



June 2, 2011

James Avery, Chairman  
California Transmission Planning Group  
San Diego Gas and Electric

**2011 Study Request to the California Transmission Planning Group  
Supplemental Southwest Import Scenario Request**

Dear Mr. Avery:

The Vote Solar Initiative, on behalf of a diverse group of other interested parties, hereon referred to as the Group, would like to compliment the California Transmission Planning Group (CTPG) on the outstanding study efforts to date and exceptional consideration of stakeholder input. Your efforts in collaborating with stakeholders and addressing their concerns through study work are appreciated, and resulted in a well-received study report for 2010 despite the scope of the task and the diversity of stakeholder positions and opinions.

One of the most formidable challenges for CTPG's planning efforts was summarized in the Study Results section of the *Final 2010 CTPG California Statewide Transmission Plan*,

*"The challenge before the CTPG is to develop the proposed state-wide plan given considerable uncertainty about possible resource portfolios."*

This same renewable generation development uncertainty highlights the need to develop comprehensive "bookend" scenarios around the level of renewable energy imports. Results from these scenarios will help ensure there is sufficient lead time to permit, design and develop any required network upgrades so that California consumers can take good advantage of the significant amounts of high quality renewable resource potential that are available from outside the state.

Furthermore, considering the significant efforts to develop transmission projects terminating at or near major California import points combined with the extensive renewable resource development potential from adjacent and more distant States as identified in the Renewable Energy Transmission Initiative (RETI) 2b, we believe the supplemental Southwest Import Scenarios can provide additional significance to the Statewide California Transmission Plan.

Objectives and Benefits

The objective of the scenarios we are requesting is to determine how high levels of renewable energy imports delivered to Southern California from the east will impact the California transmission system. This study request, if accepted, will help facilitate and inform discussions among states about how to create regional markets for renewable energy.

Supplemental Southwest Import Scenario Request

The Group requests consideration for three specific study scenarios that test the impact of varying levels of injections at key import hubs. For each scenario, we would like to examine three typical system conditions: heavy summer, heavy autumn and heavy winter cases. If CTPG requires specific dates and times, we suggest using July 14<sup>th</sup> at 5:00 pm, September 14<sup>th</sup> at 5:00 pm and January 15, 2021 at 5:00 pm. Since we are still discussing the likely mix of renewable resources that would be imported in each scenario, for the time being we suggest assuming full injection output (assuming a conservative 20% capacity factor) during all requested study scenarios, and that those injections displace fossil-fired generating inside California based on (economic) merit order dispatch. We have not had time to discuss how the injections should be split among technology types (wind, geothermal, solar PV, solar thermal, solar

thermal with storage), but will work with CTPG to fill in this data over the next couple of weeks. As with West of River Stress Scenario from 2010, we propose a 40% southwest import level as the basis for Scenarios 1 and 2.

Study Request Scenario #1- Southwest Simultaneous Import at Major California Southwest Import Points

- 33.3% of Southwest Out-of-State Imports injected at North Gila 500 kV
- 33.3% of Southwest Out-of-State Imports injected at El Dorado 500 kV
- 33.3% of Southwest Out-of-State Imports injected at Palo Verde 500 kV

Study Request Scenario #2- Southwest Non-Simultaneous Import at Major California Southwest Import Points

Three specific separate study cases:

- Study Case 1 - 100% of Southwest Out-of-State Imports injected at North Gila 500 kV
- Study Case 2 - 100% of Southwest Out-of-State Imports injected at Palo Verde 500 kV
- Study Case 3 - 100% of Southwest Out-of-State Imports injected at El Dorado 500 kV

Study Request Scenario #3- Full California RES Southwest Simultaneous Import at Major California Southwest Import Points

- 33.3% of Full California RES injected at North Gila 500 kV
- 33.3% of Full California RES injected at El Dorado 500 kV
- 33.3% Full California RES injected at Palo Verde 500 kV
- Evaluate *Sonoran-Mojave Renewables Transmission Project*<sup>1</sup> network recommendations if transmission reliability or congestion issues are identified

Per my conversation with CTPG committee members, the Group will work diligently with CTPG to provide any additional detail on the scenarios and provide any additional information CTPG requires. We look forward to collaborating with the CTPG on this analysis.

Sincerely,



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<sup>1</sup> <http://www.wapa.gov/recovery/planning.htm>