Sure Bet for Schools

Variable Frequency Drive installation on Fan Blower Motor

Pau-Wa-Lu Middle School, Douglas County School District

Project Description:
Installed a Variable Frequency Drive (VFD) on the fan blower motor used in conjunction with the cooling tower, which is expected to reduce overall electric costs and increase the efficiency of the cooling tower system.

Contractor: Yamas Controls Southwest, Inc.

Results/Benefits:
The blower motor is used in conjunction with the existing cooling tower. Cooling tower use is dependent on the load required and outside ambient air temperature. The system was monitored before the installation for baseline readings and there are plans to monitor the motor again in the spring to more accurately measure actual operation and hours of use. It is expected that most of the energy savings will take place during the cooler spring and fall months when the full load of the cooling system is not needed. This information will be used to provide Douglas County and other school districts with information that will aid in determining when such a conversion should be implemented based on energy savings and estimated payback.

It was also originally intended that the information from this installation would be used in a student demonstration project but after further investigation, and the fact that staff would be using logging equipment on electrical circuits, it was decided not to pursue this effort.

Project Details:

	Total
On-Peak Demand Savings	9.48 kW
Annual Energy Savings	10,621 kWh
Total Project Cost	$7,087
Annual Energy Cost Savings*	$1,168

* Assumes that the electricity rate is $0.11/per kWh