

HYBRID ENERGY SUPPLY – NL ANTILLES, 2016

LARGE-SCALE ISLAND ELECTRIFICATION, ST. EUSTATIUS



Today, solar energy covers 23% of St. Eustatius' total electricity need. To stabilize the grid, which is influenced by fast power fluctuation related to cloud movement, a Li-Ion storage facility has been integrated to absorb the fluctuations, provide energy shifting and frequency stability functionality also at night. Thanks to the SMA Fuel Solution about 2,240 tons CO2 per year can be saved. The project has been designed, and implemented by the SMA Sunbelt Energy GmbH.

Project

- Location: Dutch Caribbean Island of St. Eustatius
- Commissioning: 2016
- Specific Requirements: Exposure to salty air, hurricanes, fast cloud movement

Plant information

- Installed PV power: 1.89 MWp
- Installed Storage capacity: 1 MW, 570 kWh
- Diesel capacity: 4 MVA
- Annual energy yield: 3,200 MWh
- Annual diesel savings: > 850,000 liters

System Technology

- 1 SMA Fuel Save Controller
- 1 Sunny Central Storage preinstalled in 1 MVPS
- 73 Sunny Tripower 25000TL-30
- Direct modbus connection to genset controller

SMA system solutions for hybrid applications

