The Colton Electric Utility did a lot more than charge up a carport with SCHOTT solar

The Challenge

Colton, California's Colton Electric Utility (CEU) decided that one of the best ways to demonstrate its vision for the future would be through renewable energy. As part of that vision, CEU purchased 3 electric vehicles and decided to install a solar electric carport to shade and recharge them. As the City's first solar project, the carport was designed to serve as a model for future solar projects. CEU also wanted to develop a program to work with schools, community groups, and local businesses to help educate citizens about the benefits of renewable energy.

The Solution

SCHOTT solar was contracted through competitive bid to design, supply and install a 25 kW photovoltaic carport at the City's Public Works Administration Building. Renewable Energy Concepts provided the installation services.

The carport consists of an elevated, painted and galvanized post-and-beam structure supporting panels of solar modules tilted at a 20-degree angle from the horizontal to maximize sun exposure. The array includes 288 Siemens-Shell SR-100 modules and a Trace Technologies 22 kVA inverter.

The west-facing carport was sited to maximize power output during peak afternoon demand, in addition to providing shade and parking for 14 vehicles. The carport system also includes SCHOTT solar's unique SunTrack™ monitoring and data acquisition system.

The Results

With rugged construction and 30-year design life, the carport/solar system is more than meeting expectations. Of the power generated by the array, only 10% is needed to recharge the electric vehicles, leaving the remaining 90% to supply power to homes connected to the CEU energy grid.

Technical Specifications

Size: 25 kW AC PTC
Modules: 288 Siemens-Shell SR-100
Inverters: Trace Technologies PV-22208
Monitoring System: SS SunTrack™
Support Structure: Post-and-beam carport