

Irrigation Retrofits

Pacific Power provides incentives for many types of energy efficient technologies. Please read the following sections carefully to ensure that you follow the appropriate steps for securing your incentive.

For more information about the FinAnswer® Express program, eligibility requirements, incentive levels, or other general inquiries, contact your local equipment dealer or Pacific Power. Visit the program website at pacificpower.net/wattsmart and submit an inquiry online or call our **energy services hotline** at **1-800-222-4335**. Incentives for additional measures beyond those shown here may be available through the Energy FinAnswer® Program.

SPRINKLER PRESSURE REGULATOR

Measure description: Worn or faulty regulators are unable to properly control sprinkler pressure and can result in excessive amounts of water being distributed by pivot sprinklers. New regulators restore the design pressure at the individual sprinklers and can reduce the pumping demand and energy consumption from pump operation.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. This measure is not eligible for new construction projects. Equipment must be purchased and installed on or after January 19, 2012 and meet all program terms and conditions. Incentives may be available for equipment purchased prior to January 19, 2012; please contact us at **1-800-222-4355**.

Equipment eligibility: Equipment must be installed on a system with an electric pump (i.e. not diesel). Worn or faulty regulators must be replaced with new pressure regulators of the same design pressure or less. Fixed-in-place (solid set) systems are not eligible.

Items to submit with application:

1. Dated sales receipt or invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.
3. Documentation showing the design pressure of the regulators being replaced, which may include the original invoice, sprinkler package printout, or photos of the existing regulators showing the design pressure.

Prequalification required? No.

Equipment code	Measure description	Incentive
IRRSPR	Sprinkler Pressure Regulators	\$2.75 / unit

ROTATING, SPRAY-TYPE, OR LOW PRESSURE SPRINKLER

Measure description: Worn sprinklers can leak and may not function properly. Replacing worn impact, spray-type, or rotating sprinklers with new rotating, spray-type, or low-pressure sprinklers reduces leaks and improves the application uniformity of the system. This results in reduced pumping demand and energy consumption from pump operation.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. This measure is not eligible for new construction projects. Equipment must be purchased and installed on or after January 19, 2012 and meet all program terms and conditions. Incentives may be available for equipment purchased prior to January 19, 2012; please contact us at **1-800-222-4355**.

Equipment eligibility: Equipment must be installed on a system with an electric pump (i.e. not diesel). Worn rotating, impact, or spray-type sprinklers must be replaced with new rotating, spray-type, or low-pressure sprinklers. The new sprinkler must be the same design flow or less. Fixed-in-place (solid set) systems are not eligible.

Items to submit with application:

1. Dated sales receipt or invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.
3. Documentation of the original design flow rate of the equipment being replaced, which may include an inventory of the equipment being replaced, copies of design documents, or copies of specification sheets or package materials.

Prequalification required? No.

Equipment code	Measure description	Incentive
IRRRPS	Rotating, Spray-Type, or Low Pressure Sprinkler	\$3 / unit (up to 70% of measure cost)

REBUILT OR NEW IMPACT SPRINKLER

Measure description: Worn impact sprinklers can leak and may not rotate properly. This measure reduces leaks and improves water distribution, resulting in reduced pumping demand and energy consumption from pump operation.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. This measure is not eligible for new construction projects. Equipment must be purchased and installed on or after January 19, 2012 and meet all program terms and conditions. Incentives may be available for equipment purchased prior to January 19, 2012; please contact us at **1-800-222-4355**.

Equipment eligibility: Equipment must be installed on a system with an electric pump (i.e. not diesel), and replace worn or leaking impact sprinklers with new or rebuilt impact sprinklers. Fixed-in-place (solid set) systems are not eligible.

Items to submit with application:

1. Dated sales receipt or invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

Prequalification required? No.

Equipment code	Measure description	Incentive
IRRBIS	Impact Sprinkler	\$3 / unit (up to 70% of measure cost)

SPRINKLER NOZZLE

Measure description: This measure reduces flow from sprinklers by replacing worn brass or plastic sprinkler nozzles with new nozzles of the same flow rate or less. Reducing the flow results in reduced demand and energy consumption from pump operation.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. This measure is not eligible for new construction projects. Equipment must be purchased and installed on or after January 19, 2012 and meet all program terms and conditions. Incentives may be available for equipment purchased prior to January 19, 2012; please contact us at **1-800-222-4355**.

Equipment eligibility: Equipment must be installed on a system with an electric pump (i.e. not diesel). Existing worn nozzles must be replaced with new brass or plastic nozzles with the same design flow or less. Fixed-in-place (solid set) systems are not eligible.

Items to submit with application:

1. Dated sales receipt or invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

Prequalification required? No.

Equipment code	Measure description	Incentive
IRRNOZ	Nozzle	\$0.25 / unit

FLOW-CONTROLLING NOZZLE FOR IMPACT SPRINKLER

Measure description: The volume of water distributed by an impact sprinkler can be reduced by replacing a worn brass or flow-control nozzle with a new flow-control nozzle of the same size flow or less. This results in reduced pumping demand and energy consumption from pump operation.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. This measure is not eligible for new construction projects. Equipment must be purchased and installed on or after January 19, 2012 and meet all program terms and conditions. Incentives may be available for equipment purchased prior to January 19, 2012; please contact us at **1-800-222-4355**.

Equipment eligibility: Equipment must be installed on a system with an electric pump (i.e. not diesel). Worn nozzles must be replaced with new flow-controlling type nozzles. The design flow of the replacement nozzle must be the same or less than that of the nozzle it replaces. Fixed-in-place (solid set) systems are not eligible.

Items to submit with application:

1. Dated sales receipt or invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

Prequalification required? No.

Equipment code	Measure description	Incentive
IRRFCN	Flow-Controlling Nozzle	\$1.50 / unit

DRAINS AND GASKETS

Measure description: Replacing leaking drains or gaskets reduces the system flow rate, resulting in reduced pumping demand and energy consumption from pump operation.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. This measure is not eligible for new construction projects. Equipment must be purchased and installed and meet all program terms and conditions.

Equipment eligibility: Equipment must be installed on a system with an electric pump (i.e. not diesel). Worn and leaking drains or gaskets for wheel lines, pivots, portable main lines, or hand lines must be replaced with new drains or gaskets. Seals and riser caps (dome discs) for valve openers are also eligible. Fixed-in-place (solid set) systems are not eligible.

Items to submit with application:

1. Dated sales receipt or invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

Prequalification required? No.

Equipment code	Measure description	Incentive
IRR DAG	Drains and Gaskets	\$1 / unit

GOOSENECK WITH DROP TUBE OR BOOMBACK

Measure description: Replacing leaking goosenecks and drop tubes reduces the system flow rate, resulting in reduced pumping demand and energy consumption from pump operation.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. This measure is not eligible for new construction projects. Equipment must be purchased and installed and meet all program terms and conditions.

Equipment eligibility: Equipment must be installed on a system with an electric pump (i.e. not diesel). Worn or leaking goosenecks with drop tubes or boombacks must be replaced with new goosenecks with drop tubes or boombacks.

Items to submit with application:

1. Dated sales receipt or invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

Prequalification required? No.

Equipment code	Measure description	Incentive
IRRGNE	Gooseneck with Drop Tube or Boomback	\$1 / outlet

REPAIR LEAKING WHEEL LINE, HAND LINE, OR PORTABLE MAIN LINE

Measure description: Worn pipe connections can cause leaks and lead to failure, which wastes water and electricity. Repairing irrigation lines saves energy by reducing water leakage at connections resulting in reduced pumping demand and energy consumption from pump operation.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. This measure is not eligible for new construction projects. Repairs must be completed and installed and meet all program terms and conditions.

Equipment eligibility: Equipment must be installed on a system with an electric pump (i.e. not diesel). Equipment must replace worn and leaking pipe connections/joints with a cut and pipe press or weld repair process.

Items to submit with application:

1. Dated sales receipt or invoice with retailer/contractor name, address, and phone number. Add repair date as well.
2. Itemized list showing the number of joints repaired and the type of repair or other identifying information.

Prequalification required? No.

Equipment code	Measure description	Incentive
IRRPLJ	Pipe/Joint Repair	\$8 / Repair

WHEEL LINE SPRINKLER LEVELER

Measure description: This measure reduces leaks from worn levelers and can improve sprinkler application uniformity by keeping the sprinkler level. Reducing the system flow rate results in reduced pumping demand and energy consumption from pump operation.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. This measure is not eligible for new construction projects. Equipment must be purchased and installed and meet all program terms and conditions.

Equipment eligibility: Equipment must be installed on a system with an electric pump (i.e. not diesel). Worn or faulty wheel line levelers must be replaced with new or rebuilt wheel line levelers.

Items to submit with application:

1. Dated sales receipt or invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

Prequalification required? No.

Equipment code	Measure description	Incentive
IRRWSL	Wheel Line Sprinkler Leveler	\$0.75 / unit

CENTER PIVOT BASE BOOT GASKET

Measure description: A worn center pivot base boot gasket can cause significant leaks, which wastes water and electricity. Replacing the worn gasket reduces water leakage from the irrigation system, resulting in reduced pumping demand and energy consumption from pump operation.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. This measure is not eligible for new construction projects. Equipment must be purchased and installed and meet all program terms and conditions.

Equipment eligibility: Equipment must be installed on a system with an electric pump (i.e. not diesel). Worn and leaking gasket must be replaced with a new center pivot base boot gasket.

Items to submit with application:

1. Dated sales receipt or invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

Prequalification required? No.

Equipment code	Measure description	Incentive
IRRCBG	Center Pivot Base Boot Gasket	\$80 / unit

WHEEL LINE FEED HOSE

Measure description: This measure reduces leaks from worn wheel line feed hoses, reducing the system flow rate, which results in reduced pumping demand and energy consumption from pump operation.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. This measure is not eligible for new construction projects. Equipment must be purchased and installed and meet all program terms and conditions.

Equipment eligibility: Equipment must be installed on a system with an electric pump (i.e. not diesel). Worn or leaking wheel line feed hose must be replaced with a new or rebuilt wheel line feed hose.

Items to submit with application:

1. Dated sales receipt or invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

Prequalification required? No.

Equipment code	Measure description	Incentive
IRRWFH	Wheel Line Feed Hose	\$15 / unit

THUNDERBIRD WHEEL LINE HUB

Measure description: This measure is specific to Thunderbird brand wheel-lines that have a gasket at the hub of each wheel. This measure can reduce the system flow rate by replacing leaking hubs, resulting in reduced pumping demand and reduced energy consumption from pump operation.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. This measure is not eligible for new construction projects. Equipment must be purchased and installed and meet all program terms and conditions.

Equipment eligibility: Equipment must be installed on a system with an electric pump (i.e. not diesel). Worn or leaking Thunderbird wheel line hubs must be replaced with new wheel line hubs.

Items to submit with application:

1. Dated sales receipt or invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

Prequalification required? No.

Equipment code	Measure description	Incentive
IRRWLH	Wheel Line Hub	\$12 / unit

IRRIGATION PUMP VFD

Measure description: Irrigation systems frequently employ bypass or pump discharge throttling in an effort to match a pump’s output to the needs of the distribution system as pressure and flow requirements change. Pressure and flow requirements change because crop water needs vary over time, wheel lines, hand lines, and pivots may be deployed in various combinations, and source water level may vary throughout the season. In many instances a Variable Frequency Drive (VFD) may be added to the pump to provide a more efficient method of matching pump discharge conditions to system requirements. A VFD saves pumping energy by delivering the desired flow at the desired target pressure, eliminating the need for throttling, bypass, or operation at discharge pressures higher than actually required.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive. Equipment must be purchased and installed on or after January 19, 2012 and meet all program terms and conditions.

Equipment eligibility: Incentives are available for VFDs installed on pumps that transport or distribute irrigation water. The incentive is based on annual energy savings as calculated by a FinAnswer Express program analyst using the program’s pump VFD calculator tool, at \$0.12 per kWh of annual estimated savings. Inputs to the calculation include pump curve data, irrigating schedule, and information about the existing and proposed operating characteristics of the system. Pacific Power will work with information provided by the grower and/or the grower’s vendor to perform this calculation and determine incentive eligibility. Energy savings figures are subject to approval by Pacific Power.

Items to submit with application:

1. Dated sales receipt/invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of installed equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.
3. A copy of the output from the irrigation pump VFD calculator (provided by Pacific Power).

Prequalification required? No. Prequalification is recommended, but not required to receive incentives. A calculator tool and technical assistance is available for determining project savings and the incentive amount. Contact your vendor or Pacific Power for more information.

Equipment code	Measure description	Incentive
IRRVFD	Irrigation Pump VFD	\$0.12/kWh of annual energy savings*

* Energy savings figures are subject to approval by Pacific Power. For assistance in calculating project energy savings and incentives, contact Pacific Power on our energy services hotline at 1-800-222-4335 or via email at ca.irrigation@pacificpower.net.