



Durango, Mexico

GUARANTEED POWER DELIVERY

Business Needs

When the State of Durango desired to build one of the first large-scale PV systems in Mexico, McCalmont Engineering was selected to make its goal a reality. The State of Durango hoped to attract more business and manufacturing to its new industrial park with the aim of supplying the park with the maximum amount of renewable energy. McCalmont Engineering designed the first phase of a potential 10 MW system to be built in increments of 500 kW, with DelSol Systems as the project's prime contractor.

Solution

McCalmont Engineering designed the Durango project using concentrating photovoltaic single-axis tracking devices. These concentrating tracking devices require tight tolerances and precise design and engineering specifications for maximum power generation, and the position of each tracker had to be oriented within 2 degrees of North in order to facilitate ideal sun radiation exposure and minimum inter-row shading. Our team has extensive experience with single and double-axis tracking, concentrating, and fixed-plate PV technology, and our engineers devised the Durango system to perform at maximum power generating capacity.

The first phase was only a portion of the anticipated project size; therefore, the physical layout had to consider future development of the proposed full 10 MW system. McCalmont Engineering's designs were developed in both English and Spanish in order to avoid any communication issues that could stem from the language barrier between the American and Mexican teams. Also, the site was a flood plain so every piece of equipment had to be raised above grade and the physical layout designed in preparation for potential flooding.

Benefits

McCalmont Engineering designed the State of Durango system to deliver more power over time. McCalmont Engineering negotiated the construction concerns and the demands of a new tracking technology to meet the customer's goals. Our staff of engineers and designers assured that the plant was designed for the lowest levelized cost of energy (LOCE), satisfying the government's energy production goals for the newly built industrial park.

Project Specifications

Location:	Durango, Mexico
Size:	500 kW
Completed:	2012
Type:	CPV Ground Mount
Scope:	Full engineering & design
Inverter:	SMA
Modules:	Skyline X14
Racking:	Skyline X14 concentrating collector