

Southwest Transmission Expansion Plan (STEP)
(Arizona, Nevada, Mexico, and Southern California)

Purpose and Scope

STEP is a collaborative ad-hoc study group that has been created to meet the following goal:

To provide a forum where all interested parties are encouraged to participate in the planning, coordination, and implementation of a robust transmission system between the Arizona, Nevada, Mexico, and southern California areas that is capable of supporting a competitive, efficient, and seamless west-wide wholesale electricity market while meeting established reliability standards. The wide participation envisioned in this process is intended to result in a plan that meets a variety of needs and has a broad basis of support.

STEP is an ad-hoc voluntary organization whose membership is open to all interested stakeholders. The organization exists for the benefit of its members and the value that they derive in achieving the above goals. STEP has no staff and utilizes its members (stakeholders, project sponsors, transmission owners, regulatory agencies, and RTO/ISO's) to complete the required work. Generally, members that want specific studies conducted will be responsible for the completion of the work. STEP's focus is on economically driven expansion projects that support the development of seamless west-wide markets while satisfying established reliability standards. In evaluating the economic benefits of transmission projects, STEP will consider all potential aspects of economic benefits including the potential for mitigating market power. In addition, when requested, STEP will work with project sponsors to help assess the benefits (connecting generation, serving load, marketing power, etc.) of their independent transmission proposals.

Functions

STEP will contain the following planning functions:

1. STEP will develop a biennial planning process that produces a long-term bulk transmission expansion plan (10 years or more).
2. STEP will identify current and future transmission congestion that is an impediment to the efficient operation of the western market. In addition, the impacts on congestion of potential new generation facilities or new transmission projects will be considered. Generation currently developing in California, Mexico, Nevada and Arizona is expected to heavily congest the transmission facilities into those areas.

3. STEP will develop, through a collaborative process, strategic transmission options and specific alternative plans for reinforcing the transmission system and for reducing or eliminating congestion. This information will be provided to the marketplace. Specific projects that may be evaluated include:
 - a. Upgrading the series compensation in the existing 500 kV transmission lines between California and Arizona.
 - b. A new line between Imperial Valley and Rainbow
 - c. A second Palo Verde-Devers Line
 - d. A second Southwest Power Link (SWPL) line between Hassayampa and Imperial Valley and possibly on to Miguel.
 - e. Upgrading the Mead-Phoenix-Adelanto Project to DC.
 - f. A new line from the Eldorado Valley (Mead, Marketplace, Eldorado) to southern California (Lugo, Victorville, Adelanto).
 - g. A Palo Verde-Mead line
4. STEP will review project sponsor studies if requested by the project sponsor. The review may include:
 - a. Assessing the technical system impacts of the proposed project (transmission and non-transmission).
 - b. Assessing the projects cost and benefits
5. STEP will rely as much as possible on the technical studies conducted by project sponsors and studies conducted in other forums (primarily CATS, and the ISO Control Area Study).
6. The studies completed for STEP will:
 - a. Focus on regional needs.
 - b. Consider a variety of alternatives.
 - c. Consider the flexibility of alternatives.
 - d. Comply with established standards, guidelines, procedures and policies (primarily NERC and WECC).
 - e. Be made available to all STEP members following applicable data availability guidelines.
 - f. Utilize an economic methodology that has been adopted by STEP to evaluate the economic benefits of transmission system additions such as the one under development at the California ISO.
 - g. Consider viable non-transmission alternatives
7. STEP will perform technical study work that is not duplicative of work done by others. Technical studies done by STEP shall be identified in an approved study plan that will include items, such as:
 - a. Purpose and need

- b. Objectives
 - c. Development of base cases and other data
 - d. Methodology
 - e. Schedule
 - f. Assignment of study work
8. Members of STEP will share the study work. In general, members will study the areas where they have an interest. The results of the individual work will be shared with STEP and will normally be documented in a STEP report.
 9. STEP will provide a forum to facilitate stakeholder development of projects through the planning effort. It will be up to those participating in a project to determine the specifics of a project such as the scope of the project, lead entity or entities, project participants, and funding for a project.
 10. Once the long-range transmission expansion plan is developed, the focus of STEP will temporarily shift to facilitating the phased implementation of the plan. Implementation may involve a variety of short-term projects that will ultimately support the development of the long-term plan. The long-term plan will be periodically revised as desired by STEP.
 11. STEP will work closely with regulatory and governmental agencies (CEC, CPUC, ACC, etc.) in developing facility plans, in order to:
 - a. Gain their input and insights concerning energy policy and other issues.
 - b. Provide input to the various regulatory and governmental agencies primarily through the involvement of the regulatory and governmental personnel who participate in the STEP processes.
 - c. Enhance and streamline the permitting of these facilities and help reduce the amount of analysis required by siting agencies.
 12. STEP will closely coordinate with the following planning and coordination functions:
 - a. The west-wide expansion planning function that is being filled by the SSG-WI-PWG.
 - b. The planning functions and responsibilities of the individual RTOs. Specifically, this activity will take advantage of the work products produced in the annual grid expansion planning processes that are in place at the California ISO and in other entities (i.e., STEP could use base cases that are jointly developed by CATS and the California ISO).
 - c. The planning functions and responsibilities of coordination activities such as CATS and WATS.
 - d. The planning coordination function of the WECC.

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13. STEP will provide a forum for the discussion of different approaches for funding potential transmission projects.