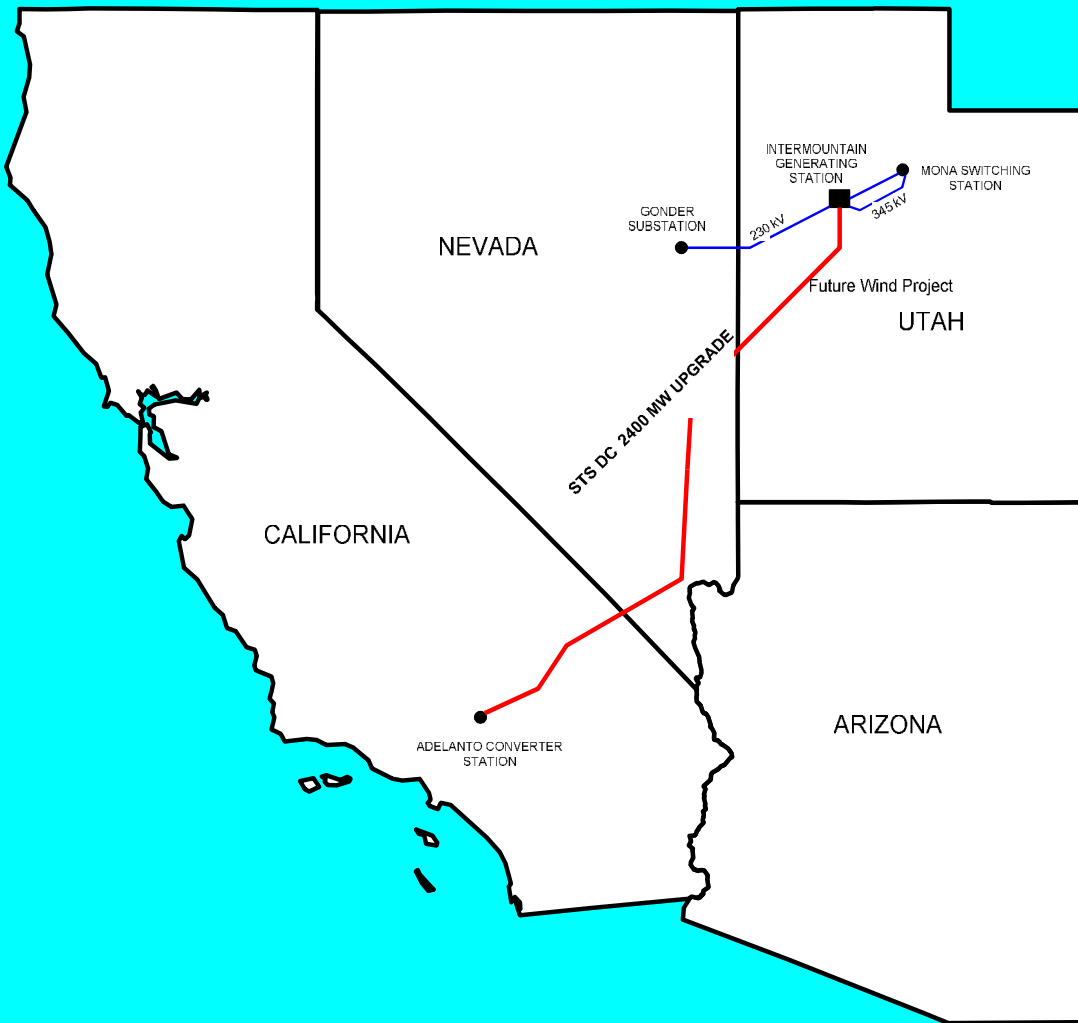


Intermountain Power Project Southern Transmission System Upgrade from 1920 MW to 2400 MW

Presentation to
Southwest Transmission Expansion Planning

November 17, 2006
San Diego, California

by
Tim Wu
Los Angeles Department of Water & Power



— Southern Transmission System
— Northern Transmission System

Background

- **500 kV HVDC bipole from Delta, Utah to Adelanto, California**
- **In service since 1986**
- **490 Miles**
- **1920 MW**
- **Major components (Valves, Transformers, Reactors, Filters, etc.) all designed for 2400 MW ratings**

Why Upgrade?

- Units 1 and 2 was upgraded
- More demand for transmission capacity from renewables from Utah to LA
- Original Equipment was designed for 2400 MW
- Timing is right!!

Rating Study Progress

- Comprehensive Progress Report to WECC on August 23, 2006
- Review comments from PacifiCorp, SCE, and SDG&E during the review period; APS requested to be in the Project Review Group
- WECC review period ended on October 27, 2006
- Achieved WECC Phase II on November 9, 2006

Study Results

- Path 27, the STS DC Line, can be upgraded from 1920 MW to 2400 MW and meet all NERC/WECC Planning Standards.
- For the known pre-existing system conditions when both Path 27 and Paths 78 (Pinto-4 Corners) or 79 (Siguard-Glen Canyon) are stressed simultaneously, the Upgrade of Path 27 does not aggravate the existing system conditions. Mitigations for the pre-existing conditions also mitigate the post-project conditions.
- For the known pre-existing system conditions when both Path 27 and Path 35 (Red Butte-Harry Allen) are stressed simultaneously, the Upgrade of Path 27 slightly improves the existing system conditions.

Phase II Studies

- More Simultaneous Studies from PRG beyond the known ones already performed in the CPR
- Sensitivity and/or Operating Studies from PRG on Projects in similar status and/or beyond in-service date

Milestones

- Presentation to STEP 07/2006
- Comprehensive Progress Report 08/23/2006
- Phase II 11/09/2006
- STEP presentation 11/17/2006
- Project Review Group meeting 12/12/2006
- Complete WECC Path Rating Studies 02/2007
- Start Construction 12/2007
- Complete Construction 03/2008
- Commission & Operation 04/2008