

California Transmission Planning Group (CTPG)
Technical Study Team Response to
June 21, 2011, Comments of the Vote Solar Initiative (the “Group”) on the
CTPG’s Proposed 2011 Work Plan

Comment:

The Vote Solar Initiative, on behalf of a diverse group of interested parties¹, hereinafter referred to as “the Group”, appreciates the opportunity to discuss the Group’s submittal regarding southwest Import Scenarios and respectfully submits this Supplemental Information Letter. The objective of this letter is to provide current information regarding the development of renewable resources in the Southwest that will provide sufficient evidence to support an additional West-of-River (“WOR”) study scenario to the one currently being developed by the California Transmission Planning Group (“CTPG”).

Specifically, the Group is interested in the following WOR scenarios:

1. Study Scenario # 1 (WOR - Heavy El Dorado Injection) – 2011 WOR study scenario with the 2010 assumptions (using a 40-percent Southwest import assumption) with the following injection allocations: 50-percent at El Dorado, 37-percent at Palo Verde and 13-percent at North Gila under heavy autumn conditions;
2. Study Scenario # 2 (WOR – Heavy Palo Verde Injection) – 2011 WOR sensitivity study scenario (using a 40-percent Southwest import assumption) with the following injection allocations: 50-percent at Palo Verde, 37-percent at El Dorado and 13-percent at North Gila under heavy autumn conditions.

The Group supports both scenarios incorporating the Once-Through-Cooling (OTC) criteria proposed by the CTPG.

The Group focuses its comments in this Supplemental Information Letter on increasing the injections at the Palo Verde hub (proposed Study Scenario #2) since the 2010 analysis, and the CTPG follow-on analysis for 2011 incorporating OTC retirements (Study Scenario #1), already examines a higher import scenario via the El Dorado hub. The Group believes there is great uncertainty as to which injection point will deliver greater amounts of renewable energy to meet California’s 33-percent Renewable Portfolio Standard (RPS) and therefore recommends the CTPG evaluate the impacts of both scenarios.

Through this Supplemental Information Letter, the Group will provide information that may not have been available for the 2010 WOR analysis. The supporting evidence this letter provides is divided into three categories: transmission planning activity, interconnection request activity, and stakeholder support.

¹ Parties include The Vote Solar Initiative, Nye County, BEC Environmental Inc., SolarExpress, Solar Millennium, Nevada Office of State Energy, and the Nevada Institute for Renewable Energy Commercialization.

Transmission-Planning Activity

Transmission-planning activity is an indicator of renewable development potential in a particular area. Four key transmission planning activities have recently completed or are underway in Arizona to enhance the existing transmission system and expand deliverability to California. The four transmission planning activities including brief summaries are:

1. *Arizona Top Three Renewable Transmission Projects*² – In this report, each AZ utility identified the top three renewable development projects in Arizona. While not implicitly aimed at export of renewable resources, the transmission projects when examined from a system perspective could greatly increase the capacity to the Palo Verde hub.
2. *Western Area Power Administration (WAPA) Sonoran-Mojave Renewables Transmission (SMRT) Project Study and Planning Work* - Study participants include Arizona Public Service, Salt River Project, Wellton-Mohawk Irrigation and Drainage District, Imperial Irrigation District, Western Area Power Administration, Starwood, TransElect, and Citizens Energy. The study goal was to determine system impacts associated with constructing new and upgraded transmission lines which would interconnect load centers (in California) with new renewable generation in the Mojave and Sonoran Deserts. A major study objective was to determine maximum injection capability for renewable energy resources onto the SMRT transmission system as a whole.
3. *Merchant Project Development* – Three specific merchant projects, SunZia, High Plains Express, and Southline, could substantially increase the renewable exports from Wyoming and New Mexico to Arizona and potentially utilize the Top Three Renewable Projects capacity to the Palo Verde hub. The total estimated transfer capacity if these three projects were completed is estimated at 6,000 MW.
4. *Arizona Biennial Transmission Assessment (BTA) Mandated Renewable Export Analysis* – From Arizona Corporation Commission’s (ACC) 6th Biennial Transmission Assessment (“BTA”) Signed Order: “The Commission is mindful of the interest in Arizona’s abundant supply of renewable energy, and the potential for these energy resources to be tapped by surrounding states to meet their RPS obligations. The Group would like the utilities to jointly conduct or procure a study, as well as a stakeholder workshop, to identify the barriers to and solutions for enhancing Arizona’s ability to export renewable energy, including identifying specific transmission corridors that should be built out in order to accomplish this objective. The study and results of the workshop should be filed at the Commission no later than November 1, 2011, and shall be included as part of the 2012 BTA.”

In addition to the Transmission-Planning Activities listed above, the ACC 6th BTA included two separate plans for constructing the Arizona portion of the Palo Verde – Devers II 500-kV

² ACC 6th Biennial Transmission Assessment Staff Report, approved December 2010

transmission line (“PVD2”). Southern California Edison (“SCE”) was one of the entities which resubmitted a portion of the PVD2 which would indicate that SCE continues to see Palo Verde as a significant energy import point. This line has been planned for the sole purpose of delivering energy to California from the Palo Verde Hub area and would increase the import capacity by up to 3,000 MW.

Each of these major transmission planning activities is focused on encouraging the developments of renewable resources with the direct or implied directive of enhancing renewable energy export. Additionally, the Group hopes it is recognized that the SMRT transmission project would allow for transfer of the power along the Colorado River to all the three major import points, thus increasing flexibility in injection point balancing. The Group is not requesting specific consideration of any of the described planning projects or components; rather the Group has identified these activities as direct indicators of substantial transmission planning activities aimed at exporting, or having the potential to export, substantial amounts of renewable resources to California.

Interconnection Request Activity

Interconnection request activity is likely the key indicator in determining the potential generation development in a given area. Coupled with the significant transmission planning activities the Group feels it would be fair to consider all or more significant portion of the generation from New Mexico, Wyoming and Arizona for injection at the Palo Verde and North Gila injection points. The table below summarizes the interconnection queue activity since July 15, 2010 - December 1, 2010 and December 1, 2010 - present in APS, ANPP, WAPA, and California ISO interconnection queues for projects that are located within New Mexico, Wyoming and Arizona.

Entity	Dec 1, 2010-Present Interconnection Requests (MW)	July 15, 2010-Dec 1, 2010 Interconnection Requests (MW)
Arizona Public Service	3,257	104
Arizona Nuclear Power Project Switchyard ³	1,000	150
Western Area Lower Colorado	300	360
CAISO	6,650	2,488
Total	11,207	3,102

Table 1 - Summary of interconnection Request Activity by State/Potential Injection Point

The table above shows a 300-percent increase in interconnection request (MW) from December 1, 2010 until present when compared to the proceeding six months with more than 14,000 MW of new interconnection requests during the one year snapshot. When taken with the significant transmission planning activity that would support a significant portion of the interconnection queue, the Group feels this provides a strong argument for a second WOR scenario and supports increased export through Palo Verde.

³ Arizona Nuclear Power Project (ANPP) switchyard shall mean those facilities constructed and owned by the ANPP Joint Participants, specifically those in the Palo Verde hub area including Palo Verde, Hassayampa and Harquahala.

Stakeholder Support

Stakeholder support is an indicator of renewable development potential in a particular area. In addition to the support for WOR scenarios formally expressed by the members of the Group, the Group understands the CTPG received multiple requests for additional or continued WOR study scenarios which demonstrate important stakeholder support. The Group will demonstrate additional stakeholder support for both the High El Dorado and High Palo Verde WOR study scenarios through forthcoming letter(s) of support from other stakeholders.

The Group feels this Supplemental Information Letter provides new and compelling evidence to support both the CTPG WOR - High El Dorado Injection scenario (Scenario #1) and an additional WOR- High Palo Verde Injection scenario (Scenario #2) through demonstration of recent transmission planning activities, increased renewable resource interconnection request activity, and substantial stakeholder interest. The Group respectfully requests that both WOR scenario studies described in this Supplemental Information Letter be included in the 2011 CTPG Study Plan.

CTPG Technical Study Team Response:

The CTPG Technical Study Team appreciates the additional information provided by the Group. The CTPG assumes that the Group's instant request that the CTPG include "Study Scenario #1" and "Study Scenario #2" in the CTPG's 2011 study plan, supersedes the scenarios referenced in the Group's June 2, 2011, comments.

The Group states that "interconnection request activity is likely the key indicator in determining the potential generation development in a given area." The CTPG Technical Study Team believes interconnection request activity is one indicator of generation development, but that it is not necessarily the "key" indicator. A better indicator of which proposed generation projects will get built is the presence of both a signed Power Purchase Agreement (PPA) and a formal interconnection request. Progress in obtaining the necessary regulatory approvals and environmental permits to construct the proposed generation project are also important indicators of eventual success. In this regard, it would be helpful if the Group could provide the CTPG with additional information concerning the proposed renewable generation projects that are included in Table 1 for the "Arizona Public Service," "Arizona Nuclear Power Project Switchyard" and "Western Area Lower Colorado" entities.

Specifically, it would be helpful to know the size and technology of the individual generators that have submitted interconnection requests, as well as the specific bus or transmission line to which these generators are proposing to connect. Information indicating the presence of a signed Power Purchase Agreement and progress in securing the necessary regulatory approvals and environmental permits would also be useful.

Locational information is also potentially important to the CTPG since these generator interconnections could have impacts on CTPG's study footprint. It would likely be important to other regional planning groups as well since potential grid impacts could occur outside the CTPG study footprint. In particular, the CTPG encourages the Group to consult with the Southwest Area Transmission (SWAT) group, and potentially the Colorado Coordinated Planning Group (CCPG) and Northern Tier Transmission Group (NTTG), since these regional planning groups' study footprints could be affected by the renewable resource additions referenced by the Group.

Because the specific interconnection locations determine how power flows throughout the entire WECC network, locational detail allows for a more realistic determination of (i) the extent to which the existing grid is capable of accommodating renewable resource additions without reliability criteria violations, and (ii) the transmission infrastructure additions that would mitigate reliability criteria violations that arise when the capability of the existing grid has been exhausted by renewable resource additions.