Case study

Containerized Gen-sets on flare gas recovery in Venezuela

The Opportunity

The main economic resource in the Anzoategui area of Venezuela is oil and gas production. Associated gas from crude oil provides abundant energy. Large quantities of oil are extracted and the associated petroleum gas (APG) can be used as a fuel for power generation, instead of being flared into the atmosphere (as it previously was).

The Solution

Siemens Energy is providing gen-sets, voltage transformers, MT transfer switches, PLC controls, installation materials and equipment, basic engineering, and spare parts for this project over a phased period of time. 150 containerized gen-sets with Siemens SGE-56SL engines have been installed in three locations in the state of Anzoategui, Venezuela.

The units are located in Bare, Merey and Tejero and have been configured to use venting gas that is extracted from nearby oil wells.

- Bare: 40 units giving a power output of 30 MWe
- Merey: 40 units giving a power output of 30 MWe
- Tejero: 70 units giving a power output of 52.5 MWe

Total power output installed: 112.5 MWe

Benefits

- Better use of natural resources
- Lowers transmission and distribution energy losses
- Lowers initial cost because the modular plants can be re-sized as demand grows
- Provides a reliable, long-lasting power supply
- Provides greater control and improved energy cost forecast
- Improves stability of the electrical network voltage
- Increases contingency reserves

The Business

Siemens Energy is among the largest suppliers of rotating equipment solutions worldwide. The company offers some of the most efficient and environmentally friendly technology platforms, products, and services in distributed power generation for oil and gas, industrial, institutional, and commercial clients, and rural electrification programs.
Our solutions include combined heat and power (CHP) systems, biogas-fueled gen-sets, hybrid systems (solar photovoltaic and engine-based gen-sets), biomass and waste-to-energy steam turbine generators, compressed air energy storage (CAES), and more.

We are also developing new technologies that use fossil fuels and renewable energy resources more efficiently, such as our wave energy based HydroAir® turbine.