

First CCHP project in Liaoning Anshan



Challenges

This project represents the first CCHP project launched in Anshan, Liaoning province and also marks the debut of Siemens' gas engine in the China market. The 3 units of SGE-56HM gas engines will be applied for a company in the economic development zone of Anshan, which will provide highly efficient power, heating and cooling.

Units:

3 units of SGE-56HM gas engines

Advantages of Siemens Gas Engine

With a power output of 1.2MW, Siemens SGE-56HM gas engine features an innovative design, a small footprint and high energy efficiency. Moreover, it performs well in terms of overall efficiency, fuel flexibility and operational availability. Siemens gas engines are widely used in fields such as industrial utilities and services, bio and biomass energy plants, and in oil and gas applications.

Key Technique Features :

- 1) power generation efficiency reaches 42.5%
- 2) Thermal efficiency reaches 47.5%
- 3) Total energy utilization efficiency up to 90%

Project Vision

Following project completion, the power generation technology of both the ORC turbine and gas engine are expected to provide energy-efficient generating units for China's distributed energy project. Every year, the project can:

- 1) provide 18,825,000 kW/h of electricity per year
- 2) meet the heating demand of 60,000 square meters
- 3) enable the customer to save about 7,530 tons of coal
- 4) reduce its carbon dioxide emissions by approximately 19,500 tons

After the project put into operation, it will yielding a positive and significant effect on controlling air pollution, conserving energy and reducing emissions.

Advantages of Distributed Energy

- 1) Effectively increase the multipurpose utilization rate of resources in order to achieve energy gradient utilization and improve economic benefits.
- 2) The clean and highly efficient gas-fired distributed energy makes good effect on energy conservation and emission reduction.
- 3) Ensure the safety of power and heat/cold supply within the distributed energy area, with the result of ensuring customers production.
- 4) Structure advantage: Ensure reliable power and heat supply during summer peak power demand and winter heat supply season.