**Measures and Rebate Amounts**

|  |  |
| --- | --- |
| **Lighting Measures** | **Incentive Amount** |
| Incandescent to LED Lighting | $0.10 per kWh saved |
| T12/T8 Fluorescent Tubes to LED Tubes | $0.10 per kWh saved |
| HID to LED Fixtures | $0.10 per kWh saved |
| Exit Signs | $0.10 per kWh saved |
| Occupancy/Daylight Sensors | $0.10 per kWh saved |
| Delamping | $0.10 per kWh saved |
| HID Lighting to T5HO/T8 | $0.10 per kWh saved |
| Induction Lighting | $0.10 per kWh saved |
|  |  |
| **Heating and Cooling Measures** |
| AC Units, 2 to 5 Tons | $90 to $260 per unit |
| Heat Pumps, 2 to 5 Tons | $90 to $260 per unit |
| Programmable Thermostat | $40 per thermostat |
| HVAC EMS System | $0.25 to $0.35 per square foot |
| System Test and Repair | $180/unit |
|  |  |
| **Building Envelope Measures** |  |
| Shade Screen | $1.00 per square foot |
|  |  |
| **Refrigeration Measures** |  |
| Strip Curtains | $2.50 per square foot |
| Anti-Sweat Heater (ASH) Controls | $12 per linear foot |
| High Efficiency Evaporative Fan motor, no controller | $30 per motor |
| High Efficiency Evaporative Fan motor with controller | $60 per motor |
| Automatic Door Closer for Walk-in cases | $15 per closer |
|  |  |
| **Plug Load Measures** |  |
| Non-Refrigerated Vending Machine Controller | $45 per controller |
| Reach-in Cooler Controller | $45 per controller |
| Refrigerated Vending Machine Controller | $45 per controller |
| Plug-Load Smart Strips | $5 per strip |
|  |  |
| **Other Measures** |  |
| Variable Speed Drives | $20 to $60 per horsepower |
| Any measure not listed above (Custom) | $0.10 per kWh saved  |

**Prescriptive measures capped at 75% of incremental costs; custom measures cap at 75% of incremental cost.**

Measure Specifications

All equipment removed under the program must be recycled or disposed of in compliance with local requirements. Documentation of disposal may be requested by program staff. A manufacturer’s specification sheet and invoice may be requested for any installed measure.

# LIGHTING

## LED Lighting

LED screw-in lamps must replace incandescent or halogen lamps on a one-for-one basis. Reflector lamps must be R, BR or PAR series. A wattage reduction of 60% is required to obtain a rebate.

Linear LED lamps may replace existing two, three, four or eight-foot T12 or T8 lamps. A wattage reduction of 40% is required to obtain a rebate.

Metal halide and high pressure sodium fixtures may be retrofitted with appropriate LED lamps or replaced with an appropriate LED fixture. A wattage reduction of 60% is required to obtain a rebate.

All LED lamps, linear tubes or fixtures must be either listed as a qualified product with Design Lights Consortium or ENERGY STAR®-certified.

## Delamping (Permanent Lamp Removal)

This measure applies to permanent removal of existing fluorescent lamps. Permanent lamp removal is the net reduction in the quantity of lamps after a project is completed. Contractors are responsible for determining whether or not to use reflectors in combination with lamp removal in order to maintain adequate lighting levels. Removing lamps from a T12 fixture that is not being retrofitted with T8 or T5 lamps is not eligible for an incentive. PCB ballasts are hazardous materials and should be disposed of properly. National recognized testing laboratory ratings (e.g., UL) are mandatory where applicable.

Lighting retrofits are expected to meet the Illuminating Engineering Society of North America (IESNA) recommended light levels. Unused lamps, lamp holders (tombstones) and ballasts must be permanently removed from the fixture and disposed of in accordance with local regulations.

## Exit Signs

High-efficiency exit signs must replace or retrofit an existing incandescent or CFL exit sign. Electroluminescent and light-emitting diode (LED) exit signs are eligible under this category. T-1 type, non-electrified and remote exit signs are not eligible. All exit signs must be new, must be UL- or ETL-listed, have a minimum lifetime of 10 years, have an input wattage ≤ 5 watts per face or be ENERGY STAR® rated and comply with local codes and ordinances.

## Occupancy Sensor Controls

Only passive infrared and/or ultrasonic detectors are eligible. Wall box and wall-, ceiling- or fixture-mounted sensors must be hardwired to control interior lighting fixtures.

## Daylighting Controls

Eligible controls shall consist of a photo sensor that controls on/off, stepped or continuous dimming ballasts. This measure is not eligible for incentives in conjunction with the daylighting incentive for the UES Renewable Energy Program. Systems that allow on/off overrides are not eligible.

## HID Lighting to T8/T5HO

This measure consists of replacing Metal Halide (MH) or High Pressure Sodium (HPS) fixtures with new T8 or T5 fixtures and electronic ballast. Fixtures must have a reflector with a minimum of 90% reflectivity. Lamps must have a color rendering index (CRI) ≥ 80. Ballasts must be high frequency (≥20kHz), UL listed, and warranted against defects for 5 years. Ballasts must have a power factor (PF) ≥0.90. Ballasts for 4-foot lamps must have total harmonic discharge (THD) ≤20% at full light output. Low pressure sodium (LPS) lamps are not eligible to be replaced under this prescriptive incentive.

## Induction Lighting Systems

This measure consists of replacing metal halide (MH), mercury vapor (MV), high pressure sodium (HPS) fixtures with new induction lighting systems. All induction lamps must have CRI ≥ 80, expected life ≥ 60,000 hours, and must save at least 30% from the MH/HPS/MV lamp wattage.

# HVAC

## Unitary and Split Air Conditioning Systems and Air Source Heat Pumps

This measure applies to the installation of new unitary air conditioning units or air source heat pumps that meets or exceeds the qualifying Seasonal Energy Efficiency Ratio (SEER). They can be either split systems or single packaged units. The efficiency of split systems is based on an AHRI reference number. Water-cooled systems, evaporative coolers, and water source heat pumps do not qualify for prescriptive incentives, but may qualify for a custom incentive.

All packaged and split system cooling equipment must meet Air-Conditioning and Refrigeration Institute (ARI) standards (210/240, 320 or 340/360), be NRTL listed, and use a minimum ozone-depleting refrigerant (e.g., HCFC or HFC). Disposal of the existing unit must comply with local codes and ordinances.

An AHRI Certificate and a manufacturer's specification sheet indicating the system efficiency must accompany the application:

* To retrieve an AHRI Certificate, visit: <http://www.ahridirectory.org/ahridirectory/pages/home.aspx>
	+ AC and Heat Pumps units less than 6 tons are listed under Residential by selecting "Air Conditioners and Air Conditioner Coils" or "Heat Pumps and Heat Pump Coils" and entering made/ number.
	+ AC and Heat Pumps units over 6 tons are listed under Commercial by selecting "Unitary Large Equipment" and entering model number.

## Programmable Thermostats

Equipment must replace a non-programmable thermostat. Programmable thermostats must be capable of 7-day, 5-2 or 5-1-1 programming. Programmable thermostats installed in hotel and motel guest rooms are not eligible for this rebate. Thermostats for evaporative coolers also are ineligible.

## HVAC EMS System

This measure is for installing an energy management system to replace thermostats, pneumatic controls or an existing direct digital control (DDC) system. This measure is paid by the square foot of the area controlled.

Please call 866-324-5506 or ces@uesaz.com for more details.

## System Test and Repair

Advanced Diagnostic Tune-up consists of an air conditioning equipment performance test with program approved specialized test equipment, tune-up with repairs and a test out. Refrigerant charge and air flow verification, belt replacement as necessary, air filter replacement, condenser coil cleaning with a non-acidic chemical, evaporator coil cleaning as needed, cleaning condensate drain lines, electrical connections checked and tightened, economizer functional testing and any other repairs needed to bring the unit back to the manufacturer’s specifications. Outdoor temperature must be 55 degrees Fahrenheit or higher for systems with R410A and 60 degrees Fahrenheit for systems with R22 during the tune-up and repair procedure.

Please call 866-324-5506 or ces@uesaz.com for a copy of the “HVAC Testing & Repair Technical Specifications” technical manual for complete service procedures.

# BUILDING ENVELOPE

## Shade Screen

This measure consists of installing fixed exterior-mounted shading screens to the windows with east, south and west exposures. Incentives are not available for windows with northern exposure (+/- 45o of true north). This measure is applicable only to retrofit of existing facilities. Shading Coefficient (SC) must be ≤0.30 at a 30° angle profile. Interior window shades, such as blinds and drapes do not qualify. Roll-up shade screens are not eligible for an incentive. A manufacturer’s specification sheet **must** accompany the application.

# REFRIGERATION

## Strip Curtains

New strip curtains or clear plastic swinging doors must be installed on doorways of walk-in boxes and refrigerated warehouses. This incentive is not available for display cases or replacing existing strip curtains. Incentive is based on square foot of the opening.

## Anti-Sweat Heater Controls

For this measure, devices installed that sense the relative humidity in the air outside of the display case and reduce or turn off the glass door (if applicable) and frame anti-sweat heaters at low-humidity conditions are eligible for incentives. Technologies that can turn off anti-sweat heaters based on sensing condensation (on the inner glass pane) also qualify for rebates. The rebate is based on the total horizontal linear footage of doors controlled on the case.

## Electronically Commutated (EC) Evaporator Fan Motor (no controls)

This measure is applicable to the replacement of an existing standard-efficiency, shaded-pole evaporator fan motor in refrigerated display cases or fan coils in walk-ins. The replacement unit must be an EC motor.

## EC Evaporator Fan Motor with Evaporator Fan Control

This measure consists of replacing an existing standard efficiency shaded pole evaporator fan motor without controls with an EC evaporator fan motor with controls in medium temperature walk-in coolers. It must control a minimum fan load of 1/47 HP where the fan(s) operate continuously at full speed. It also must reduce fan motor power by at least 75% during the compressor off-cycle. This measure is not applicable if any of the following existing (base case) conditions apply: the compressor runs all the time with high duty cycle, the evaporator fan does not run at full speed all the time, the evaporator fan motor runs on poly-phase power or the evaporator does not use off-cycle or time-off defrost.

## Automatic Door Closer

Automatic door closers must automatically close the main insulated door of an existing walk-in cooler or freezer. The auto-closer must firmly close the door when it is within one inch of full closure. Only new installations are eligible for a rebate.

# PLUG LOADS

## Non-Refrigerated Vending Machine Controller

This measure consists of a controller that must include a passive infrared occupancy sensor to turn off lamps and other vending machine systems when the surrounding area is unoccupied for 15 minutes or longer. For vending machines located indoors, backlighting lamps and ballasts should be removed to obtain additional energy savings.

## Reach-in Cooler Controller

This measure consists of controls with passive infrared occupancy sensor to turn off fluorescent lights and other refrigerated systems when the surrounding area is unoccupied for 15 minutes or longer. The refrigerated unit should contain only non-perishable bottled and canned beverages. Control logic should power up the machine at two-hour intervals to maintain product temperature.

## Refrigerated Vending Machine Controller

This measure consists of a controller that must include a passive infrared occupancy sensor to turn off fluorescent lights and other vending machine systems when the surrounding area is unoccupied for 15 minutes or longer. The control logic should power up the machine at minimum at 2-hour intervals to maintain product temperature and provide compressor protection. For refrigerated beverage machines located indoors, backlighting lamps and ballasts should be removed to obtain additional energy savings.

## Plug-Load Smart Strips

New plug-load smart strips can be installed to control electricity-using equipment in offices or cubicles, including lighting, monitors, shared copiers and/or printers. Three types of smart strips are eligible for rebates: occupancy sensors, load controlled and time controlled. Power strips with an occupancy sensor must have passive infrared and/or ultrasonic detectors for plug-load office equipment. Load-sensing smart plug strips detect a drop in current when a control device enters low-power mode. Timer smart strips turn equipment on and off based on programmable timer. This device should be used on equipment that requires a long warm-up.

# OTHER MEASURES

## Variable Frequency Drives

Variable speed drives (VSDs) installed on HVAC fans or pumps are eligible for an incentive. The rated connected motor horsepower must be <50 hp. The installation of a VSD must accompany the permanent removal or disabling of any flow control devices such as inlet vanes, bypass dampers and throttling valves to qualify for incentives. This measure applies only to VSDs installed with an automatic control technology.

This measure does not apply to redundant or backup/standby motors that are expected to operate less than 1,200 hours per year, nor does it apply to variable-pitch fans and forward curve with inlet guide vanes unless, the applicant supplies proof of kWh savings from logged or measured data. This measure does not apply to replacement of a multi-speed motor or VSDs included on a new variable speed chiller.

## Custom Measure

The Commercial Energy Solutions program offers rebates for energy efficiency improvements that are not listed as a prescriptive measure, but meet the custom project criteria. Custom projects must have isolated and measurable or verifiable energy savings. Projects replacing inefficient equipment with more efficient equipment must demonstrate that the old equipment has been eliminated from the resale market. All custom measures must pass a Societal Cost Test (SCT), as defined and calculated by DNV GL, using energy savings and incremental measure costs provided by the customer.

Equipment specifications, hours of operation, project cost information, and copies of the calculations that were used to determine savings (in Excel format) are required for the applicant to be eligible for a rebate. It is up to the applicant to present a convincing case for how energy savings should be estimated. The Commercial Energy Solutions team is available to assist in developing energy savings estimates. Examples of custom measures include but are not limited to:

* Economizers – Air-side or water-side
* High Intensity Discharge (HID) or fluorescent light fixture improvements not covered under the prescriptive measures (LEDs, etc.)
* Improved Automatic Controls (time switches, sensors, etc.)
* Building envelope improvements (solar screens, etc.)

Ineligible projects include, but are not limited to, cool roofs, electrical generation projects including renewables, fuel switching, and customer-owned on-site generation. Measures that are listed in the prescriptive table above are **not** eligible for a custom rebate.

Custom rebates are calculated using $0.10 per estimated first year kilowatt hour saved. Actual rebate payments are based on either (1) documented electrical energy (kWh) reduction or (2) an electrical energy reduction estimate approved by DNV GL. Under no circumstances will the rebate payment exceed 75% of the energy efficiency-related project costs, which are defined as the incremental costs associated with implementing the energy-saving measures.