



Comments of OptiSolar on Draft Report
Renewable Energy Transmission Initiative (RETI) Phase 1A

Introduction

OptiSolar is a California manufacturer of thin film photovoltaic (PV) panels and develops utility scale solar farms throughout North America. Our company is encouraged by the work to date undertaken by Black & Veatch (B&V) and guided by the RETI Phase 1A Working Group as the planning, permitting and construction of additional transmission capacity is absolutely critical to the development of renewable power for California and other states.

We are unable to attend the March 26 stakeholder meeting and submit these brief comments and suggested changes to the draft report for your consideration. Please contact Randy Wu at rwu@optisolar.com (510) 441-4436 if you should have any questions about our comments.

Comments

1. The Phase 1A Draft Report is based upon B&V's understanding of the cost and performance of announced solar thermal projects and existing solar PV installations. At pg. 1-7 in Table 1-1, B&V summarizes the capacity of a solar thermal project as 200 MWs in a cost range of \$137-176/MWh. In comparison, the capacity of a solar PV project is shown as 20 MWs in a cost range of \$201-276/MWh. These Table 1-1 summary conclusions on capacity/price underly B&V's later conclusions as to what geographic areas should be studied in Phase 1B and what solar energy technologies should be highlighted for these study areas. As solar energy projects based upon either a solar thermal design or a thin film PV manufacturing process rely upon a new design or a new manufacturing process, the actual production cost for each technology can not be known by B&V and should not be fixed based upon either a recent, but unproven, solar thermal project announcement or a dated snapshot of an existing solar PV project. Instead, B&V should assume that the cost of solar energy will be driven down

below historical cost levels and also that the size of cost effective solar PV projects will be well above 20 MWs.ⁱ

2. B&V recommends that the solar thermal study area should be limited in Phase 1B to the Southwest U.S., which would include California, southern Nevada and western Arizona. For solar PV, B&V recommends that the study area should be limited to just California because “. . . [solar pv] can be located almost anywhere, scaled to virtually any size . . . [and] there is a sufficient high-quality resource within in (sic) California to meet almost any level of demand.” Pgs. 1-9, 1-10. It makes little sense to restrict a solar technology that is flexible in size and location from study areas that can accommodate solar energy projects. While B&V may believe that the opportunities for solar thermal are more limited and therefore should have an expanded study area, the purpose of RETI should be to promote renewable energy development for all cost effective technologies. Favoring an expanded geographic study of solar thermal projects and simultaneously restricting a study for solar PV when both technologies show great promise does not make good sense.
3. B&V’s draft report is based upon its selection of the current technology for solar PV. At pg. 5-27 B&V states that it chose crystalline PV as the representative technology because it is the most mature. B&V does concede that thin film and concentrating solar systems show “great promise”, but it has based its Phase 1A draft report on the existing, mature crystalline PV technology. B&V should assume that all PV technologies, including crystalline, thin film and concentrating solar systems will drive the cost of solar power well below historical data points and to the level of conventional power.
4. OptiSolar respectfully suggests that the Phase 1A draft report should be modified to identify high potential study areas for the development of solar power using any of the solar energy technologies, i.e. solar thermal, solar PV and other concentrating solar systems. This could be accomplished by simply including solar PV as a technology that may be developed in the same Southwest U.S. study area identified by B&V for solar thermal. The inclusion of solar PV in this study area is consistent with B&V’s other conclusions in the draft report regarding the potential for scaling of solar PV and the wide variety of locations suitable for solar PV.

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5. As the planning, permitting and construction of additional transmission capacity for renewable energy will likely take 5-10 years, the Phase 1B study should not be constrained by a current understanding or a premature prediction of the cost effectiveness of different solar technologies. If the Phase 1A estimates of the cost effectiveness of different solar technologies limits in any way the potential for the development of a particular technology, it very well may create more harm than good. Given the enormous potential for the development of solar power based upon any technology, the draft report should be modified to allow for the development in the high potential Southwest U.S. study area of solar energy projects using all solar energy technologies.

Conclusion

The Phase 1A draft report should be modified to include solar PV in the Southwest U.S. study area identified by B&V for the RETI development of solar thermal projects. This modification will not increase the recommended study areas or the scope of work for Phase 1B, and it will allow the development of solar projects based upon any of the several promising technologies. B&V also should refrain from reaching a premature conclusion on the cost effectiveness of solar PV technology and instead should assume that solar thermal, solar PV and other concentrating solar systems will drive the cost of solar power down to the cost of conventional power.

ⁱ A few examples of lower PV production costs already achieved by PV manufacturers are evident in public announcements by several companies of costs now approaching \$1.00/watt for solar modules and a near term goal to achieve "grid parity" of 8-10 cents/kwh by 2010-2012.