

CASE STUDY
COMPRESSED AIR SYSTEM



EASTERDAY FARMS

receives \$4,384 incentive for new, energy efficient compressed air system.

The Bonneville Power Administration's Energy Smart Industrial program has had tremendous success working with public utilities and their industrial customers to improve energy efficiency throughout the Pacific Northwest. In addition to financial assistance for replacing or retrofitting older systems with energy efficient alternatives, many companies receive incentives for new capital equipment – often as part of facility or business expansion.

ENERGY EFFICIENCY EFFORTS AID BUSINESS EXPANSION

Located on 17,000 acres in Pasco, Washington, Easterday Farms has packaged and shipped fresh produce since 1958. Today, the family-run business – spanning three generations and counting – continues to expand. In 2010, Easterday Farms added a brand new, 80,000 square-foot potato packing house to its operations. The warehouse and packing line use the latest in technology to handle, sort and pack Russet, yellow and red potatoes efficiently, safely and with the highest possible quality.

"Compressed air is critical for facilities that use pneumatic packaging equipment," says Andrew Wills, Production Manager for Easterday Farms. "And we were weighing a couple of options for our new potato packing house."

While both options were 60 HP air compressors, one possessed a fixed-speed motor and the other featured a variable-frequency drive (VFD) and 660 gallon air receiver. Although the latter came with a higher price tag, it was more efficient and better suited to the sporadic demand of potato processing and packaging. The VFD-controlled compressor offered improved part-load efficiency, so that if Easterday Farm's processing capacity was operating at 30% the compressor slowed down to produce just enough pressurized air. Also, a variable speed compressor has a much tighter pressure band, which typically reduces the discharge pressure by three to five pounds per square inch.

"Part of our mission is being sustainable and environmentally friendly, and we wanted the new facility to be energy efficient," says Wills. "Plus, our utility suggested incentive dollars might be available for the higher-efficiency system."



COMPANY
Easterday Farms

UTILITY
Franklin County PUD

PROJECT
Air compressor and receiver for
new facility

PROJECT COST
(above and beyond less efficient option)
\$7,099

PROJECT INCENTIVE
\$4,384

ENERGY SAVINGS
(compared to less efficient option)
16,081 kWh/y

ENERGY COST SAVINGS
(compared to less efficient option)
\$564 per year

CONTINUED

For more information about BPA ESI:
Visit www.energysmartindustrial.com
or contact your local utility provider.

INCENTIVES DRIVE PROJECT FORWARD

The utility, Franklin County PUD, contacted a BPA ESI representative, who conducted calculations to compare the energy consumption of the two options and determine possible incentives. When told that financial assistance was available, Easterday Farms selected the variable-speed air compressor and receiver.

"It was a no brainer," Wills says. "Quite frankly, we couldn't afford to not do it."

While the new compressed air system cost \$7,099 more than the less efficient option, the company received a \$4,384 incentive payment from Franklin County PUD through the BPA ESI program to offset the additional expense. Compared to the less efficient option, Easterday Farms is saving 16,081 kWh and \$564 annually.

NON-ENERGY BENEFITS CONTRIBUTE TO ROI

A few non-energy benefits include the fact that a variable speed compressor maintains a steady pressure, normally within plus or minus two pounds per square inch of the pressure set point, and when part-loaded it's usually quieter. Also, the VFD and air receiver minimize wear and tear on the air compressor, reducing maintenance costs and increasing the lifespan of the system.

"Above and beyond the financial assistance, ESI is a great program and it was a very pleasant process. Everyone was extremely helpful and did everything they could for us," says Wills. "Anything we do in the future, we will certainly look into energy efficient options and incentives." ●

For more information about BPA ESI:

Visit www.energysmartindustrial.com or contact your local utility provider.