

Agriculture Utilities Group

January 30, 2019



Agenda

- Agriculture Program Updates Stephanie
- Customizable marketing collateral Boyd
- Interpreting Invoices Charlie
- EPA WaterSense Controllers Tom
- Review new measures Tom
- VFD Calculator walk-through Tom

Agriculture Program Updates

- Resource Plan: Ag cost-effective and desirable for load shape
- Loads of measures to utilize:
 - Freeze resistant stock water tanks/fountains
 - Irrigation system upgrades
 - Pump testing
 - VFD's for Ag pumps
 - Transformer de-energization
 - Agriculture Construction
 - Lighting, barns and other... Lighting Calculator 3.3 expires 9/30!



Irrigation Hardware Updates

- RTF changes to baseline methodology affected all measures in the category
 - Savings and payment changes will be noticed
 - Some will be deactivated
- New measures
 - LESA/LEPA/MDI Upgrade
 - LESA/LEPA/MDI Sprinkler Replacements
 - Pivot and Linear Tower Gaskets



New Collateral Review



Agricultural Energy Efficiency

Bonneville Power Administration (BPA) 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 Favorite Utility** offers services and financial reimbursements to farmers for eligible energy-efficiency measures. Contact **Your Favorite 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 Favorite Utility can help

Call **Your Favorite Utility** to learn more about Agricultural energy-efficiency and available incentives for energy-saving improvements.

Bonneville
POWER ADMINISTRATION



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www.yourfaveutility.com

Contact us for more information ▶

New Collateral Review

- Customizable on the Marketing Portal
- Non-customizable version available on Agricultural Marketing Toolkit [page](#) as *General Agricultural Energy Efficiency Flyer*

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Interpreting Invoices

- **Best Practice**
 - Mark up invoices for expedited processing
- **AIRHA40005** Goosenecks
 - Riser elbows *are not* Goosenecks
- **AIRHA40006** Hub Replacements
 - Female & male components should not be claimed separately, they are one unit

Current Electric Solution 5/10/2018

| BILL TO | | SHIP TO | | | | |
|-------------|-------------|--|-----------|-----|---------------|-----------------|
| [REDACTED] | | [REDACTED] | | | | |
| Phone # | Fax # | | | | | |
| [REDACTED] | [REDACTED] | | | | | |
| P.O. NUMBER | TERMS | REP | SHIP | VIA | FOB | PROJECT |
| | Net 30 Days | | 5/10/2018 | | | |
| QUANTITY | ITEM CODE | DESCRIPTION | | | PRICE EACH | AMOUNT |
| 37 | E38 | 8" Round Back Gasket Out-of-state sale, exempt from sales tax | | | 3.90 0.00% | 144.30T 0.00 |
| | | AIRHA40003, Gasket replacement | | | | |

| QUANTITY | ITEM CODE | DESCRIPTION | PRICE EACH | AMOUNT |
|----------|-----------|---|---------------|----------------|
| 78 | 3x40 ALT | 3"x40' .050 Wall Aluminum Tube | 57.10 | 4,453.80T |
| 84 | WBLCR300 | 3" Western Coupler Set | 14.48 | 1,216.32T |
| 84 | S-Preas | Pipe Splice | 3.42 | 287.28T |
| 26 | MILES | Miles To Job Sight | 2.00 | 52.00T |
| 72 | TST13412 | 1 x 3/4 x 12 Sch 40 Swaged/Tapered Riser | 7.18 | 516.96T |
| 120 | WR33 | Wade Rain 3/4 Brass Impact - Full Circle | 11.56 | 1,387.20T |
| 1 | 2022-3202 | Permatex Anti-Seize - Roz | 11.25 | 11.25T |
| 14 | E36 | 6" Round Back Gasket Out-of-state sale, exempt from sales tax | 3.26 0.00% | 45.64T 0.00 |
| | | AIRHA40014, Pipe Repair | | |
| | | AIRHA40016, Replace leaking impact sprinkler w/ rebuilt or new impact sprinkler | | |
| | | AIRHA40003, Gasket replacement | | |

EPA WaterSense Custom Projects

- Landscape irrigation can use excessive water
- New technology uses weather input data to adjust sprinkler system zone run time to meet requirements
- This can save water and pumping energy (amounts vary). For city water, it also saves on treatment costs.
- EPA WaterSense-labelled irrigation controllers can save water and energy. Some major jurisdictions require it.
- BPA is willing to look at custom projects.

New Agriculture Measures, Oct 2018

Tom Osborn

Implementation Manual Chapter 13.2

| IM Section | New Measure Description | Payment |
|------------|---|--|
| 13.2.1.1 | Variable Frequency Drive for Centrifugal Agriculture Pumps (BPAQ) (<i>Retroactive</i>) | \$50/HP |
| 13.2.1.2 | Variable Frequency Drive for New Agriculture Pump Installations (BPAQ) (<i>Retroactive</i>) | \$80/HP Turbine \$50/HP Centrifugal |
| 13.2.1.3 | Agriculture New Pump Efficiency Upgrade (BPAQ) (<i>Retroactive</i>) | \$50/HP |
| 13.2.1.4 | Thermostatically Controlled Outlets | \$14 each |
| 13.2.1.5 | Thermostatically Controlled Stock Tank Deicers | \$52 each |

VFD Calculator Walk-Through

- On Ag Sector Page [here](#)
- [Centrifugal Pump VFD Deemed Savings Tool \(2018\)](#)
- [New Construction Turbine and Centrifugal VFD Deemed Savings Tool \(2018\)](#)
- [Turbine Pump VFD Deemed Savings Tool \(2018\)](#)