

John Muir Medical Center

Variable Speed Drive Project Cuts Operating Costs



John Muir Medical Center is the only designated trauma center for Contra Costa County and portions of Solano County, California. Built in 1963, this acute care facility is recognized as one of the region's premier health-care providers. It is a busy place and requires a lot of electricity to meet the needs of its patients. With energy being the largest single line item in the yearly budget, management began looking for the most efficient way to cool the building.



The 322-bed, 368,000-square-foot John Muir Medical Center is located in Walnut Creek, Calif., where industrial electricity prices can exceed \$0.13 per kilowatt hour. Prior to 2004, the healthcare facility used chillers with compressor motors rated at an aggregated 1,500 hp, and at times the lights in the building would dim when the chillers were activated. The director of facilities management, Vince Scoccia, was looking for a way to save money on operating expenses, correct the electrical and mechanical problems associated with the chiller system, and show a significant return on investment with the project.

Scoccia engaged Carrier Commercial Service to retrofit the chillers with variable speed drives (VSDs). VSD projects provide the biggest payback when they are focused on

the largest motors and those with the longest run times. These can include compressor motors, air handler motors, cooling tower motors and pump motors. By matching the speed of the VSDs to the cooling demand, energy savings were projected at \$54,150 per year. In addition, Carrier worked with John Muir and the Pacific Gas and Electric utility company to qualify the project for a utility rebate of \$63,173. With a payback estimated at 3.6 years, this project showed a very attractive return on investment.

Bob Foster, supervisor of operations at John Muir, observed that the VSD project went well beyond the financial benefits. "The lights don't dim anymore when the chillers come on," he said, "and mechanical troubles seem to have gone away."

Scoccia reported the VSD project has gone a long way toward reducing operational expenses. He noted, "Each dollar saved equates to 20 dollars of revenue, and what finance officer would not like that?!"

The VSD project provided energy savings and operational benefits that were immediate and are ongoing. The patients are enjoying the comfort of the improved cooling system, while the facility is enjoying the financial advantage of a much healthier bottom line.



Implementing a VSD solution from Carrier Commercial Service, the 322-bed, 368,000-square-foot John Muir Medical Center, located in Walnut Creek, Calif., is projecting an energy savings of \$54,150 per year.