

Meeting Agenda - Revision 1
Southwest Transmission Expansion Plan (STEP)

May 27th, 2004

Sempra Energy Building, Main Auditorium

101 Ash St, San Diego, CA

10:00 a.m. to 3:00 p.m.

Call-in number: 877-670-4099 (Passcode: 925206)

1. Welcome, introductions, meeting goals – Bob Smith
2. Status of the sub-group to develop the initial upgrades (series capacitor upgrades and a second Devers 500/230 kV transformer) – Bob Smith
3. SWAT Colorado River Transmission (CRT) Group Status and Potential merger with STEP Sub-group to develop a new line from Arizona to California – Ken Bagley
4. Economic study sensitivity results – Mohamed Awad
 - Benefit of short-term upgrades (societal and participant benefits)
 - Benefit of Imperial Valley-San Diego Expansion Plan (ISEP)
 - Benefit of Lake Elsinore Advanced Pumped Storage Project (LEAPS)
 - Benefit of ISEP and LEAPS combined
 - Benefit of Palo Verde-Devers #2
 - Benefit of Navajo Transmission Project - Section 3
 - Benefit of James Hsu Option with and without WOR upgrades
 - Benefit of relieving Marketplace-Adelanto congestion
 - Benefit of relieving SCIT diagonal congestion
 - Benefit of relieving Jojoba-Kyrene congestion
 - Benefit of relieving El Centro Bank congestion
5. Reliability benefits from different options (ISEP and LEAPS) for a new line into San Diego – John Kyei
6. Proposed EOR 9000+ Project (formerly the James Hsu Project) – Brian Keel
7. Status on meeting STEP 2004 Goals – Jeff Miller
8. Five minute status reports on related studies and projects
 - Seams Steering Group – Western Interconnection (SSG-WI) – Jeff Miller
 - Status of the sub-group developing a new line into San Diego – Jeff Miller
 - Southwest Area Transmission (SWAT) – Rob Kondziolka
 - Western Arizona Transmission Studies (WATS) – Brian Keel
 - Palo Verde-Devers #2 Project – Steve Mavis
 - Los Angeles area generation additions – Steve Mavis

- Path 49 Upgrade Project Review Group – Kishore Patel
- US/Mexico border studies – Kishore Patel
- Imperial Valley-San Diego Expansion Project (ISEP) – Kishore Patel
- San Diego area generation additions – Kishore Patel

9. Review action items and assignments

10. Next meeting – Proposed for June 29th in San Diego.

Proposed 2004 STEP Goals

Note: The short-term upgrades referred to in these goals do not include upgrades to the Moenkopi-Eldorado and Navajo-Crystal series capacitors.

First Quarter 2004

1. Agree on the allocation of capacity for short-term upgrades (*Status: Completed April 8, 2004*).
2. Agree on the criteria for determining the voltage support requirements for the short-term upgrades and develop a technical study plan to determine requirements. (*Status: Completed April 8, 2004*)
3. Agree on the short-term west of Devers project (reactor or reconductoring)
4. Agree on the series capacitor ratings. (*Status: Completed April 27, 2004*)

Second Quarter of 2004

1. 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 CRT needs to complete study first*)
2. Complete the economic, reliability, and preliminary routing assessments for the various options for a new line into San Diego. (*Status: SDG&E to issue report soon*)
3. Invite voltage support equipment manufacturers to a STEP meeting to discuss available technologies, modeling in studies, and costs – (*Status: Completed April 8, 2004*)
4. Complete studies to determine voltage support requirements (*Status: On schedule to be completed this June*).
5. Agree on voltage support requirements for the STEP area (*Status: Will be the focus of the June STEP meeting*).
6. Gain all the utility and ISO approvals that are necessary to proceed with the short-term upgrades – (*Status: Scheduled for June 18th, 2004 ISO Board Meeting*)

Third Quarter of 2004

1. Order all equipment necessary to complete the short-term upgrades.
2. Reach agreement on whether or not to proceed with a new line into San Diego, and if so, select the preferred option.
3. Gain utility and ISO approvals necessary to proceed with a new line from Arizona to California.
4. Agree on transmission economic assessment methodology
5. Develop study plan for long range STEP study (i.e., 10-20 years).

Fourth Quarter of 2004

1. Gain Utility and ISO approvals necessary to proceed with a new line into San Diego.
2. Begin development of the STEP long-range plan (10+ years) using SSG-WI updated data bases

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 further refine and develop these projects.

San Diego Upgrades (EOR rating unchanged at 7550 MW)

1. Miguel 500/230 kV #2, Imperial Valley-Miguel 500 kV Series Capacitor Upgrade, and Miguel-Mission 230 kV #2

Short-term Upgrades (EOR rating increased to 8300 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. Small West of Devers Upgrade (install reactor in limiting line)
3. Navajo-Crystal and Moenkopi-Eldorado Series Capacitor Upgrade (may be implemented as a subsequent project rather than as part of the short-term upgrade)

New Line between Arizona and California (assumes completion of the short-term upgrades)(EOR rating increased to 9500 MW)

1. Rebuilding of the four 230 kV lines west of Devers.
2. New Harquahala-Devers 500 kV line
3. Connection of the Blythe #2 power plant to the Palo-Verde Devers 500 kV line
4. 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)

- 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.