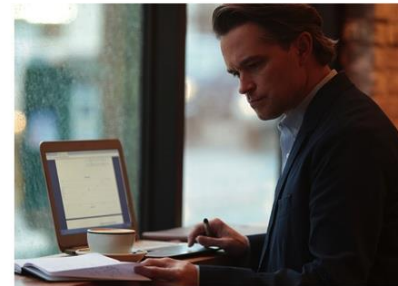


Popular Non-Lighting Projects

Incentives for Pumps, Fans, Doors and Forklifts

(Irrigation, Farm & Dairy, Refrigeration & More)



Shawn Huff
Energy Efficiency Outreach Engineer

Wattsmart® Business Listed Incentive Categories



Irrigation



Refrigeration & Distribution



Farm & Dairy



Compressed Air

Industrial Facilities



Agriculture



Wattsmart Business How?



Call to confirm eligibility and discuss projects

Shawn Huff

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Wattsmart® Business What's New? Increased Incentive Rate!

*Higher total incentives paid to your customers for projects.
\$0.28 per annual kWh saved*

Capital Projects	2021	2022	2024
Incentive	\$0.18/kWh	\$0.24/kWh	\$0.28/kWh
Cost Cap	80%	70%	70%
Payback Cap	1 year	1 year	1 year



Wattsmart® Business What's New?

Increased Incentive Categories!

Fuel switching – Replace propane or diesel with electric
Pre-approval required

Propane to
electric forklifts



Diesel to
electric pumps



Opportunities for VFD Incentive \$

Streamlined process -- application + energy calculator

We do the work!

Replace old drives

- Over 15 years old -or-
- End of life and never received incentive (any age)



Opportunities for VFD Incentive \$

Common VFD opportunities

- Pumps: water, glycol, slurry
- Dust collection: fans and blowers
- Evaporator, condenser fans
- Refrigeration compressors
- Dairy fans



Replace old drives

- Over 15 years old, -or-
- End of life and never received incentive (any age)

Wattsmart® Business Irrigation Pump Example – 40 hp Pump VFD

A pump sometimes serves 2 fields,
sometimes only 1.

Cost	\$8,000
Incentive	\$3,954 (49% of cost)
Net Cost	\$4,046

Energy Reduction	18,474 kWh/year
Annual Savings	\$1,293 per year
Payback	3.1 years



Is a VFD Right for Your Pump?



- Is the pump oversized?
- Is it throttled?
- Is there more than one pressure or flow setpoint?
- Does the pumping level in well vary?

Wattsmart® Business Fuel Switching Example – Diesel Irrigation Pump

Old: 75 hp irrigation pump, powered by diesel generator

Upgrade: Electric service with VFD

Cost	\$34,182
Incentive	\$11,798 (35% of cost)
Net Cost	\$22,384

Energy Reduction	49,160 kWh/year
Annual Savings	\$5,596 per year
Payback	4 years



Irrigation – Details

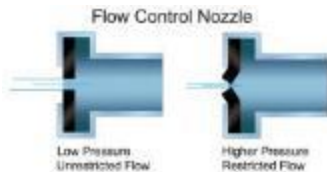
Important restrictions:

1. Retrofit installations only – not brand new systems, which will have new components anyway. *(Except VFDs – those can be on new systems)*
2. Incentives are limited to mobile systems – wheel lines, hand lines, pivots, linears. Fixed-in-place systems are not eligible. *(Except VFDs – those can be on fixed-in-place systems)*
3. Incentive caps: 1 year payback or 70% project cost

Other Irrigation Upgrades



Sprinklers – rotators, spray-type, impacts replacing same design flow or less	\$2 each
Regulators – same design pressure or less	\$3 each
Nozzles, flow controlling nozzles	\$1.50 each
Gaskets and drains	\$2 each
Pivot sprinkler package	\$2 - \$7 per drop



Wattsmart® Business Example – Regulators and Low-Pressure Sprinklers



Replace 64 worn regulators and low-pressure sprinklers on MESA with new regulators and sprinklers

Cost	\$2,159
Incentive	\$256
Net Cost	\$1,903

Energy Reduction	4,599 kWh/year
Annual Savings	\$322 per year
Payback	5.9 years

Non-energy benefits – water savings, consistent watering, yield improvement

Wattsmart® Business Fuel Switching Example – Propane Forklifts

Old: Three propane-powered forklifts

Upgrade: Three electric-powered forklifts

Cost	\$131,430
Incentive	\$40,862 (31% of cost)
Net Cost	\$90,658

Energy Reduction	145,938 kWh/year
Annual Savings	\$22,642 per year
Payback	4 years



Refrigeration, Distribution and Storage



Adaptive refrigeration controls

- \$0.28 per kWh annual savings
- Evaporator fan cycling
- Defrost control
- Typical incentive 50% to 70% of cost

High speed doors

- \$0.28 per kWh annual savings
- Typical incentive 25% to 50% of total cost

Compressed Air Incentives

VFD air compressors

- Up to 75 hp single compressor are eligible for post-install rebate
- Savings from \$1,500 to as much as \$9,000/year
- Incentive calculated at \$0.28/kWh of savings (caps may apply)



Farm & Dairy Upgrades



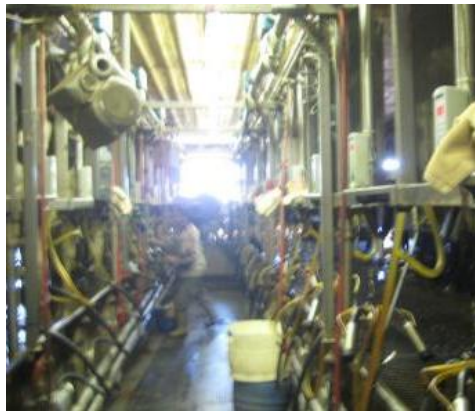
Vacuum Pump VFD
\$206 per hp



Potato or Onion Fan VFD
\$219 / fan hp



Heat Recovery - Refrigeration Units
\$0.28 per kWh annual savings



Automatic Milker Takeoffs
\$294 each



Milk Precooling With Well Water
\$0.28 per kWh annual savings

Farm & Dairy Upgrades



- High efficiency circulating fans
- High efficiency ventilation fans
- Programmable ventilation controllers
- Chiller upgrade (custom projects)



- Amount depends on fan diameter
- \$25 per fan controlled
- \$0.28/kWh annual savings (caps may apply)

Energy Management Projects

Tune-Ups

- Compressed air leak repair
- Setpoint adjustments
 - Fan speeds
 - Pump pressure
 - Idle time
- Pump reconditioning and impeller changes
- Storage room resealing



Irrigation Incentive Application – Washington

To apply for Wattsmart Business incentives:

1. Review the measure descriptions below to ensure that equipment meets eligibility criteria.
2. Purchase and install equipment. Complete and sign this application form (front and back). Attach a copy of invoice(s) or sales receipt(s). Also attach either a copy of a recent Pacific Power bill or write account number or meter number in the space below.
3. Fax, mail or email this form together with [IRS Form W-9](#) to the address shown at end of form within six months of equipment purchase. Please allow 6 weeks for delivery of check.

Incentives below are available for retrofit installations only, where new items replace existing. The incentive check will be issued to the Participant name given below unless a third-party payment release is completed and submitted with this application. If you wish the incentive check to be made out to a third party, attach the completed third-party release and check here:

Send completed application by mail, fax, or email to:

wattsmartbusiness@pacificpower.net
Wattsmart Business
123 NE 3rd Ave, Suite 400
Portland, OR 97232
fax 503-282-0177

For information or assistance with this application, please call **971-244-8178**

PARTICIPANT INFORMATION									
Participant is (check all that apply) <input type="checkbox"/> Customer <input type="checkbox"/> Electricity User <input type="checkbox"/> Facility Owner									
Participant name (if account holder, name on Pacific Power bill):			Contact:			Title:			
Contact cell or telephone:		Fax:		Email:					
Mailing address:			City:		State:		Zip:		
Contact primary language spoken is: <input type="checkbox"/> English <input type="checkbox"/> Other than English (specify):									
PROJECT SITE INFORMATION where items are installed									
Address where items installed:									
Field name or #:		Acres:		Crop (current year):		Installation date:		Dealer:	
Account # or meter # where installed:		Pump electrically driven? <input type="checkbox"/> Yes <input type="checkbox"/> No		Pump hp:		Water source: <input type="checkbox"/> Surface <input type="checkbox"/> Well		Pump type: <input type="checkbox"/> Centrifugal <input type="checkbox"/> Turbine	
System type: <input type="checkbox"/> Wheel line <input type="checkbox"/> Pivot or Linear <input type="checkbox"/> Hand line <input type="checkbox"/> Portable Main Line									
Does Participant rent/lease the project site location? <input type="checkbox"/> Yes <input type="checkbox"/> No									

QUALIFYING CRITERIA. To confirm eligibility, please review and check off:

- Equipment below is installed on linear, pivot, wheel line, or hand line system. Fixed-in-place systems are not eligible.
- Equipment has been installed at the site identified above. Application is submitted within 6 months of purchase.
- Nozzles, sprinklers and regulators are of equal or lesser flow than those being replaced.
- Incentives have not been received for these components on the affected irrigation system(s) in the past 5 years.

For Wheel lines, Hand Lines, or other Portable Systems - Retrofit Only (not New Construction)			
Incentive Description	Qty	Incentive	Total
1. New rotating sprinkler replacing worn or leaking impact or rotating sprinkler		\$2.00*	\$
2. New impact sprinkler (including nozzle) replacing worn or leaking impact sprinkler		\$2.00*	\$
3. New nozzle replacing worn nozzle of same design flow or less on existing sprinkler		\$1.50	\$
4. New gasket replacing leaking gasket - includes main line valve or section gasket, seal or riser cap (dome disc)		\$2.00	\$
5. New drain replacing leaking drain		\$2.00	\$
6. New or rebuilt wheel line leveler replacing leaking or malfunctioning leveler		\$1.00	\$
Sprinkler Packages for Pivots and Linears - Retrofit Only (not New Construction), per drop			
7. Replacement - High Pressure (Impact Sprinklers)		\$7.00	\$
8. Replacement - MESA (Mid-Elevation Spray Application)		\$4.00	\$
9. Replacement - LESA/LEPA/MDI (Low-Elevation Spray or Precision Application)		\$2.00	\$
10. Upgrade - High Pressure (Impact Sprinklers) to MESA		\$7.00	\$
11. Upgrade - High Pressure (Impact Sprinklers) to LESA/LEPA/MDI		\$7.00	\$
12. Upgrade - MESA to LESA/LEPA/MDI		\$5.00	\$
For Any Type Irrigation System - Retrofit or New Construction			
13. Irrigation pump Variable Frequency Drive (VFD) for new pump or existing pump. Incentive is paid at the rate of \$0.24 per kWh of annual savings. Please call for assistance with incentive determination. Incentive is capped at 70% of project cost, and incentives will not be available to reduce energy efficiency project simple payback below one year. Energy savings and costs are subject to Pacific Power approval.		\$0.24 per kWh	\$
		Grand Total	\$

Note: Except for #13 pump VFD, fixed-in-place systems are not eligible, and incentive is limited to two items per irrigated acre. For #1 through #6 incentive is limited to two items per irrigated acre. Sprinkler package includes new sprinkler together with regulator, where applicable. *Incentive for #1 and #2 is combination of \$0.50 for sprinkler plus \$1.50 for nozzle.

Application Process

1. Call to confirm eligibility
2. Complete application (paper or online)
<https://csapps.pacificpower.net/idm/login>
3. Purchase equipment
4. Send in a copy of invoices or receipts

Incentive checks are mailed ~4 weeks after your installation is complete

Custom Project Process

Call to confirm eligibility and discuss projects

Shawn Huff

Shawn.Huff@CascadeEnergy.com

(503) 880-0743

General Application

PARTICIPANT INFORMATION			
<i>(Check will be issued to the participant business name and address listed below unless the payment release section below has been filled out)</i>			
Participant is (check all that apply) <input type="checkbox"/> Customer <input type="checkbox"/> Facility owner <input type="checkbox"/> Tenant/Electricity user			
Participant business name (as shown on IRS Form W-9)			
Mailing address:	City:	State:	Zip:
Contact name:	Contact title:		
Contact telephone number: ()	Cell number: ()	Contact email address:	
Contact primary language spoken: <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> Other (specify):			

PROJECT SITE INFORMATION			
Facility/Project name:			
Facility address:	City:	State:	Zip:
Commercial/industrial electric account #:	Rate Schedule:		
Electric meter number – seven or eight digits: (If multiple meters at site only enter one)	Customer name: (As shown on bill)		
Does Participant rent/lease the project site location? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Please provide a description of your project so we may better help you:			
<input type="checkbox"/> Lighting Retrofit <input type="checkbox"/> Listed Equipment Incentives <input type="checkbox"/> New Construction <input type="checkbox"/> Custom or Energy Management Incentives <input type="checkbox"/> Other:	Additional project information: (scope and schedule)		

INCENTIVE ASSIGNMENT (Complete only if incentive is to be assigned to someone other than participant above)			
Check should be made out to:			
Mailing address:	City:	State:	Zip:
Contact name:	Contact telephone:		

APPLICATION ACKNOWLEDGEMENT

By my signature below, I certify that all information provided for participation will be accurate including but not limited to supplemental material and claims of participant and equipment information. I confirm I have read, understand and agree with the terms and conditions and agree to be bound by them. I authorize Pacific Power to provide my electric account information to consultants associated with the Wattsmart Business program.

 Signatory name & title (please print) Participant signature Date

A young boy with a backpack and arms raised in front of wind turbines. The boy is wearing a plaid shirt and khaki pants, and has a purple backpack. He is standing in front of several large wind turbines against a clear blue sky. The boy's arms are raised, and he has a slight smile on his face. The wind turbines are in the background, and the sky is a clear, light blue. The overall scene is bright and positive, suggesting a clean energy future.

Questions?

Shawn Huff

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