

Meeting Agenda
Southwest Transmission Expansion Plan (STEP)

April 27, 2005

Sempra Energy Building, Main Auditorium

101 Ash St, San Diego, CA

9:00 a.m. to 3:00 p.m.

1. Welcome, introductions, meeting goals – Bob Smith and Armie Perez
2. Status on the implementation of the STEP Short-term Upgrades
 - Allocation and Contractual Issues – Bob Smith
 - North Gila Series Capacitor – Bob Smith
 - Palo Verde Devers Series Capacitors, Devers SVC, Devers 500/230 kV #2, and west of Devers improvements – Steve Mavis/Dana Cabbell
 - Imperial Valley Series Capacitor Upgrade and Imperial Valley Phase Shifting Transformer – Linda Brown
 - WECC Rating Studies – Kishore Patel
3. SWAT/STEP Colorado River Transmission (CRT) Group Status– Ken Bagley
4. EOR 9000 Project Update – James Hsu
5. Palo Verde-Devers #2 Project Update – Steve Mavis
6. Update on STEP sub group comparing options for a new 500 kV line into San Diego (Transmission Comparison Study) – Linda Brown
7. Imperial Valley Study Group (geothermal generation integration) – Juan Carlos Sandoval
8. Northern Lights Project – Bill Hosie
9. Five minute status reports on related studies and projects
 - Seams Steering Group – Western Interconnection (SSG-WI) – Jeff Miller
 - Southwest Area Transmission (SWAT) – Rob Kondziolka
 - Western Arizona Transmission Studies (WATS) – Brian Keel
10. Review action items and assignments
11. Next meeting – Proposed for **June 29th** in San Diego.

2005 STEP Goals

STEP's primary mission is to coordinate transmission expansion plans in the STEP area. In addition to its basic mission of coordination, STEP will strive to achieve the following goals:

First Quarter 2005

1. If determined to be necessary and cost-effective, seek the utility and ISO approvals necessary to proceed with the Arizona-Nevada Short-term Upgrades (Navajo-Crystal, Perkins-Mead, and Moenkopi-Eldorado).
2. COMPLETED -- If determined to be necessary and cost-effective, seek the utility and ISO approvals necessary to proceed with a new line from Arizona to California.

Second Quarter of 2005

3. Complete ordering of equipment necessary to complete the Arizona-California Short-term Upgrades.
4. Complete the economic, reliability, and preliminary routing assessments for the various options for a new line into San Diego.

Third Quarter of 2005

5. Reach agreement on the integration of the new line between Arizona and California with the underlying system that runs north and south along the Colorado River. (*Status: SWAT/STEP CRT needs to complete study first*)
6. Reach agreement on whether or not to proceed with a new line into San Diego, and if so, select the preferred option.
7. Develop study plan for long range STEP study (i.e., 10-20 years).

Fourth Quarter of 2005

8. If determined to be necessary and cost-effective, seek the utility and ISO approvals necessary to proceed with a new line into San Diego.
9. Begin development of the STEP long-range plan (10+ years) using the updated SSG-WI databases.

Current STEP Transmission Plan

Initially, 26 alternatives were considered in the STEP Screening Study. From these, six alternatives were selected for more detailed studies. Those studies led to the following plan for upgrades. Additional studies are underway to refine and further develop these projects.

Arizona-California Short-term Upgrades (EOR rating increased to 8050 MW)

1. Hassayampa-N. Gila-Imperial Valley Series Capacitor Upgrade (2200 A normal), Palo Verde-Devers Series Capacitor Upgrade (2700 A normal), and Devers 500/230 kV #2.
2. 400 MVAR SVC at Devers
3. West of Devers improvements as proposed by SCE in February of 2005
4. Add phase shifter at Imperial Valley.

Arizona-Nevada Short-term Upgrades (EOR rating increased to 9300 MW)

5. Navajo-Crystal Series Capacitor Upgrade, Moenkopi-Eldorado Series Capacitor Upgrade, and Perkins-Mead Series Capacitor Upgrade with the Perkins Phase Shifters bypassed.

New Line between Arizona and California (assumes completion of the short-term upgrades)

1. Rebuilding of the four 230 kV lines west of Devers.
2. New Harquahala-Devers 500 kV line
3. Potential connection of the Blythe #2 power plant to the Palo-Verde Devers 500 kV line
4. Potential addition of a new double circuit 230 kV line north out of Blythe to Parker Substation.

New Line into San Diego for Economic and Reliability Need (assumes completion of the short-term upgrades)

A specific project has not been developed to fill this need. The following options are a few of the many options currently under study:

- Option 1) New Valley-Rainbow 500 kV line.
- Option 2) New Talega-Escondido-Valley/Serrano Line with or without the Lake Elsinore Advanced Pumped Storage project
- Option 3) New Imperial Valley-Rainbow 500 kV line
- Option 4) New Imperial Valley-Ramona 500 kV line
- Option 5) New Imperial Valley-East of Escondido 500 kV line
- Option 6) New Imperial Valley-Miguel 500 kV line.

Option 7) New La Rosita-Tijuana 230 kV Double Circuit 230 kV line with 230 kV reinforcements as needed between Tijuana and Miguel and between La Rosita and Imperial Valley.