



CASE STUDY: ATLANTIS CASINO RESORT SPA

Casino Taps Into Energy Savings With Variable Speed Drives

An effective water distribution system is a key component to smooth hotel operations and guest satisfaction. It also has a significant impact on total energy use. To reach these goals and offset the cost of improving the efficiency of its water pumping system, the Atlantis Casino Resort Spa in Reno, Nevada, used an incentive from NV Energy.

The Atlantis Casino Resort Spa relies on a pumping system with three motors—one 20-horsepower and two 30-horsepower motors—to maintain adequate water pressure. This critical system delivers water to more than 600 guest rooms and four commercial kitchens. It must maintain pressure during all levels of occupancy and activity. The site's chief engineer recognized an opportunity to capture measurable energy savings by installing variable speed drives (VSDs) on the domestic water booster pumps and the resort worked with NV Energy to trim the project's cost.



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Project Summary

A VSD is a device that controls the speed of an induction, or constant-speed, motor. It adjusts a motor's speed in response to changing demand, which can significantly reduce energy use and cut wear on the motor.

Prior to adding the VSDs at the resort, the 20-horsepower pump operated continuously to meet demand. The two 30-horsepower pumps cycled on only if water pressure dropped below a certain level.

Since adding the VSDs on all three motors, logged data and customer observation confirm that the second pump rarely cycles on. The third pump cycles on even less frequently, and most days not at all. When two pumps do run at the same time, the VSDs regulate the motors so they operate at the same speed, ensuring equal pump use.



Energy-saving Equipment

As a result of adding VSDs to the water pumps, Atlantis Casino Resort Spa can expect energy savings of more than 173,000 kWh annually, without compromising operations or customer experience.



Project Results

Building Type: Hotel/casino

Project Type: Retrofit

Measures: Installed VSDs on water booster pumps

Incentive: \$5,263

Projected Annual kWh Savings: 173,101