



what's the big idea?

commercial
residential
industrial

Variable Frequency Drives Slash Energy Use at Select Onion's Processing Plant

Situation

Select Onion uses eight large buildings to store onions for its processing operations. Each building has multiple industrial fans and each fan is approximately 3 feet in diameter. The fans circulate cool air through special duct work in the buildings to maintain the onions in their peak state after harvest.

Challenge

The existing fans had conventional magnetic starters, which meant there were only two states: "off" or "on".

Select Onion realized this was not the most efficient approach and began looking for solutions to cut their energy use while maintaining the highest quality storage conditions for their onions.

Solution

Select Onion worked with Idaho Power, Enterprise Electric, the state of Oregon and the federal government, and identified Variable Frequency Drives as the best energy-saving solution. As their name implies, Variable Frequency Drives operate at variable speeds. This allows them to use less power overall and run industrial equipment like large circulation fans much more efficiently.

Enterprise Electric installed the Variable Frequency Drives on 36 fans over a 9-week period. In addition, Enterprise Electric installed line filters that eliminate surges and spikes to clean up the power supplied to the Variable Frequency Drives, a necessary condition for optimal operating conditions.

The project was scheduled so that the new equipment would be fully installed and operational prior to the fall harvest.

In fact, the project was completed on time and on budget, without disrupting on-going operations in the rest of the facility.

Incentives from Idaho Power and grants from the state of Oregon and the federal government helped defray equipment and installation costs, setting Select Onion on the fast track to realizing a return on their investment in a relatively short period of time.

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