

Volkswagen Group of America, Inc.

Comprehensive Renewable Energy Feasibility



Having successfully performed design work for more than 50% of all automotive assembly plants built in the United States over the last ten years, Volkswagen called upon SSOE to oversee architecture, engineering, and construction management services for their new production facility.

In keeping with Volkswagen's commitment to work in harmony with the environment, SSOE spent one year on-site assisting with LEED® certification requirements. This led to Volkswagen receiving the first and only LEED Platinum certification for an automotive manufacturing plant.

As part of this project, SSOE performed a full-spectrum renewable energy survey to determine the most suitable and cost effective technology to utilize to meet Volkswagen's energy production and system integration requirements.

The survey included all available renewable energy technologies, such as solar electric, solar thermal / cooling, wind, biomass, and landfill gas to meet a 4 million kWh renewable energy production target. The study aimed at developing the most effective renewable energy systems to meet Volkswagen's sustainability and economic objectives for the campus on a 1,500 acre site. A preliminary design of a 3 MW photovoltaic system and a 2 MW landfill gas generating system resulted from the study.

The photovoltaic segment of the project included a full technology comparison of ground-based and building-integrated systems, multiple module technologies, and tracking system evaluations. This project resulted in the preliminary design of an 800 kW and 3 MW building integrated photovoltaic system which included a CSI master specification-based bid package.

size 2.7 million SF

location Chattanooga, Tennessee

highlights

Platinum LEED® certification

Full-spectrum survey of all suitable, renewable energy technologies

3 MW building integrated photovoltaic system design

2 MW landfill gas system design