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Beau Rivage Resort & Casino – improving comfort and saving costs

Central plant upgrade project successful thanks to Demand Flow from Siemens. Cost savings finance the necessary investments.

“Improvements in comfort were felt immediately, which was appreciated by our customers, but especially by our team members who worked throughout the building.”

Al Greene, Director of Engineering
Beau Rivage Resort & Casino

The building

The Beau Rivage Resort & Casino Hotel is located on the beautiful Gulf of Mexico and is one of the premier MGM Resorts International properties. The resort and casino is a 24-hour operation, with approximately 10,000 occupants at any given time and enfolded 1,740 guest rooms and more than 297,300 m² of gaming, hotel, resort, convention and retail space. Because of its dedication to their customers in the region, the highest levels of hospitality and occupant comfort are of the utmost importance to the Beau Rivage.

The challenge

The Beau Rivage chilled water delivery system was unable to deliver its full cooling capacity, requiring the facility to reduce cooling in non-essential areas so it could maintain comfort levels in guest-occupied areas of the resort.

Therefore, the Beau Rivage engineering department initiated a central plant upgrade project that included the improvement of the building and occupant comfort, an update and improvement of the outdated building automation system as well as the reduction of energy costs to help to pay for the upgrade and the improvements.

Answers for infrastructure.



The solution

To help the Beau Rivage Casino achieve its goals, Siemens proposed and implemented the following solutions:

- Install a new building automation system with Demand Flow™ chiller plant optimization strategy
- Optimize the pumping strategy with Demand Flow to increase the deliverable capacity of the chilled water plant and maximize plant efficiency
- Remove five unnecessary 90 kW secondary pumps to reduce pumping energy

After the building automation system with Demand Flow technology from Siemens was implemented, the Beau Rivage Resort & Casino Hotel realized the following results:

- Air-side capacity increased 33% to the full nominal 21 MW required to effectively cool the entire property
- Plant electrical demand was reduced by more than 500 kW, saving more than US\$300,000 in energy costs in the first year alone – representing a full return on investment for Beau Rivage

- Humidity within the property was reduced by approximately 10% as a result of supplying colder chilled water than before, further improving building and occupant comfort

The 24-hour operation presented unique challenges during the Demand Flow implementation: It was critical to the Beau Rivage that guest rooms and gaming areas never lose chilled water and that the project could not interfere with business operations. Siemens was able to complete the project within a two-month time frame and fulfill these customer requirements.

Because the Demand Flow optimization solution was so effective and successful, when the engineering department designed a new plant for the Beau Rivage facility, it decided to include the Demand Flow solution again.

Highlights

- Improvements in comfort were felt immediately by customers and employees
- Air-side capacity increased 33% to the full nominal 21 MW
- Plant electrical demand reduced by more than 500 kW
- Savings of more than US\$300,000 in the first year alone
- Resort operation not interfered during implementation