

Clarion Hotel – Phoenix, AZ



Combined heat and power system cuts Clarion Hotel's energy costs by an estimated \$15,000 per year, paying for itself in only 2.4 years.

- ▶ **A natural gas-powered engine produces electricity for guest rooms, slashing peak electricity demand costs.**
- ▶ **Waste heat from electricity production supplies hot water for guest rooms, pool, spa and laundry, cutting energy costs further.**

"This system decreases our electricity costs without impacting comfort or services for our guests."

-- James Evanoff,
General Manager

Hotel Uses Natural Gas To Cut Peak Electricity Costs

In the heat of the day, the window air conditioning units at the Clarion Hotel Phoenix were driving up peak electricity costs, significantly cutting into the hotel's profits. During discussions with the Phoenix-based firm, Easy Energy, the forward-thinking hotel owners acted on the recommendation to install a natural gas-powered engine to generate electricity when peak electric demand is at its highest. The natural gas generator not only produces electricity needed for the 200 guest rooms, but waste heat from the engine provides an energy bonus – supplying the hot water used in the hotel's guest rooms, pool, spa and onsite laundry. Known as combined heat and power (CHP), this double-duty approach is a highly cost-effective solution for businesses with high electricity demand charges and is saving the hotel an estimated \$15,000 in annual energy costs. "We had to find a way to decrease our electricity costs," says James Evanoff, general manager, Clarion Hotel Phoenix. "We like the combined heat and power solution because it offers savings during peak electricity demand periods, which coincides with the check-in times of our guests during summer months."

CHP Boosts Hotel's Efficiency and Bottom Line

In addition to the natural gas-powered engine, the CHP system includes a heat exchanger that captures waste heat from electricity generation and uses it to heat water that is stored in a large domestic hot water tank, which fulfills most of the hotel's hot water needs while the system is running. The exchange of heat in CHP, which is also called cogeneration, is highly efficient – capturing 80 percent of waste heat for use by the facility.



Natural Gas Utility Provides an \$80,000 Rebate

Southwest Gas, Clarion's natural gas utility, provided a rebate of \$80,000 on the system as part of its incentive program for customers who invest in energy-efficient equipment. Easy Energy, an Arizona company that specializes in commercial energy systems, financed and installed the system, which has a payback of 2.4 years after the rebate.

"Southwest Gas is proud to support combined heat and power projects such as the efficiency project at the Clarion Hotel Phoenix," says Jose Esparza, director of Energy services, Southwest Gas. "We encourage other Arizona businesses with a central plant operation to investigate the cost savings and environmental benefits of a CHP installation."

Also known as cogeneration, CHP is a well-proven technology with a 30-year history. It is used often in commercial and industrial applications where there is a constant demand for both electricity and heat.



Natural Gas... your BEST energy value!



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