



Status of Transmission Projects: Southern California

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Director, Regional Transmission South

Board of Governors Meeting
General Session
July 20, 2009

Tehachapi Renewable Transmission Project was approved to connect wind generation.

Capacity: 4,500 MW

Potential new generation: 4,350 MW (wind)

Length: 333 miles of new 500kV and 230kV lines and substations

Location: Southern Kern and Los Angeles counties

Project segments: 11

Originally approved
project cost: \$1.8 billion

Figure 1-1: Tehachapi Renewable Transmission Project

(Courtesy of SCE)



Online	Seg	Description	Cumulative Capability*
2008	1	Antelope-Pardee 500 kV T/L and Antelope Expansion	300
2009	2	Antelope-Vincent No.1 500 kV T/L	700
2009	3	Antelope-Windhub 500 kV & WindHub-Highwind 220 kV	
2011	6	Antelope-Vincent No.2 500 kV T/L	
2011	4	Antelope-Whirlwind 500 kV and Whirlwind-Cottonwind 220 kV T/L Facilities	2,200
2011	9	Increase Operation to 500 kV/Transformer Banks/Substation Equipment/Static VAR Compensators	
2011	10	New Whirlwind-Windhub 500 kV T/L	
2011	6	New Replacement Vincent-Rio Hondo No.2 500 kV T/L	
2012	7	New Vincent-Mira Loma 500 kV T/L (portion between Angeles National Forest-Mesa area)	
2012	8	New Vincent-Mira Loma 500 kV T/L (portion between Mesa area-Mira Loma)	
2013	11	New Vincent-Mesa (via Gould) 500/220 kV T/L	4,500

*Capacity in MW delivery to Southern California

- Substation
- Segments 1-3
- Segments 4-11

Tehachapi Transmission Project is under construction and on schedule for commissioning.

- Purchase agreements - signed for 1,942 MW of new wind generation
- Permits: CPUC and U.S. Forest Service - segments 1-3 issued
- Construction:
 - Segments 1-3 scheduled to be completed Q4-09 (500 kV) and Q3-10 (230 kV)
 - Segments 4-11 scheduled to be completed 2011-2013
- Transmission delivery capability
 - Segments 1–3: 700 MW
 - All segments: 4,500 MW transmission delivery capability

Devers – Palo Verde No. 2 500 kV (DPV2) Project was approved as an economic project.

Capacity: 1,200 MW

Potential new generation: 6,110 MW (4,900 MW renewables)

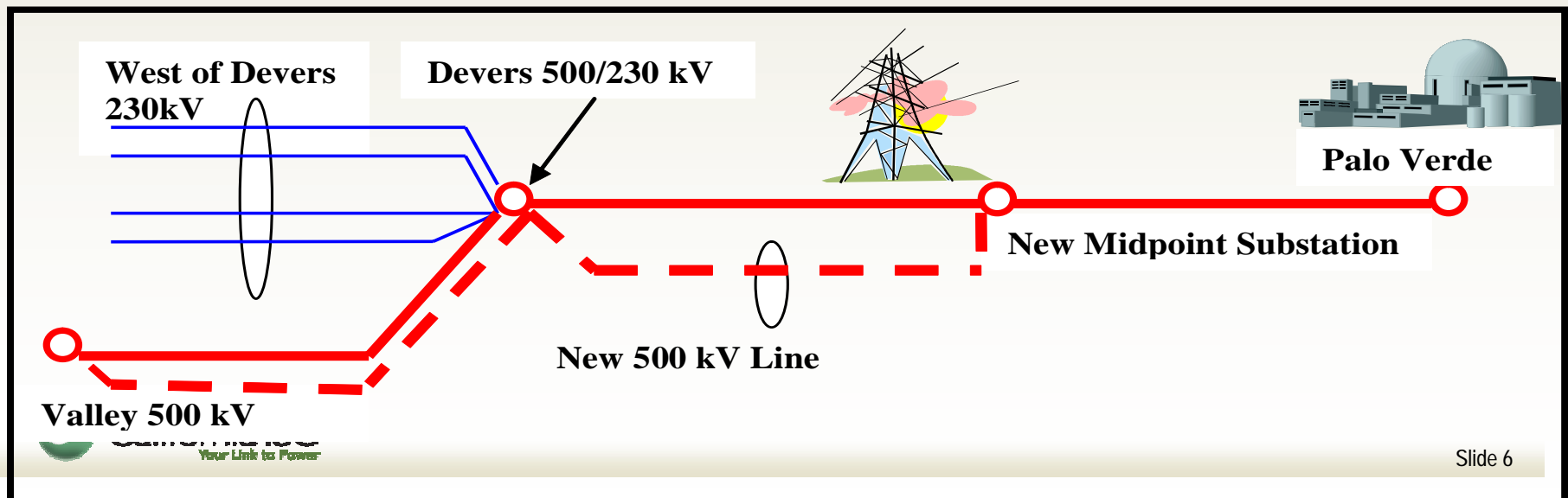
Length: 267 miles of new 500 KV line and substations (original project scope)

Location: western Arizona to southern California

Originally approved
project cost : \$680 million

SCE recently modified the DPV2 project to include California portion only.

- Permits:
 - CPUC construction permit – issued
 - Arizona Corporation Commission permit – not issued
- Modification: May 2009, SCE no longer pursuing Arizona portion
- ISO activity:
 - Sent letter to CPUC evaluating line as generation interconnection and setting milestones related to the interconnection queue
- Original commission date: end of 2012



Sunrise Powerlink Project was approved to meet reliability, economics and connecting renewables.

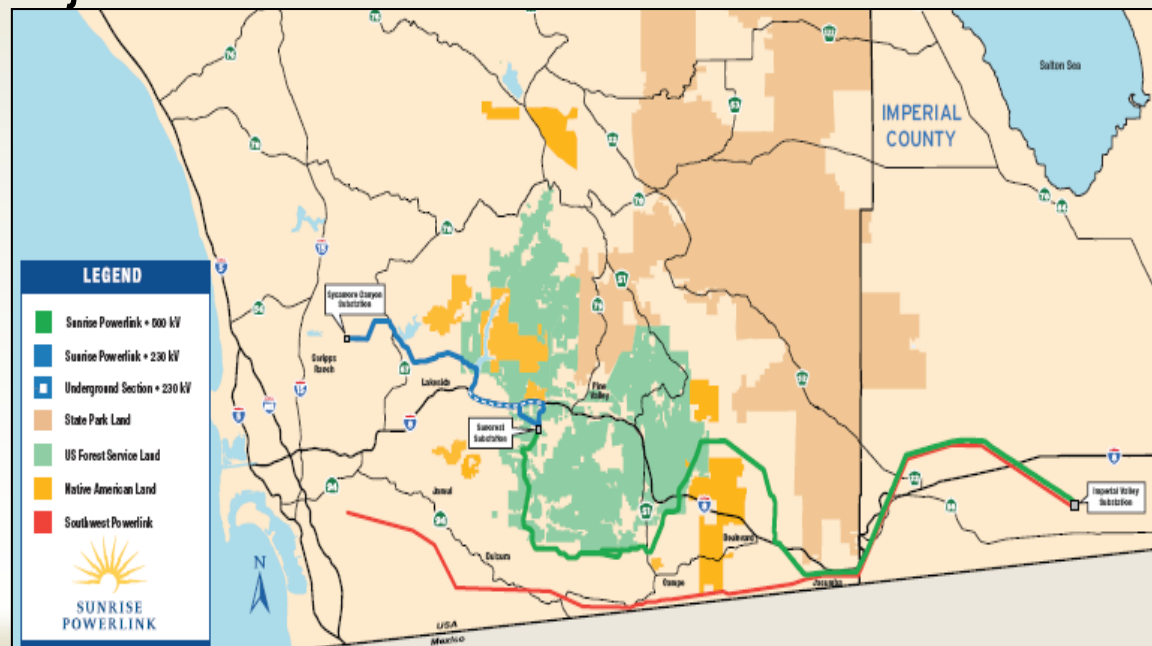
Capacity: Up to 1,900 MW

Potential new generation: 2,400 MW (renewables)

Length: 123 miles of new 500kV & 230kV lines & substations

Location: Imperial Valley to San Diego

Originally approved project cost : \$1.11 billion



Sunrise project is under way and on schedule.

- Permits:
 - CPUC and U.S. Bureau of Land Management permits issued
 - U.S. Forest Service – expected this summer
- Engineering: to be completed in October 2009
- Construction:
 - begins June 2010
 - big-horn sheep mitigation work planned to begin Q4-09
 - scheduled completion June 2012



Status of Transmission Projects: Northern California

Gary DeShazo
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Trans Bay Cable Project was approved by the Board in September 2005.

- Project cost— \$500M
- Unidirectional from Pittsburg
- +/- 200kV
- 400 MW
- 59 miles



Trans Bay Cable Project is under construction and on schedule.

- Project – City of Pittsburg as a PTO
- ISO Development
 - Operating procedures
 - Economic optimization models and settlement/invoice processes
 - Full Network Model and Market Model update (in DB42)
 - Operational training

Key milestone dates for the Trans Bay Cable Project.

- Converter (reactive power available) at Pittsburg - Sept, 2009
- Underwater cable installation begins – Sept, 2009
- Converter (reactive power available) at Potrero - Nov, 2009
- Real power available - Dec, 2009
- Commercial Date - Mar, 2010

Key milestone dates for the Trans Bay Cable Project.

Sep 09 Converter at Pittsburg (reactive power available)

Sep 09 Underwater cable installation begins

Nov 09 Converter at Potrero substation (reactive power available)

Dec 09 Real power available

Mar 10 Commercial operation