

**LISA D. NORDSTROM**  
Lead Counsel  
[lnordstrom@idahopower.com](mailto:lnordstrom@idahopower.com)

June 28, 2018

Public Utility Commission of Oregon  
Filing Center  
201 High Street SE, Suite 100  
P.O. Box 1088  
Salem, Oregon 97301

RE: Tariff Advice No. 18-08  
Schedule 89 – Commercial and Industrial Energy Efficiency and New Cost-  
Effectiveness Exceptions

Attention Filing Center:

Pursuant to ORS 757.205, OAR 860-030-0000(3), and Order No. 94-590, Idaho Power Company (“Idaho Power” or “Company”) herewith transmits for filing to the Public Utility Commission of Oregon (“Commission”) the following proposed modifications to Schedule 89, Commercial and Industrial Energy Efficiency (“Schedule 89”):

First Revised Sheet No. 89-1	Cancelling	Original Sheet No. 89-1
First Revised Sheet No. 89-2	Cancelling	Original Sheet No. 89-2
First Revised Sheet No. 89-3	Cancelling	Original Sheet No. 89-3
First Revised Sheet No. 89-4	Cancelling	Original Sheet No. 89-4
First Revised Sheet No. 89-5	Cancelling	Original Sheet No. 89-5
First Revised Sheet No. 89-6	Cancelling	Original Sheet No. 89-6
First Revised Sheet No. 89-7	Cancelling	Original Sheet No. 89-7
First Revised Sheet No. 89-8	Cancelling	Original Sheet No. 89-8
First Revised Sheet No. 89-9	Cancelling	Original Sheet No. 89-9
First Revised Sheet No. 89-10	Cancelling	Original Sheet No. 89-10
First Revised Sheet No. 89-12	Cancelling	Original Sheet No. 89-12
First Revised Sheet No. 89-13	Cancelling	Original Sheet No. 89-13
Original Sheet No. 89-14		

Schedule 89, the Commercial and Industrial Energy Efficiency program (“Program”) is an incentive-based program designed to help reduce the costs of installing energy efficiency features in existing and new commercial and industrial buildings. The Program provides incentives for a variety of prescriptive lighting and non-lighting measures, as well as a custom path for projects which fall outside the prescriptive offerings. In its filing, the Company is proposing to modify several existing measures, remove some non-cost-effective measures, and add new prescriptive measures for the energy efficiency offerings contained within the Program.

Following the biennial update of the Technical Reference Manual (“TRM”) and the Company’s avoided cost rates, Idaho Power conducted a review of both the Prescriptive Retrofit Incentives measures and the Prescriptive New Construction Incentives measures and determined

adjustments to various measures were warranted. The proposed changes are described below, with Attachment 1 providing additional information on the Prescriptive Retrofit Incentives changes and Attachment 2 providing supplementary detail on the Prescriptive New Construction Incentive modifications. In addition to the recommended changes to Schedule 89, the Company is requesting approval of cost-effectiveness exceptions for 16 measures. Attachment 3 includes a comprehensive report on Idaho Power's cost-effectiveness exceptions request.

### **Prescriptive Retrofit Incentives**

The Company proposes the following Prescriptive Retrofit Incentives measure changes, listed by Table, and Equipment Category when necessary, with the reason for the proposed change (reference Attachment 1 for additional details):

#### **Schedule 89 Table 1: Retrofit - Lighting and Lighting Controls**

- T8 Fluorescents
  - Remove the incentive for *exterior* applications for the two, three, and four-foot T8 lamps replacing two, three, and four-foot T12 lamps in exterior applications because these measures are no longer cost-effective.
  - Remove the 8' T8 fluorescent lamps from the Program. These measures have become more difficult to purchase as the market has shifted to light emitting diodes ("LED") for this lamp size. In addition, customer applications for 8' T8 fluorescent incentives have declined.
- Remove the T5 (Non-HO) fluorescent measures because there has been no customer participation and the technology is no longer cost-effective.
- Remove all of the CFL measures because the market has shifted to LED technology and there has been a lack of Idaho Power customer participation with all CFL incentive options.
- LEDs
  - Update the screw-in or pin-base LED incentive to reflect the price decrease of screw-in LED lamps.
  - Create a separate HID LED screw-in replacement lamp incentive. Although this technology was incented as part of the LED screw-in or LED fixture or fixture retrofit kit measures, there has been customer confusion about which measure is applicable to a particular project. In addition, the cost of this technology has declined so the reduced incentive reflects the decline in price.
  - Separate linear LED tubes ("TLED") into two categories: (1) Types A, B, and DM, and (2) Type C; and, propose to adjust the incentive amounts. Type C has been separated because the tubes require additional wiring to install multiple components and therefore have a higher installation cost. The incentive is adjusted accordingly. The incentive for Types A, B, and DM have been reduced to reflect price decreases.
  - Add a new measure for LED hardwired conversion based on its expanded market presence and continued cost decline. The Company previously provided an incentive for LED hardwired conversions under the LED fixture or fixture retrofit kit measure. However, the LED hardwired conversion technology does not replace optics or lenses in the existing fixtures, which leads to them having lower overall material and installation costs, highlighting

- the lower cost of LED hardwired conversions than the cost of a full retrofit kit or new fixture. As its own measure, the LED hardwired conversion will be incentivized at the appropriate cost. The incentive was set equal to the Type C TLEDs incentive due to the similarities of the products.
- Adjust the incentive for LED fixture or fixture retrofit to reflect the price decrease in the product. The change will also encourage customers to select a new fixture or retrofit kit with controls (new measures discussed below) due to the higher incentive amounts offered for those measures.
  - Add three new measures for LED fixture or fixture kit with a control strategy option: single control strategy, multiple control strategies, or networked controls. Currently, customers can receive an incentive for new LED fixtures or retrofit kits and receive a separate incentive for incorporating a control strategy. Combining the fixture and control incentive into one incentive will facilitate ease in filling out the program application, which can be cumbersome with two different measures and incentive options, and will encourage customers to purchase fixtures with embedded controls that are now more readily available. The measures provide a higher incentive the more controls chosen to encourage greater energy efficiency. The networked controls, controls that include networking of luminaires and devices, occupancy sensing, daylight harvesting/photocell control, high-end trim, zoning, luminaire and device addressability and continuous dimming, are a new, more costly option to the market that utilities have begun offering throughout the region, and offer the highest amount of energy savings.
  - Remove the Ceramic/Pulse Start/Electronic Metal Halide measures because the market has shifted to LED technology and there has been a lack of customer participation.
  - Add a new LED sign lighting measure to incent specialty LED sign lighting that has emerged over the past year and comes at a higher price point than a typical TLED or LED hardwired conversion, but lower than a new LED fixture. A new measure specific to specialty LED sign lighting will align the incentive appropriate to the product cost. Because of the new measure, the equipment category was changed to LED Sign Lighting.
  - Lighting Controls
    - Adjust the incentives on all existing measures to reflect the decreases in price.
    - Add a new measure for fixture mount occupancy sensors installed on existing exterior fixtures and clarify the existing fixture mount occupancy sensor measure is for interior fixtures. The control must be added to a minimum connected load of  $\geq 75$  input watts to ensure cost-effectiveness. Analysis showed anything below this threshold would not pass cost-effectiveness because lower savings would be achieved with less connected load.
    - Add two new measures for multiple control strategies on existing LED, one for interior fixtures and one for exterior fixtures. The new measures will encourage customers to add multiple controls where applicable. The incentive is available when the control is added to a minimum connected load of  $\geq 25$  input watts for interior fixtures and to a minimum connected load of  $\geq 75$  input watts for exterior fixtures. Analysis showed anything below this threshold would not pass cost-effectiveness because lower savings would be achieved with less connected load.

- Remove the TLED display refrigeration case lighting measures (Case #4, Case #5) because this product has yet to qualify for a qualified LED product listing in refrigerated case lighting applications. Adjust the incentive per linear foot for Case #1, Case #2, and Case #3 to provide an incentive based on kilowatt-hour (“kWh”) savings as a result of increased product availability and greater savings opportunities.

In addition, under Table 1 Notes, the Company proposes to adjust the Non-Standard incentive on new LED fixtures/retrofit kits to reflect the new incentive amounts. While most lighting retrofit projects will fall within the prescriptive incentive categories, the availability of a non-standard incentive allows for broader participation for customers with projects that do not fall within the prescriptive categories. Reducing the non-standard incentive better aligns with the overall adjustments made to the prescriptive incentives as the lighting equipment costs continue to decline.

#### Schedule 89 Table 2: Retrofit – HVAC and HVAC Controls

- Add a new measure for air conditioning units less than five tons that meet Consortium for Energy Efficiency (“CEE”) Tier 1.
- Remove the measures for air conditioning units greater than five tons as they are no longer cost-effective.
- Add a new measure for air conditioning units with VRF up to five tons that meet CEE Tier 2.
- Replace the eligible VRF unit measures for air conditioning units with a maximum of 25 ton to 64 tons that meet CEE Tier 1 because additional sizes are now cost-effective.
- Add a new measure for heat pump units less than five tons that meet CEE Tier 2.
- Remove the measures for heat pump units greater than five tons as they are no longer cost-effective.
- Add a new measure for heat pumps with variable refrigerant flow (“VRFs”) up to five tons that meet CEE Tier 2.
- Replace the eligible VRF unit measures for air conditioning units with a maximum of 25 ton a VRF unit with a maximum of 64 tons that meet CEE Tier 1 because additional sizes are now cost-effective.
- For housekeeping purposes, the incentive unit for economizer repair has been corrected to reflect the incentive is per ton rather than per unit.
- Add an Energy Management System control with one strategy measure to accommodate customer requests.
- For housekeeping purposes, the lodging room occupancy controls incentive has been modified from per ton to per unit.
- Remove the evaporative pre-cooler measure because it is no longer cost-effective and there were no Oregon projects with this measure in 2017.
- Move the notched V-belt measures from the HVAC Fan Motor Belts Equipment Category in Table 2 to Table 4 – Other Equipment as V-belts are applicable beyond just HVAC equipment.

Schedule 89 Table 3: Retrofit – Building Shell

- Add a new measure for ceiling insulation for facilities that are electrically-heated, targeting energy savings in facilities that are generally found in rural Idaho where natural gas is not available. To increase the availability and adoption of the measure, there will be no requirement that mechanical cooling exist. The incentive is intended to help reduce the initial cost of the conversion for customers.

The Table 3 Notes have been revised to remove the restriction that windows and insulation must be installed in a building with mechanical cooling. The only requirement will be that the building has electric heat, providing consistency across building shell measures and allowing for the broadest participation.

Schedule 89 Table 4: Retrofit – Other Equipment

- Revise the Stock Tank measure, removing the energy free freeze resistant stock tank and replacing it with a thermostatically-controlled stock tank de-icer. The Regional Technical Forum (“RTF”) has lowered the savings of the energy free freeze resistant stock tank from 1,176 annual kWh to 626 annual kWh so it is no longer cost-effective.
- Remove all electric water heater measures. The residential water heater measures were removed from the RTF because federal code changed and the code efficiencies are higher than what RTF had listed. The RTF intends on deactivating the commercial water heater measures in July 2018 because all equipment models are having standby losses and are already near the federal standard. In addition, customers are not expressing interest in the commercial water heater measures.
- Move the notched V-belt measures from the HVAC Fan Motor Belts Equipment Category in Table 2 to Table 4 – Other Equipment as V-belts are applicable beyond just HVAC equipment. Add a synchronous belt measure and update the Equipment Category title to Motor Belts. A synchronous belt reduces the slip of a conventional V-belt thereby saving energy. The incentive will help customers defer some of the initial cost of the conversion and speed up the adoption of this technology.
- Add a wall-mounted and an engine-mounted engine block heater control measure, which are complementary to the generator block heater measure. These have broader applicability as they can be deployed to all types of mobile equipment that are parked outdoors during the winter months, such as school bus barns, city fleet vehicles, etc. Traditionally, block heaters are plugged in at night, regardless of the weather conditions. The new technology will use thermostats to control the block heaters to run only when required as determined by cold weather. The incentive will help reduce some of the initial cost of the conversion and increase the adoption of engine block heater controls.
- Add a high volume low speed fan measure for fans used for air circulation in high ceiling spaces (warehouses, etc.). These fans save energy by using smaller motors to drive the fans, run at low speeds, and provide a gentle stirring action to prevent stratification in high ceiling spaces.
- Add several measures associated with compressed air equipment: Variable Frequency Drives (“VFD”) on the air compressor, low pressure drop filter, no-loss condensate drain, efficient compressed air nozzle  $\leq 1/4$ ” and  $>1/4$ ”, and a cycling

refrigerated compressed air dryer. These measures, which were previously available through the Custom Incentives offering, now have identifiable savings. Inclusion in the Prescriptive Retrofit Incentives will simplify and streamline the processing for customers.

Schedule 89 Table 5: Retrofit – Food Service Equipment

- Remove the add refrigeration line insulation measure because the measure is no longer cost-effective.
- Add four new measures associated with refrigeration: freezer to dock automatic high speed door, freezer to refrigerator automatic high speed door, freezer strip curtain, and refrigerated strip curtain. High speed doors are used in place of traditional rollup or bifold doors for fork lift traffic in and out of refrigerated spaces and minimizing the amount of time the door is open and saving energy. Strip curtains are also used to minimize air infiltration for forklift traffic. These measures, which were previously available through the Custom Incentives offering, now have identifiable savings. Inclusion in the Prescriptive Retrofit Incentives will simplify and streamline the processing for customers.
- There are two housekeeping edits to the electric combination oven measures to align the pan size categories to the categories listed in the RTF.

Schedule 89 Table 6: Retrofit – Variable Speed/Frequency Drives

- Add a VFD on milking vacuum pump measure. The VFD reduces the power required by controlling the vacuum rather than using a vacuum breaker that introduces an artificial load on the vacuum pump and wastes energy. This measure, which was previously available through the Custom Incentives offering, now has identifiable savings. Inclusion in the Prescriptive Retrofit Incentives will simplify and streamline the processing for customers.

**Prescriptive New Construction Incentives**

The Company proposes the following Prescriptive New Construction Incentives measure changes, listed by Table, and Equipment Category when necessary, with the reason for the proposed change (reference Attachment 2 for additional details):

Schedule 89 Table 7: Lighting for New Construction, Expansion, or Major Renovations

- Adjust the non-standard interior lighting incentive from \$0.18/kWh saved to \$0.15/kWh saved and a maximum incentive of 70 percent of total invoiced costs. This adjustment reflects the price drop in efficient lighting products.
- Adjust the requirement that high efficiency exit signs draw less than two watts. This adjustment reflects the improved efficiency of available LED exit signs and will encourage customers to select more efficient products.

Schedule 89 Table 8: Air Conditioning (HVAC) For New Construction, Expansion, Or Major Renovations

- Efficient Air-cooled AC, HP, and VRF units
  - Remove the air conditioning measures and the heat pump measures for units greater than five tons because they are no longer cost-effective. For housekeeping purposes, converted the units from Btu/hr to tons.
  - Add a new measure for heat pump units five tons and less that meet the CEE Tier 2 to align with the existing CEE Tier 2 air conditioning unit offering.
  - Expand the eligibility of VRF units up to 64 tons for the CEE Tier 1 offering.
  - Add a new Part C offering for VRFs up to five tons that meet the CEE Tier 2.
- Remove the Evaporative Pre-cooler measure because it is no longer cost-effective. Incentives on projects that have already turned in program preliminary applications will be paid.

Schedule 89 Table 10: Controls for New Construction, Expansion, or Major Renovations

- Add a new incentive for Energy Management Control Systems (“EMCS”) for one strategy to align with the Company’s recently updated TRM that incorporates one to five strategies. In addition, broadening the EMCS measure with an additional incentive should result in increased market participation.
- For housekeeping purposes, the Guest Room Energy Management controls unit is updated from tons to units.

Schedule 89 Table 12: Refrigeration for New Construction, Expansion, or Major Renovations

- Add a Strip Curtains measure for freezers and refrigerators. Strip curtains are also used to minimize air infiltration for forklift traffic. This measure, which was previously available through the Custom Incentives offering, now has identifiable savings and will be simplified and streamlined for processing.
- Add an Automatic High Speed Doors measure for between a freezer and refrigerator or between a freezer and dock. High speed doors are used to minimize the amount of time the door is open, reducing air infiltration into the refrigerated space, and saving energy. This measure, which was previously available through the Custom Incentives offering, now has identifiable savings. Inclusion in the Prescriptive New Construction Incentives will simplify and streamline the processing for customers.

Schedule 89 Table 13: Equipment for New Construction, Expansion, or Major Renovations

- Add a High Volume Low Speed Fan measure for fans used for air circulation in high ceiling spaces (warehouses, etc.). These fans save energy by using smaller motors to drive the fans, run at low speeds, and provide a gentle stirring action to prevent stratification in high ceiling spaces.
- The following measures are proposed to be added because they now have identifiable savings and inclusion in the Prescriptive New Construction Incentives will simplify and streamline the processing for customers:
  - Air Compressor VFD

- No-Loss Condensate Drain
- Low Pressure Drop Filter
- Cycling Refrigerated Compressed Air Dryer
- Efficient Compressed Air Nozzle  $\leq \frac{1}{4}$ " and  $> \frac{1}{4}$ "
- Add wall-mounted and engine-mounted engine block heater control measures. These have broader applicability as they can be deployed to all types of mobile equipment that are parked outdoors during the winter months, such as school bus barns, city fleet vehicles, etc. Traditionally, block heaters are plugged in at night, regardless of the weather conditions. The new technology will use thermostats to control the block heaters to run only when required as determined by cold weather. The incentive will help reduce some of the initial cost of the conversion and increase the adoption of engine block heater controls.
- Add a new measure for VFD on milking vacuum pumps. The VFD reduces the power required by controlling the vacuum rather than using a vacuum breaker that introduces an artificial load on the vacuum pump and wastes energy. This measure, which was previously available through the Custom Incentives offering, now has identifiable savings and inclusion in the Prescriptive New Construction Incentives will simplify and streamline the processing for customers.

### **Cost-Effectiveness Exception Request**

Idaho Power is requesting approval for cost-effectiveness exceptions as allowed by Order No. 94-590, issued in Docket No. UM 551, for 16 measures (13 measure groupings) within the Program. Some of these measures fall under both the Retrofit and New Construction offerings. Attachment 3 provides a comprehensive report of the Company's cost-effectiveness exceptions request. It describes in great detail the actions Idaho Power is recommending for the measures that are not cost-effective under the 2017 demand-side management ("DSM") alternate costs, but that the Company proposes to offer or continue offering to its Oregon customers through the Program.

### **Background**

In late 2017, Idaho Power contracted with ADM Associates, Inc. ("ADM") to update the TRM for the Retrofit and New Construction offerings within the Program. Additionally, the Company worked with Evergreen Consulting ("Evergreen") to update the assumptions within the lighting tool for the Retrofit offering.

In 2018, the Company reviewed the savings and cost assumptions provided by ADM and Evergreen and found the assumptions to be reasonable. The Company analyzed the cost-effectiveness of each measure within the Program by applying the updated 2017 DSM alternate costs from the recently acknowledged 2017 Integrated Resource Plan ("IRP"). Idaho Power filed its 2017 IRP in Docket No. LC 68 with the Commission, and the IRP was acknowledged in Order No. 18-176 on May 23, 2018.

### **Measure Groupings**

The 16 measures, that fall under 13 measure groupings, do not pass the Total Resource Cost test. While some are proposed new measures, other measures were previously cost-



effective, but due to updated savings, costs, and DSM alternate cost assumptions, the measures do not pass the TRC test. The TRC Benefit Cost Ratio (“BCR”) of these measures range from 0.45 to 0.99.

While some of the measures have limited participation in Oregon, Idaho Power endeavors to keep consistency of the Program across its Idaho and Oregon jurisdictions. The importance of offering consistent incentives across the Idaho Power jurisdictions cannot be overstated. Trade allies such as contractors, suppliers, engineers, architects, etc., design and build projects in both states. Offering two separate program designs would create confusion in the marketplace and could inhibit participation. In addition, program infrastructure is designed to implement consistent programs across jurisdictions.

Cost-Effectiveness Exceptions

The Company believes the following measures meet at least one of the additional conditions identified in Order No. 94-590 and should be granted a cost-effectiveness exception:

	Measure Grouping	Offering	% of 2017 Program Oregon Savings	UC BCR	TRC BCR
1.	0 – 5 Ton Air Conditioning (“AC”) Variable Refrigerant Flow (“VRF”) Units and Heat Pump (“HP”) VRF Units that Meet CEE Tier 2	Retrofit & New Construction	N/A (new measure)	1.06 (AC) 1.44 (HP)	0.64 (AC) 0.96 (HP)
2.	0 – 64 Ton AC VRF Units and HP VRF Units that Meet CEE Tier 1	Retrofit & New Construction	0.00%	0.99 (AC) 1.49 (HP)	1.18 (AC) 0.87 (HP)
3.	0 – 5 Ton HP Units that Meets CEE Tier 1 and 2	Retrofit & New Construction	0.00%	2.07 (Tier 1) 1.30 (Tier 2)	0.45 (Tier 1) 0.64 (Tier 2)
4.	Synchronous Belt	Retrofit	N/A (new measure)	1.69	0.97
5.	Premium Windows: Low U-Value, U-Factor of .30 or Less	Retrofit	0.10%	1.69	0.79
6.	Ceiling Insulation: Increase to R38 Min Insulation	Retrofit	N/A (new measure)	3.52	0.98
7.	Smart Power Strips	Retrofit & New Construction	0.00%	2.32 (Retrofit & New Construction)	0.69 (Retrofit) 0.77 (New Construction)

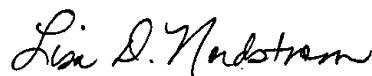
8.	Efficient Refrigerated Compressed Air Dryer	Retrofit & New Construction	N/A (new measure)	2.58	0.95
9.	Auto-Closer (Reach-in, Med Temp)	Retrofit	0.00%	1.30	0.82
10.	Floating Suction Pressure Controller (Retrofit)	Retrofit	0.00%	3.45	0.87
11.	Floating Head Pressure Controller (New Construction)	New Construction	0.30%	3.73	0.99
12.	ENERGY STAR® Commercial Dishwasher	Retrofit & New Construction	0.00%	5.85	0.95
13.	ENERGY STAR® Electric Convection Oven	Retrofit	0.00%	2.61	0.97

Proposed Effective Date

To maintain consistency across the Company's service territory, Idaho Power will be implementing the above-described changes to the Program in its Idaho jurisdiction on August 15, 2018. Because the changes are extensive, the Company has scheduled vendor and contractor training to disseminate all new Program information and materials in both Idaho and Oregon the beginning of July. Therefore, Idaho Power respectfully requests that the proposed modifications to Schedule 89 become effective on August 15, 2018, to allow time to finalize Program materials prior to the implementation of Program changes. In addition, the Company requests approval of exceptions articulated in Order No. 94-590 for the measures presented herein and described in Attachment 3.

If you have any questions regarding this filing, please contact Senior Regulatory Analyst Courtney Waites at (208) 388-5612 or cwaites@idahopower.com.

Sincerely,



Lisa D. Nordstrom  
 Lead Counsel

LDN:kkt

Enclosures

**SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY**

**AVAILABILITY**

Service under this schedule is available to commercial and industrial Customers as well as other customer classes where there may be commercial and industrial facilities throughout the Company’s service area within the State of Oregon receiving active service.

**APPLICABILITY**

This schedule is applicable to electric energy efficiency retrofit and new construction projects typical of commercial or industrial applications that meet the requirements of the Commercial and Industrial Energy Efficiency program. (N)

**DESCRIPTION**

The Commercial and Industrial Energy Efficiency program is an incentive-based program designed to help reduce the costs of installing energy efficiency features in existing and new commercial and industrial buildings. The Program provides incentives for a variety of prescriptive lighting and non-lighting measures, as well as a custom path for projects which fall outside the prescriptive offerings.

**INCENTIVE STRUCTURE**

Installed measures must meet the requirements of the Commercial and Industrial Energy Efficiency program as detailed in this Schedule, and must also comply with the current Program terms and conditions posted to the Program website at [www.idahopower.com/business](http://www.idahopower.com/business). Incentives will not be paid for measures required by Oregon code. Incentive payments will not exceed 100% of the installed cost.

**PRESCRIPTIVE RETROFIT INCENTIVES**

<b>TABLE 1: RETROFIT - LIGHTING AND LIGHTING CONTROLS</b>			
<b>Equipment Category</b>	<b>Installing</b>	<b>Replacing</b>	<b>Incentive Per Unit Exterior/Interior</b>
<b>T8 Fluorescents</b>	2' or 3' T8 and electronic ballast (1 or more lamps)	2', 3' and 4' ( <i>u-bent</i> ) T12	\$ n/a/10.00
	1-lamp 4' T8 and electronic ballast	1-lamp 4' T12	\$ n/a/22.00
	1- or 2-lamp 4' T8 and electronic ballast	2-lamp 4' T12	\$ n/a/24.00
	2- or 3-lamp 4' T8 and electronic ballast	3-lamp 4' T12	\$ n/a/36.00
	2-, 3- or 4-lamp 4' T8 and electronic ballast	4-lamp 4' T12	\$ n/a/40.00
	1- or 2-lamp 6' T8 and electronic ballast	1- or 2-lamp 6' T12	\$ 14.00/16.00
	1- or 2-lamp 6' T8 and electronic ballast (slimline & HO)	1- or 2-lamp 6' T12HO/VHO	\$ 14.00/16.00
	2-, 3- or 4-lamp 4' T8 and electronic ballast (tandem/retrofit)	1- or 2-lamp 8' T12	\$ 34.00/40.00
	2-, 3- or 4-lamp 4' T8 and electronic ballast (tandem/retrofit)	1- or 2-lamp 8' T12HO/VHO	\$ 45.00/55.00
	<b>T5/T8 High Bay – New Fixture (Use of reflector recommended)</b>	4-lamp 4' T8 and electronic ballast	Fixture using ≥ 200 input watts
6-lamp 4' T8 and electronic ballast or 2-, 3- or 4-lamp 4' T5HO and electronic ballast		Fixture using 200-399 input watts	\$ 75.00/85.00
4-, 6- or 8-lamp 4' T8 and electronic ballast or 4- or 6- lamp 4' T5HO and electronic ballast		Fixture using ≥ 400 input watts	\$110.00/160.00
10- or 12-lamp 4' T8 and electronic ballast or 8- or 10-lamp 4' T5HO and electronic ballast		Fixture using 751-1100 input watts	\$180.00/200.00

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**SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY  
(Continued)**

**PRESCRIPTIVE RETROFIT INCENTIVES (Continued)**

<b>TABLE 1: RETROFIT - LIGHTING AND LIGHTING CONTROLS (Continued)</b>			
<b>Equipment Category</b>	<b>Installing</b>	<b>Replacing</b>	<b>Incentive Per Unit Exterior/Interior</b>
Fluorescent <i>Delamping (Only applicable as standard measures)</i>	Delamping Fixture from T12 to 4' T8 (per lamp)	T12 Fixture	\$ 5.00/5.00
Reduced Wattage T8/T5HO <i>(Only applicable as standard measures)</i>	Reduced wattage 4' T8 & T5HO lamps (per lamp) (ballast <i>must</i> be compatible)	T12 or HID	\$ n/a/1.00
Relamp T8/T5HO to Reduced Wattage T8/T5HO <i>(Only applicable as standard measures)</i>	Reduced wattage 4' T8 lamps, 28W & 25W (per lamp) Reduced wattage 4' T8 lamps, 25W (per lamp) Reduced wattage 4' T5HO lamps, 47W-49W (per lamp)  (In all above cases, ballast/lamps must be compatible)	4' T8, 32 watt  4' T8, 28 watt 4' T5HO, 54 watt	\$ n/a/1.00
Permanent Fixture Removal <i>(Only applicable as standard measures)</i>	Permanent fixture removal as part of overall lighting retrofit project	Hardwired fixture using 50-299 input watts	\$ 15.00/20.00
	Permanent fixture removal as part of overall lighting retrofit project	Hardwired fixture ≥ 300 input watts	\$ 25.00/30.00
Light Emitting Diodes (LEDs) <i>(Must be on DLC or ENERGY STAR® Qualified Commercial LED List)</i>	Screw-in or pin-base LED	Screw-in or pin-base lamp using higher wattage	\$0.08/0.12/watt reduced
	HID LED screw-in replacement lamp	Existing HID lamp using > input watts	\$0.20/0.22/watt reduced
	Linear LED tube (Types A, B, and DM)	Lamp > 17 watts	\$0.50/0.50/ft
	Linear LED tube (Type C)	Lamp > 17 watts	\$0.02/0.05/kWh reduced
	LED hardwired conversion	Fixture using higher wattage	\$0.02/0.05/kWh reduced
	LED fixture or fixture retrofit kit	Fixture using higher wattage	\$0.12/0.15/kWh reduced
	LED fixture or fixture kit with single control strategy	Fixture using higher wattage	\$0.14/0.18/kWh reduced
	LED fixture or fixture kit with multiple control strategies	Fixture using higher wattage	\$0.16/0.20/kWh reduced
LED Fixture with networked controls	Fixture using higher wattage	\$0.18/0.22/kWh reduced	

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**SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY  
(Continued)**

**PRESCRIPTIVE RETROFIT INCENTIVES (Continued)**

<b>TABLE 1: RETROFIT - LIGHTING AND LIGHTING CONTROLS (Continued)</b>			
<b>Equipment Category</b>	<b>Installing</b>	<b>Replacing</b>	<b>Incentive Per Unit Exterior/Interior</b>
LED Sign Lighting	LED exit sign or equivalent (<5 watts) LED sign lighting retrofit	Exit sign using $\geq 18$ watts Existing using $>$ input watts	\$ n/a/40.00 \$ 0.06/0.10/kWh
Lighting Controls	Wall switch occupancy sensor	Manual or no prior control $\geq$ 25 input watts	\$ n/a/15.00
	Ceiling mount occupancy sensor	Manual or no prior control $\geq$ 25 input watts	\$ n/a/30.00
	Fixture mount occupancy sensor – interior	Manual or no prior control $\geq$ 25 input watts	\$ n/a/25.00
	Fixture mount occupancy sensor – exterior	Manual or no prior control, $\geq 75$ input watts	\$ 15.00/n/a
	Interior photocell control (dimming, step-dimming or switching)	Manual or no prior control $\geq$ 25 input watts	\$ n/a/25.00
	Multiple control strategies on existing LED – interior	Manual or no prior control $\geq$ 25 input watts	\$ n/a/\$35.00
Refrigeration Case Lighting	Multiple control strategies on existing LED - exterior	Manual or no prior control, $>75$ input watts	\$ 25.00/n/a
	Case #1 – T8 fluorescent lighting and electronic ballast (per lamp)	Case #1 – T12 fluorescent lighting	\$0.08/kWh
	Case #2 – LED display case lighting	Case #2 – T12 fluorescent lighting	\$ 0.15/kWh
	Case #3 – LED display case lighting	Case #3 – T8 fluorescent lighting	\$ 0.12/kWh

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**Table 1 Notes:**

1. "Non-standard" incentives are available for cost-effective lighting measures not listed on Table 1. Non-standard interior lighting incentives will be calculated at \$0.10 per first year annual kilowatt-hour saved up to 70% of measure cost and exterior lighting incentives will be calculated at \$0.08 per first year annual kilowatt-hour saved up to 70% of measure cost.
2. Complete Lighting Upgrade incentive applies to projects where all the interior inefficient lighting is retrofitted with more efficient technologies, including the incorporation of controls, where applicable. The Complete Lighting Upgrade is a bonus incentive given in addition to the Company's incentive calculation. This bonus incentive will be equal to five percent of the regular interior incentive amount.

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**SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY  
(Continued)**

**PRESCRIPTIVE RETROFIT INCENTIVES (Continued)**

<b>TABLE 2: RETROFIT - HVAC AND HVAC CONTROLS</b>			
<b>Equipment category</b>	<b>Installing</b>	<b>Replacing</b>	<b>Incentive Per Unit</b>
Air Conditioning (AC) Units	<5 ton AC unit that meets CEE Tier 1	Standard <5 ton AC/HP unit	\$ 30.00/ton
	≤5 ton AC unit that meets CEE Tier 2	Standard ≤5 ton AC/HP unit	\$ 75.00/ton
	≤5 ton VRF unit that meets CEE Tier 2	Standard <5 ton AC/HP unit	\$ 100.00/ton
	<64 ton VRF unit that meets CEE Tier 1	Standard <64 ton AC/HP unit	\$ 75.00/ton
Heat Pump (HP) Units	≤5 ton HP unit that meets CEE Tier 1	Standard ≤5 ton AC/HP unit	\$ 30.00/ton
	<5 ton HP unit that meets CEE Tier 2	Standard <5 ton AC/HP unit	\$ 75.00/ton
	<5 ton VRF unit that meets CEE Tier 2	Standard <5 ton AC/HP unit	\$ 100.00/ton
	<64 ton VRF unit that meets CEE Tier 1	Standard <64 ton AC/HP unit	\$ 75.00/ton
Chiller Units	Air-cooled chiller, IPLV 14.0 EER or higher	Standard air-cooled chiller	\$ 80.00/ton
	Water-cooled chiller electronically operated, reciprocating and positive displacement: Up to 149 ton unit, IPLV: 0.52 or less (kW/ton) 150 ton or greater, IPLV: 0.49 or less (kW/ton) Water-cooled chiller electronically operated, centrifugal: Up to 299 ton unit, IPLV: 0.52 or less (kW/ton) 300 to 599 ton unit, IPLV: 0.45 or less (kW/ton)	Standard water-cooled chiller	\$ 40.00/ton
Economizers	Air side economizer control addition	No prior control	\$100.00/ton
	Air side economizer control repair	Non-functional economizer	\$50.00/ton
Evaporative Coolers	Retrofit to direct evaporative cooler (Evaporative pre-cooled DX systems are not eligible)	Standard AC unit	\$200.00/ton
<b>Equipment category</b>	<b>Installing</b>	<b>Replacing</b>	<b>Incentive Per Unit</b>
Automated Control Systems	EMS control with 1 strategy	Proposed strategy not existing	<u>Retrofit System/New System</u> \$100.00/ton/60.00/ton
	EMS controls with 2 strategies	Proposed strategy not existing	\$125.00/ton/70.00/ton
Electronically Commutated Motor (ECM)	EMS controls with 3 strategies	Proposed strategy not existing	\$150.00/ton/80.00/ton
	EMS controls with 4 strategies	Proposed strategy not existing	\$175.00/ton/90.00/ton
	EMS controls with 5 strategies	Proposed strategy not existing	\$200.00/ton/100.00/ton
	Lodging room occupancy controls	Manual controls	\$ 75.00/unit
	ECM motor in HVAC application	Shaded pole or permanent split capacitor motor	\$100/motor

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**SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY  
(Continued)**

**PRESCRIPTIVE RETROFIT INCENTIVES (Continued)**

<b>TABLE 3: RETROFIT - BUILDING SHELL</b>			
Equipment category	Installing	Replacing	Incentive
Premium Windows	Low U-value, U-factor of .30 or less	Standard windows	\$ 2.50/ft2 window area
Reflective Roofing	Adding reflective roof treatment	Non-reflective low pitch roof	\$ 0.05/ft2 roof area
Ceiling Insulation	Increase to R38 min. insulation	Insulation level R11 or less	\$ 0.35/ft2
Wall Insulation	Increase to R11 min. insulation	Insulation level, R2.5 or less	\$ 0.40/ft2 wall area
	Increase to R19 min. insulation	Insulation level, R2.5 or less	\$ 0.55/ft2 wall area

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**Table 3 Notes:**

1. Windows must be installed in building with electric heat.
2. Insulation must be professionally installed by an insulation contractor.
3. Insulation must be installed in building with electric heat.

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<b>TABLE 4: RETROFIT - OTHER EQUIPMENT</b>			
Equipment category	Installing	Replacing	Incentive Per Unit
Computers	PC network power management	No central control software in place	\$ 10.00
Laundry Machines	High efficiency washer	Standard washer, electric HW	\$125.00
Stock Tank	Thermostatically-controlled stock tank de-icer	No existing thermostatically-controlled de-icer	\$50.00/unit
Motor Belts	Type AX notched V-belt Type BX notched V-belt Synchronous belt	Type A solid V-belt Type B solid V-belt Standard fan belt	\$ 5.00/hp* \$ 5.00/hp* \$ 35.00/hp* *Incentive capped at \$50/motor
Commercial showerhead, electric water heat	2.0 gpm or less installed in health club/fitness business	Showerhead using 2.2 gpm or greater	\$ 15.00
	2.0 gpm or less installed in commercial business (non health club/fitness)	Showerhead using 2.2 gpm or greater	\$ 9.00
Smart Power Strips	Load-sensing, motion-sensing, or timer-controlled power strip	No existing load or motion-sensing, or timer-controlled power strip	\$ 10.00/power strip

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**SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY  
(Continued)**

**PRESCRIPTIVE RETROFIT INCENTIVES (Continued)**

<b>TABLE 4: RETROFIT - OTHER EQUIPMENT (Continued)</b>			
<b>Equipment category</b>	<b>Installing</b>	<b>Replacing</b>	<b>Incentive Per Unit</b>
Engine Block Heater and controls	Standby generation stationary pump-driven circulating block heater; must operate continuously	Thermosiphon electric resistance circulating block heater < 3 kW	\$200/unit
	Wall-mounted engine block heater control	3 kW or greater	\$1,500/unit
		Standard engine block heater without controls	\$50.00
Engine-mounted engine block heater control	Standard engine block heater without controls	\$100.00	
High Volume Low Speed Fan	High volume low speed fan	Standard high speed fan	\$2,000.00/fan
Compressed Air	VFD on air compressor	No existing VFD	\$150.00/hp
	Low pressure drop filter	Standard filter	\$7.50/hp
	No-loss condensate drain	Open tube with ball valve	\$300/unit
	Efficient compressed air nozzle ≤1/4"	Standard air nozzle	\$30.00/unit
	Efficient compressed air nozzle >1/4"	Standard air nozzle	\$60.00/unit
Cycling refrigerated compressed air dryer	Standard air dryer	\$2.00/CFM	

**Table 4 Notes:**

1. PC network power management incentive applies to desktop units only.

<b>TABLE 5: RETROFIT - FOOD SERVICE EQUIPMENT</b>			
<b>Equipment category</b>	<b>Installing</b>	<b>Replacing</b>	<b>Incentive Per Unit</b>
Refrigeration	Install auto-closer – walk-in	No/damaged auto-closer, low temp.	\$125.00/door
	Install auto-closer – reach-in	Damaged auto-closer, low temp.	\$100.00/door
	Install auto-closer – walk-in	No/damaged auto-closer, med. temp.	\$100.00/door
	Install auto-closer – reach-in	Damaged auto-closer, med. temp.	\$ 70.00/door
	Add anti-sweat heat controls	Low/med. temp. case w/out controls	\$ 40.00/linear foot
	Freezer to dock automatic high speed door	Manual or electric warehouse door	\$8,000.00
	Freezer to refrigerator automatic high speed door	Manual or electric warehouse door	\$4,000.00
	Freezer strip curtain	No protective barrier	\$150.00
Refrigerated strip curtain	No protective barrier	\$150.00	



**SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY  
(Continued)**

**PRESCRIPTIVE RETROFIT INCENTIVES (Continued)**

<b>TABLE 5: RETROFIT - FOOD SERVICE EQUIPMENT (Continued)</b>			
<b>Equipment category</b>	<b>Installing</b>	<b>Replacing</b>	<b>Incentive Per Unit</b>
Evaporator Fans	Add evaporator fan controls	Low or med. temp. walk-in or reach-in with no controls	\$ 75.00/fan
	Install ECM/PSC evap fan motor	Med. or low temp. walk-in	\$100.00/motor
	Install ECM/PSC fan motor	Med. or low temp. reach-in	\$ 60.00/motor
Floating Head, Suction Pressures	Head pressure controller	Standard head pressure control	\$ 80.00/hp
	Suction pressure controller	Standard suction pressure control	\$ 20.00/hp
Demand Controlled Kitchen Ventilation Exhaust Hood	VFD installed on kitchen exhaust and/or makeup air fan	Kitchen hood with constant speed ventilation motor	\$200/hp
Vending Machines	Non-cooled snack control	Vending machine with no sensor	\$ 50.00
Commercial Kitchen Equipment	ENERGY STAR® undercounter dishwasher	Standard dishwasher	\$200.00
	ENERGY STAR® commercial dishwasher	Standard commercial dishwasher	\$500.00
	ENERGY STAR® listed electric combination oven (6-15 pans)	Standard electric oven	\$1,100.00
	ENERGY STAR® listed electric combination oven (16-20 pans)	Standard electric oven	\$300.00
	ENERGY STAR® listed electric convection oven	Standard electric oven	\$300.00
	ENERGY STAR® listed electric fryer	Standard fryer	\$400.00
	ENERGY STAR® listed electric steamer - 3 pan - 4 pan - 5 pan - 6 pan - 10 pan or larger	Standard steamer	\$ 80.00 \$100.00 \$150.00 \$175.00 \$200.00

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**SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY  
(Continued)**

**PRESCRIPTIVE RETROFIT INCENTIVES (Continued)**

<b>TABLE 6: RETROFIT - VARIABLE SPEED/FREQUENCY DRIVES</b>			
<b>Equipment category</b>	<b>Installing</b>	<b>Replacing</b>	<b>Incentive Per Unit</b>
Variable Speed Controls	Variable speed drive on HVAC system applications: - Chilled water pumps - Condenser water pumps - Cooling tower fans	Single speed HVAC system fan/pump	\$ 60.00/hp
	Variable speed drive on HVAC fan applications: - Supply - Return - Outside air - Make-up air - Hot water pumps	Single speed HVAC system fan/pump	\$100.00/hp
	Variable speed drive on potato and onion storage shed ventilation	No existing VSD	\$200.00/hp
	VFD on milking vacuum pump	No existing VSD	\$250/hp

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**PRESCRIPTIVE NEW CONSTRUCTION INCENTIVES**

<b>TABLE 7: LIGHTING FOR NEW CONSTRUCTION, EXPANSION, OR MAJOR RENOVATIONS</b>		
<b>Measure Type</b>	<b>Incentive</b>	<b>Eligibility Requirements</b>
Interior Light Load Reduction	Part A: \$0.10 Part B: \$0.20 Part C: \$0.30 per square foot covered by the lighting	Lighting systems designed with a lighting power density (LPD) that is at least: Part A: 10-19.9% below the Oregon Energy Efficiency Specialty Code will be eligible for this incentive, or Part B: 20-29.9% below the Oregon Energy Efficiency Specialty Code or Part C: Equal to or greater than 30% below the Oregon Energy Efficiency Specialty Code will be eligible for this incentive.  A project that is at least 60% below code and/or has high operation hours can receive a non-standard interior lighting incentive at \$0.15 per kWh saved, up to 100% of the incremental cost or 70% of total invoiced costs between a base and efficient lighting system.
Exterior Light Load Reduction	\$200.00 per kW below code	Must be a minimum of 15% below the Oregon Energy Efficiency Specialty Code to qualify.
Daylight Photo Controls	\$0.25 per square foot of daylit space	Daylight photo controls dim or turn off electric lights in response to levels of natural daylight. To qualify for an incentive, the design must include a consultation with the Integrated Design Lab or other qualified daylighting professional.
Occupancy Sensors	\$25.00 per sensor installed	Occupancy sensors are automatic switching devices that sense human occupancy and control the lighting system accordingly. Either wall- or ceiling-mounted sensors are eligible.
High Efficiency Exit Signs	\$7.50 per installed sign	Any code compliant exit sign that draws less than 2 watts per sign face including, but not limited to, light emitting diode (LED), cold cathode, electroluminescent, or self-luminous exit signs are eligible for an incentive.

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**SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY  
(Continued)**

**PRESCRIPTIVE NEW CONSTRUCTION INCENTIVES (Continued)**

<b>TABLE 8: AIR CONDITIONING (HVAC) FOR NEW CONSTRUCTION, EXPANSION, OR MAJOR RENOVATIONS</b>							
Measure Type	Incentive	Eligibility Requirements					
Efficient Air-cooled AC, HP and VRF units	Part A: \$30.00 Part B: \$75.00 Part C: \$100.00 per ton of air conditioning	Equipment Type	Size Category (single & three phase units)	Sub-Category	Part A: \$30/ton	Part B: \$75/ton	Part C: \$100/ton
		Unitary Commercial Air Conditioners, Air Cooled (Cooling Mode)	<=5 tons	Split system & single package	CEE Tier 1	CEE Tier 2	N/A
		Heat Pumps, Air-Cooled (Cooling Mode)	<=5 tons	Split system & single package	CEE Tier 1	CEE Tier 2	N/A
		Variable Refrigerant Flow Units	<=64 tons	Multi-split AC or Heat Pump	N/A	CEE Tier 1	N/A
<=5 tons	Multi-split AC or Heat Pump		N/A	N/A	CEE Tier 2		
NOTE: Efficiency is based on AHRI and ISO standards.							
Efficient Chillers	Part A: \$40.00 per ton for water cooled Part B: \$80.00 per ton for air-cooled	Equipment Type	Size Category		Requirement		
			Air Cooled Chiller with Condenser	<150 tons	>=150 tons	IPLV: 14.0 EER or higher	
		Water Cooled Chiller electrically operated, reciprocating & positive displacement	<75 tons	IPLV: 0.52 OR LESS (kW/ton)			
			>=75 and <150 tons	IPLV: 0.52 OR LESS (kW/ton)			
			>=150 and <300 tons	IPLV: 0.49 OR LESS (kW/ton)			
			>=300 tons	IPLV: 0.49 OR LESS (kW/ton)			
		Water Cooled Chiller electrically operated, centrifugal	<150 tons	IPLV: 0.52 OR LESS (kW/ton)			
			>=150 and <300 tons	IPLV: 0.52 OR LESS (kW/ton)			
			>=300 and <600 tons	IPLV: 0.45 OR LESS (kW/ton)			
			>=600 tons	IPLV: 0.45 OR LESS (kW/ton)			
NOTES: 1) Only primary use chillers will qualify. Chillers intended for backup service only are not eligible. 2) Air-cooled chiller efficiencies must include condenser fan energy consumption. 3) Efficiency ratings for IPLV kW/ton must be based on ARI standard rating conditions per ARI-550-98 & ARI-590-98. 4) IPLV = Integrated Part Load Value.							

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**SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY  
(Continued)**

**PRESCRIPTIVE NEW CONSTRUCTION INCENTIVES (Continued)**

<b>TABLE 8: AIR CONDITIONING (HVAC) FOR NEW CONSTRUCTION, EXPANSION, OR MAJOR RENOVATIONS (Continued)</b>		
Measure Type	Incentive	Eligibility Requirements
Air Side Economizer	\$75.00 per ton of air conditioning economized	Applicable economizers must allow outdoor air capacity to meet at least 85% of an air conditioning unit's airflow rate coupled with a programmable thermostat capable of two-stage cooling controls.
Direct Evaporative Coolers	\$200.00 per ton	Installation of a direct evaporative cooling system. Evaporatively pre-cooled DX systems do not qualify under this measure.

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<b>TABLE 9: BUILDING SHELL FOR NEW CONSTRUCTION, EXPANSION, OR MAJOR RENOVATIONS</b>		
Measure Type	Incentive	Eligibility Requirements
Reflective Roof Treatment	\$0.05 per square foot of roof treatment	Reflective roof treatments must meet a minimum initial solar reflectivity of 0.70 and a minimum emissivity of 0.75 consistent with California's Title 24 standards for flat or minimally pitched roofs.

<b>TABLE 10: CONTROLS FOR NEW CONSTRUCTION, EXPANSION, OR MAJOR RENOVATIONS</b>		
Measure Type	Incentive	Eligibility Requirements
Energy Management Control System	Part A: \$60.00 per ton for 1-strategy Part B: \$70.00 per ton for 2-strategies Part C: \$80.00 per ton for 3-strategies Part D: \$90.00 per ton for 4-strategies Part E: \$100.00 per ton for 5-strategies	Systems must provide automatic control for cooling systems and incorporate specific strategies that result in energy savings over standard operation.
Guest Room Energy Management System	\$50.00 per unit of controlled cooling	Systems must provide occupancy based thermostatic set-back controls for the HVAC system. Eligible systems include thermostat based controls, room key-card controls and system check-in/check-out controls.

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**SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY  
(Continued)**

**PRESCRIPTIVE NEW CONSTRUCTION INCENTIVES (Continued)**

<b>TABLE 12: REFRIGERATION FOR NEW CONSTRUCTION, EXPANSION, OR MAJOR RENOVATIONS</b>		
Measure Type	Incentive	Eligibility Requirements
Refrigeration Head Pressure Controls	\$40.00 per compressor hp	Refrigeration systems with head pressure controls.
Refrigeration Floating Suction Controls	\$10.00 per compressor hp	Refrigeration systems with floating suction controls.
Efficient Refrigeration Condensers	\$20.00 per ton of refrigeration	Refrigeration condensers that incorporate specific strategies that result in energy savings over standard operation.
Strip Curtain	\$150 per curtain/door	For walk-in freezers with an unobstructed door opening
	\$150 per curtain/door	For walk-in refrigerators with an unobstructed door opening
Automatic High Speed Doors	\$4,000 per door/opening	Freezer to Refrigerator: Door controls with automatic control to open and close.
	\$8,000 per door/opening	Freezer to Dock: Door controls with automatic control to open and close.

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<b>TABLE 13: EQUIPMENT FOR NEW CONSTRUCTION, EXPANSION, OR MAJOR RENOVATIONS</b>		
Measure Type	Incentive	Eligibility Requirements
Smart Power Strips	\$10.00 per power strip	Load-sensing, motion-sensing, or timer-controlled power strip.
High Volume Low Speed Fan	\$2,000 per fan	High volume low speed fans installed
Air compressor VFD	\$150 per hp	Installing a VFD on the air compressor that allow the compressor to vary the speed based on actual demand.
No-Loss Condensate Drain	\$300 per unit	Installing a no-loss condensate drain that monitors the amount of condensate present and then exhausts only the condensate without wasting compressed air.
Low Pressure Drop Filter	\$7.50 per hp	Installing a low-pressure filter that has a pressure drop between 1 and 3 psi.
Cycling Refrigerated Compressed Air Dryer	\$2 per CFM	Installing an efficient refrigerated compressed air dryer that cycles on and off based on the need during part load demand.
Efficient Compressed Air Nozzle	<= 1/4": \$30 per unit	Installing an efficient air nozzle that reduces the amount of air compared to a standard nozzle but produces the same performance.
	> 1/4": \$60 per unit	

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SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY  
(Continued)

PRESCRIPTIVE NEW CONSTRUCTION INCENTIVES (Continued)

Engine Block Heater Controls	Wall Mounted: \$50 per unit	Controls that provide a 2-hour delay from first plugged in and will turn on only when outside air drops below a certain threshold.
	Engine Mounted: \$100 per unit	Control that cycles the heater on based on engine temperature.
Dairy VFD	Vacuum Pump: \$250 per hp	Installing a VFD on the pump that slows down the motor during normal operation and then speeds up when necessary.

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Note: A Professional Assistance Incentive will be provided to a third-party architect or engineer that submits the application and provides the supporting documentation that is required to complete the application and incentive process. The professional is eligible for an incentive equal to 10% of the participant's total incentive to a maximum amount of \$2,500.

CUSTOM INCENTIVES

QUALIFICATIONS

Project viability will be determined through a collaborative process involving the Company, a participating Customer, and if necessary, a qualified third party or the Customer's licensed Professional Engineer. Potential projects will be evaluated for program eligibility based upon the following criteria:

1. The technology must be generally accepted cost-effective energy efficiency technology. This determination will be at the Company's sole discretion.
2. Projects must not be started or equipment ordered until after the Customer has obtained written approval from the Company.
3. Projects must exceed the current established building code requirements or standard practice for the applicable industry as determined by the Company.
4. If there is no corresponding prescriptive measure available, then the project may be submitted for review by the Company and, if cost-effective, the project may be eligible for a financial incentive.

OPTIONS

Energy saving projects and measures that are not covered under prescriptive sections of this Schedule may be eligible for Custom Incentives based on the calculated energy savings. There are two incentive options available under the Custom Incentive; the Cost-Share option or the Self-Directed Funds option. The Cost-Share option is available to all Customers that meet the requirements of the Custom Incentive offering. The Self-Directed Funds option is available only to Customers taking service under Schedule 19. The maximum incentive payment will not exceed \$0.18 per first-year kilowatt-hour saved under either incentive option.

SCHEDULE 89  
COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY  
(Continued)

CUSTOM INCENTIVE OPTIONS (Continued)OPTIONS (Continued)

Option 1 - Cost-Share. Financial incentives are determined under the Cost-Share option using the lesser of the following two calculations:

1. Up to \$0.18 per first-year kilowatt-hours saved
2. 70% of eligible project costs

Option 2 - Self-Directed. Under the Self-Directed Funds option, the Customer's contributions to the Energy Efficiency Rider are tracked starting from the latter of the following: June 2005 or the last Cost-Share project paid and funds expected to accrue for a maximum of three years from the date the pre-application is received. Customers selecting this option will have direct use of 100% of the funds for implementation of cost-effective DSM projects. Any funds not utilized by the Customer will remain pooled with the rest of the Energy Efficiency Rider, Schedule 91, funds. Customers may combine individual account funds from multiple sites to implement cost-effective DSM projects under this option. Financial incentives are determined under the Self-Directed option using the lesser of the following two calculations:

1. Up to \$0.18 per first-year kilowatt-hours saved
2. 100% of eligible project costs

GREEN MOTORS INITIATIVE

The Green Motors Initiative employs industry best practices when rewinding motors (Green Rewind). The certified rewind process ensures that the motor maintains its original efficiency when the rewind is complete. Motors between 25 and 5,000 horsepower are eligible. Idaho Power pays participating service centers \$2.00 per horsepower for each motor that received a verified Green Rewind. Each motor receiving Green Rewind is verified by a non-profit trade organization, Green Motors Practice Group. Motors must be rewound in a certified participating service center that has the equipment and training to perform Green Rewind. For a current list of motor service centers offering Green Rewind please see <http://greenmotors.org/practicing.htm>.

**IDAHO POWER COMPANY**

**Advice No. 18-08**

**Schedule 89  
Commercial and Industrial  
Energy Efficiency**

**ATTACHMENT 1**



**ATTACHMENT 1**

**PRESCRIPTIVE RETROFIT INCENTIVES CHANGES**

Table	Equipment Category	Installing	Replacing	Reason for Change			Cost Effectiveness Results		
				New Measure	No Customer	Not Cost Effective	Utility Cost (BCR)	Total Resource Cost (BCR)	
1	T8 Fluorescents	2' or 3' T8 and electronic ballast (1 or more lamps)	2', 3' and 4' (u-bent) T12			X	1.51	0.65	(1)
		1-lamp 4' T8 and electronic ballast	1-lamp 4' T12			X	1.51	0.65	(1)
		1- or 2-lamp 4' T8 and electronic ballast	2-lamp 4' T12			X	1.51	0.65	(1)
		2- or 3-lamp 4' T8 and electronic ballast	3-lamp 4' T12			X	1.51	0.65	(1)
		2-, 3- or 4-lamp 4' T8 and electronic ballast	4-lamp 4' T12			X	1.51	0.65	(1)
		1- or 2-lamp 8' T8 and electronic ballast	1- or 2-lamp 8' T12		X				
		2-, 3- or 4-lamp 8' T8 and electronic ballast	3- or 4-lamp 8' T12		X				
		1- or 2-lamp 8' T8 and electronic ballast (slimline & HO)	1- or 2-lamp 8' T12HO/VHO		X				
		2-, 3- or 4-lamp 8' T8 and electronic ballast (slimline & HO)	3- or 4-lamp 8' T12HO/VHO		X				
		1- or 2-lamp 4' T5 and electronic ballast	1- or 2-lamp 4' T12		X	X	1.31/1.60	0.69/0.47	(2)
1	T5 (Non-HO) Fluorescents	2-, 3- or 4-lamp 4' T5 and electronic ballast	3- or 4-lamp 4' T12		X	X	1.31/1.60	0.69/0.47	(2)
1	Compact Fluorescents (CFLs)	Screw-in compact fluorescent ≤ 32 watt	Fixture using > 40 input watts		X				
		Screw-in compact fluorescent 33-59 watt	Fixture using > 100 input watts		X				
		Screw-in compact fluorescent ≥ 60 watt	Fixture using > 150 input watts		X				
		Screw-in cold-cathode ≤ 32 watt	Fixture using > 40 input watts		X				
		Hard-wired compact fluorescent ≤ 49 watts and electronic ballast	Fixture using > 90 input watts		X				
		Hard-wired compact fluorescent 50-99 watts and electronic ballast	Fixture using > 150 input watts		X				
1	Light Emitting Diodes (LEDs)	Screw-in or pin-base LED	Screw-in or pin-base lamp using higher wattage	X					
		HID LED Screw-in replacement lamp	Existing HID lamp using > input watts	X					
		Linear LED tube (Types A, B, and DM)	Fluorescent lamp > 17 watts	X					
		Linear LED tube (Type C)	Fluorescent lamp > 17 watts	X					
		LED hardwired conversion	Fixture using higher wattage	X					
		LED fixture or fixture retrofit kit	Fixture using higher wattage	X					
		LED fixture or fixture kit with single control strategy	Fixture using higher wattage	X					
		LED fixture or fixture kit with multiple control strategies	Fixture using higher wattage	X					
LED fixture with networked controls	Fixture using higher wattage	X							
1	Ceramic/Pulse Start/Electronic Metal Halide	Screw-in reduced wattage metal halide > 125 watt	Metal halide using ≥ 250 input watts		X				
		150-230 input watts metal halide	Fixture using 170-295 input watts		X				
		150-230 input watts metal halide	Fixture using ≥ 296 input watts		X				
		231-360 input watts metal halide	Fixture using > 450 input watts		X				
		361+ input watts metal halide	Fixture using > 600 input watts		X				
1	LED Exit Signs	LED sign lighting retrofit	Existing using > input watts	X					

**ATTACHMENT 1**

**PRESCRIPTIVE RETROFIT INCENTIVES CHANGES**

Table	Equipment Category	Installing	Replacing	Reason for Change			Cost Effectiveness Results	
				New Measure	No Customer	Not Cost Effective	Utility Cost (BCR)	Total Resource Cost (BCR)
1	Lighting Controls	Wall switch occupancy sensor	Manual or no prior control ≥ 25 input watts	X				
		Ceiling mount occupancy sensor	Manual or no prior control ≥ 25 input watts	X				
		Fixture mount occupancy sensor - interior	Manual or no prior control ≥ 25 input watts	X				
		Fixture mount occupancy sensor - exterior	Manual or no prior control ≥ 75 input watts	X				
		Interior photocell control (dimming, step-dimming or switching)	Manual or no prior control ≥ 25 input watts	X				
		Multiple control strategies on existing LED - interior	Manual or no prior control ≥ 25 input watts	X				
1	Refrigeration Case Lighting	Multiple control strategies on existing LED - exterior	Manual or no prior control ≥ 75 input watts	X				
		Case #1 – T8 fluorescent lighting and electronic ballast (per lamp)	Case #1 – T12 fluorescent lighting	X				
		Case #2 – LED display case lighting	Case #2 – T12 fluorescent lighting	X				
		Case #3 – LED display case lighting	Case #3 – T8 fluorescent	X				
		Case #4 – TLED display case lighting (per linear ft)	T12 fluorescent lighting		X			
1	Refrigeration Case Lighting	Case #5 – TLED display case lighting (per linear ft)	T8 fluorescent lighting		X			
2	Air Conditioning (AC) Units	<5 ton AC unit that meets CEE Tier 1	Standard <5 ton AC/HP unit	X				
		>5-11 ton AC unit that meets CEE Tier 1	Standard >5-11 ton AC/HP unit			X	0.18	0.22
		>5-11 ton AC unit that meets CEE Tier 2	Standard >5-11 ton AC/HP unit			X	0.76	1.14
		>11-19 ton AC unit that meets CEE Tier 1	Standard >11-19 ton AC/HP unit			X	0.00	0.00
		>11-19 ton AC unit that meets CEE Tier 2	Standard >11-19 ton AC/HP unit			X	0.55	1.12
		>19-25 ton AC unit that meets CEE Tier 1	Standard >19-25 ton AC/HP unit			X	0.00	0.00
		>19-25 ton AC unit that meets CEE Tier 2	Standard >19-25 ton AC/HP unit			X	0.55	0.33
		< 5 ton VRF unit that meets CEE Tier 2	Standard < 5 ton AC/HP unit	X				
		<64 ton VRF unit that meets CEE Tier 1	Standard <64 ton AC/HP unit	X				
		2	Heat Pump (HP) Units	>5-11 ton VRF unit that meets CEE Tier 1	Standard >5-11 ton AC unit	X		
>11-19 ton VRF unit that meets CEE Tier 1	Standard >11-19 ton AC/HP unit			X				
>19-25 ton VRF unit that meets CEE Tier 1	Standard >19-25 ton AC/HP unit			X				
< 5 ton VRF unit that meets CEE Tier 2	Standard < 5 ton AC/HP unit			X				
<64 ton VRF unit that meets CEE Tier 1	Standard <64 ton AC/HP unit			X				
<5 ton HP unit that meets CEE Tier 2	Standard <5 ton AC/HP unit			X				
>5-11 ton HP unit that meets CEE Tier 1	Standard >5-11 ton AC/HP unit					X	0.39	0.11
>11-19 ton HP unit that meets CEE Tier 1	Standard >11-19 ton AC/HP unit					X	0.00	0.00
>19-25 ton HP unit that meets CEE Tier 1	Standard >19-25 ton AC/HP unit					X	1.41	0.35
>5-11 ton VRF unit that meets CEE Tier 1	Standard >5-11 ton AC/HP unit			X				
>11-19 ton VRF unit that meets CEE Tier 1	Standard >11-19 ton AC/HP unit			X				
>19-25 ton VRF unit that meets CEE Tier 1	Standard >19-25 ton AC/HP unit			X				
< 5 ton VRF unit that meets CEE Tier 2	Standard < 5 ton AC/HP unit			X				
<64 ton VRF unit that meets CEE Tier 1	Standard <64 ton AC/HP unit			X				
2	Economizers	Air side economizer control repair	Non-functional economizer	X				
2	Automated Control Systems	EMS control with 1 strategy	Proposed strategy not existing	X				
		Lodging room occupancy controls	Manual controls	X				
2	Evaporative Pre-Cooler	Pre-cooler added to condenser	Standard air-cooled condenser		X	X	4.13	0.52
2	Motor Belts	Synchronous belt	Standard fan belt	X				
3	Ceiling Insulation	Increase to R38 min. insulation	Insulation level R 11 or less	X				

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**ATTACHMENT 1**

**PRESCRIPTIVE RETROFIT INCENTIVES CHANGES**

Table	Equipment Category	Installing	Replacing	Reason for Change			Cost Effectiveness Results	
				New Measure	No Customer	Not Cost Effective	Utility Cost (BCR)	Total Resource Cost (BCR)
4	Stock Tank	Thermostatically-controlled stock tank de-icer	No existing thermostatically-controlled de-icer	X		X	1.90	0.37
4	Residential type electric water heater	EF 0.94 or higher, 25-54 gallon; EF 0.95 or higher, 45-54 gallon; EF 0.93 or higher, 55-74 gallon; EF 0.92 or higher, 75-99 gallon; EF 0.85 or higher, 100-119 gallon	Standard electric water heater			X		
4	Commercial type electric water heater	25-34 gallon, standby loss 157 or lower 35-44 gallon, standby loss 185 or lower 45-54 gallon, standby loss 201 or lower 55-74 gallon, standby loss 238 or lower 75-99 gallon, standby loss 249 or lower 100-119 gallon, standby loss 287 or lower Standard electric water heater	Standard electric water heater			X		
4	Engine Block Heater and Controls	Wall-mounted engine block heater control	Standard engine block heater without controls	X				
		Engine-mounted engine block heater control	Standard engine block heater without controls	X				
4	High Volume Low Speed Fan	High volume low speed fan	Standard high speed fan	X				
4	Compressed Air	VFD on air compressor	No existing VFD	X				
		Low pressure drop filter	Standard filter	X				
		No-loss condensate drain	Open tube with ball valve	X				
		Efficient compressed air nozzle <1/4"	Standard air nozzle	X				
		Efficient compressed air nozzle >1/4"	Standard air nozzle	X				
		Cycling refrigerated compressed air dryer	Standard air dryer	X				
5	Refrigeration	Add refrigeration line insulation	Non insulation present			X	1.63	0.49
		Freezer to dock automatic high speed door	Manual or electric warehouse door	X				
		Freezer to refrigerator automatic high speed door	Manual or electric warehouse door	X				
		Freezer strip curtain	No protective barrier	X				
		Refrigerated strip curtain	No protective barrier	X				
6	Variable Speed Controls	VFD on milking vacuum pump	No existing VSD	X				

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Notes

1. Exterior applications only.
2. Interior/Exterior.
3. Not qualified as a Qualified LED Product Listing.
4. Measure has no savings above code.
5. Measure was consolidated into the <64 ton VRF unit that meets CEE Tier 1 measure.
6. Housekeeping change to correct unit.
7. Removed by the Regional Technical Forum.

**IDAHO POWER COMPANY**

**Advice No. 18-08**

**Schedule 89  
Commercial and Industrial  
Energy Efficiency**

**ATTACHMENT 2**

**ATTACHMENT 2**

**PRESCRIPTIVE NEW CONSTRUCTION INCENTIVES CHANGES**

Table	Measure Type	Incentive	Eligibility Requirements	Reason for Change			Cost Effective Results	
				New Measure or New Incentive Amount	No Customer Interest	Not Cost Effective	Utility Cost (BCR)	Total Resource Cost (BCR)
7	Interior Light Load Reduction	Part A: \$0.10 Part B: \$0.20 Part C: \$0.30 per square foot covered by the lighting	Lighting systems designed with a lighting power density (LPD) that is at least: Part A: 10-19.9% below the Oregon Energy Efficiency Specialty Code will be eligible for this incentive, or Part B: 20-29.9% below the Oregon Energy Efficiency Specialty Code or Part C: Equal to or greater than 30% below the Oregon Energy Efficiency Specialty Code will be eligible for this incentive.  A project that is at least 60% below code and/or has high operation hours can receive a non-standard interior lighting incentive at \$0.15 per kWh saved, up to 100% of the incremental cost or 70% of total invoiced costs between a base and efficient lighting system.	X				
7	High Efficiency Exit Signs	\$7.50 per installed sign	Any code compliant exit sign that draws less than 2 watts per sign face including, but not limited to, light emitting diode (LED), cold cathode, electroluminescent, or self-luminous exit signs are eligible for an incentive.	X				
8	Efficient Air-cooled AC, HP, and VRF units	Part A: \$30.00, Part B: \$75.00, Part C: \$100.00 per ton of air conditioning	Unitary Commercial Air Conditioners, Air Cooled (Cooling Mode) >5 tons Heat-Pumps, Air-Cooled (Cooling Mode) > 5 tons Heat-Pumps, Air-Cooled (Cooling Mode) <= 5 tons Variable refrigerant Flow Units <= 64 tons Variable refrigerant Flow Units <= 5 tons			X	0.18	0.22
				X		X	0.39	0.11
8	Evaporative Pre-Cooler	\$20.00 per ton	Evaporative pre-cooler added to a standard air-cooled condenser			X	4.13	0.52
10	Energy Management Control System	Part A: \$60 per unit of controlled cooling	System must provide automatic control for cooling systems and incorporate specific strategies that result in energy savings over standard operation.	X				
12	Strip Curtain	\$150 per curtain/door \$150 per curtain/door	For walk-in freezers with an unobstructed door opening For walk-in refrigerators with an unobstructed door opening	X X				
12	Automatic High Speed Doors	\$4,000 per door/opening \$8,000 per door/opening	Freezer to Refrigerator: Door controls with automatic control to open and close. Freezer to Dock: Door controls with automatic control to open and close.	X X				
13	High Volume Low Speed Fan	\$2,000 per fan	High volume low speed fans installed	X				
13	Air compressor VFD	\$150 per hp	Installing a VFD on the air compressor that allow the compressor to vary the speed based on actual demand.	X				
13	No-Loss Condensate Drain	\$300 per unit	Installing a no-loss condensate drain that monitors the amount of condensate present and then exhausts only the condensate without wasting compressed air.	X				
13	Low Pressure Drop Filter	\$7.50 per hp	Installing a low-pressure filter that has a pressure drop between 1 and 3 psi.	X				
13	Cycling Refrigerated Compressed Air Dryer	\$2 per CFM	Installing an efficient refrigerated compressed air dryer that cycles on and off based on the need during part load demand.	X				
13	Efficient Compressed Air Nozzle	<= 3/4": \$30 per unit > 3/4": \$60 per unit	Installing an efficient air nozzle that reduces the amount of air compared to a standard nozzle but produces the same performance.	X X				
13	Engine Block Heater Controls	Wall Mounted: \$50 per unit Engine Mounted: \$100 per unit	Controls that provide a 2-hour delay from first plugged in and will turn on only when outside air drops below a certain threshold. Control that cycles the heater on based on engine temperature.	X X				
13	Dairy VFD	Vacuum Pump: \$250 per hp	Installing a VFD on the pump that slows down the motor during normal operation and then speeds up when necessary.	X				

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Notes

1. Used same C/E ratios as individual tonnage ranges from Retrofit table.

**IDAHO POWER COMPANY**

**Advice No. 18-08**

**Schedule 89  
Commercial and Industrial  
Energy Efficiency**

**ATTACHMENT 3**

## **COST-EFFECTIVENESS EXCEPTIONS**

In Order No. 94-590, issued in Docket No. UM 551, the Public Utility Commission of Oregon (“Commission”) outlined specific cost-effectiveness guidelines for energy efficiency measures and programs managed by the program administrators. It is the expectation of the Commission that measures pass both the Utility Cost (“UC”) and the Total Resource Cost (“TRC”) tests. In accordance with Order No. 94-590, measures that do not pass these tests may be included in the programs if they meet one or more of the following additional conditions specified by Section 13 of Order No. 94-590:

- A. The measure produces significant non-quantifiable non-energy benefits. In this case, the incentive payment should be set at no greater than the cost-effective limit (defined as present value of avoided costs plus 10 percent) less the perceived value of bill savings, e.g., two years of bill savings;
- B. Inclusion of the measure will increase market acceptance and is expected to lead to reduced cost of the measure;
- C. The measure is included for consistency with other demand-side management (“DSM”) programs in the region;
- D. Inclusion of the measure helps to increase participation in a cost-effective program;
- E. The package of measures cannot be changed frequently and the measure will be cost-effective during the period the program is offered;
- F. The measure or package of measures is included in a pilot or research project intended to be offered to a limit number of customers;
- G. The measure is required by law or is consistent with Commission policy and/or direction.

Idaho Power Company (“Idaho Power” or “Company”) is requesting approval for a cost-effectiveness exception as allowed by Order No. 94-590 for 16 measures (13 measure groupings) within the Commercial and Industrial Energy Efficiency Program (“Program”). The Program is an incentive-based program designed to help reduce the costs of installing energy efficiency features in existing and new commercial and industrial buildings. Some of these measures fall under both the Retrofit and New Construction offerings.

### **1. Table 8: Efficient Air-cooled AC, HP, and VRF Units: 0 - 5 Ton AC VRF Units and HP VRF Units that Meet CEE Tier 2**

This is a new measure offering incentives to encourage customers to increase energy savings beyond Consortium for Energy Efficiency (“CEE”) Tier 1 that are nearly cost-effective. Idaho Power has an opportunity to help increase market acceptance of the CEE Tier 2 air conditioning (“AC”) and heat pump (“HP”) variable refrigerant flow (“VRF”) units which may bring the costs down for these units and bring them closer to cost-effectiveness.

The AC VRF units have a UC Benefit Cost Ratio (“BCR”) of 1.06 and TRC BCR of 0.64. The HP VRF units have a UC BCR of 1.44 and TRC BCR of 0.96 and are nearly cost-effective with cooling only savings. While the AC VRFs have a lower BCR, Idaho Power recommends offering parallel incentive offerings for both ACs and HPs to reduce customer confusion.

For heat pumps, the savings for the cost-effectiveness analysis is based on the cooling savings. The Company chose not to limit participation within this measure based on the customer's heating source to avoid customer confusion because the Company is planning to offer a parallel incentive for the AC VRF units. However, if participants have electric heating and mechanical cooling, the HP VRFs would have a UC BCR of 2.57 and TRC BCR of 1.71.

Finally, Rocky Mountain Power also provides an incentive for HP VRFs that meet CEE Tier 2, indicating that these measures are consistent with other DSM programs in the region.

*Pursuant to Conditions B, C and D from Order No. 94-590, Idaho Power recommends that this VRF measure be included in the program offering to encourage participation in a cost-effective program and increase market acceptance.*

## **2. Table 8: Efficient Air-cooled AC, HP, and VRF Units: 0 - 64 Ton AC VRF Units and HP VRF Units that Meet CEE Tier 1**

Looking at a simple average, the 0 – 64 ton AC VRF units have a UC BCR of 0.99 and a TRC BCR of 1.18, nearly cost-effective from the UC perspective; however, the HP VRF units have a TRC of 1.49 and a UC of 0.87.

Previously, the measure applied to 0 – 25 ton HP VRFs meeting CEE Tier 1 which had received a cost-effectiveness exception under Advice No. 16-08. Idaho Power is recommending to expand the measure offering to include AC and HP VRFs up to 64 tons in an attempt to gain customer participation and improve the measure's cost-effectiveness. While Idaho Power did not incent on any projects with this measure in Oregon in 2017, the Company is hoping to do so in the future.

For HP VRFs, the savings are based on mechanical cooling. As mentioned previously, the Company chose not to limit participation within this measure based on the customer's heating source. However, if participants have electric heat and mechanical cooling, the HP VRFs would have a UC BCR of 1.93 and a TRC BCR of 1.28.

Finally, Rocky Mountain Power also provides an incentive for HP VRFs that meet CEE Tier 1, indicating that these measures are consistent with other DSM programs in the region.

*Pursuant to conditions C and D from Order No. 94-590, Idaho Power recommends that this VRF measure remain in the program offering to encourage participation in a cost-effective program.*

## **3. Table 8: Efficient Air-cooled AC, HP, and VRF Units: 0 – 5 Ton HP Unit that Meets CEE Tier 1 or 2**

Idaho Power is proposing a new incentive for HP units that meet CEE Tier 2 to encourage customers to increase energy savings beyond CEE Tier 1. Idaho Power has an opportunity to help increase market acceptance of the CEE Tier 2 HP units which may bring the units' costs down and bring them closer to cost-effectiveness.



Previously, the 0 – 25 ton HP units that meet CEE Tier 1 received a cost-effectiveness exception under Advice Nos. 14-06 and 14-10. Due to the increase in baseline code standards, there are few savings for 6 – 25 ton HP units to meet CEE Tier 1. Idaho Power has proposed to remove these tonnages from the program.

The 0 – 5 ton HP unit meeting CEE Tier 1 has a UC BCR of 2.07 and TRC BCR of 0.45. The 0 – 5 HP unit meeting CEE Tier 2 has a UC BCR of 1.30 and TRC of 0.64. In 2017, Idaho Power did not incent on any Oregon projects that meet CEE Tier 1.

To reduce customer confusion, Idaho Power is recommending offering parallel incentives for both ACs and HPs. 0 – 5 ton AC units that meet CEE Tier 1 or Tier 2 are cost-effective. Those that meet CEE Tier 1 have a UC BCR of 2.07 and a TRC BCR of 2.03. Those that meet CEE Tier 2 have a UC BCR of 1.30 and a TRC of 1.78.

Finally, Rocky Mountain Power also provides an incentive for HP units that meet CEE Tier 1 or 2, indicating that the addition of these measures is consistent with other DSM programs in the region.

*Pursuant to conditions B, C and D from Order No. 94-590, Idaho Power recommends these HP measures remain in the program offering to encourage participation in a cost-effective program and increase market acceptance.*

#### **4. Table 2: HVAC and HVAC Controls: HVAC Fan Motor Belts, Synchronous Belts**

This proposed new measure is nearly cost-effective with a UC BCR of 1.69 and a TRC BCR of 0.97. The Company believes the measure will help increase participation in a cost-effective program and increase market acceptance of this product. When a customer first installs a synchronous belt, the initial cost includes both new sheaves and new synchronous belts on equipment. Subsequently, however, the customer will be able to replace only belts. The replacement will be at a lower cost and will result in energy savings beyond the five-year life of the measure.

In addition to the incentive proposed by Idaho Power, the U.S. Department of Energy Motor System Tip Sheet #5 recommends the use of synchronous belts.<sup>1</sup> Synchronous belts are a complementary measure to the Notched V-Belt incentive that is currently offered in the program.

*Pursuant to conditions B and D from Order No. 94-590, Idaho Power recommends that these belts be included in the program offering to encourage participation in a cost-effective program and increase market acceptance.*

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<sup>1</sup> U.S. Department of Energy. Motor Systems Tip Sheet #5: Replace V-Belts with Notched or Synchronous Belt Drives. [https://www.energy.gov/sites/prod/files/2014/04/f15/replace\\_vbelts\\_motor\\_systemts5.pdf](https://www.energy.gov/sites/prod/files/2014/04/f15/replace_vbelts_motor_systemts5.pdf)

**5. Table 3: Building Shell – Premium Windows, Low U-value, U-factor of .30 or less**

This measure has a UC BCR of 1.69 and TRC BCR of 0.79. In 2017, Idaho Power incented two projects in Oregon totaling 3,322 annual kWh of savings. Those projects represented 0.10 percent of the total Oregon savings (.004 percent of total program savings) in the Program.

While the HVAC measures focus on cooling savings to eliminate confusion between the AC and HP units, the weatherization measures must rely on the heating savings due to the small amount of cooling savings that can be attributed to Premium Windows. However, if a customer has both electric heat and mechanical cooling, the UC BCR would be 1.98 and the TRC BCR would be 0.92.

Finally, Rocky Mountain Power also provides an incentive for HP units that meet CEE Tier 1 or 2, indicating that these measures are consistent with other DSM programs in the region.

*Pursuant to Conditions B, C and D from Order No. 94-590, Idaho Power recommends that this window measure remain in the program offering to encourage participation in a cost-effective program and increase market acceptance.*

**6. Table 3: Building Shell – Ceiling Insulation, Increase to R38 min Insulation.**

The Ceiling Insulation incentive is a new offering for Idaho Power customers who increase ceiling insulation at R11 or less to a level of at least R38. This measure has a UC BCR of 3.52 and TRC BCR of 0.98 and is nearly cost-effective. These savings are based on electric heat only; however, if a customer has electric heat and mechanical cooling, the UC BCR would be 6.27 and the TRC BCR would be 1.0.

Idaho Power currently has wall insulation measures within the Program. Wall insulation is currently cost-effective with a TRC BCR range between 7.59 and 9.40. By adding ceiling insulation to the Program, Idaho Power has the ability to encourage customers to increase their efficiency with a suite of weatherization options that includes wall insulation, reflective roof treatment, and premium windows.

Finally, others in the region that offer this measure include Avista, the Energy Trust of Oregon, and Rocky Mountain Power, indicating that these measures are consistent with other DSM programs in the region.

*Pursuant to conditions C and D from Order No. 94-590, Idaho Power recommends that this ceiling insulation measure be included in the program offering to encourage participation in a cost-effective program.*

**7. Table 4: Other Equipment – Smart Power Strips**

This measure has a UC BCR of 2.32 and TRC BCR of 0.69 for Retrofit and a UC BCR of 2.32 and a TRC BCR of 0.77 for New Construction. The program did not have any Oregon projects with this measure in 2017; however, there may be opportunities to do so in the future.

The TRM currently cites the RTF as the main source of data for this measure. Advance Smart Power Strips is currently a planning measure at the RTF therefore research is being gathered around various assumptions such as savings, costs, and life. For instance, the RTF lists the measure life at 4 years. Both the Pennsylvania and Illinois TRMs list the measure life at 5 years. Additionally, the TRM lists the costs to be \$33-37. Idaho Power believes these Advance Smart Power Strips can be purchased for less, improving the TRC BCR of the measure.

Furthermore, this measure will be offered within the Commercial Energy Efficiency Kit's office kit. While Idaho Power is able to purchase the Advance Smart Power Strips in bulk and the cost-effectiveness is calculated at the kit level rather than at the individual measure level, the Company is concerned that there may be additional customer confusion if the power strips are prematurely removed from the program while still being offered in the Commercial Energy Efficiency Kit. The intent of these Commercial Energy Efficiency Kits is to encourage customers to participate in the Company's Commercial and Industrial Energy Efficiency Program. Because Idaho Power recently added the measure to the Program in 2016 and due to the uncertainty around the measure assumptions, the Company proposes to keep this measure to avoid customer confusion.

Finally, others in the region that offer this measure include Energy Trust of Oregon and Rocky Mountain Power, indicating that these measures are consistent with other DSM programs in the region.

*Pursuant to options C and D from Order No. 94-590, Idaho Power recommends that the smart power strip measure remain in the program offering to encourage participation in a cost-effective program.*

#### **8. Table 4: Other Equipment – Efficient Refrigerated Compressed Air Dryer**

This measure has a UC BCR of 2.58 and a TRC BCR of 0.95 and is nearly cost-effective. Others in the region that offer this measure include Avista and Rocky Mountain Power.

*Pursuant to conditions C and D from Order No. 94-590, Idaho Power recommends that the efficient refrigerated compressed air dryer measure be included in the program offering to encourage participation in a cost-effective program. This measure is also offered in conjunction with several other cost-effective compressed air measures. Inclusion of this measure will provide customers with a comprehensive list of compressed air measures.*

#### **9. Table 5: Food Service Equipment – Refrigeration, Auto-closer (reach-in, med temp)**

This measure is one of four refrigeration auto-closer measures and has a UC BCR of 1.30 and a TRC BCR of 0.82. The other three measures have TRC BCRs between 1.10 to 6.59. In 2017, Idaho Power did not have any Oregon projects with this measure. Because the measure is also offered in the Company's Idaho service area, Idaho Power believes that keeping this measure in Oregon could increase participation in a cost-effective program.

*Pursuant to Condition D from Order No. 94-590, Idaho Power recommends that the auto closure measure be included in the program offering to encourage participation in a cost-effective program.*

**10. Table 5: Food Service Equipment – Floating Suction Pressure Controller (Retrofit)**

This measure has a UC BCR of 3.45 and TRC BCR of 0.87. In 2017, Idaho Power did not incent on any Oregon projects. The floating suction pressure controller is cost-effective under New Construction with a TRC BCR of 1.05. Additionally, the floating head pressure controller in Retrofit is cost-effective as well with a TRC BCR of 1.18. Because the measure is nearly cost-effective and both the floating suction and head controllers are offered under the Retrofit and New Construction offerings, the Company recommends that the measure remain in the program.

Avista and the Energy Trust of Oregon provide an incentive for floating suction pressure controllers, indicating that these measures are consistent with other DSM programs in the region.

*Pursuant to conditions C and D from Order No. 94-590, Idaho Power recommends that this pressure controller measure remain in the program offering to encourage participation in a cost-effective program.*

**11. Table 12: Refrigeration for New Construction, Expansion, or Major Renovations – Floating head pressure controller (New Construction)**

This measure has a UC BCR of 3.73 and a TRC BCR of 0.99 and is nearly cost-effective. In 2017, Idaho Power incented one Oregon project that totaled 10,463 annual kWh of savings. The project represented 0.30 percent of total Oregon savings (0.01 percent of total program savings) in the overall program.

The floating head pressure controller is cost-effective under Retrofit with a TRC BCR of 1.18. Additionally, the floating suction head pressure controller in New Construction is cost-effective as well with a TRC of 1.18. Because the measure is nearly cost-effective and both the floating head and suction controllers are offered under the Retrofit and New Construction offerings, the Company recommends that the measure remain in the program.

Avista and the Energy Trust of Oregon provide an incentive for floating head pressure controllers, indicating that these measures are consistent with other DSM programs in the region.

*Pursuant to conditions C and D from Order No. 94-950, Idaho Power recommends that this pressure controller measure remain in the program offering to encourage participation in a cost-effective program.*

**12. Table 5: Food Service Equipment – ENERGY STAR® Commercial Dishwasher**

This measure has a UC BCR of 5.85 and TRC of 0.95 and is nearly cost-effective. In 2017, Idaho Power did not incent on any Oregon projects; however, there may be opportunities to do so in the

future. Avista and the Energy Trust of Oregon offer this measure so including this measure in the program would be consistent with other DSM programs in the region.

*Pursuant to conditions C and D from Order No. 94-590, Idaho Power recommends that this dishwasher measure be included in the program offering to encourage participation in a cost-effective program and increase market acceptance.*

**13. Table 5: Food Service Equipment – ENERGY STAR® electric convection oven**

This measure has a UC BCR of 2.61 and TRC of 0.97 and is nearly cost-effective. In 2017, Idaho Power did not incent on any Oregon projects; however, there may be opportunities to do so in the future. Rocky Mountain Power and the Energy Trust of Oregon offer this measure, so including this measure in the program would be consistent with other DSM programs in the region.

*Pursuant to conditions C and D from Order No. 94-590, Idaho Power recommends that this oven measure be included in the program offering to encourage participation in a cost-effective program and increase market acceptance.*