HVDC Conversion of Southwest Powerlink

May 4, 2016
Southern California Electric System
SDG&E’s Existing System

- Suncrest
- Miguel
- Otay Mesa
- OMEC
- Pio Pico
- TJI
- IIID
- Ocotillo
- PST (2x400 MVA)
- IV
- ROA

Lines:
- 500 kV
- 230 kV AC
- 500 kV AC

- 450 MVAR Sync Conds
- NG
- HAA
Proposed HVDC Conversion

- New 2000/3000 MW AC/DC converter station
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- Convert SWPL to multi-terminal multi-polar HVDC system
  Terminals at North Gila, IV, and Miguel
What does it do?

- Significant interregional benefits by solving the loop flow issue for multiple parties (APS, SDG&E, IID, and CENACE)

- Reduces GHG emissions & provides improved access to both in-state and out-of-state renewables to meet 50% RPS goal.

- Allows the development of more renewables in El Centro, California by controlling intertie between CAISO and IID

- Increases West of River (WOR) and East of River (EOR) path ratings

- Reduces Greater IV/San Diego and Western LA Basin local LCR requirements

- Increases San Diego import capability by 500-1000 MW or more by mitigating worst N-1-1 contingency (Sunrise & SWPL)