

Final Report

Project Title: SUNPATH SANFAB
Covering Period: Oct. 1, 2012 to Aug. 31, 2014
Approved Project Period: Oct. 1, 2012 to Aug. 31, 2014
Submission Date: Aug 31st , 2014
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Signature _____ Date 15th Aug. 2014

 15/8/14

Executive Summary:

As a world leader in the utility-scale CPV solar power industry, Soitec Solar is committed to growing this market by generating significant CPV system sales, and to manufacturing its CX-M500 CPV modules based on its proprietary Concentrix™ technology in the United States.

Manufacturing in the U.S. required a significant capital investment from Soitec, including the purchase and the retrofit of an existing manufacturing facility in San Diego.

DOE's SUNPATH PV Manufacturing Initiative II award partially funded the Manufacturing Facility and thus supplemented Soitec's direct investment in the U.S.'s green energy and high-tech manufacturing sectors.

The award also supported Soitec's commitment to promoting clean, renewable solar energy and economic development in Southern California.

Through building and operating its new module factory, Soitec has become a significant creator of high-skilled manufacturing, construction, and long-term operation jobs in the San Diego area.

Soitec's Concentrix™ technology is the most efficient Solar technology available. It is a most competitive technology in high irradiation locations e.g. the US South Western region.

Soitec's CX-M500 module has an extremely low environmental impact. No water is required to operate the module, the carbon foot print is low, the energy payback time is short and the component recyclability is extremely high.

Project Scope and Accomplishments:

Soitec's CPV module factory in San Diego was planned with an annual production capacity of 280MW_{DC}. It was scheduled to be operational by the first quarter of 2013, and was expected to create several hundred direct and indirect jobs in the San Diego region.

From ground breaking to facility readiness was completed in six months. This enabled the docking of equipment in the Q3'12 time frame. The first 140 MW of capacity was ready for operation in Q4'12.

Production of the CX-M500 modules started in Q4 2012. The line yield and factory capacity were ramped in 2013. The annual production capacity demonstration was successfully completed in Q2 2014.

The modules manufactured at the plant were used to supply utility scale demand in the US and also world markets.

Soitec has rights to all the intellectual property required to manufacture its CPV modules.

Project Objectives and Actual Performance:

In summary all project objectives were completed on time and within budget.

Task	Description	Due	Actual	Complete
1	Building readiness	Jul'12	Jul '12	100%
2	140MW tool set installed	Nov'12	Nov'12	100%
3	140MW ready for operation	Jan'13	Jan'13	100%
4	100kw shipment to DOD	Mar'13	Mar'13	100%
5	280MW tools ready for operation	Nov'13	Nov'13	100%
6	Full Factory capacity demonstrated	Aug '14	Jun'14	100%

The plan created in 2011 started with the Soitec Board approval for the project. This mile stone was accomplished following a lengthy site selection process. The site for production in San Diego was secured in Q4'11after completing a robust diligence procedure.

The building readiness was completed by July '12. This was an aggressive schedule which was completed on time with zero accidents or injuries recorded during the construction. There were upwards of 250 construction employees at the peak of construction. Safety, Schedule and Cost were key project management metrics.

The 140MW tool set was Installed and qualified in Nov '12. The 280MW tool set was ready for operation in Dec '13. In between the installs and the qualifications, the staffing was ramped, the yield, efficiency and capacity were also ramped. The full factory capacity demonstration was completed in June '14.

All milestones were validated independently by the DOE.