



**The Ryan Company, Inc.**

A  QUANTA SERVICES COMPANY

# Solar Operations and Maintenance



## KEY POINTS

The Ryan Company provides both pre- and post-COD O&M and Asset Management Services for renewable power generation systems including:

- Owner's representation for technical and mechanical compliance
- Development and construction support
- Transitional support from construction to ongoing commercial operation
- Monitoring testing
- Punch list oversight
- Module connection maintenance and thermal imaging
- Active system production optimization
- Active preventative maintenance planning
- Module cleaning
- Weekly performance reporting
- Material warranties and guarantee oversight

**Contact Us**  
**508-742-2500**  
**ryancompany.net**

Proprietary and Confidential

## O&M Case Study



The Ryan Company, Inc. performed both complete EPC delivery and ongoing O&M and asset management services for Atwell Island Solar Generation Facility Project. The project is a 20 megawatt utility-scale solar installation for SPS Atwell LLC, a project company partly owned by Samsung C&T America, Inc. Located near the city of Alpaugh in Tulare County, Calif., the project was developed by Samsung C&T America and has proven to be a significant contributor to the local community through the creation of local jobs and the generation of clean, renewable power.

Ryan began construction on the 160-acre site began in January 2012. It utilizes Sharp thin-film frameless modules, Sharp racking system and SMA inverters. The project connects to Pacific Gas & Electric's distribution system and provides approximately 42,200 MWh of power into the grid annually.

They Ryan Company has performed O&M services since the turnover of the project from commissioning and construction teams. O&M services have included the following:

- Manage plant to optimize system production on a day to day basis
- Perform maintenance to all equipment as needed by manufacturer recommended intervals
- Support Operating budgets
- Complete daily, weekly, monthly and annual reports.
- Support owner with regulatory and federal compliance
- Thermal imaging identifying poor connections that aid in minimizing unnecessary downtime
- Monitor SCADA and plant output
- Maintain water supply system, as needed by regulatory requirements
- Work side by side with sub-contractors

## Specialized Services

Established in 1949, The Ryan Company, Inc. (Ryan) is a wholly-owned subsidiary of Quanta Services, Inc. (NYSE:PWR), and specializes in providing renewable, electrical infrastructure and public sector services. Ryan has completed hundreds of projects in the past 60+ years throughout the United States and Puerto Rico. As of Jan 1, 2016, Ryan consolidated with a sister company, Quanta Power Generation, Inc. (QPG) to expand renewable offerings.



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- 630 Total MW<sub>DC</sub>
- 32 Utility- Scale Projects
- 29 DG Projects
- 8 Community Solar Arrays
- Ground Mount, Carport, Roof-top, Ballasted, Shaded Structures, Trellis
- More than 30 new substations constructed

