

SMA Solar Technology AG - Press Release

Sustainable Power Supply for Caribbean Island St. Eustatius with the SMA Fuel Save Solution

Niestetal, May 24, 2016 – SMA Solar Technology AG (SMA) and its subsidiary SMA Sunbelt Energy GmbH have commissioned a PV Hybrid System on the Caribbean island of St. Eustatius, Caribbean Netherlands, to completely electrify the island with the smart combination of utility scale PV, battery storage and diesel generators. Up until March 2016 the island 's power supply was fully based on diesel gensets. By integrating 1,9 MWp of PV power and 1 MW of batteries with the SMA Fuel Save Controller 2.0, the local utility company is now able to reduce its fossil fuel consumption significantly by up to 30 percent and save more than 800.000 liters of diesel fuel and 2,200 tons of CO<sub>2</sub> per year.

In 2010, St. Eustatius became a special municipality of the Netherlands. The Dutch Ministry of Economic Affairs decided to make the island and the Statia Utility Company (STUCO) less dependent on imported fossil fuel oils by financing a solar power plant. "We were looking for fossil fuel reduction and at the same time for a solution with both very low maintenance and also stand-alone operation," Fred Cuvalay, CEO of STUCO, summarized the technical challenges. "SMA provided a hybrid system solution exactly tailored to our needs, which is extremely user-friendly."

#### SMA sets a good example for a more sustainable power supply in the Caribbean

"The project fully integrates three different energy sources on a large scale that work together in a harmonized manner: solar power, battery storage and diesel gensets," said Volker Wachenfeld, Executive Vice President SMA business unit Off-Grid and Storage. The project is designed to generate enough clean solar power to cover more than 23% of St. Eustatius' annual electricity demand of 13.5 GWh. The Sunny Central Storage 1000 integrated into the SMA Medium Voltage Power Station 1000 enables a measured solar fraction of up to 88% during sunshine hours and supports the grid with stability functions such as frequency regulation, ramp-rate control for smoothing PV power fluctuations and optimization of diesel genset operation. "Rapid movement of clouds in this region, in particular, leads to extreme fluctuations in solar power generation which constrains the integration of large-scale photovoltaics into diesel-based grids," Wachenfeld commented on one of the challenges. "That's why using large-scale storage systems is meaningful for this application as they minimize the impact of fluctuating energy sources on diesel generators."

"Via SMA Sunbelt Energy GmbH, SMA can now offer fully integrated hybrid and large-scale grid-connected battery energy storage systems as a turnkey supplier," said Fabian Jochem, General Manager at SMA subsidiary SMA Sunbelt Energy GmbH. The project also includes a system service contract and a customized PV hybrid monitoring



system design for integrated data logging of power management system, PV inverters, battery inverter, diesel generators and the complete storage system, engineered and commissioned by SMA Sunbelt Energy GmbH.

Local system integrator, Eco Energy N.V. from Curaçao, was responsible for installation of the PV plant. Its experience on Caribbean logistics and high quality workmanship played an important role in realizing this project successfully within the ambitious schedule of 9 months.

The installation in St. Eustatius is the first project of its kind in the entire Caribbean region and will likely serve as an example of what's possible to neighboring islands.

A video on the project is available at https://youtu.be/OGIIRI8BHXo.

### About SMA

The SMA Group with sales of €1 billion in 2015 is the global market leader for solar inverters, a key component of all PV plants, and offers innovative key technologies for future power supply structures. It is headquartered in Niestetal, near Kassel, Germany, and is represented in 20 countries. The Group employs more than 3,000 people worldwide. SMA has an extensive range of products, which offers the right inverters for all module types and plant sizes; for small residential systems as well as large-scale plants, grid-connected photovoltaic systems as well as off-grid and hybrid systems. Moreover, SMA offers system technology for various battery technologies and system sizes and collaborates with renowned battery manufacturers and companies from the automotive industry. The SMA technology is protected by about 700 patents and utility models worldwide. The range of services is supplemented by comprehensive services and operational management of large-scale PV power plants. Since 2008, the Group's parent company, SMA Solar Technology AG, has been listed on the Prime Standard of the Frankfurt Stock Exchange (S92) and is currently the only company in the solar industry that is listed in the TecDAX index.

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