

OVERVIEW:

The Calatagan Solar Power Plant is the largest solar facility in Luzon, Philippines. With 200,000 Trina Solar TSM-PC14 modules installed, this facility is generating enough power for the whole of the western Batangas province.



SIZE: 63.3MW
SYSTEM TYPE:
Ground Mounted



COMMERCIAL
OPERATION DATE:
March, 2016



DEVELOPER:
Solar Philippines



MODULES:
200,000 Trina
Solar Tallmax
TSM-PC14



CO₂ SAVINGS:
33,333 tons/year

SITUATION

Calatagan has long been known as a small and picturesque seaside resort town in the Batangas Province (Southern Tagalog) of the Philippines. Since March 2016, the peninsular town is now also known as being the site of the largest solar facility in Luzon, Philippines – the 63.3 megawatt Calatagan Solar Farm, located near the foothills of Mount San Piro.

Over 200,000 Trina Solar TSM-PC14 solar panels are installed over an expansive 160-hectares, generating a substantial amount of clean energy, enough to power the whole of western Batangas. The solar farm also enjoys optimum weather conditions – receiving a steady breeze off the South China Sea, the highest levels of sunshine in Southern Tagalog, and seldom hit by typhoons.

Developed by Solar Philippines, a full locally owned project developer and EPC, the new solar farm is the first project that is fully developed, financed and constructed by a local renewable energy company at a facility of this scale.

TECHNICAL CHALLENGES

For a project of this scale and capacity with the added pressure of timely completion, strong partnerships and reliable suppliers were critical to its success. With an established track record of supplying large capacity solar farms, Trina Solar was the choice for solar panels.

The product chosen, the Trina Solar Module PC14, 315W solar panels, was ideal for an installation of this nature. The modules have a high power footprint which reduces installation time and balance-of-system (BOS) costs, making this solution an optimum choice for large scale projects.

Trina solar panels are built to withstand the toughest of conditions and have been the choice for many developers looking for a top quality product in delivering their solar energy targets.

PRODUCT SOLUTION

Trina Solar Tallmax TSM-PC14 series module was chosen because of its solid track record of deployment in many large scale power plants globally. The high power footprint reduces installation time and BOS costs, making it the preferred choice for many developers.

Trina Solar's PC14 modules are specifically designed to optimise the BOS costs for ground-mounted arrays. The modules deliver high power outputs even in lowlight conditions. Consisting of 72 individual cells, the modules require fewer mounting kits to achieve the same overall power output compared to standard 60-cell multicrystalline modules. Taller than usual ground-mounted modules, PC14 panels deliver more power per square metre of land coverage. The Trina Solar PC14 modules therefore make large solar farm projects extremely cost-efficient.

RESULTS

As the Philippines looks to invest further in green technologies, the Calatagan Solar Farm is making a direct impact in meeting the country's energy needs and easing environmental

pressures. Experts have even said the Philippines can become one of the world's first 100 percent renewable energy-powered economies because of its plentiful sunlight.

The wide-reaching scale of the project was not only limited to its size, but also its impact on the province's economy; about 2,500 people were employed to complete the project. In addition, the solar farm is expected to offset over 1 million tons of carbon dioxide, equating to planting over five million trees in the next three decades of operation.

A significant achievement was also the fact that the project was not only completed in time but started generating power weeks ahead of the government's feed-in-tariff (FIT) deadline.

The Philippines is a stellar example in the South East Asia region for investing in cleaner energy sources and the Calatagan Solar Farm is a momentous achievement in supplementing the country's energy requirements. Trina Solar is proud to have been a major contributor to this groundbreaking project.

