CASE STUDY
RENEWABLES

S&C ELECTRIC COMPANY
Excellence Through Innovation

S&C Swiftly Brings 2.5-MW Solar Plant Online in New Mexico

S&C Featured Solution: Solar Integration

Location: Roswell, New Mexico

2.5-MWs of PV Solar Panels at the Roswell Solar Plant

Customer Challenge

Green States Energy (GSE), an independent power producer, began working with a solar energy developer and local electric utility Xcel Energy to build, run, and operate a 2.5-MW solar photovoltaic (PV) power facility in Roswell, a geographic area with an ideal climate for solar energy collection. The new plant would supply clean energy to Xcel's grid, helping to power the city while reducing carbon emissions.

GSE required the entire solar PV facility to be engineered, constructed, and energized in less than three months in order to retain their Solar Renewable Energy Credits (SRECs) from Xcel Energy and ensure the project's financial viability. To meet this pressing energization deadline and maximize their return on investment, GSE needed end-to-end project management and renewable energy integration services from a specialized provider.

S&C Solution

Green States Energy enlisted S&C for this fast-track project because of the company's extensive experience with renewable energy integration and its proven ability to complete complex projects within very tight timeframes. S&C provided all of the engineering, procurement, and construction services needed for the 2.5-MW solar PV facility.

S&C was responsible for both the AC and DC power system designs, civil and electrical construction, utility interconnection and metering, performance monitoring, racking systems, and PV panel and inverter selections. In addition, S&C commissioned every installation at the site.

"S&C was able to leverage their leadership in the solar industry to bring together the right team that could meet our aggressive schedule."

Stephen Clevett, CEO, Green States Energy

Because of the compressed timeframe for construction, S&C needed to overlap the engineering and physical construction phases of the project to enable GSE to meet their energization goal. Before the electrical design was completed, S&C began civil site work. Then, once the basic site work was finished, S&C started the structural work of racking, followed closely by panel installation and DC wiring.

S&C constructs a solar PV power facility in less than three months, meeting the customer's energization deadline and securing project financing.

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To meet GSE's specialized requirement for PV panel dispersion, S&C provided the 2.5-MW solar PV installation in 25 separate 100-kW strings. Although each string was composed of panels with different efficiency levels, including 1603-qualifying panels, S&C quickly developed an innovative system design that produced the desired power output.

In addition, S&C interconnected the renewable energy facility with the local electric grid, enabling it to supply clean solar power to Roswell residents. By working very closely with GSE, Xcel Energy, and a strong network of hand-selected top-tier subcontractors like Green Earth Developers throughout the engineering, procurement, construction, and commissioning phases, S&C ensured successful results in every aspect of this complex project.

Valued Outcome

S&C finished the project ahead of schedule and under budget, meeting every challenge and surpassing the customer's expectations. Shortly after the project was completed, GSE informed S&C that the output of their new solar PV facility was exceeding their design criteria. Because the plant was constructed and energized so quickly, GSE retained all of their SRECs, which provided essential funding. Not only was the project a complete success for the customer, Roswell residents now benefit from clean renewable power and reduced carbon emissions.

Layout and installation of PV racking system

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