



**Comments on
Renewable Energy Transmission Initiative (RETI)
Phase 1B Draft Report**

OptiSolar has been an active participant in the RETI stakeholder process and we appreciate the opportunity to file these comments on the Phase 1B Draft Report. OptiSolar is a vertically integrated manufacturer of solar photovoltaic (PV) thin film panels and a developer of utility-scale solar farms. We have a panel manufacturing facility in Hayward, CA and are currently retrofitting and constructing a one million square ft manufacturing site in Sacramento, CA. PG&E recently announced signing a Power Purchase Agreement for our 550MW Topaz Solar Farm located in Carrizo South CREZ. OptiSolar is supportive of the RETI process and any other process which accelerates additions to California's transmission infrastructure. OptiSolar is a member of the Large-scale Solar Association (LSA) and endorses and supports their comments filed on the Phase 1B Draft Report. Our comments will focus on the Solar PV Thin Film Sensitivity Case and Appendix D.

**RETI Phase 1B – Economic Analysis of CREZ
Section 5.8.5 Reduced Solar Photovoltaic Cost (Thin Film)**

OptiSolar strongly recommends that the Solar PV Thin Film Sensitivity Case be adopted into the Economic Analysis Base Case. This could take place during the CREZ validation process that will take place in Phase 2 where there will be a fine tuning of the CREZ's based on additional criteria and based on adopting certain of the uncertainty cases. Some of the criteria could be based on using only real projects vs. proxy projects, priority for CREZ's with projects that have Power Purchase Agreements (PPA), and how certain transmission plans for a certain CREZ's effects neighboring CREZ's.

In the Phase 1A Final Report, Black & Vetch (B&V) picked crystalline tracking as the representative PV technology to be applied to all PV projects. The reasoning was that, "While thin film and concentrating systems show great promise, crystalline is the most mature at this point."¹ The Phase 1A Final Report was adopted in May of this year and did not have the information of PG&E's August announcement of signing a PPA for our **550MW** Topaz Solar

¹ RETI Phase 1A Final Report, May 2008 - Section 5.5.6



Farm to be located in the Carrizo Plains South CREZ. However, even in the Phase 1A report B&V identified the need for a thin film sensitivity case.

When the Tracking Crystalline PV Project Capital Cost were used in the Phase 1B Base Case analysis and compared to the Parabolic Trough Solar Thermal Project Capital Cost the solar thermal cost were lower therefore it was picked to be used for all solar in the economic analysis. This does not seem realistic since OptiSolar alone has over thousands of additional MWs of thin film PV projects under development here in California. If as part of the CREZ validation process RETI decides to use as a criteria identified projects only then the actual cost components for the different technologies for these projects should be used in the economic analysis.

The Phase 1B Draft Report states that when the Thin Film Sensitivity Case is run the results are dramatic and that every CREZ with solar potential benefits strongly. This section also states that, unlike most other renewable technologies, capital cost in the PV industry has significant potential to decrease and there is considerable commercial interest in utility-scale “thin film” systems. I have attached a graph from the Department of Energy (DOE) which, based on their analysis shows PV cost decreasing and deployment of PV increasing over time. (Attachment A)

OptiSolar takes issue with the assumption that as a result of running this Sensitivity Case the amount of distributed PV 20 MW projects would dramatically increase. The report states, “in-state, non-CREZ resources increases by more than 20 times to about 45,000 GWh/yr.”² This represents over two-thirds of the net short requirements. This is not a realistic nor practical assumption because as PG&E stated at Nov. 14th RETI Steering Stakeholder Committee meeting, many of the substations that would be required for this level of distributed PV are not capable of accepting an additional 20 MWs and may not be conducive to solar generation. The development timeframe for the total buildout of 20 MW projects equivalent to large scale projects would be much longer than to building the larger utility scale PV projects.

RETI Phase 1B – Economic Analysis of CREZ Appendix D

In our review Appendix D of the Economic Analysis of the Carrizo South CREZ, despite being notified of our Topaz Solar Farm, B&V has not included any Solar PV in this CREZ. OptiSolar

² RETI Phase 1B Draft Report, Pg 5-16



also does not understand why the cost differential for Transmission cost between Carrizo North and Carrizo South are so great. The Transmission cost for Carrizo South appears to be the driving force behind why this CREZ has such a poor economic ranking. This needs further clarification.

Conclusion

OptiSolar looks forward to continued participation in Phase 2 and the CREZ validation process that will lead to a conceptual transmission plan for California. For the reasons stated above OptiSolar recommends that the Solar PV Thin Film Sensitivity Case be adopted into the Economic Analysis Base Case. Also OptiSolar seeks further clarification and modification to Appendix D.

November 19, 2008

Greg Blue
OptiSolar Inc.
31302 Huntwood Ave.
Hayward, CA 94544
(510) 441-4719
gblue@optisolar.com

OPTISOLAR

31302 Huntwood Avenue  Hayward, California 94544
Phone: 510.401.5800 Fax: 510.401.5859

www.optisolar.com