



SMA Solar Technology AG – Press Release

System Solution From SMA Provides Caribbean Island with 100% Solar Power Supply

Niestetal, December 14, 2017 – The sound of ocean waves instead of droning diesel generators: the energy supply to the Caribbean island of St. Eustatius is provided exclusively by clean solar power during the day. SMA Solar Technology AG (SMA) and its subsidiary SMA Sunbelt Energy GmbH have expanded the PV diesel hybrid system, which went into operation there last year. The use of the new Sunny Central Storage 2200 battery inverters with grid-forming characteristics makes it possible for the first time to switch off the diesel generators fully automatically without impairing the stability of the utility grid. The power of the PV farm has been doubled to 4.15 MW and the capacity of the battery-storage system has been expanded to approximately 5.9 MWh. This allows the local electric utility company, Stacia Utility Company (STUCO), to save around 1.7 million liters of fossil fuel a year.

“The new SMA system combines solar power and a battery-storage system, and incorporates diesel equipment when necessary,” said Fabian Jochem, general manager of SMA Sunbelt Energy GmbH. “In a matter of milliseconds the system balances out the PV array’s power fluctuations, which are caused by the rapid cloud movements in this region in particular. Excess energy is temporarily stored in the batteries and is used in the evening.” At the heart of the system, the battery inverters initially take on the job of grid formation. This means that the diesel generators can be switched off completely during the day. The battery inverters stabilize the frequency and keep the reserve power, and thus enable a reliable electricity supply with European grid quality at all times. Thanks to comprehensive expansion of the function of the SMA Fuel Save Controller, including energy and power management in real time, synchronization between diesel operation and battery operation takes place intelligently and fully automatically.

Excellent grid quality

“SMA’s system solution now makes it possible to completely switch off the diesel power supply to the island during the day without impairing the electricity supply to the roughly 4,000 inhabitants,” said Fred Cuvalay, chief executive officer of the electric utility company STUCO. “Even if the diesel generators fail during the night, the SMA system will provide the island with electricity without interruption. Thanks to the reduced use of the diesel generators, their operating hours as well as fuel consumption are reduced. This results in much lower maintenance costs, and the environment is saved from over 4,500 tonnes of CO₂ every year. We are particularly happy with the high grid quality, which, since the installation of the system, has been considerably better than in the past with our fleet of generators.”



In 2010, St. Eustatius gained the status of 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. Following the PV diesel hybrid system, which won the Intersolar Award for outstanding solar projects in 2016, the Dutch Ministry of Economic Affairs has also financed the expansion of this system.

A video about the project is available at: <https://youtu.be/xBM7Rdz5qjA>

An article about the project is available at the SMA Blog en.SMA-Sunny.com.

About SMA

The SMA Group with sales of around €1 billion in 2016 is the global market leader for solar inverters, a key component of all PV plants. SMA offers a wide range of products and solutions that allow for high energy yields for residential and commercial PV systems and large-scale PV power plants. To increase PV self-consumption efficiently, SMA system technology can easily be combined with different battery technologies. Intelligent energy management solutions, comprehensive services and operational management of PV power plants round off SMA's range. The company is headquartered in Niestetal, near Kassel, Germany, is represented in 20 countries and has more than 3,000 employees worldwide, including 500 working in Development. SMA's multi-award-winning technology is protected by more than 1,000 patents and utility models. 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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