

## Case Study - South Boulder Waste Water Treatment Plant - 150kW



In late 2013, The City of Kalgoorlie-Boulder went to tender for their second large solar power system (greater than 30kVA). Coming off the back of a successfully completed system at the Goldfields Oasis Leisure Centre (137.5kW) Solargain put together another strong submission and was chosen from a field of 12 respondents.

The system comprises 500 X Suntech 300W PV modules and a duo of Fronius Agilo 75kW inverters. Of note also is the high quality ground mounting PVMax3 product from Schletter GmbH. Solargain PV is very excited to be working with high quality manufacturers to deliver projects such as these.

As with most systems of this size, Western Power does not allow excess power to flow from the PV system out onto their electricity network. The reverse power protection system is thus capable of ramping down the power output of the inverters to match the site's electrical loads.

Solargain also worked with a Kalgoorlie-based civil engineering firm to overcome the challenges of installing on soft clay soil.

Solargain has successfully completed another project for the City of Kalgoorlie Boulder, their largest so far as of 2014. Solargain looks forward to mining more of the Kalgoorlie sunshine resource in the coming years!

### Project Overview

**Location:** Kalgoorlie-Boulder, WA

**System size:** 150kW

**Completion date:** September 2014

**Roof Fixing Method:** Tilt frames on concrete footings

**Products:** - 500 x 300W Suntech Polycrystalline PV modules  
- 2 x Fronius Agilo 75kW inverters  
- Schletter PVMax3 racking

**Installation:** FastTrack Electrical / Solargain Kalgoorlie

**Civil works:** CPC Engineering

**Annual Energy Production:** 273.5MWh approximately

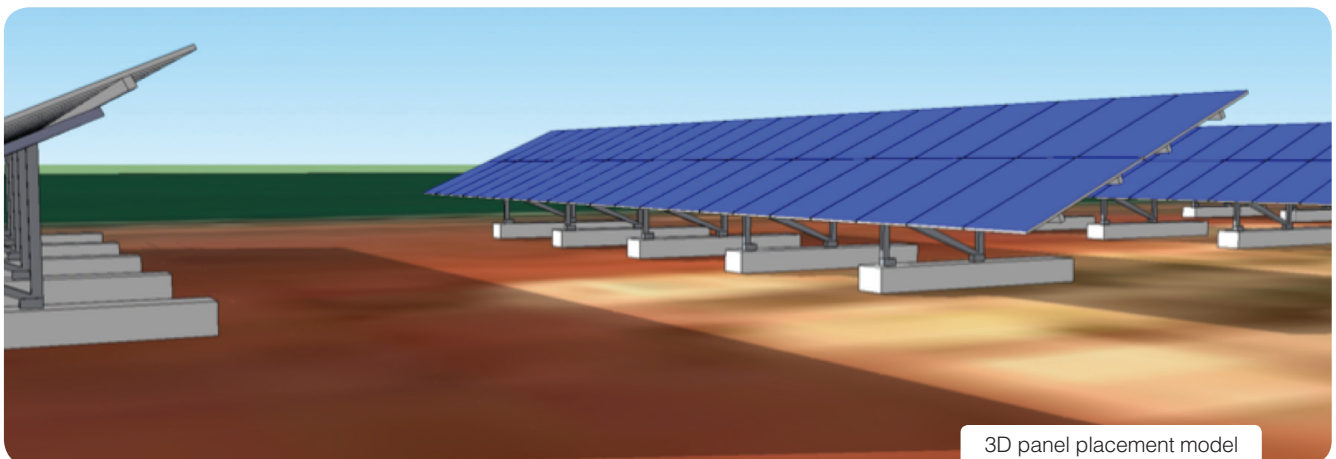
**Annual Greenhouse Gas Emission Reduction:**  
229 tonnes CO<sub>2</sub> (CO<sub>2</sub> equivalent)



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An excerpt from the City of Kalgoorlie-Boulder Ordinary Meeting of Council agenda from January 20, 2014: (Page 14)

*Following consideration of the submissions and in accordance with the tender assessment criteria, the submission from Solargain is considered the highest quality of those received and most likely to result in the best outcome to the City. Solargain's submission provided the highest level of savings to the city over a twenty five (25) year period (projected life of solar PV systems) as well as a comprehensive demonstrated understanding of project requirements which minimises potential risks associated with the project. ISO 9001 Quality Management System and AS 4801 Occupational Health and Safety System accreditation further reduces potential risks and Solargain's proposed management, engineering and installation team have a proven local track record with ground mount and large solar PV system installations in WA. Solargain's local branch in Kalgoorlie also means that employment will be generated within the City. Solargain was also the only company to offer management of the Large-scale Generation Certificates (LGCs) that will be created by this system, a service that would otherwise need to be performed by City Officers.*



3D panel placement model



Installation image