Trinasolar

CASE STUDY

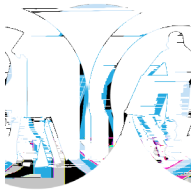
THE SUSTAINABLE CITY, DUBAI, UAE

OVERVIEW:

The Sustainable City in Dubai is an initiative which combines economic, environmental, and social sustainability and aspires to become the first Net Zero energy community in the Middle East. The community is now successfully producing clean energy via solar panels to operate the entire city.

SIZE: 12 MW
SYSTEM TYPE: Rooftop

COMMERCIAL OPERATION DATE: 2016



DEVELOPER: Diamond Developers

EPC: City Solar

OUTPUT: 24 GWh/annum

MODULES: 40,000 Trina Solar Duomax PEG5

CO_2 SAVINGS: 11,000 tons/year

SITUATION

When it comes to incredible transformations, Dubai is a city that has celebrated this accolade for many decades, growing from a desert-city with a small population to a modern business hub and metropolis. Now, with The Sustainable City initiative rapidly progressing, Trina Solar is steadfastly making a mark on Dubai's pioneer green economy project.

The Sustainable City is an innovative project encompassing three major features: social, economic and environmental and is commonly billed as the Middle East's first operational sustainable community, built on 46 hectares. Designed to be the first Net Zero Energy city in Dubai, its energy needs are to be met entirely via solar-panelled roofs. In keeping with the chief principles of sustainability, the project mandated that the city's residents should be completely free of maintenance costs, with a Net Zero fee scheme. The idea was that fees would be a result of shared revenues from the community rentals.

Trina Solar was engaged to supply and install solar panels which would produce an output of 12MW for the proposed commercial complex, comprising several facilities, including 500 residential villas, 170-room hotel, mosque, school, equestrian club and track, swimming pool complex and play areas. The entire city is expected to require around 13MW, notwithstanding further expansion.

The Sustainable City already has more than 250 villas occupied and a population of around 1000 residents.

PRODUCT SOLUTION

The installation was made up of 40,000 solar panels estimated to produce around 24 GWh per annum.

Trinasolar

CASE STUDY

THE SUSTAINABLE CITY, DUBAI, UAE

For a project of this scale and substance, the developer's choice was none other than Trina Solar Duomax, a solution which has long been renowned for its durability and reliablity with 30 years product warranty. With it's first-of-type frameless design, this solar module comes with a double layer of glass, providing benefits of enhanced safety and aesthetically-pleasing design.

Duomax modules produce a higher power yield and performance warranty. Built to be stronger against severe desert weather conditions, the frameless design also ensures there is no dust accumulation, which results in more solar energy produced. Additionally, the Duomax solution doesn't undergo mudding, thereby adhering to the city's community-friendly design and requirements.

RESULTS

With Dubai being the most populous of the seven Emirates, the solar output is expected to help its ambitions to become the world's most sustainable city by 2020, with 7% of total energy production coming from cleaner sources. The Sustainable City is a ground-breaking initiative in ensuring that the city's growth and development continues responsibly. With Trina Solar's installation, a significant portion of its residents' energy needs are being met for a cleaner, lower cost, and more sustainable future.