



## Eden Resort

- **FUEL TYPE** Natural Gas
- **APPLICATION** Hotels & Resorts
- **KW PRODUCTION** 400
- **LOCATION** Lancaster, PA, USA



### About This Project

Energy expenses are the second largest cost in the hotel & hospitality industry. Fortunately, energy costs can be controlled through use of efficient, cost saving, and environmentally friendly CHP cogeneration systems, while simultaneously boosting a hotel's image.

CHP (combined heat & power) systems are highly beneficial for hotel owners and operators. Thermal energy generated by the CHP can be utilized to provide space heat, domestic hot water, can be used to heat pools, and to serve chillers for cooling applications. It significantly reduces the need to use existing boilers, especially during summer seasons. Furthermore, the hotel's carbon footprint and CO2 emissions are considerably reduced. Electricity is generated at much lower cost, and demand charges are often completely eliminated.

Eden Resort & Suites in Lancaster, Pennsylvania, a 301-room hotel and conference center asked Sophance to perform an energy study based on the hotel's current and future energy needs, attempting to reduce the hotel's rising energy costs. Sophance is an energy consulting and project development company, focused primarily on clients needing to increase energy efficiency through smart on-site distributed energy solutions. Based on the energy study results, a CHP system was selected to reduce costs and to become more energy independent.

2G Energy Inc. received the order to manufacture and supply a 2G patruus rated 400 ekW/h with a yearly capacity of 3,320 MWh electrical output along with 15,756 mmBTU of thermal energy generation. This fully-containerized CHP Cogeneration system was supplied in High-Line Configuration for more pleasing aesthetics and with reduced noise level of <50 dB(A) @ 30', to assure a very quiet ambience around the hotel.

The High-Line CHP Module was delivered in the hotel's color and skillfully integrated into the existing resort infrastructure, considering hotel guest experience and limitations on space. The hotel is now enjoying significant cost savings and this project demonstrates how easy it is for hotel owners to reduce their energy expenses.

### Additional Details

- **TOTAL ELECTRICAL POWER**  
400kW
- **MODULE**  
patruus 400
- **CONFIGURATION**  
Super Silent Highline Container

