

“Putting Wind on the Wires” T&D Grid Initiatives and Technology to Support the Growth of Wind Power

Southern California Edison's
Tehachapi Renewable Transmission Project
(TRTP)

February 5, 2007

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CONFERENCE & EXHIBITION



TRTP Purpose and Need

- Purpose: to interconnect new renewable wind generation in excess of 700 MW and up to approximately 4,500 MW in the Tehachapi Wind Resource Area
- Needed to:
 - Comply with CPUC Resolution E-3969 Ordering Paragraph No. 2
 - Comply with state-mandated RPS program
 - Integrate potential renewable resources in a manner that minimizes potential environmental impacts and impacts to existing and planned residences, where feasible
 - Meet transmission reliability needs in the Antelope Valley
 - Increase South of Lugo transmission capability
 - Comply with NERC/WECC reliability criteria
 - Support the State of California Greenhouse Gas Reduction Program

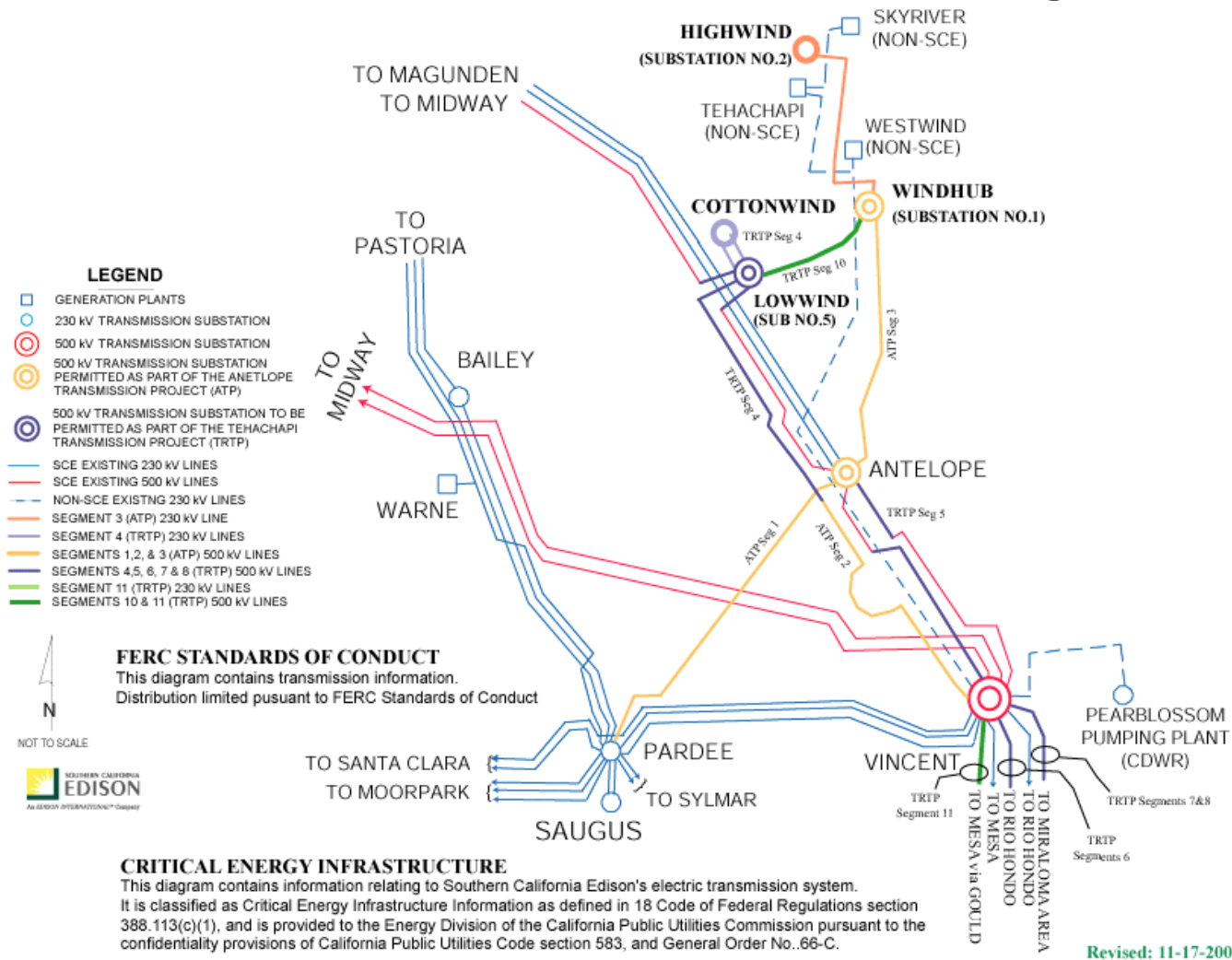
TRTP Objectives

- Construct project to reliably interconnect new wind generation resources in the TWRA, and enable SCE and other CA utilities to comply with the RPS in an expedited manner
- Comply with all applicable planning criteria required by NERC, WECC, and the CAISO
- Construct project in an orderly, rational, and cost-effective manner, by minimizing service interruptions, during construction
- Address reliability needs of the Antelope Valley
- Address South of Lugo transmission constraints
- Maximize use of existing transmission right-of-ways to minimize effects on previously undisturbed land and resources
- Minimize environmental impacts, through selection of routes, tower types and locations, while still meeting project objectives
- Select shortest feasible route that minimizes environmental impacts
- Meet project needs in a cost-effective and timely manner

TRTP by the Numbers

- Removal of existing transmission facilities in order to upgrade using existing right-of-way
 - Approximately 185 miles of 230 kV transmission line
 - Several 66 kV subtransmission lines
- Construction of new facilities
 - Three new 500/230 kV Substations
 - Eight 500/230 kV Transformer Banks
 - Two SVC (total 800 MVAR)
 - Several MSC
 - Two new 230 kV Substations
 - Approximately 45 miles of double circuit and 127 miles of single circuit 500 kV transmission lines
 - Approximately 18 miles double-circuit and 10 miles single circuit 230 kV transmission lines

TRTP North Of Vincent Upgrades



TRTP South Of Vincent Upgrades

NEW VINCENT-PARDEE NO.2 230 kV

LOOP EXISTING PARDEE-EAGLE ROCK 220 kV INTO (220 kV) AND OUT OF (500 kV) VINCENT SUBSTATION (Part of Segment 11)

