

## DOCKETED

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*Comment Received From: Alan Comnes*

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**SunPower Corporation Comments on the August 15, 2016 RETI 2.0 Joint Agency Workshop**

Please see the attached document.

*Additional submitted attachment is included below.*



*Submitted online*

August 29, 2016

California Energy Commission  
Dockets Office, MS-4  
1516 Ninth Street  
Sacramento, CA 95814-5512

Docket No. 15-RETI-02

**Subject: Comments on the August 15, 2016 RETI 2.0 Joint Agency Workshop**

SunPower Corporation (“SunPower”) appreciates the opportunity to provide written comments in response to the discussion that took place during the August 15, 2016 RETI 2.0 Joint Agency Workshop.<sup>1</sup>

SunPower is a member of the Large Scale Solar Association (“LSA”) which also filed comments today in this docket. SunPower supports LSA’s comments and provides these additional comments.

The RETI 2.0 process for evaluating Transmission Assessment Focus Areas (TAFAs) provides a unique opportunity to study upgrades necessary to support renewable development at levels that may not otherwise be studied in CAISO’s or Transmission Planning Process (“TPP”) or the equivalent planning process of non-CAISO-member California utilities. As SunPower understands it, CAISO will study specific renewable portfolios that are fully deliverable at 2020 33% Renewables Portfolio Standard mandate. CAISO is also conducting a 50% RPS Special Study but that study will not determine upgrades necessary to provide all procured projects with full capacity (FC) status. Instead the 50% RPS Special Study is expected provide additional detailed information about the potential for congestion in areas where renewables are developed to support 50% RPS but where transmission is insufficient to support FC status. The upcoming RETI 2.0 report prepared by the Transmission Technical Input Group (TTIG) can play a valuable role in showing what upgrades are necessary to provide valuable benefits including congestion relief, the promotion of competition, and resource adequacy capacity.

As reflected in updates posted by TTIG during July and August, the TTIG is making steps at filling this information gap but have fallen short at least a few ways. Specifically the following information should be included in the RETI 2.0 TTIG revised report due next month:

- TAFE study ranges should be revised to reflect the interest of all stakeholders, including actual commercial interest reflected in recent interconnection queues. TTIG should review the most recent CAISO and non-CAISO interconnection queues. For example, in the San Joaquin Valley TAFE, total active renewable generation in the CAISO queue totals almost 8,000 MW.<sup>2</sup> **Of that amount, 3,300 MW entered the queue in CAISO’s Cluster 9, which closed on April 30, 2016.** This represents approximately

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<sup>1</sup> [www.energy.ca.gov/reti/reti2/documents/2016-08-15\\_workshop/2016-08-15\\_presentations.php](http://www.energy.ca.gov/reti/reti2/documents/2016-08-15_workshop/2016-08-15_presentations.php)

<sup>2</sup> For purposes of these comments “renewable energy” projects include PV, wind, and storage (stand-alone and hybrid) projects. Queue data is as of August 29, 2016. [www.caiso.com/planning/Pages/GeneratorInterconnection/default.aspx](http://www.caiso.com/planning/Pages/GeneratorInterconnection/default.aspx)

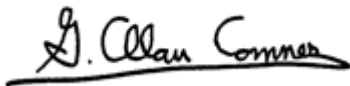
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18% of the total amount of renewable generation that entered the CAISO queue in all areas via Cluster 9 (18,500 MW).<sup>3</sup> This information is indicative that a study range of 5,000 MW for the San Joaquin TAFE may be insufficient.

- There should be a recognition of the need for at least some slack capacity to capacity to cover unforeseen events, reduce commercial uncertainty, and promote competition. Extra deliverability capacity can provide optionality for unforeseen event and, by allowing more generation to offer itself as full capacity, promote competition. Using as an example the numbers for the San Joaquin TAFE: although approximately 1,823 MW of renewable generation in this area is deliverable with the transmission system that exists today (including committed upgrades), that FC capacity was largely secured by projects that entered the queue before 2015. Since 2015 (i.e., beginning with CAISO Queue Cluster 8), there now exists in the San Joaquin TAFE 52 renewable generation interconnection requests, totaling 5,800 MW, that are seeking FC capacity status. These projects in the San Joaquin TAFE will unlikely obtain FC status unless they fund significant network upgrades or depend on massive amounts of queue drop outs. Even if procurement of energy only projects is determined as “least cost” in a study under a specific set of assumptions, it is important to know what specific upgrades may improve deliverability in an area to provide a hedge against unforeseen events and to promote competition
- Information on specific required upgrades should be published by RETI 2.0 / TTIG in its next report. For certain TAFAs, TTIG show only total dollar amounts of required upgrades with insufficient detail. For example for the San Joaquin Valley TAFE, TTIG states “[t]o make the study range deliverable: [s]everal upgrades between Gates and Los Banos will be required to mitigate 230 kV, 115 kV and 70 kV constraints ... (~\$440 million)”. This is an insufficient level of detail to be actionable by policy makers. First, the type of required network upgrades (e.g., voltage level, new lines requiring new rights of way versus reconductoring or transformer upgrades) are not described, which in turn has land use, permitting, and time-to-market considerations. Second, whether the upgrades provide deliverability to all projects in the TAFE or are needed to collect power from projects at lower voltages is a crucial detail that should be included in the next report. For the San Joaquin TAFE, SunPower estimates that at approximately \$400 million of TTIG’s \$440 million upgrade estimate will be required to make 5,000 MWs of projects deliverable at any transmission voltage (i.e. do not represent upgrades required solely for lower voltages), which underscores the broad need for these upgrades in this TAFE.

SunPower thanks the RETI 2.0 team, including the TTIG, for the opportunity to provide these comments.

Respectfully submitted,



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<sup>3</sup> [www.caiso.com/Documents/Update\\_Renewables\\_GeneratorInterconnectionQueue-Memo-Aug2016.pdf](http://www.caiso.com/Documents/Update_Renewables_GeneratorInterconnectionQueue-Memo-Aug2016.pdf)