: Can regional planning be improved to better consider opportunities for connecting remote generation (wind or coal) to load centers?

Regional planning in the Western Interconnection is already considering opportunities for connecting remote generation (wind and coal) to load centers. SWAT is looking at transmission expansion required to facilitate several thousands of MW of wind generation in New Mexico with the assumption that most of the wind energy would sink

in Arizona and California. RMATS has developed conceptual transmission expansion plans to facilitate wind and coal energy development in Wyoming. SSG-WI has looked at these scenarios as well. State policy to help identify beneficiaries of such development and determine funding mechanisms for transmission projects and FERC initiatives for continuing the exploration of cost recovery mechanisms to make transmission investments more attractive could help this process.