

Klickitat PUD Agricultural Energy Efficiency Program Participation Requirements and Instructions

Thank you for your interest in our Agricultural Energy Efficiency Program. We are pleased that we have the opportunity to offer this service to you through our association with Bonneville Power. Because of this collaboration of funds, the information we collect from you is required to help determine your eligibility and may also be used to evaluate and audit data about energy use and the conservation program as a whole. With that, your information may be requested for certain site visits to evaluate the performance of the program and is to be kept available for three years. No personal information will be issued to the public.

The Agricultural Sector includes (1) by a farm or business of which the primary purpose is applying water for food production or vegetation growth (e.g., pumping and irrigation) and (2) by a ranch or aquaculture (aquafarming) business where the primary business is breeding or raising of domestic livestock, poultry, game animals, fish, oysters, etc. The storage and processing of farm products is not agricultural, and rather it is industrial with the exception of dairies and the storage of milk at the milking facility (note that homogenizing, dehydrating and bottling of milk and its derivatives are industrial). A facility may have a mix of both agricultural and industrial measures at the same location (e.g., winery operation with processing facility where the vineyard irrigation is considered agricultural and the grape processing facility is considered industrial).

PROGRAM REQUIREMENTS

All Agricultural measures must be installed according to KPUD, BPA, and manufacturer standards & specifications and are subject to inspection for the approval process. KPUD reserves the right to make changes to all programs and rebates are subject to the availability of funds through the Energy Efficiency Program.

NOTE TO CONTRACTORS: Please contact KPUD's Energy Services to obtain specifications and requirements as each measure may require special forms and procedures to be followed. All contractors must be licensed and bonded in the state of Washington and are responsible for following all local codes and laws.

REBATE OPPORTUNITIES

Klickitat PUD reserves the right to make changes to all programs and rebates are subject to the availability of funds through the Energy Efficiency Program. See measure specific details for rebate values as shown herein.

REBATE PAYMENTS WILL BE CAPPED AS NOT TO EXCEED ACTUAL APPROVED COST OF ANY PROJECT AND ARE SUBJECT TO AVAILABILITY

Program Description	KPUD Rebate
Freeze Resistant Stock Water Tanks/Fountains	\$165.00 each
Thermostatically Controlled Outlet	\$14.00 each
Irrigation System Hardware Upgrades	*See chart
Variable Frequency Drives & Pump Upgrades	\$50.00-\$70.00/HP
Irrigation Pump Testing & Analysis	* \$100.00 - \$600.00

* See associated rebate value chart

Livestock Watering: Freeze Resistant Stock Water Tank/Fountains: REBATE \$165.00

Qualifying specifications:

- Must replace an electric resistance stock water tank heater or permanently disabled unit;
- Must be new (not homemade or kit made);
- Enclosed, fully insulated;
- Water supply is hard-piped underground and stubbed into the insulated portion of the fountain;
- Contains no electric heat; and
- Possess a minimum One-year manufactured defect warranty.

Required Documentation:

- Livestock Watering Rebate Application.
- Detailed Invoice showing installed costs, equipment information and date of installation.
- Proof of minimum 1-year defect warranty.
- Pictures of before and after installation.

Livestock Watering: Thermostatically Controlled Outlet: REBATE \$14.00

Only one (1) outlet per pump house or utility room is eligible.

This measure requires the addition of a thermostatically controlled outlet or controller to control the heating load in a pump house or utility shed to prevent piping and other equipment from freezing. The thermostatically controlled outlet should turn on when the buildings ambient temperature is below 39 degrees Fahrenheit, and should stop providing power at a temperature no higher than 50 degrees Fahrenheit.

Required Documentation:

- Livestock Watering Rebate Application.
- Detailed Invoice showing installed costs, equipment information and date of installation.

Variable Frequency Drives (VFD) for Centrifugal Agricultural Pumps: REBATE \$50.00 per nameplate HP

This measure requires the addition of a VFD to an existing, fixed-speed, centrifugal-style irrigation pump that applies to pumping operations that deliver, distribute or transport irrigation water with qualifying VFDs from 7.5 to 1000 HP. Eligible installations are limited to CENTRIFUGAL pumps with substantial variation in head pressure requirements (20% variation or more). All new VFD installations must meet the IEEE 519 harmonics standards.

Required Documentation:

- Non-Residential Project Rebate Application.
- Approved KPUD Implementation Agreement.
- Complete the Agricultural Centrifugal Pump Tool (completed by Utility or BPA Engineer)
- Equipment/contractor invoice is to include: manufacturer, model number, type or size of equipment or product installed/used, quantity, order/purchase date and cost.
- Final on-site visit for documentation of final install including pictures.

Variable Frequency Drives (VFD) for Turbine Agricultural Pumps: REBATE \$70.00 per nameplate HP

This measure requires the addition of a VFD to an existing, fixed-speed but has a variation head flow or head requirements turbine irrigation pump that applies to pumping operations that deliver, distribute or transport irrigation water with qualifying VFDs from 7.5 to 1000 HP. Eligible installations are limited to turbine pumps with substantial variation in flow rate (20% variation or more) or discharge pressure requirements (10% variation or more). All new VFD installations must meet the IEEE 519 harmonics standards.

Required Documentation:

- Non-Residential Project Rebate Application.
- Approved KPUD Implementation Agreement.
- Complete the Agricultural Turbine Pump Tool (completed by Utility or BPA Engineer)
- Equipment/contractor invoice is to include: manufacturer, model number, type or size of equipment or product installed/used, quantity, order/purchase date and cost.
- Final on-site visit for documentation of final install including pictures.

Variable Frequency Drives for NEW Agricultural Pumps:

Centrifugal OR Turbine Pump: REBATE \$50.00 (Centrifugal) to \$70.00 (Turbine) per nameplate HP

This measure requires the addition of a new VFD to a new centrifugal or turbine style irrigation pump which operates at a fixed-speed and applies to pumping operations that deliver, distribute or transport irrigation water with qualifying VFDs from 7.5 to 1000 HP. Eligible installations are limited to pumps with substantial variation in flow rate (20% variation or more for turbine pumps) or discharge pressure requirements (10% variation or more for turbine pumps or more for centrifugal pumps). All new VFD installations must meet the IEEE 519 harmonics standards.

Required Documentation:

- Non-Residential Project Rebate Application.
- Approved KPUD Implementation Agreement.
- Complete the New Construction Turbine or Centrifugal Pump VFD Tool (completed by Utility or BPA Engineer)
- Equipment/contractor invoice is to include: manufacturer, model number, type or size of equipment or product installed/used, quantity, order/purchase date and cost.
- Final on-site visit for documentation of final install including pictures.

Agricultural NEW Pump Efficiency Upgrade: REBATE \$50.00 per nameplate HP

This measure requires the installation of a new (newly manufactured) centrifugal or turbine style irrigation pump to replace an existing one that applies to pumping operations that deliver, distribute or transport irrigation water that range from 20 to 500 HP. The existing pump being replaced must be centrifugal, turbine or submersible turbine. The new replacement pump must have the same or lower horsepower rating, unless it is coupled with a VFD. A change from turbine to centrifugal or centrifugal to turbine is allowed. All new VFD installations must meet the IEEE 519 harmonics standards.

Required Documentation:

- KPUD Agricultural Rebate Application.
- Approved KPUD Implementation Agreement.
- Complete the Pump Efficiency Upgrade form (completed by Utility or BPA Engineer)
- Equipment/contractor invoice is to include: manufacturer, model number, type or size of equipment or product installed/used, quantity, order/purchase date and cost.
- Final on-site visit for documentation of final install including pictures.

Irrigation Pump Testing & Analysis:

This measure is intended to help the irrigator determine irrigation system health and identify potential energy efficiency improvements. Ideally, the pump test will be performed on systems that are inefficient as determined by the Irrigation Pump Testing and System Analysis BPA Screening Tool. The results of the pump test could be used in developing the Custom Project proposal.

Test Type	KPUD Rebate
Simple System Evaluation	\$100.00
Simple System Irrigation Pump Test (e.g. open discharge)	\$200.00
Irrigation pump Test and System Analysis 400 acres or less	\$400.00
Irrigation Pump Test and System Analysis, over 400 acres	\$600.00
Irrigation Pump Test and System Analysis Complex Pumping System over 400 acres with multiple operating pumps	\$400.00 per main pump plus \$100.00 per booster pump

Requirements and Specifications:

- The irrigation pump must be electrically powered, 20 HP or greater and must not have been tested through BPA-sponsored pump testing services within the past five years.
- The irrigation pump must have been in operation for two (2) of three (3) previous years.
- The irrigation pump test must be performed by an individual possessing pump testing knowledge and experience.
- Customers and qualified vendors must use the Irrigation Pump Testing and System Analysis BPA Screening Tool (available from KPUD) to limit the amount of dry holes (i.e., pump tests that do not result in a BPA-approved custom project).
- The customer may choose from the following tests:
 - Simple System Evaluation: Measure pump discharge pressure and evaluate condition of the sprinkler nozzles.
 - Simple System Irrigation Pump Test (e.g. open discharge): Perform irrigation pump test.
 - Irrigation Pump Test and System Analysis: Perform irrigation pump test and evaluate mainlines and critical sprinklers.
- KPUD will deliver printed recommendation reports to the end-user.

Required Documentation:

- Non-Residential Project rebate Application.
- Completed Agricultural Irrigation Pump Testing and System Analysis.
- Electronic or hard copies of the completed Irrigation Pump Testing and System Analysis BPA Screening Tool, irrigation pump test, and recommendation report.
- Equipment/contractor invoice is to include: manufacturer, model number, type or size of equipment or product installed/used, quantity order/purchase date and cost.

Irrigation System Hardware Upgrades and Sprinkler Package replacements:

Each measure has some specific requirement as identified below: Ask KPUD for measure specific requirements.

System	New System	ID#	Rebate Per Drop	
A. High Pressure <u>conversion</u> from high to low pressure (eg reduce system pressure by 15 psi) or from MESA	LESA (Low Elevation Sprinkler Application)	40227/40228	\$13	
	LEPA (Low Energy Precision Application)	40227/40228	\$13	
B. Sprinkler replacement	MDI (Mobile Drip Irrig)	40227/40228	\$13	
	High Pressure	40225	\$12	
	MESA	40226	\$11	
	LESA	40229	\$5	
	LEPA	40229	\$5	
C. Existing System <u>Conversion</u> from High Pressure to MESA	Mobile Drip	40229	\$5	
	MESA	40224	\$13	
	D. Pivot/Linear Move	Replace leaky drain gasket	40003	\$2/drain
	E. Wheel and Hand Lines & Pivot Sprinklers on Top	High Pressure to low pressure <u>conversion</u> (eg reduce pressure by 15 psi) with new sprinkler, nozzle, and low pressure regulator	40230	\$12/head
		Replace leaky drain gasket with new gasket	40001	\$2/drain
F. Wheel and Hand Lines	Replace leaky gasket	40003	\$3/gasket	
	Replace worn impact sprinkler w/new or rebuilt impact sprinkler	40016	\$1/sprinkler	
	Replace worn nozzle (includes Flow Controlling Nozzle)	40019	\$2/nozzle	
	G. Wheel Lines	Replace Thunderbird wheel line hubs	40006	\$3/hub
Rebuild or replace leaky malfunctioning leveler		40007	\$1/leveler	

IMPLEMENTATION PROCESS

Some projects require a Pre-Audit/Pre-Approval with our Energy Services Specialist from KPUD. Call (509) 773-7622 to schedule an appointment. Rebates may be denied if a pre-audit is not completed prior to starting the work.

1. Read the Program Participation Requirements and Instructions pages.
2. Complete Non-Residential Project Rebate Application.
3. Request any additional information needed.
4. Contact KPUD to request if an on-site pre-inspection is required.

BID ACCEPTANCE AND INSTALLATION PROCEDURE

Customer is to secure bids from installer's. A list of participating Contractors is available through KPUD or at www.comfortreadyhome.com, or if one is not identified on either list. they must be bonded and licensed in Washington and they must contact KPUD to be approved. It is suggested that you obtain at least two (2) bids and no bid be accepted unless the premises have been visited and physically inspected by the bidding contractor. It is easier to evaluate submitted bids if each bidder receives the same description of the measures to be installed. When entering into the contact with your chosen installer, you may need to make them aware of the requirements as contractors are not considered agents of KPUD and we cannot guarantee they keep current with our program requirements.

INSPECTION AND COMPLETION PROCEDURE

1. After the installation of all materials, contact KPUD to schedule an inspection.
2. We request that business owner and/or occupant is present for the inspection.
3. If corrections are needed, KPUD will notify the contractor and customer to clarify changes required comply with installation requirement .and another inspection will need to be scheduled.
4. Once all work is complete and approved by you, KPUD and the appropriate BPA Qualifying Agents; KPUD will then process the rebate request for approval on the next scheduled Commissioner's meeting or as funds are available.
5. Required paperwork must be submitted for each measure:
 - a. Equipment/contractor invoice showing:
 - *Manufacturer
 - * Model numbers
 - * Type, size, details
 - * Purchase date
 - * Costs
 - b. Measure specific required documentation

NOTICES AND DISCLAIMERS

Kickbacks, rebates, non-authorized discounting of bids or other non-program benefits from the Contractors are prohibited, and may be subject to federal law.

All materials and installations must comply with current KPUD/BPA conservation specifications in order to be eligible for funding.

Contractors, participating in the program shall not be considered officers, agents or employees of BPA or KPUD; therefore, KPUD shall not be liable for the tortuous acts or omissions of the Contractors or other independent contractors.

All installations are subject to Quality Assurance oversight inspections by BPA approved Inspectors.

As KPUD's rebate program is funded by federal funds, certain limitations must be applied. Unfortunately, if a business is not federally recognized as a legal operation by BPA, then the business will not qualify for rebates.

Questions about this program can be directed to Klickitat PUD Energy Services

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Subject to changes and as funds are available

