



CUSTOMER CASE STUDY

Reducing Costs and Improving Energy Performance at Scale: CHP at a Major Airport Hotel

Catalyst Power finances, updates, and operates an onsite combined heat and power (CHP) system for a major airport hotel in Massachusetts.

275+

ROOMS SERVICED DAILY

75 kW

CHP SYSTEM UPGRADE

\$0

UPFRONT CAPITAL



● WHO THEY ARE

An Airport Hotel's Blueprint for Smarter Energy

Airport hotels represent a distinct segment of the hospitality industry where energy demand is consistent and insulated from seasonality. They serve business travelers, transient guests, and airline crews whose travel patterns keep occupancy and energy demand stable year-round.

This 275+ room hotel operates around the clock, with guests arriving and departing, and property systems never fully power down. To support 24/7 operations, the property has significant heating loads, including domestic hot water for guest rooms and laundry, and space heating across guest and common areas, as well as electrical loads that power HVAC, lighting, and food service equipment.

● ENERGY NEEDS & CHALLENGES

Balancing Efficiency and Cost Pressures

This property operated with aging infrastructure that had been under continuous load for years. For an energy-intensive hotel that can't tolerate downtime, even minor disruptions can impact guest experience and service quality. At the same time, replacing or upgrading these systems typically requires significant upfront capital, creating a barrier to modernization.

AT A GLANCE

CUSTOMER

- 275+ room hotel with 24/7 operations
- More than 80% occupancy

CHALLENGES

- Aging infrastructure
- Rising and more volatile utility costs

THE CATALYST DIFFERENCE

- Repowered existing CHP system
- Improved onsite electricity generation and heat capture
- Eliminated upfront capital burden

Compounding this, energy costs don't ease up during slow periods. For this customer, January brings some of the year's highest utility bills, just as hotel revenue hits its annual low point due to post-holiday lag in winter travel. It needed a solution that could hedge against the utility cost volatility and update its energy systems without significant capital investment or operational disruption.


Aging infrastructure, rising energy costs, and zero tolerance for downtime created mounting pressure on a hotel that never stops running.


● WHAT CATALYST POWER SOLVED


Onsite CHP with No Operational Disruption


Catalyst Power helped the hotel implement a fully financed onsite energy solution, at no upfront cost to the customer. The system uses a compact design that fits within its existing footprint, making it easier to deploy without interrupting operations or impacting guests.

The project includes a CHP module, two domestic hot water boilers, and six instantaneous indirect water heaters. These systems help the property generate onsite electricity and redirect waste heat for heating applications.

 **CHP System Repower:** A 75 kW CHP module generates electricity onsite and supports efficiency.

 **Hot Water and Heating Equipment:** 2 MMBtu/hour DHW boilers and 6 instantaneous indirect water heaters (0.82 MMBtu/hour) support thermal demand.

 **No Upfront Capital Required:** Catalyst Power provided a financing model that requires no upfront investment.

 **End-to-End Ownership:** Catalyst Power handles everything from installation to ongoing operations.

Measurable Results for Hotel Operations

450+ MWh
electricity generated annually

3,000 MMBtu
thermal energy recovered

15%
contracted savings

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We're very pleased with our CHP plant and the services provided. Having a supplemental source of heat and electricity isn't just convenient; it gives us control. It was a strategic investment in long-term financial stability.

– Director of Facilities
at the Massachusetts hotel

Could Your Facility Be Next?

Onsite energy solutions work well for hospitality properties dealing with comparable cost and budgeting challenges. Reach out to a [Catalyst Power Energy Expert](#) to discuss how we can support your portfolio.

