



Audio instructions

Welcome to BPA's AUG Webex Meeting!

Note: Your audio is muted upon entry.

Audio connection **Preferred choice**

Use computer audio

Call me at +1

Call in Call me at

Don't connect to audio

Note: The incoming call may be listed as **POTENTIAL SPAM**.

Second choice: In the example above, instead select **Call in** and use your phone to call into the webinar. A window will pop-up with your meeting **Call in** information.

Call In

Call in from another application

- Call**
US Toll
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[Show all global call-in numbers](#)
- Enter**
Access code: **XXX XXX XXXX #**
Attendee ID: **XXXXXX #**

Last choice: Use Computer for Audio. Connect a headset to your computer for best results.

Viewing EPA Computer's ap...

PRESENTATION

ENERGY EFFICIENCY

Mute Start video Share Participants Chat

Use to mute and unmute

Use to express emotion

Use to view participant list and chat panel

JANUARY 2024
Agricultural Utility Group Meeting

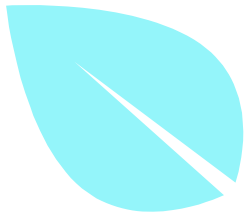
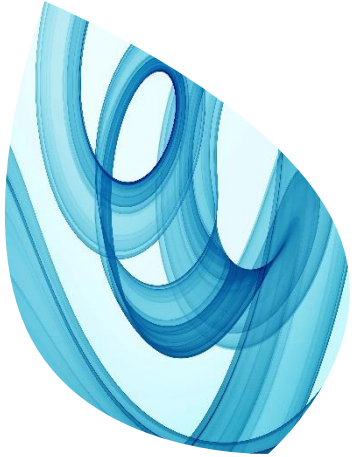
Agenda

- 10:00a – 10:10a Come together, meeting norms, roll call – David Lee
- 10:10a – 10:30a New Ag Energy Audit Measures Resource Walk-through – David Lee
- 10:30a – 10:35a SPIF program implementation – Tom Osborn
- 10:35a – 10:50a Self-funded policy for Marijuana grow EE project submissions – Lita Mahan
- 10:50a – 11:00a Customer Utility Feedback on Marketing Opportunities – Tom Osborn



Ice Breaker

If you were a vegetable or a fruit, what would you be and why?



Ag Sector Team Members

- David Lee, Ag Sector Lead/Program Manager
- Ben Mabee, Planning & Evaluation
- Dick Stroh & Travis Wood, Engineering
- Tom Osborn, Sector Tech Lead, Engineering
- Dena Hilde, EER Liaison
- Lita Mahan, COTR
- Larry King, Ag Program Specialist
- Jonathan Farmer, Ag Program Support Specialist 2
- Rachael Ettelman, Marketing Support



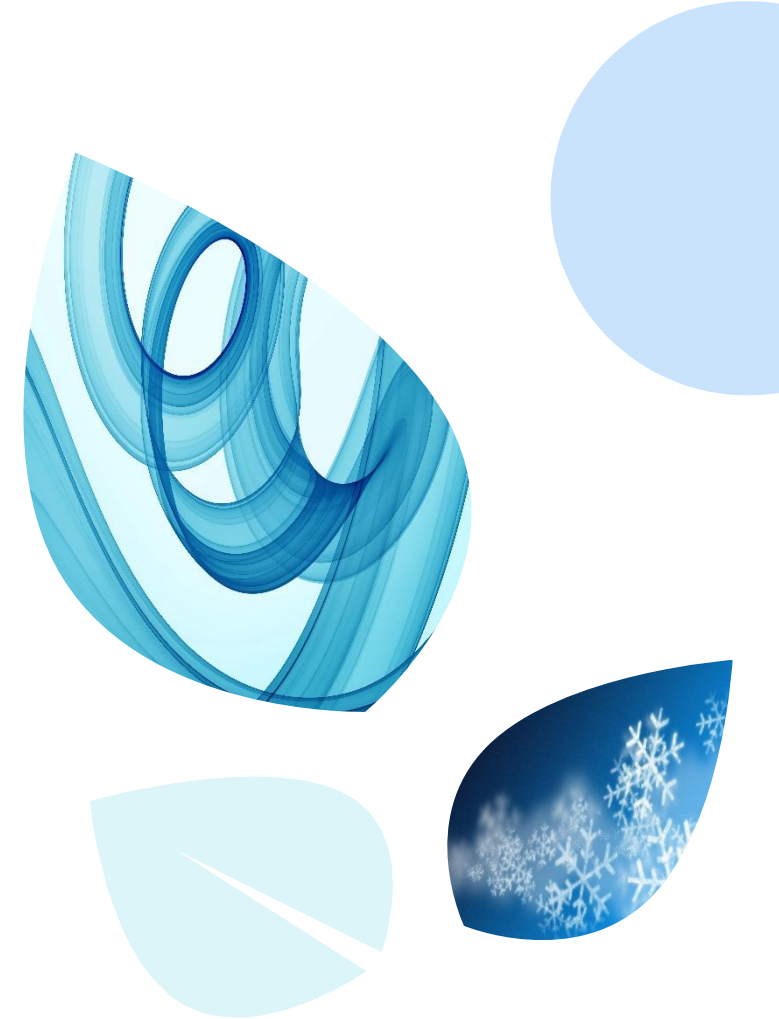
BPA Agriculture Energy Audit Measures

- ❖ Became effective October 1, 2023
- ❖ 7.8.1 Ag Energy Audit Screening
 - ❖ \$150 per site
- ❖ 7.8.2 Ag On-site Energy Audit (must complete 7.8.1 prior to proceeding)
 - ❖ Up to \$15,000 (minus outside funding)
- ❖ No savings measures that should lead to identifying and implementing other Ag program UES measure and custom projects that have energy savings.



What is an Ag Energy Audit?

- ❖ Identifies/Analyzes Ag energy efficiency opportunities
 - ❖ Irrigation system/hardware upgrades/conversions
 - ❖ VFDs for pumps, pump efficiency upgrade opportunities
 - ❖ Lighting upgrades
- ❖ Follows American Society of Agricultural and Biological Engineers (ASABE) 2009 standard
- ❖ Performed by a CEM, USDA NRCS TSP, P.E., or experienced Ag Energy Auditor



Where?

- ❖ Irrigated Crops
- ❖ Dairy
- ❖ Livestock or Poultry Farm
- ❖ Indoor Ag Grow/Greenhouse/Controlled Environment Ag Facility
- ❖ Vineyard
- ❖ Any other Ag Operation



Why do it?

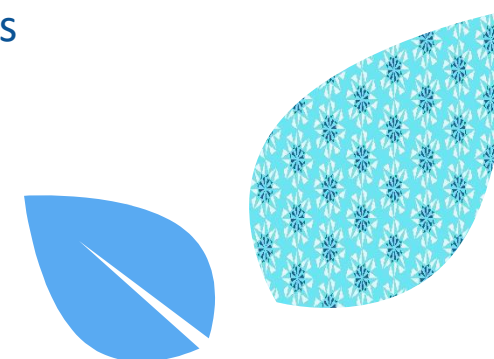
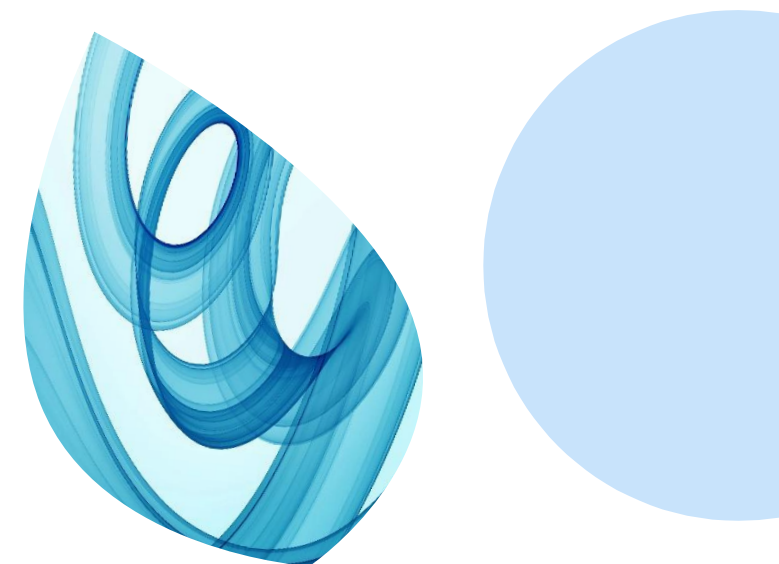
❖ For the Utility

- ❖ Creates pipeline of customer energy efficiency projects
- ❖ Assists in EEI spend planning
- ❖ Helps your members

❖ For the Ag Producer

❖ Comprehensive Energy Audit Report

- ❖ Business case for Ag Producer to make financial decision on implementing EE projects
 - ❖ Energy and O&M cost savings
 - ❖ Available utility incentive
 - ❖ Available funding sources
 - ❖ Enables implementation of low cost measures
 - ❖ Assists in planning for capital projects
- ❖ Completes necessary step to get USDA Rural Energy for America (REAP) grant or loan



Ag Energy Audit Measures Resources

Located at BPA Document Library:

bpa.gov/energy-and-services/efficiency/document-library

Custom Projects +

Custom Programs +

Agricultural Sector -

- [ANSI/ASABE Audit Standard](#)
- [BPA Ag Energy Audit Standard](#)
- [ASABE Guide to Ag Energy Consultants May 2022](#)
- [Ag Energy Audit Screening Form](#)
- [Ag Energy Audit TSP Resources](#)
- [ODOE Audit Program](#)
- [Existing Centrifugal and Turbine Pump VFD Deemed Savings Tool](#)
- [New Construction Pump VFD Deemed Savings Tool](#)
- [Agricultural Pump Efficiency Upgrade PIF](#)
- [Agriculture Hardware Conversion](#)
- [Freeze-Resistant Stock Water Tanks and Fountains - RTF Specifications](#)
- [Irrigation Pump Testing and System Analysis BPA Screening Tool](#)
- [Dairy Milking Machine Vacuum Pump VSD Calculator](#)
- [Transformer De-energization Worksheet](#)

Commercial Sector +

Live Walk-through of Measure Resources

- ❖ Ag Energy Audit Screening Form
- ❖ ANSI/ASABE Audit Standard – Performing on Farm Energy Audits
- ❖ BPA Ag Energy Audit Guide/Standard
- ❖ ASABE Guide to Energy Consultants – May 2022
- ❖ Ag Energy Audit TSP Resources
- ❖ ODOE Audit Program



SPIF (Sales Performance Incentive Fund)

An incentive that encourages a sales representative to sell a specific item or group of items. The term is often used as a synonym for the word "bonus."

- ❖ Benton PUD used a SPIF strategy to influence contractors to install connected thermostats.
- ❖ They held back some of the rebate funds, and offered a SPIF of \$50 for each thermostat installed.
- ❖ Had an agreement with two commercial HVAC vendor/contractors with a limit of 100 thermostats each.
- ❖ It worked well! The vendor contractors installed 200 thermostats and depleted the utility's allocated SPIF in 2 months.

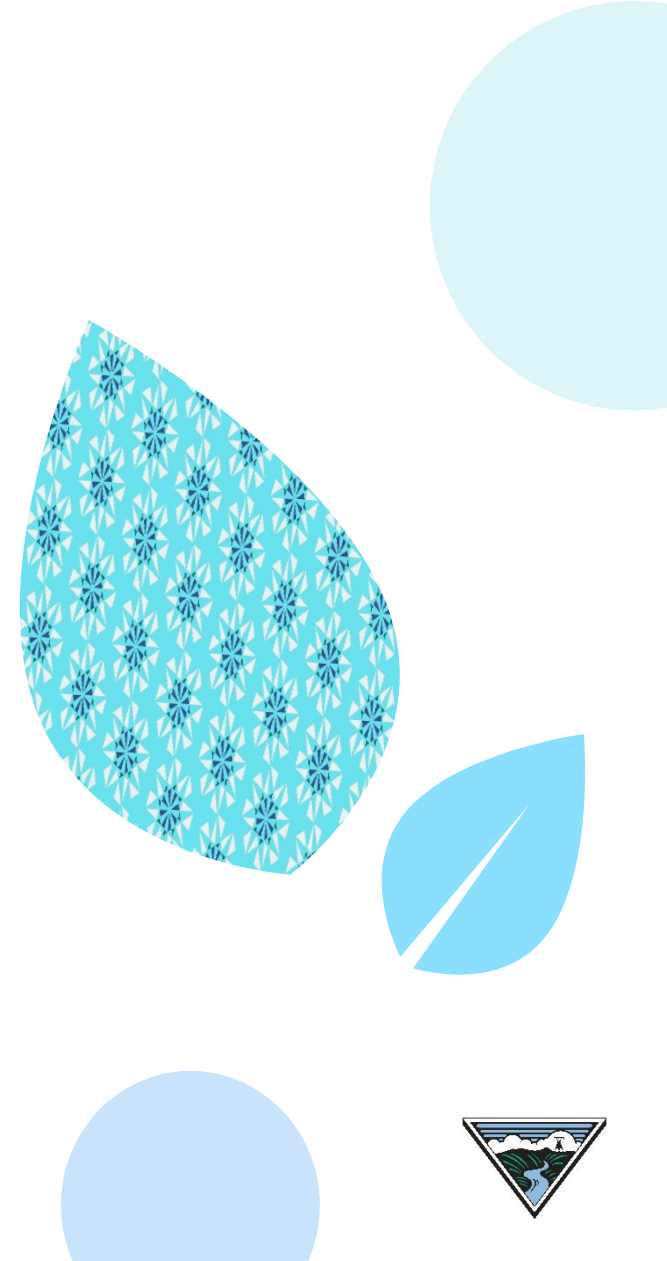
Could the SPIF strategy work for VFDs, sprinkler packages, other measures?



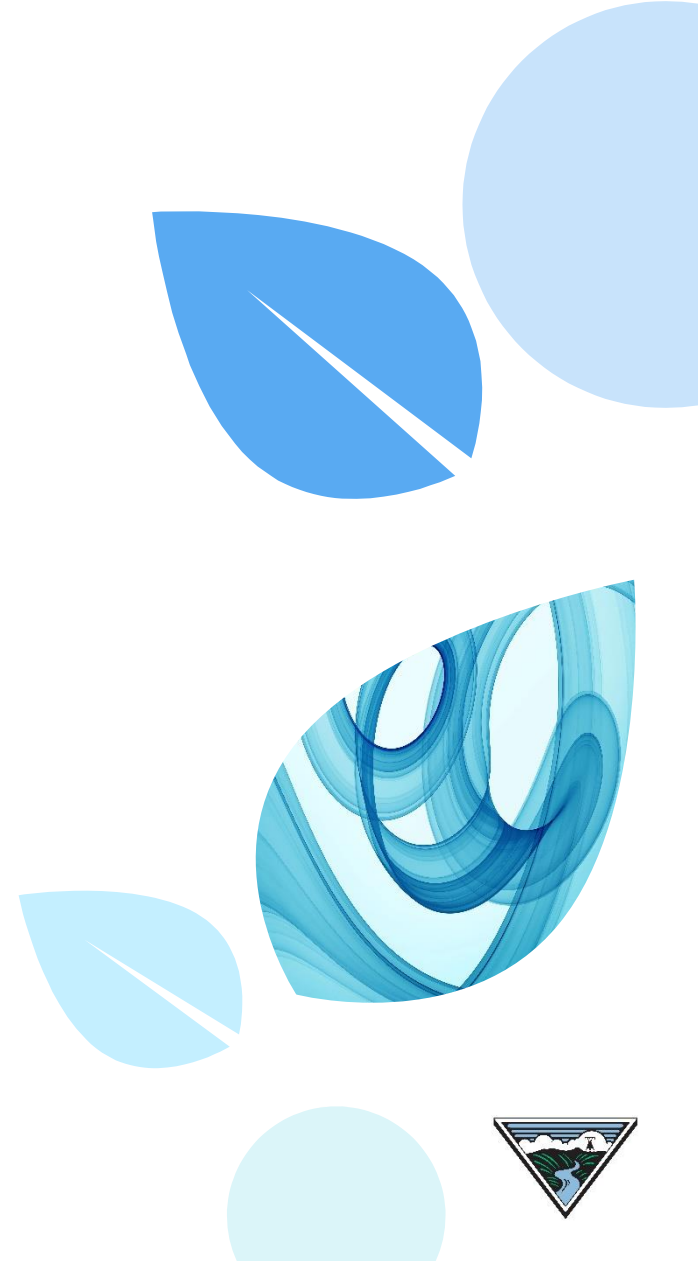
BPA GUIDANCE

Hemp and Marijuana

- ❖ Washington, California, Oregon and Montana have adopted laws legalizing the cultivation, distribution and sale of marijuana.
- ❖ As a federal entity, BPA follows the legal direction provided by the U.S. Department of Energy and the U.S. Department of Justice as it pertains to marijuana-related business loads.
- ❖ Because the cultivation, distribution and sale of marijuana remains prohibited by federal law, federally owned, controlled or administered resources may not be purposely provided to facilitate the commission of a federal offense. As a result, BPA's guidance regarding energy-efficiency activities related to marijuana-related business load at this time is as follows:



- ❖ The cultivation, distribution and sale of marijuana remains prohibited by federal law, federally owned, controlled or administered resources may not be purposely provided to facilitate the commission of a federal offense. As a federal entity, BPA follows the legal direction provided by the U.S. Department of Energy and the U.S. Department of Justice as it pertains to marijuana-related business loads.
- ❖ **Though BPA will not provide funding or support for measures or projects involving marijuana-related business load, BPA will allow customers to report self-funded activities that meet the rules and requirements of the Implementation Manual.**
- ❖ For more information see, Clarification on BPA's Energy Efficiency Programs and Marijuana.



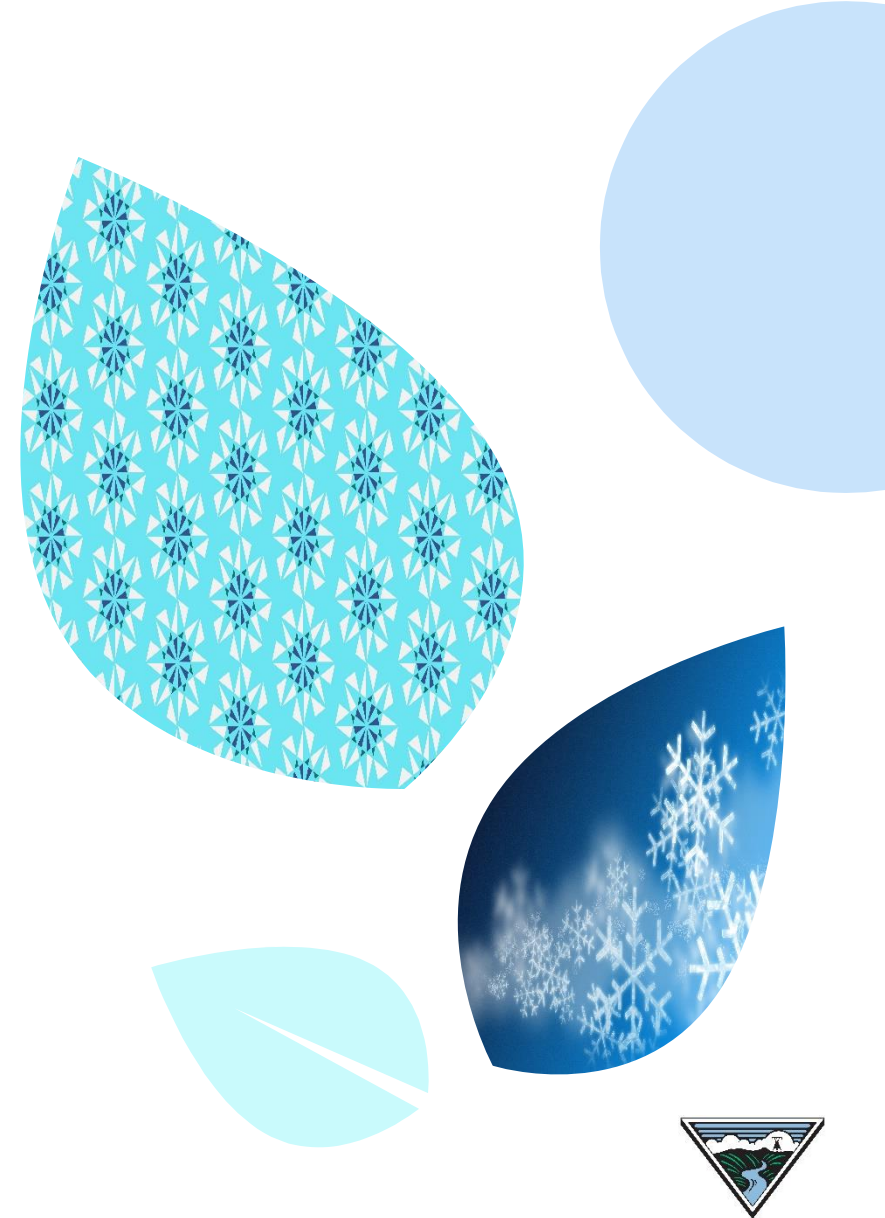
BPA Engineers and COTR guidance is as follows:

- ❖ The BPA policy on cannabis projects allows the COTR and QC review of self funded cannabis projects for compliance and engineer review.
- ❖ BPA cannot provide support for the development, analysis, or entering the project in BEETS
- ❖ If a utility submits the project in BEETS as self-funded, we are allowed to review the project to ensure it meets our requirements to count the energy savings.



- ❖ BPA's Energy Efficiency Incentive, or EEI, dollars can now be used for energy-efficiency projects at facilities involved in the cultivation, processing, and sales of **hemp and hemp-derived products** in states with U.S. Department of Agriculture, or USDA, approved hemp plans.
- ❖ Hemp and hemp associated load is allowed for energy efficiency program participation in states where such activities have received USDA approval.
- ❖ As of January 1, 2022, all states within the BPA service territory have USDA-approval for hemp production.

*For more information, see Hemp in the Energy Efficiency Program and Hemp FAQ



- ❖ The 2018 Farm Bill removed hemp from the controlled substances list and retained USDA regulation of hemp production. USDA issued an interim rule governing production of industrial hemp on October 29, 2019. This rule requires states and tribal entities to submit a plan for USDA approval prior to implementation.
- ❖ Based on this change in the rules governing hemp, BPA will no longer exclude hemp and hemp associated load from our energy-efficiency program in states where such activities have received USDA approval.
- ❖ As of January 1, 2022, all states within the BPA service territory have USDA-approval for hemp production.
- ❖ BPA will take no proactive steps to ensure individual program participants are compliant with USDA regulations, nor will we proactively seek to ensure that program participants are compliant with other state and federal regulations governing the sale or manufacture of hemp derivatives. This allowance includes all hemp cultivation, processing, manufacture, and marketing of hemp and hemp-derived products (inclusive of hemp-derived products containing CBD).
- ❖ Eligibility for a project is based on the date USDA approved a state's plan. Projects with completion dates on or after the USDA plan approval will be accepted.



State Hemp Plan USDA Approval Dates

- ❖ California March 22, 2021
- ❖ Idaho November 1, 2021
- ❖ Montana January 1, 2022
- ❖ Nevada May 28, 2021
- ❖ Oregon January 1, 2022
- ❖ Utah November 11, 2020
- ❖ Washington November 19, 2019
- ❖ Wyoming February 20, 2020



Utility Feedback

BPA is looking for a few good stories to promote and share!

Success Story

[Farmer Felipe Jimenez sees pay-off from irrigation upgrades - Energy Trust Blog](#)



Bonneville Power Administration

Sep 6, 2023

Cowabunga! An Eastern Washington dairy farm, Benton REA REA and BPA are seizing the moo-moment to help these beautiful ladies stay cool during the summer heat. How? With 65 new energy efficient variable frequency driven fans, using humidity and temperature controllers. These extra-large 3HP 74-inch fans are the first to be installed in a dairy in the NW! By limiting the maximum speed of the fans to 80%, the energy consumption is half of normal. And when the fans first came on, the cows udderly quieted down. It is believed that the happy cows are less stressed and produce more milk too! You don't need a cowculator to know that'll add up to some big benefits!



You and 32 others

3 comments 3 shares



IRRIGATION SYSTEM CONVERSION AND HARDWARE REBATES



For Irrigated Agriculture Applications inlandpower.com

Irrigator Member Name	Phone #
Member Account #	Meter #
Mailing Address	City State Zip
Installation Address or service location (if different than above) or GPS Lat + Long	
Pivot ID or field name or number(s)	
Email	Installed date

System	New System	Quantity		Rebate Per Drop		Subtotal
A. High Pressure conversion from high to low pressure AIRHA40227 (eg reduce system pressure by 15 psi) or from MESA AIRHA40228 (include gooseneck, drop tube, regulator, sprinkler, nozzle) IM 7.6.1	LESA (Low Elevation Sprinkler Application)	X		\$18	=	
	LEPA (Low Energy Precision Application)	X		\$18	=	
	MDI (Mobile Drip Imig)	X		\$18	=	

B. Sprinkler replacement IM 7.6.2	High Pressure AIRHA40225	X	\$16	=	
	MESA AIRHA40226	X	\$15	=	
	LESA AIRHA40229	X	\$7	=	
	LEPA AIRHA40229	X	\$7	=	
	Mobile Drip AIRHA40229	X	\$7	=	

IRRIGATION SYSTEM CONVERSION AND HARDWARE REBATES



C. Existing System Conversion from High Pressure to MESA IM 7.6.3	MESA AIRHA40224	X	\$18	=	
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D. Pivot/Linear Move	Replace leaky drain gasket	X	\$3/drain	=	
Subtotal:					

System	Component	Quantity	Rebate	Subtotal
E. Wheel and Hand Lines & Pivot Sprinklers on Top	High Pressure to low pressure conversion (eg reduce pressure by 15 psi) with new sprinkler, nozzle, and low pressure regulator AIRHA40230	X	\$16/head	
F. Wheel and Hand Lines	Replace leaky drain gasket with new gasket	X	\$3/drain	=
	Replace leaky gasket	X	\$4/gasket	=
	Replace worn impact sprinkler w/new or rebuilt impact sprinkler	X	\$1/sprinkler	=
	Replace worn nozzle (includes Flow Controlling Nozzle)	X	\$3/nozzle	=

G. Wheel Lines	Replace Thunderbird wheel line hubs	X	\$4/hub	=
	Rebuild or replace leaky malfunctioning leveler	X	\$1/leveler	=

Invoice	Vendor/supplier invoice(s)	Attach invoices
		Subtotal: \$
		Grand Total Page 1 and 2: \$

Please contact your utility Agriculture Rebate Program specialist for more information. Purchase and installation must be made after DATE and installed in your utility service territory to be eligible. All incentives are subject to availability and may change at any time. Your utility reserves the right to inspect for program compliance. By signing, the Member certifies that the above information is true and accurate to the best of their knowledge.

Member Signature _____	Date _____
GL: _____ Inland Power Representative _____ Effective 4/1/2023	Utility Use Only Pay \$ _____ Date: _____

Submit completed form to
conservation@inlandpower.com

Or mail to:
Inland Power
Attn: Conservation
PO Box A
Spokane, WA 99224





Agricultural Energy Efficiency

Northern Lights 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, we offer services and financial reimbursements to farmers for eligible energy-efficiency measures. Contact us 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.

CONTACT NORTHERN LIGHTS TO GET STARTED. ▶

CONTACT NORTHERN LIGHTS TO GET STARTED.



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 Northern Lights today to learn more about Agricultural energy-efficiency and available incentives for energy-saving improvements.



Northern Lights, Inc.
421 Chevy St
Sagle, ID 83860

MAIN OFFICE
(208) 263-5141

www.nli.coop

TOLL-FREE
(800) 326-9594

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





Aeneas Lake Irrigation District Sees Big Energy Savings

2023



Project Background

Aeneas Lake Irrigation District in Tonasket is seeing energy savings with the installation of a new 600 horsepower irrigation pump upgrade. The district irrigates 1,164 acres of farmland that includes orchards, hay and grass and serves 87 agricultural and residential customers. According to Maintenance Supervisor Bryan Sawyer, the original pump was installed in 1969 with various parts replaced several times over the years. Now that the replacement parts are obsolete and unavailable, it was time to work with their electric utility, Okanogan County PUD, to install the upgrade.

Results

- Aeneas Lake Irrigation District received an incentive check of \$38,815.33 from Okanogan County PUD.
- The incentive covered 70% of the project costs.
- The District is enjoying an annual energy savings of 143,232 kilowatt-hours.
- The new pump is delivering more water with improved efficiency and less maintenance.
- Okanogan County PUD manages the incentive programs through funding by the Bonneville Power Administration, a major source of its electricity.



143,232

kWh Annual Energy Savings



\$38,815.33

Okanogan PUD Incentive Payment



Back row: Board Member Roger Sawyer, Maintenance Supervisor Bryan Sawyer, Board Member Anthony Jenkins, District President Jack Denison. Front row: District Secretary Page Davisson and future board member, Brinlee McCallum.



This is a huge win for our little district... So very thankful for this.

District Secretary, Page Davisson

What ideas do you have to save energy?

Okanogan PUD has multiple energy efficiency incentives for residential, commercial and other types of customers.

PUD Energy Services Dept
509-422-8428
www.okanoganpud.org



Questions?