



Agricultural Energy Efficiency

Your utility recognizes that energy efficiency is the premier low-cost source of new energy and works to bring energy savings to the agriculture industry. By saving energy, farmers, dairies, and ranchers may be able to reduce energy costs, increase irrigation uniformity, decrease the amount of water and fertilizer required, or potentially even increase yield. Through energy-efficiency incentives, your utility offers services and financial reimbursements to farmers for eligible energy-efficiency measures. Contact your local public utility to learn how you may be eligible for incentives to increase energy efficiency in the following areas:

Livestock Waterers

Do you take care of livestock during the winter months? An immersion tank heater uses a lot of electricity. Replace the tank with a non-electric tank, or add a thermostatically controlled outlet to limit tank-heater operation on freezing days, but still provide fresh water to your animals—and save electricity.

New high-efficiency irrigation pumps

Over time, some irrigation pumps may become worn out or less efficient than ideal. Or your old irrigation pump might not be a good match to your current irrigation system requirements. Installing a new more efficient pump will help restore your irrigation system to the best operating point and save energy. If you install a Variable Frequency Drive (VFD), you can save even more energy.

Variable Frequency Drives

VFDs are designed to adjust water pump motor speed to match your changing irrigation needs, controlling the frequency of the electrical power that's supplied to your motor. Even small speed adjustments using a VFD can create big energy savings, often as much as 10 - 20 percent. You will also get greater precision and tighter control over water distribution and pressure, and help the pump match-flow requirements. A new calculator is now available to make estimating savings and applying for incentives easier than ever.

Irrigation Hardware Upgrades

Energy-efficient irrigation hardware, such as new nozzles and gaskets, can provide more uniform water application, reduce unnecessary irrigation, and save energy. As equipment wears out, making the switch to more energy-efficient hardware is one of the easiest ways for you to start saving water and power.

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Low Elevation Spray Application (LESA)

LESA can provide more uniform irrigation application for all of your crops through the conversion of your center pivot irrigation system to lower sprinkler heads—bringing them closer to crops. This greatly reduces water evaporation during irrigation, and reduces the overall pressure and energy required to efficiently water crops for a low-pressure way to save.

Irrigation Pump Testing

Irrigation system analysis or pump testing may identify opportunities to increase the efficiency of a pumping plant and irrigation delivery system. These opportunities may include low-pressure conversion for center pivots and laterals, reduction of friction losses in piping, and rebuilding or replacing pumps, and trimming pump impellers.

Lighting

In addition to energy-cost savings of 25 - 50 percent, energy-efficient LED lighting upgrades and controls can increase visual acuity and lighting equipment life, improve security, and may also improve worker safety, productivity, and quality of work.

Dairies

BPA supports utility incentives in dairies that include barn and area LED lighting, chiller improvements, and VFD applications on vacuum pumps.

Wineries

Many processing applications at wineries—including crushing, destemming, pumping, cooling, and fermenting—are ripe for energy improvements. Energy-saving enhancements such as lighting upgrades, HVAC, pipe insulation, compressed air, VFDs, and refrigeration are all eligible opportunities for utility incentives.

Your utility can help

Call your local utility today to learn more about Agricultural energy-efficiency and available incentives for energy-saving improvements.

Bonneville
POWER ADMINISTRATION



Visit www.bpa.gov/EE/Sectors/Agriculture for more information

