



## Hilton

**Customer:**  
Hilton Garden Inn

**Location:**  
Chesterton, Indiana



### Customer Description:

The Hilton Garden Inn is a 120 room hotel conveniently located just off the Indiana Toll Road and 3 miles from I94. A full range of special amenities available at this Hilton Garden Inn cater to both the busy executive as well the leisure traveler.

### CHP Application:

The equipment uses natural gas to power up to three microturbines that generate electricity and heat energy for the hotel. The heat energy extracted from the microturbines is used to heat the domestic water supplies within the hotel, providing hot water to the guest rooms, laundry, and kitchen facilities. Heat energy is also used to heat the common areas of the hotel lobby, utilizing Wirsbo heat store technology, which released heat energy upon demand through the lobby floor. The system is available for use as back-up power for critical circuits, such as hotel offices, emergency lighting throughout the hotel, as well as exterior area lighting, should an electric outage occur. This facility is currently being used in an ongoing Department of Energy, National Renewable Laboratories research study.

### Major Equipment:

- (3) 30 kW Capstone Microturbines
- (3) Exhaust Gas to Water Heat Exchangers.
- (1) 13 Zone Hydronic In-Floor Heating System
- (1) 1st Floor Eutetic Salt Heat Storage Area in the Foyer Entrance

### Benefits:

Energy cost savings while using this combined heat and power system is approximately 2.5%. The CHP system reduces atmospheric pollutants (NO<sub>x</sub>) per kWh produced by 90% compared to local coal-fired power plants. Energy efficiency is provided by this CHP system as it uses by-product heat to supplement the building's hot water and heating requirements, which reduces amount of fuel needed and energy wasted. Advantages for hotel guests is a constant temperature level through all lobby common areas without the need of a forced hot air system to heat these areas. The microturbines may be used as a backup power system to the hotels protected circuits in the event of a power failure on the local utility system.