

NV Energy Sure Bet Program: Project Snapshot

New Chiller Technology Produces Multiple Benefits

The 41,000-square-foot Black Mountain Recreation Center/Aquatic Complex in Henderson, Nevada, serves the community seven days a week through a diverse array of programming and special events for people of all ages. Its features include a fitness center, game room, gymnasium, indoor cycling area, meeting/classrooms, multi-use room, racquetball/volleyball courts, tennis courts and a seasonal aquatic complex.

The City of Henderson, which owns and operates the complex, capitalized on an opportunity to save energy by replacing the existing 200-ton McQuay water-cooled chiller with a 150-ton McQuay chiller equipped with Turbocor compressor technology. This new technology created benefits for multiple points of operation—from energy and maintenance costs to occupant comfort.

Effective heating and cooling is essential for maintaining a comfortable and safe recreation complex; it also comprises a large portion of the typical energy costs. Since the equipment carries a significant purchase price, it is important to maximize efficiency from the start. When the city was ready to upgrade to a more efficient chiller, it used an incentive of nearly \$13,000 from the Sure Bet Program to offset the initial cost.

In addition to measurable energy savings and maintenance benefits, the staff and members at Black Mountain Recreation Center are enjoying quieter operations and improved comfort. The maintenance department reports more stability in setting and maintaining temperatures throughout building as well.

EQUIPMENT BENEFITS

- Turbocor technology features a compact, oil-free compressor design with impellers and shaft suspended on magnetic bearings. Because the rotating shaft and attached impellers are the only moving parts in the compressor, this design improves reliability and minimizes maintenance.
- The compressor operates at low noise and vibration levels and, at full capacity, draws less than half as much current as the old chiller. Onboard digital electronics enable the compressor to self-correct, allowing nondestructive slow-down in the event of power loss.

PROJECT SUMMARY

Building Type:

Municipality

Project Type:

Retrofit

Measure:

150-ton Turbocor technology chiller

NV Energy Sure Bet Incentive:

\$12,844

Annual Projected Electricity Savings:

226,300 kWh



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