PUBLIC SECTOR ELECTRIC EFFICIENCY PROGRAM

APPLICATION AND WORKSHEETS FOR STANDARD INCENTIVE PROGRAMS

dceo

ILLINOIS DEPARTMENT OF COMMERCE AND ECONOMIC OPPORTUNITY

PROGRAM CONTACT INFORMATION

For additional information on the
DCEO Standard and Custom Incentive Programs
under the Public Sector Electric Efficiency Program:

Visit our website at
www.illinoisenergy.org

or

Phone: 217/785-2863
(TDD: 217/785-6055)

or

Email us at
illinois.energy@illinois.gov

An on-line application system is available
for DCEO applicants in the ComEd Electric service territory at:
www.ComEd.com

Paper applications may be mailed or delivered to DCEO's program office:

Illinois Department of Commerce and Economic Opportunity
Bureau of Energy and Recycling
Attn: PSEE
620 East Adams Street
Springfield, IL 62701

or faxed: 217/785-2618

or submitted electronically:
illinois.energy@illinois.gov

APPENDIX A: APPLICATION FOR STANDARD AND CUSTOM INCENTIVE PROGRAMS

Applying for incentives from Ameren or ComEd and DCEO for same energy efficiency measure is prohibited.

☐ **Pre-approval** ☑ **Final Application**

Name of Applicant*	Lake County Illinois		
Name as it Appears on Your Utility Bill	County Administrator		
Name of Contact Person	Chris Kutchin	**Title**	Administrative Assistant
Telephone #	847-377-2987	**Fax #**	847-984-5980
Email Address	ckutchin@lakecountyil.gov		
Address Where Measures Installed	15 S. County		
City, State, Zip+4 (Measures Installed)	Waukegan, IL 60085		
Mailing Address	18 N. County St.		
City, State, Zip+4 (Mailing Address)	Waukegan, IL 60085		
Account Number (Where Measures Installed)	1285380002	**Electric Utility Company**	ComEd
Taxpayer ID Number (SSN / FEIN)	36-6006600	**Tax Status** (Individual, Partnership, Corp, Exempt)	Exempt
Contracting Company	Stuckey Construction Company		
Contractor Contact Name	Laurie Dust	**Contractor Phone #**	847-336-8575
Contractor Email	Laurie@stuckeyconstruction.com		
Contractor Address	2020 N. Lewis Ave., Waukegan, IL 60085		

Public Entity Type:

(Check One)

Local govt.	X
K-12 School	
Community College	
University	
State Agency	
Federal Agency	

Complete this form along with the appropriate forms in Appendices B and C.

*Applicant means (i) a unit of local, state and federal government, (ii) public school district, (iii) public community college district, or (iv) public college or university proposing an electrical energy efficiency project in Illinois that receives electric delivery service from Ameren or ComEd wires regardless of which retail electric supplier the applicant has chosen to purchase power from.

Incentive** Total	$3,907.00
Total Project Cost	$55,430.00

** Incentive Cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

APPLICANT CERTIFICATIONS FOR STANDARD AND CUSTOM INCENTIVE PROGRAMS

Applicant hereby certifies that:

- The project receives electric delivery service from Ameren Illinois or ComEd. **A copy of the electric utility bill or other documentation must be submitted with this Application.**
- All authorizations required to perform the project, described in its application, have either been obtained or will be obtained no later than 90 days following the grant beginning date set forth in the Notice of Grant Award issued by the Department.
- The project complies with all applicable state, federal, and local environmental and zoning laws, ordinances, and regulations and that all required licenses, permits, etc., have either been obtained or will be obtained no later than 90 days following an award by DCEO.
- It is not in violation of the prohibitions against bribery of any officer or employee of the state of Illinois as set forth in 30 ILCS 505/10.1.
- It has not been barred from contracting with a unit of state or local government as a result of a violation of Section 33E-3 or 33E-4 of the Criminal Code of 1961 (720 ILCS 5/33 E-3 and 5/33 E-4).
- It is not in violation of the Educational Loan Default Act (5 ILCS 385/3).
- I understand that the State Finance Act, 30 ILCS 105/30 may apply and that payments under this incentive program are contingent upon the existence of a valid appropriation, and that no officer, institution, department, board or commission shall contract any indebtedness on behalf of the State, or assume to bind the State in an amount in excess of the money appropriated, unless expressly authorized by law.
- I understand that the Illinois Prevailing Wage Act (820 ILCS 130/0.01) may apply and that Grantees are responsible for determining if their projects will trigger compliance.
- As of the submittal date, the information provided in its application is accurate, and the individuals signing below are authorized to submit this application.

Authorized Official (signature*)	Project Manager (signature*)
Typed/Printed Name	MATTHEW R GARDNER Typed/Printed Name
Title Date	CONSTRUCTION MANAGER 3/24/09 Title Date

Authorized Signature Address

Authorized Signature City, 9 Digit Zip

Authorized Signature E-mail address

*Electronic Signatures not acceptable. Please supply Certifications (this page) with original signature via mail, fax, or electronically (scanned document).

Building Name	

Lighting Incentive Worksheet

Equipment Type	Incentive	Unit	# of Units	Incentive Subtotal
[illegible]				
15 W or Less	$1.50	Lamp	4	$6.00
16 W - 26 W	$1.50	Lamp		$0.00
27 W or Greater	$2.00	Lamp		$0.00
[illegible]				
29 W or Less	$25.00	Fixture	7	$175.00
30 W or Greater	$50.00	Fixture		$0.00
[illegible]				
Remove 4-foot lamp	$6.00	Lamp		$0.00
Remove 8-foot lamp	$8.00	Lamp		$0.00
Remove 4-foot lamp with reflector	$12.00	Lamp		$0.00
Remove 8-foot lamp with reflector	$16.00	Lamp		$0.00
[illegible]				
4-foot lamp and ballast	$7.00	Lamp		$0.00
[illegible]				
4-foot lamp and ballast	$7.00	Lamp		$0.00
4-foot lamp only	$1.00	Lamp		$0.00
[illegible]				
8-foot and ballast	$10.00	Lamp		$0.00
8-foot lamp only	$1.00	Lamp		$0.00
[illegible]				
100 W or Less	$20.00	Fixture		$0.00
101 W - 200 W	$35.00	Fixture		$0.00
201 W - 350 W	$40.00	Fixture		$0.00
[illegible]				
Cold Cathode	$3.00	Lamp		$0.00
[illegible]				
LED, T-1, or Electroluminescent	$22.00	Signs	23	$506.00
[illegible]				
Occupancy Sensors	$0.10	Connected Watts Controlled	448	$44.80
[illegible]				
Total Existing Fixture Watts less Total New Fixture Watts	$0.40	Connected Watt Reduction	0	$0.00
Total Existing Fixture Watts less Total New Fixture Watts	$0.40	Connected Watt Reduction	0	$0.00
Total Existing Fixture Watts less Total New Fixture Watts	$0.40	Connected Watt Reduction	0	$0.00
[illegible]				
8" Traffic LED Signal Head	$75	Module		$0.00
12" Traffic LED Signal Head	$90	Module		$0.00
8" Arrow LED Module	$20	Module		$0.00
12" Arrow LED Module	$35	Module		$0.00
8"-9" Pedestrian LED Module	$30	Module		$0.00
12" Pedestrian LED Module	$35	Module		$0.00
16"x18" Pedestrian Combo	$35	Module		$0.00
Total*				**$731.80**

* Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost

Lighting Specifications

All lighting projects are expected to comply with the Illuminating Engineering Society of North America (IESNA) recommended lighting levels or the local code.

Compact Fluorescent Lamps (Screw-in)
This incentive applies to screw-in compact fluorescent lamps (CFLs) and applies only if an incandescent or high intensity discharge (HID) lamp is being replaced. All screw-in CFLs must be ENERGY STAR®-rated. The lamp/ballast combination must have an efficacy of ≥40 lumens per Watt (LPW). For screw-in CFLs, electronic ballasts are required for lamps ≥18 Watts.

Hardwired Compact Fluorescent Fixtures
For hardwired CFL fixtures, only complete new fixtures or modular hardwired retrofits with hardwired electronic ballasts qualify. The CFL ballast must be programmed start or programmed rapid start with a power factor (PF) ≥90 and a total harmonic distortion (THD) ≤20%.

Permanent Lamp Removal
Incentives are paid for the permanent removal of existing fluorescent lamps. Customers are responsible for determining whether or not to use reflectors in combination with lamp removal in order to maintain adequate lighting levels. Lighting levels are expected to meet the Illuminating Engineering Society of North America (IESNA) recommended light levels. Unused lamps, lamp holders, and ballasts must be permanently removed from the fixture and disposed of in accordance with local regulations. This measure is applicable when retrofitting from T12 lamps to T8 lamps or reconfiguring a T8 fixture to reduce the number of lamps. Removing lamps from a T12 fixture that is not being retrofitted with T8 lamps are not eligible for this incentive. A **Pre-approval Application is required** for lamp removal projects in order for DCEO to conduct a pre-retrofit inspection.

High Performance 4-foot T8 Lamps and Ballast
This measure consists of replacing existing T12 lamps and magnetic ballasts with high performance T8 lamps and electronic ballasts. This measure is based on the Consortium for Energy Efficiency (CEE) high performance T8 specification (www.cee1.org)[1] and is summarized below. A list of qualified lamps and ballasts can be found at: http://www.cee1.org/com/com-lt/com-lt-main.php3. Both the lamp and ballast must meet the specification in order to qualify for an incentive. Incentives for this measure are calculated per lamp installed. A manufacturer's specification sheet must accompany the application.

Performance Characteristics for Systems				
Mean System Efficacy	≥ 90 Mean Lumens per Watt (MLPW) for Instant Start Ballasts ≥ 88 MLPW for Programmed Rapid Start Ballasts			
Performance Characteristics for Lamps				
Color Rendering Index (CRI)	≥ 80			
Minimum Initial Lamp Lumens	≥ 3100 Lumens			
Lamp Life	≥ 24,000 hours			
Lumen Maintenance or Minimum Mean Lumens	≥ 90% or ≥ 2,900 Mean Lumens			
Performance Characteristics for Ballasts				
Ballast Efficacy Factor (BEF) BEF = (BF x 100) / Ballast Input Watts	**Instant-Start Ballast (BEF)**			
	Lamps	Low BF ≤ 0.85	Norm 0.85 < BF ≤ 1.0	High BF ≥ 1.01
	1	> 3.08	> 3.11	NA
	2	> 1.60	> 1.58	>1.55
	3	≥1.04	≥ 1.05	≥ 1.04
	4	≥ 0.79	≥ 0.80	≥ 0.77
	Programmed Rapid Start Ballast (BEF)			
	1	≥ 2.84	≥ 2.84	NA
	2	≥1.48	≥ 1.47	≥ 1.51
	3	≥0.97	≥ 1.00	≥ 1.00
	4	≥0.76	≥ 0.75	≥ 0.75
Ballast Frequency	20 to 33 kHz or ≥ 40 kHz			
Power Factor	≥ 0.90			
Total Harmonic Distortion	≤20%			

[1] This website contains a list of eligible components.

Reduced Wattage 4-foot T8

Incentives are available for replacing T12 or T8 systems with reduced wattage lamp and electronic ballast systems. The lamps and ballasts must meet the Consortium for Energy Efficiency (CEE) specification (www.cee1.org)[1]. Qualified lamps and ballast products can be found at http://www.cee1.org/com/com-lt/com-lt-main.php3. Both the lamp and ballast must qualify in order to receive an incentive for the system. The mean system efficacy must be ≥90 MLPW, CRI ≥80, and lumen maintenance at 94%. A manufacturer's specification sheet must accompany the application.

Incentives are also available for when replacing 32 Watt T8 lamps with reduced wattage T8 lamps when an electronic ballast is already present. The lamps must be reduced wattage in accordance with the Consortium for Energy Efficiency (CEE) specification (www.cee1.org)[2]. Qualified product can be found at http://www.cee1.org/com/com-lt/com-lt-main.php3. The nominal wattage must be 28W (≥2585 Lumens) or 25W (≥2400 Lumens) to qualify.

Reduced Wattage 8-foot T8

This measure is for the replacement of existing T12 lamps and magnetic ballasts with reduced wattage 8-foot T8 lamps and electronic ballasts. Lamps must have a minimum MLPW of 90 and must have a nominal wattage of less than 57W. A manufacturer's specification sheet must accompany the application. Incentives are also available for replacing 59 Watt T8 lamps with reduced wattage 8-foot T8 lamps. Lamps must have a minimum MLPW of 90 and must have a nominal wattage of less than 57W. The incentive level is calculated on a per lamp basis and ballast replacement is not necessary. A manufacturer's specification sheet must accompany the application.

Metal Halide Fixtures - Pulse Start or Ceramic

This incentive applies to retrofits of high intensity discharge fixtures with either pulse start metal halide or ceramic metal halide fixtures. Total replacement wattage must be lower than existing wattage to insure energy savings. This measure is subject to possible pre-inspection. Retrofit kits may be used on existing Mercury Vapor, Standard Metal Halide or High Pressure Sodium Fixtures only.

Cathode

All Cold Cathode Fluorescent lamps (CCFLs) must replace incandescent lamps of greater than or equal to 10 Watts and not greater than 40 Watts. Cold cathode lamps may be medium (Edison) or candelabra base. Product must be rated for at least 18,000 average life hours.

Exit Signs

High-efficiency exit signs must replace or retrofit an existing incandescent exit sign. Electroluminescent, photoluminescent, T1 and light-emitting diode (LED) exit signs are eligible under this category. Non-electrified and remote exit signs are not eligible. All new exit signs or retrofit exit signs must be UL or ETL listed, have a minimum lifetime of 10 years, and have an input wattage ≤5 Watts or be ENERGY STAR qualified.

Controls

Passive infrared, ultrasonic detectors and fixture-integrated sensors or sensors with a combination thereof are eligible. All sensors must be hard-wired and control interior lighting fixtures. The incentive is per Watt controlled. To assist in rebate processing, please provide the inventory of the controlled fixtures with the Final Application.

New T8/T5 Highbay Fluorescent Fixtures with electronic ballast (Example-Highbay Fixtures)

This measure consists of replacing one or more existing fixtures with new fixtures containing T8 or T5 lamps and electronic ballasts. The T8 or T5 lamps must have a color rendering index (CRI) ≥80. The electronic ballast must be high frequency (≥20 kHz), 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 distortion (THD) ≤20% at full light output. For 2- and 3-foot lamps, ballasts must have THD ≤32% at full light output. High output T5/T8 lamps also qualify for this rebate. This incentive can be used in highbay and lowbay fluorescent applications.

Incentives for this measure are calculated based on the reduction in connected watts. **A Pre-approval Application is required** for this measure in order for DCEO to conduct a pre-retrofit inspection. Specifications of the new fixtures must accompany the final application. Incentives are only available for new fixtures.

Note: PCB ballasts and lamps are hazardous materials and should be disposed of properly.

LED Traffic and Pedestrian Signals

LED traffic and pedestrian signals must replace or retrofit an existing incandescent traffic signal. Each lamp must have a maximum LED module wattage of 25. Incentives are not available for spare lights. Lights must be hardwired and single lamp replacements are not eligible, with the exception of pedestrian hand signals. The traffic signal LED modules shall fully comply with the Institute of Transportation Engineers (ITE) latest adopted specifications.

[1, 3] This website contains a list of eligible lamps.

HVAC Incentive Worksheet

Equipment Type	Size Category	Efficiency Level*	Incentive ($/unit)
Unitary and Split Air Conditioning Systems and Air Source Heat Pumps	< 65,000 Btuh (5.4 tons)	14 SEER	$15.00
		15 SEER	$30.00
	≥65,000 Btuh and <240,000 Btuh (5.5-20 tons)	11.5 EER/11.9 IPLV	$15.00
		12 EER/12.4 IPLV	$30.00
	≥240,000 Btuh and <760,000 Btuh (21-63 tons)	10.5 EER/10.9 IPLV	$15.00
		10.8 EER/12.0 IPLV	$30.00
	≥760,000 Btuh (> 63 tons)	9.7 EER/11.0 IPLV	$15.00
		10.2 EER/11.0 IPLV	$30.00
Water-Cooled Chillers	ALL	Level 1 (see specifications)	$20.00
		Level 2 (see specifications)	$40.00
Air-Cooled Chillers	ALL	1.04 kW/ton-IPLV	$30.00
Room Air Conditioners	ALL	Level 1 (see specifications)	$30.00
		Level 2 (see specifications)	$50.00
PTAC	ALL	13.08-(0.2556 x Btuh/1000) EER	$30.00

Equipment Type	Model Number	Unit Efficiency	Unit Size (tons)	Qty	Incentive per Unit	Total Incentive
Air-Cooled Chillers	McQuay AGZ060c	0.8275	60	1	30	$1,800.00
						$0.00
						$0.00
						$0.00
						$0.00
						$0.00
						$0.00
Total**						$1,800.00

Variable Speed Drive on HVAC Motors
$50 Per horsepower

VSD Equipment Description	Motor Size (hp)	Qty	Incentive per VSD	Total Incentive
Supply fan	20	1	$50	$1,000.00
Return fan	7.5	1	$50	$375.00
			$50	$0.00
Total**				**$1,375.00**

* Unit efficiency for chillers should be provided in kW per ton – IPLV. Unit efficiency for ac units less than 65,000 Btuh should be provided in SEER. Unit efficiency for all other equipment should be provided in EER.

IPLV= Integrated Part Load Value

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

Specifications for HVAC Measures

Unitary and Split Air Conditioning Systems and Air Source Heat Pumps

New unitary air conditioning units or air source heat pumps that meet or exceed the qualifying cooling efficiency shown in the HVAC Incentive Worksheet Table are eligible for an incentive. They can be either split systems or single package units. The efficiency of split systems is based on an ARI reference number. Water-cooled systems, evaporative coolers, and water source heat pumps do not qualify under this program, but may qualify under the Custom Incentive Program. All packaged and split system cooling equipment must meet Air Conditioning and Refrigeration Institute (ARI) standards (210/240, 320 or 340/360), be UL listed, use a minimum ozone-depleting refrigerant (e.g., HCFC or HFC). All required efficiencies are based on the Consortium for Energy Efficiency (CEE) high efficiency commercial air conditioning and heat pump specifications (www.cee1.org)[1]. A manufacturer's specification sheet indicating the system efficiency must accompany the application. Disposal of the existing unit must comply with local codes and ordinances.

Water- and Air-cooled Chillers

Chillers are eligible for an incentive if they have a rated kW/ton for the Integrated Part Load Value (IPLV) that is less than or equal to the qualifying Level 1 and Level 2 efficiency shown in the table below. The chiller efficiency rating must be based on ARI Standard 550/590-2003 for IPLV conditions and not based on full-load conditions. The chillers must meet ARI standards 550/590-2003, be UL listed, and use a minimum ozone-depleting refrigerant (e.g., HCFC or HFC). The ARI net capacity value should be used to determine the chiller tons. A manufacturer specification sheet with the rated kW/Ton-IPLV or COP-IPLV must accompany the application. Qualifying efficiencies for chillers are summarized below.

Chiller Type	Size Category	Level 1 kW/ton IPLV	Level 2 kW/ton IPLV
Scroll or Helical-Rotary	< 150	0.61	0.54
	150 to 300	0.57	0.50
	>= 300	0.51	0.46
Centrifugal	< 150	0.60	0.54
	150 to 300	0.54	0.48
	>= 300	0.49	0.44
Reciprocating	ALL	0.63	0.56
Air-Cooled	ALL	1.04	NA

Room Air Conditioners

Room air conditioning units are through-the-wall (or built-in) self-contained units that are 2 tons or less. There are two eligible efficiency levels as listed by the Consortium for Energy Efficiency. A unit can either qualify under ENERGY STAR standards or under Super Efficient Home Appliance (SEHA) Tier 1 standards. The minimum requirements and eligible equipment are listed Consortium for Energy Efficiency (CEE) high efficiency room air conditioning specifications (www.cee1.org)[2]. These units are with and without louvered sides, without reverse cycle (i.e., heating), and casement. The qualifying efficiencies for both levels are provided below. Disposal of existing unit must comply with local codes and ordinances.

Size Category	Level 1 2000 ENERGY STAR EER	Level 2 SEHA Tier 1 EER
< 8,000	10.7	11.2
8000 to 13,999	10.8	11.3
14,000 to 19,999	10.7	11.2
>= 20,000	9.4	9.8

Package Terminal AC and Heat Pump Units (PTAC/PTHP)

Package terminal air conditioners and heat pumps are through-the-wall self contained units that are 2 tons (24,000 Btuh) or less. Only units that have an EER greater than or equal to 13.08 – (0.2556 * Capacity / 1000), where capacity is in Btuh, qualify for the incentive. All EER values must be rated at 95 °F outdoor dry-bulb temperature.

Variable Speed Drives on HVAC Motors

Variable-speed drives (VSDs) which are installed on existing chillers, HVAC fans, or HVAC pumps are eligible for this incentive. New chillers with integrated VSDs are eligible under the chiller incentive. The installation of a VSD must accompany the permanent removal or disabling of any throttling devices such as inlet vanes, bypass dampers, and throttling valves. VSDs for non-HVAC applications may be eligible for a custom incentive.

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[1] This website also has a list of eligible systems.
[2] This website also has a list of eligible units.

Refrigeration Incentive Worksheet

Refrigeration Measures				
Measure	Incentive Unit	Quantity	Incentive/Unit	Incentive
Strip Curtains on Walk-Ins	Per Square Foot		$4.00	$0.00
Anti-Sweat Heater Control	Per Linear Foot		$30.00	$0.00
EC Motor for Walk-in	Per Motor		$50.00	$0.00
EC Motor for Reach-in	Per Motor		$35.00	$0.00
Evaporative Fan Control	Per Motor		$60.00	$0.00
Automatic Door Closers for Walk-in Freezers	Per Door		$160.00	$0.00
Beverage Machine Control	Per Unit		$100.00	$0.00
ENERGY STAR Vending Machine	Per Unit		$100.00	$0.00
Snack Machine Control	Per Unit		$30.00	$0.00
Total**				**$0.00**

High-Efficiency Ice Makers					
Size (lbs/24 hrs)	Qualifying kWh per 100 lbs	Installed kWh per 100 lbs	Quantity	Incentive per Ice Maker	Incentive
101-200	8.5			$100.00	$0.00
201-300	7.7			$150.00	$0.00
301-400	6.5			$200.00	$0.00
401-500	5.5			$200.00	$0.00
501-1000	5.2			$300.00	$0.00
1001-1500	5			$400.00	$0.00
>1500	4.6			$400.00	$0.00
Total**					**$0.00**

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

Specifications for Refrigeration Measures

Strip Curtains on Walk-in Coolers and Freezers
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 that have useful life left. A pre-inspection may be performed. Incentive is based on square footage of doorway.

Anti-Sweat Heater Controls
For this measure, a device is installed that senses the relative humidity in the air outside of the display case and reduces or turns off the glass door (if applicable) and frame anti-sweat heaters at low-humidity conditions. Technologies that can turn off anti-sweat heaters based on sensing condensation (on the inner glass pane) also qualify. Rebate is based on the total linear footage of the case.

Electrically Commutated Evaporator Fan Motor (Refrigerated Cases or Walk-ins)
This measure is applicable to the replacement of an existing standard-efficiency shaded-pole evaporator fan motor in refrigerated display cases or fan coil in walk-ins. The replacement unit must be an Electronically Commutated Motor (ECM). This measure cannot be used in conjunction with the Evaporator Fan Controller measure.

Evaporative Fan Controls
This measure is for the installation of controls in medium temperature walk-in coolers. The controller reduces airflow of the evaporator fans when there is no refrigerant flow. The measure must control a minimum of 1/20 HP where fans operate continuously at full speed. The measure also must reduce fan motor power by at least 75% during the off cycle.

This measure is not applicable if any of the following conditions apply:

1) The compressor runs all the time with high duty cycle
2) The evaporator fan does not run at full speed all the time
3) The evaporator fan motor runs on poly-phase power
4) The evaporator fan motor is not shaded-pole or permanent split capacitor (PSC)
5) Evaporator does not use off-cycle or time-off defrost.

Automatic Door Closer for Walk-in Freezers
This measure is for installing an auto-closer to the main insulated opaque door(s) of a walk-in freezer. The auto-closer must firmly close the door when it is within one inch of full closure.

Beverage Machine Control
The beverage machine is assumed to be a refrigerated vending machine that contains only non-perishable bottled and canned beverages. Controller for both types of systems 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. For the beverage machine, the control logic should power up the machine at 2-hour intervals to maintain product temperature and provide compressor protection.

ENERGY STAR® Refrigerated Beverage Vending Machine
ENERGY STAR beverage vending machines qualify for an incentive. Qualifying machines can be found at http://www.energystar.gov/ia/products/prod_lists/vending_machines_prod_list.pdf.

High-Efficiency Ice Makers
The rebate covers ice machines that generate 60 grams (2 oz.) or lighter ice cubes, flaked, crushed, or fragmented ice. Only air-cooled machines qualify (self contained, ice making heads, or remote condensing). The machine must have a minimum capacity of 101 lbs of ice per 24-hour period (per day). The minimum efficiency required is per ENERGY STAR or CEE Tier 2[1]. A manufacturer's specification sheet must accompany the application that shows rating in accordance to ARI standard 810.

[1] The websites have a list of qualifying model numbers, www.energystar.gov or www.cee1.org.

Motors Incentive Worksheet

NEMA Premium Efficiency Motors - Minimum Qualifying Efficiencies							
	3600 RPM		1800 RPM		1200 RPM		Incentive per Motor
Horse Power	Open	Closed	Open	Closed	Open	Closed	
1	77.00%	77.00%	85.50%	85.50%	82.50%	82.50%	$7.00
1.5	84.00%	84.00%	86.50%	86.50%	86.50%	87.50%	$9.00
2	85.50%	85.50%	86.50%	86.50%	87.50%	88.50%	$11.00
3	85.50%	86.50%	89.50%	89.50%	88.50%	89.50%	$16.00
5	86.50%	88.50%	89.50%	89.50%	89.50%	89.50%	$20.00
7.5	88.50%	89.50%	91.00%	91.70%	90.20%	91.00%	$35.00
10	89.50%	90.20%	91.70%	91.70%	91.00%	91.00%	$45.00
15	90.20%	91.00%	93.00%	92.40%	91.70%	91.70%	$60.00
20	91.00%	91.00%	93.00%	93.00%	92.40%	91.70%	$75.00
25	91.70%	91.70%	93.60%	93.60%	93.00%	93.00%	$80.00
30	91.70%	91.70%	94.10%	93.60%	93.60%	93.00%	$90.00
40	92.40%	92.40%	94.10%	94.10%	94.10%	94.10%	$100.00
50	93.00%	93.00%	94.50%	94.50%	94.10%	94.10%	$125.00
60	93.60%	93.60%	95.00%	95.00%	94.50%	94.50%	$150.00
75	93.60%	93.60%	95.00%	95.40%	94.50%	94.50%	$175.00
100	93.60%	94.10%	95.40%	95.40%	95.00%	95.00%	$250.00
125	94.10%	95.00%	95.40%	95.40%	95.00%	95.00%	$275.00
150	94.10%	95.00%	95.80%	95.80%	95.40%	95.80%	$325.00
200	95.00%	95.40%	95.80%	96.20%	95.40%	95.80%	$450.00

Motor Make/Model	Quantity	Motor Size (HP)	3600 RPM / 1800 RPM / 1200 RPM (Please place X in one of these options for each motor)			Open / Closed (Please place an X in one option for each motor)		Motor Efficiency	Incentive per Motor	Incentive Amount per Motor x Quantity
									0	$0
									0	$0
									0	$0
									0	$0
									0	$0
									0	$0
									0	$0
Total*										$0

Specifications for Premium Motors

Motors eligible for an incentive are three-phase AC induction motors, 1-200 HP, of open drip-proof (open) and totally enclosed fan-cooled (closed) classifications. Rewound motors do not qualify. Incentives are based on the motor's Nominal Full Load Efficiencies, tested in accordance with IEEE (Institute of Electrical and Electronics Engineers) Standard 112, method B, that meet or exceed the NEMA premium efficiency standards on the Motors Incentive Worksheet. The application must include the manufacturer's performance data sheet that at least shows equipment type, equipment size, model number, and efficiency rating. Customers should consider matching RPMs of the existing pump or fan when installing energy efficient motors that inherently have higher speeds (less slip), which may affect electric energy use.

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

Specifications for Premium Motors

Motors eligible for an incentive are three-phase AC induction motors, 1-200 HP, of open drip-proof (open) and totally enclosed fan-cooled (closed) classifications. Rewound motors do not qualify. Incentives are based on the motor's Nominal Full Load Efficiencies, tested in accordance with IEEE (Institute of Electrical and Electronics Engineers) Standard 112, method B, that meet or exceed the NEMA premium efficiency standards on the Motors Incentive Worksheet. The application must include the manufacturer's performance data sheet that at least shows equipment type, equipment size, model number, and efficiency rating. Customers should consider matching RPMs of the existing pump or fan when installing energy efficient motors that inherently have higher speeds (less slip), which may affect electric energy use.

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

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Total Standard Incentive

Lighting	$732
HVAC	$3,175
Refrigeration	$0
Motors	$0
Total Incentive	**$3,907**

Inventory of Fixtures Controlled by Occupancy Sensors

Fixture Tag	Type of Fixture	Fixture Wattage	Number of Fixtures
A	2'X4' 2-lamp T5	56	2
C	4' 2-lamp T5	56	3
M	13W	13	2

Total Controlled Wattage:

Total Wattage for all Fixtures
112
168
168
448

PUBLIC SECTOR ELECTRIC EFFICIENCY PROGRAM

APPLICATION AND WORKSHEETS FOR STANDARD INCENTIVE PROGRAMS

dceo

ILLINOIS DEPARTMENT OF COMMERCE AND ECONOMIC OPPORTUNITY

PROGRAM CONTACT INFORMATION

For additional information on the
DCEO Standard and Custom Incentive Programs
under the Public Sector Electric Efficiency Program:

Visit our website at
www.illinoisenergy.org

or

Phone: 217/785-2863
(TDD: 217/785-6055)

or

Email us at
illinois.energy@illinois.gov

An on-line application system is available
for DCEO applicants in the ComEd Electric service territory at:
www.ComEd.com

Paper applications may be mailed or delivered to DCEO's program office:

Illinois Department of Commerce and Economic Opportunity
Bureau of Energy and Recycling
Attn: PSEE
620 East Adams Street
Springfield, IL 62701

or faxed: 217/785-2618

or submitted electronically:
illinois.energy@illinois.gov

APPENDIX A: APPLICATION FOR STANDARD AND CUSTOM INCENTIVE PROGRAMS

Applying for incentives from Ameren or ComEd and DCEO for same energy efficiency measure is prohibited.

☐ **Pre-approval** ☑ **Final Application**

Name of Applicant*	Lake County Illinois		
Name as it Appears on Your Utility Bill	Lake County Health Department		
Name of Contact Person	Bruce Robbins	**Title**	Facilities Manager
Telephone #	847-377-8041	**Fax #**	847-360-3656
Email Address	hrobbins@lakecountyil.gov		
Address Where Measures Installed	3010 Grand Ave		
City, State, Zip+4 (Measures Installed)	Waukegan, IL 60085		
Mailing Address	3010 Grand Ave		
City, State, Zip+4 (Mailing Address)	Waukegan, IL 60085		
Account Number (Where Measures Installed)	1950350018	**Electric Utility Company**	ComEd
Taxpayer ID Number (SSN / FEIN)	36-6006600	**Tax Status** (Individual, Partnership, Corp, Exempt)	Exempt
Contracting Company	AJ Maggio Co.		
Contractor Contact Name	Kurt Goudy	**Contractor Phone #**	847-437-7300
Contractor Email	Kurt@AJMaggio.com		
Contractor Address	567 W. Algonquin Rd., Mt. Prospect, IL 60056-5774		

Public Entity Type: *(Check One)*	
Local govt.	X
K-12 School	
Community College	
University	
State Agency	
Federal Agency	

Complete this form along with the appropriate forms in Appendices B and C.

*Applicant means (i) a unit of local, state and federal government, (ii) public school district, (iii) public community college district, or (iv) public college or university proposing an electrical energy efficiency project in Illinois that receives electric delivery service from Ameren or ComEd wires regardless of which retail electric supplier the applicant has chosen to purchase power from.

Incentive** Total	$11,600.00
Total Project Cost	$473,000.00

** Incentive Cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

APPLICANT CERTIFICATIONS FOR STANDARD AND CUSTOM INCENTIVE PROGRAMS

Applicant hereby certifies that:

- The project receives electric delivery service from Ameren Illinois or ComEd. **A copy of the electric utility bill or other documentation must be submitted with this Application.**
- All authorizations required to perform the project, described in its application, have either been obtained or will be obtained no later than 90 days following the grant beginning date set forth in the Notice of Grant Award issued by the Department.
- The project complies with all applicable state, federal, and local environmental and zoning laws, ordinances, and regulations and that all required licenses, permits, etc., have either been obtained or will be obtained no later than 90 days following an award by DCEO.
- It is not in violation of the prohibitions against bribery of any officer or employee of the state of Illinois as set forth in 30 ILCS 505/10.1.
- It has not been barred from contracting with a unit of state or local government as a result of a violation of Section 33E-3 or 33E-4 of the Criminal Code of 1961 (720 ILCS 5/33 E-3 and 5/33 E-4).
- It is not in violation of the Educational Loan Default Act (5 ILCS 385/3).
- I understand that the State Finance Act, 30 ILCS 105/30 may apply and that payments under this incentive program are contingent upon the existence of a valid appropriation, and that no officer, institution, department, board or commission shall contract any indebtedness on behalf of the State, or assume to bind the State in an amount in excess of the money appropriated, unless expressly authorized by law.
- I understand that the Illinois Prevailing Wage Act (820 ILCS 130/0.01) may apply and that Grantees are responsible for determining if their projects will trigger compliance.
- As of the submittal date, the information provided in its application is accurate, and the individuals signing below are authorized to submit this application.

	Bruce Robbins
Authorized Official (signature*)	Project Manager (signature*)
	Bruce Robbins
Typed/Printed Name	Typed/Printed Name
	Facilities Manager 3/19/09
Title Date	Title Date

Authorized Signature Address

Authorized Signature City, 9 Digit Zip

Authorized Signature E-mail address

*Electronic Signatures not acceptable. Please supply Certifications (this page) with original signature via mail, fax, or electronically (scanned document).

Building Name	

Lighting Incentive Worksheet

Equipment Type	Incentive	Unit	# of Units	Incentive Subtotal
[illegible]				
15 W or Less	$1.50	Lamp		$0.00
16 W - 26 W	$1.50	Lamp		$0.00
27 W or Greater	$2.00	Lamp		$0.00
[illegible]				
29 W or Less	$25.00	Fixture		$0.00
30 W or Greater	$50.00	Fixture		$0.00
[illegible]				
Remove 4-foot lamp	$6.00	Lamp		$0.00
Remove 8-foot lamp	$8.00	Lamp		$0.00
Remove 4-foot lamp with reflector	$12.00	Lamp		$0.00
Remove 8-foot lamp with reflector	$16.00	Lamp		$0.00
[illegible]				
4-foot lamp and ballast	$7.00	Lamp		$0.00
[illegible]				
4-foot lamp and ballast	$7.00	Lamp		$0.00
4-foot lamp only	$1.00	Lamp		$0.00
[illegible]				
8-foot and ballast	$10.00	Lamp		$0.00
8-foot lamp only	$1.00	Lamp		$0.00
[illegible]				
100 W or Less	$20.00	Fixture		$0.00
101 W - 200 W	$35.00	Fixture		$0.00
201 W - 350 W	$40.00	Fixture		$0.00
[illegible]				
Cold Cathode	$3.00	Lamp		$0.00
[illegible]				
LED, T-1, or Electroluminescent	$22.00	Signs		$0.00
[illegible]				
Occupancy Sensors	$0.10	Connected Watts Controlled		$0.00
[illegible]				
Total Existing Fixture Watts less Total New Fixture Watts	$0.40	Connected Watt Reduction	0	$0.00
Total Existing Fixture Watts less Total New Fixture Watts	$0.40	Connected Watt Reduction	0	$0.00
Total Existing Fixture Watts less Total New Fixture Watts	$0.40	Connected Watt Reduction	0	$0.00
[illegible]				
8" Traffic LED Signal Head	$75	Module		$0.00
12" Traffic LED Signal Head	$90	Module		$0.00
8" Arrow LED Module	$20	Module		$0.00
12" Arrow LED Module	$35	Module		$0.00
8"-9" Pedestrian LED Module	$30	Module		$0.00
12" Pedestrian LED Module	$35	Module		$0.00
16"x18" Pedestrian Combo	$35	Module		$0.00
Total*				**$0.00**

* Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost

Lighting Specifications

All lighting projects are expected to comply with the Illuminating Engineering Society of North America (IESNA) recommended lighting levels or the local code.

Compact Fluorescent Lamps (Screw-in)
This incentive applies to screw-in compact fluorescent lamps (CFLs) and applies only if an incandescent or high intensity discharge (HID) lamp is being replaced. All screw-in CFLs must be ENERGY STAR®-rated. The lamp/ballast combination must have an efficacy of ≥40 lumens per Watt (LPW). For screw-in CFLs, electronic ballasts are required for lamps ≥18 Watts.

Hardwired Compact Fluorescent Fixtures
For hardwired CFL fixtures, only complete new fixtures or modular hardwired retrofits with hardwired electronic ballasts qualify. The CFL ballast must be programmed start or programmed rapid start with a power factor (PF) ≥90 and a total harmonic distortion (THD) ≤20%.

Permanent Lamp Removal
Incentives are paid for the permanent removal of existing fluorescent lamps. Customers are responsible for determining whether or not to use reflectors in combination with lamp removal in order to maintain adequate lighting levels. Lighting levels are expected to meet the Illuminating Engineering Society of North America (IESNA) recommended light levels. Unused lamps, lamp holders, and ballasts must be permanently removed from the fixture and disposed of in accordance with local regulations. This measure is applicable when retrofitting from T12 lamps to T8 lamps or reconfiguring a T8 fixture to reduce the number of lamps. Removing lamps from a T12 fixture that is not being retrofitted with T8 lamps are not eligible for this incentive. A **Pre-approval Application is required** for lamp removal projects in order for DCEO to conduct a pre-retrofit inspection.

High Performance 4-foot T8 Lamps and Ballast
This measure consists of replacing existing T12 lamps and magnetic ballasts with high performance T8 lamps and electronic ballasts. This measure is based on the Consortium for Energy Efficiency (CEE) high performance T8 specification (www.cee1.org)[1] and is summarized below. A list of qualified lamps and ballasts can be found at: http://www.cee1.org/com/com-lt/com-lt-main.php3. Both the lamp and ballast must meet the specification in order to qualify for an incentive. Incentives for this measure are calculated per lamp installed. A manufacturer's specification sheet must accompany the application.

Performance Characteristics for Systems				
Mean System Efficacy	≥ 90 Mean Lumens per Watt (MLPW) for Instant Start Ballasts ≥ 88 MLPW for Programmed Rapid Start Ballasts			
Performance Characteristics for Lamps				
Color Rendering Index (CRI)	≥ 80			
Minimum Initial Lamp Lumens	≥ 3100 Lumens			
Lamp Life	≥ 24,000 hours			
Lumen Maintenance or Minimum Mean Lumens	≥ 90% or ≥ 2,900 Mean Lumens			
Performance Characteristics for Ballasts				
Ballast Efficacy Factor (BEF) BEF = (BF x 100) / Ballast Input Watts	**Instant-Start Ballast (BEF)**			
	Lamps	Low BF ≤ 0.85	Norm 0.85 < BF ≤ 1.0	High BF ≥ 1.01
	1	> 3.08	> 3.11	NA
	2	> 1.60	> 1.58	>1.55
	3	≥1.04	≥ 1.05	≥ 1.04
	4	≥ 0.79	≥ 0.80	≥ 0.77
	Programmed Rapid Start Ballast (BEF)			
	1	≥ 2.84	≥ 2.84	NA
	2	≥1.48	≥ 1.47	≥ 1.51
	3	≥0.97	≥ 1.00	≥ 1.00
	4	≥0.76	≥ 0.75	≥ 0.75
Ballast Frequency	20 to 33 kHz or ≥ 40 kHz			
Power Factor	≥ 0.90			
Total Harmonic Distortion	≤20%			

[1] This website contains a list of eligible components.

Reduced Wattage 4-foot T8

Incentives are available for replacing T12 or T8 systems with reduced wattage lamp and electronic ballast systems. The lamps and ballasts must meet the Consortium for Energy Efficiency (CEE) specification (www.cee1.org)[1]. Qualified lamps and ballast products can be found at http://www.cee1.org/com/com-lt/com-lt-main.php3. Both the lamp and ballast must qualify in order to receive an incentive for the system. The mean system efficacy must be ≥90 MLPW, CRI ≥80, and lumen maintenance at 94%. A manufacturer's specification sheet must accompany the application.

Incentives are also available for when replacing 32 Watt T8 lamps with reduced wattage T8 lamps when an electronic ballast is already present. The lamps must be reduced wattage in accordance with the Consortium for Energy Efficiency (CEE) specification (www.cee1.org)[2]. Qualified product can be found at http://www.cee1.org/com/com-lt/com-lt-main.php3. The nominal wattage must be 28W (≥2585 Lumens) or 25W (≥2400 Lumens) to qualify.

Reduced Wattage 8-foot T8

This measure is for the replacement of existing T12 lamps and magnetic ballasts with reduced wattage 8-foot T8 lamps and electronic ballasts. Lamps must have a minimum MLPW of 90 and must have a nominal wattage of less than 57W. A manufacturer's specification sheet must accompany the application. Incentives are also available for replacing 59 Watt T8 lamps with reduced wattage 8-foot T8 lamps. Lamps must have a minimum MLPW of 90 and must have a nominal wattage of less than 57W. The incentive level is calculated on a per lamp basis and ballast replacement is not necessary. A manufacturer's specification sheet must accompany the application.

Metal Halide Fixtures - Pulse Start or Ceramic

This incentive applies to retrofits of high intensity discharge fixtures with either pulse start metal halide or ceramic metal halide fixtures. Total replacement wattage must be lower than existing wattage to insure energy savings. This measure is subject to possible pre-inspection. Retrofit kits may be used on existing Mercury Vapor, Standard Metal Halide or High Pressure Sodium Fixtures only.

Cathode

All Cold Cathode Fluorescent lamps (CCFLs) must replace incandescent lamps of greater than or equal to 10 Watts and not greater than 40 Watts. Cold cathode lamps may be medium (Edison) or candelabra base. Product must be rated for at least 18,000 average life hours.

Exit Signs

High-efficiency exit signs must replace or retrofit an existing incandescent exit sign. Electroluminescent, photoluminescent, T1 and light-emitting diode (LED) exit signs are eligible under this category. Non-electrified and remote exit signs are not eligible. All new exit signs or retrofit exit signs must be UL or ETL listed, have a minimum lifetime of 10 years, and have an input wattage ≤5 Watts or be ENERGY STAR qualified.

Controls

Passive infrared, ultrasonic detectors and fixture-integrated sensors or sensors with a combination thereof are eligible. All sensors must be hard-wired and control interior lighting fixtures. The incentive is per Watt controlled. To assist in rebate processing, please provide the inventory of the controlled fixtures with the Final Application.

New T8/T5 Highbay Fluorescent Fixtures with electronic ballast (Example-Highbay Fixtures)

This measure consists of replacing one or more existing fixtures with new fixtures containing T8 or T5 lamps and electronic ballasts. The T8 or T5 lamps must have a color rendering index (CRI) ≥80. The electronic ballast must be high frequency (≥20 kHz), 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 distortion (THD) ≤20% at full light output. For 2- and 3-foot lamps, ballasts must have THD ≤32% at full light output. High output T5/T8 lamps also qualify for this rebate. This incentive can be used in highbay and lowbay fluorescent applications.

Incentives for this measure are calculated based on the reduction in connected watts. **A Pre-approval Application is required** for this measure in order for DCEO to conduct a pre-retrofit inspection. Specifications of the new fixtures must accompany the final application. Incentives are only available for new fixtures.

Note: PCB ballasts and lamps are hazardous materials and should be disposed of properly.

LED Traffic and Pedestrian Signals

LED traffic and pedestrian signals must replace or retrofit an existing incandescent traffic signal. Each lamp must have a maximum LED module wattage of 25. Incentives are not available for spare lights. Lights must be hardwired and single lamp replacements are not eligible, with the exception of pedestrian hand signals. The traffic signal LED modules shall fully comply with the Institute of Transportation Engineers (ITE) latest adopted specifications.

[1, 3]This website contains a list of eligible lamps.

HVAC Incentive Worksheet

Equipment Type	Size Category	Qualifying Efficiency*	Incentive ($ per ton)
Unitary and Split Air Conditioning Systems and Air Source Heat Pumps	< 65,000 Btuh (5.4 tons)	14 SEER	$15.00
		15 SEER	$30.00
	≥65,000 Btuh and <240,000 Btuh (5.5-20 tons)	11.5 EER/11.9 IPLV	$15.00
		12 EER/12.4 IPLV	$30.00
	≥240,000 Btuh and <760,000 Btuh (21-63 tons)	10.5 EER/10.9 IPLV	$15.00
		10.8 EER/12.0 IPLV	$30.00
	≥760,000 Btuh (> 63 tons)	9.7 EER/11.0 IPLV	$15.00
		10.2 EER/11.0 IPLV	$30.00
Water-Cooled Chillers	ALL	Level 1 (see specifications)	$20.00
		Level 2 (see specifications)	$40.00
Air-Cooled Chillers	ALL	1.04 kW/ton-IPLV	$30.00
Room Air Conditioners	ALL	Level 1 (see specifications)	$30.00
		Level 2 (see specifications)	$50.00
PTAC	ALL	13.08-(0.2556 x Btuh/1000) EER	$30.00

Equipment Type	Make and Model	Unit Efficiency*	(A) Unit Size (tons)	(B) Quantity	(C) Incentive per ton	(A x B x C) Incentive
Water-cooled chillers	McQuay WMC290	0.328	290	1	40	$11,600.00
						$0.00
						$0.00
						$0.00
						$0.00
						$0.00
						$0.00
Total**						$11,600.00

Variable Speed Drive on HVAC Motors
$50 Per horsepower

VSD Application/Description	(A) VSD Size (HP)	(B) Quantity	(C) Incentive per HP	(A x B x C) Incentive
			$50	$0.00
			$50	$0.00
			$50	$0.00
Total**				**$0.00**

* Unit efficiency for chillers should be provided in kW per ton – IPLV. Unit efficiency for ac units less than 65,000 Btuh should be provided in SEER. Unit efficiency for all other equipment should be provided in EER.

IPLV= Integrated Part Load Value

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

Specifications for HVAC Measures

Unitary and Split Air Conditioning Systems and Air Source Heat Pumps

New unitary air conditioning units or air source heat pumps that meet or exceed the qualifying cooling efficiency shown in the HVAC Incentive Worksheet Table are eligible for an incentive. They can be either split systems or single package units. The efficiency of split systems is based on an ARI reference number. Water-cooled systems, evaporative coolers, and water source heat pumps do not qualify under this program, but may qualify under the Custom Incentive Program. All packaged and split system cooling equipment must meet Air Conditioning and Refrigeration Institute (ARI) standards (210/240, 320 or 340/360), be UL listed, use a minimum ozone-depleting refrigerant (e.g., HCFC or HFC). All required efficiencies are based on the Consortium for Energy Efficiency (CEE) high efficiency commercial air conditioning and heat pump specifications (www.cee1.org)[1]. A manufacturer's specification sheet indicating the system efficiency must accompany the application. Disposal of the existing unit must comply with local codes and ordinances.

Water- and Air-cooled Chillers

Chillers are eligible for an incentive if they have a rated kW/ton for the Integrated Part Load Value (IPLV) that is less than or equal to the qualifying Level 1 and Level 2 efficiency shown in the table below. The chiller efficiency rating must be based on ARI Standard 550/590-2003 for IPLV conditions and not based on full-load conditions. The chillers must meet ARI standards 550/590-2003, be UL listed, and use a minimum ozone-depleting refrigerant (e.g., HCFC or HFC). The ARI net capacity value should be used to determine the chiller tons. A manufacturer specification sheet with the rated kW/Ton-IPLV or COP-IPLV must accompany the application. Qualifying efficiencies for chillers are summarized below.

Chiller Type	Size (Tons)	Level 1 kW/ton IPLV	Level 2 kW/ton IPLV
Scroll or Helical-Rotary	< 150	0.61	0.54
	150 to 300	0.57	0.50
	>= 300	0.51	0.46
Centrifugal	< 150	0.60	0.54
	150 to 300	0.54	0.48
	>= 300	0.49	0.44
Reciprocating	ALL	0.63	0.56
Air-Cooled	ALL	1.04	NA

Room Air Conditioners

Room air conditioning units are through-the-wall (or built-in) self-contained units that are 2 tons or less. There are two eligible efficiency levels as listed by the Consortium for Energy Efficiency. A unit can either qualify under ENERGY STAR standards or under Super Efficient Home Appliance (SEHA) Tier 1 standards. The minimum requirements and eligible equipment are listed Consortium for Energy Efficiency (CEE) high efficiency room air conditioning specifications (www.cee1.org)[2]. These units are with and without louvered sides, without reverse cycle (i.e., heating), and casement. The qualifying efficiencies for both levels are provided below. Disposal of existing unit must comply with local codes and ordinances.

Size (Btuh)	Level 1 2008 CEE/ENERGY STAR EER	Level 2 SEHA Tier 1 EER
< 8,000	10.7	11.2
8000 to 13,999	10.8	11.3
14,000 to 19,999	10.7	11.2
>= 20,000	9.4	9.8

Package Terminal AC and Heat Pump Units (PTAC/PTHP)

Package terminal air conditioners and heat pumps are through-the-wall self contained units that are 2 tons (24,000 Btuh) or less. Only units that have an EER greater than or equal to 13.08 – (0.2556 * Capacity / 1000), where capacity is in Btuh, qualify for the incentive. All EER values must be rated at 95 °F outdoor dry-bulb temperature.

Variable Speed Drives on HVAC Motors

Variable-speed drives (VSDs) which are installed on existing chillers, HVAC fans, or HVAC pumps are eligible for this incentive. New chillers with integrated VSDs are eligible under the chiller incentive. The installation of a VSD must accompany the permanent removal or disabling of any throttling devices such as inlet vanes, bypass dampers, and throttling valves. VSDs for non-HVAC applications may be eligible for a custom incentive.

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[1] This website also has a list of eligible systems.

[2] This website also has a list of eligible units.

Refrigeration Incentive Worksheet

Refrigeration Measure				
Measure	Unit of Measure	Quantity	Incentive per Unit	Total Incentive
Strip Curtains on Walk-Ins	Per Square Foot		$4.00	$0.00
Anti-Sweat Heater Control	Per Linear Foot		$30.00	$0.00
EC Motor for Walk-in	Per Motor		$50.00	$0.00
EC Motor for Reach-in	Per Motor		$35.00	$0.00
Evaporative Fan Control	Per Motor		$60.00	$0.00
Automatic Door Closers for Walk-in Freezers	Per Door		$160.00	$0.00
Beverage Machine Control	Per Unit		$100.00	$0.00
ENERGY STAR Vending Machine	Per Unit		$100.00	$0.00
Snack Machine Control	Per Unit		$30.00	$0.00
Total**				**$0.00**

High Efficiency Ice Makers					
Size (lbs./day)	Qualifying kWh/100 lbs.	Installed kWh/100 lbs.	Quantity	Incentive per Unit	Total Incentive
101-200	8.5			$100.00	$0.00
201-300	7.7			$150.00	$0.00
301-400	6.5			$200.00	$0.00
401-500	5.5			$200.00	$0.00
501-1000	5.2			$300.00	$0.00
1001-1500	5			$400.00	$0.00
>1500	4.6			$400.00	$0.00
Total**					**$0.00**

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

Specifications for Refrigeration Measures

Strip Curtains on Walk-in Coolers and Freezers
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 that have useful life left. A pre-inspection may be performed. Incentive is based on square footage of doorway.

Anti-Sweat Heater Controls
For this measure, a device is installed that senses the relative humidity in the air outside of the display case and reduces or turns off the glass door (if applicable) and frame anti-sweat heaters at low-humidity conditions. Technologies that can turn off anti-sweat heaters based on sensing condensation (on the inner glass pane) also qualify. Rebate is based on the total linear footage of the case.

Electrically Commutated Evaporator Fan Motor (Refrigerated Cases or Walk-ins)
This measure is applicable to the replacement of an existing standard-efficiency shaded-pole evaporator fan motor in refrigerated display cases or fan coil in walk-ins. The replacement unit must be an Electronically Commutated Motor (ECM). This measure cannot be used in conjunction with the Evaporator Fan Controller measure.

Evaporative Fan Controls
This measure is for the installation of controls in medium temperature walk-in coolers. The controller reduces airflow of the evaporator fans when there is no refrigerant flow. The measure must control a minimum of 1/20 HP where fans operate continuously at full speed. The measure also must reduce fan motor power by at least 75% during the off cycle.

This measure is not applicable if any of the following conditions apply:

1) The compressor runs all the time with high duty cycle
2) The evaporator fan does not run at full speed all the time
3) The evaporator fan motor runs on poly-phase power
4) The evaporator fan motor is not shaded-pole or permanent split capacitor (PSC)
5) Evaporator does not use off-cycle or time-off defrost.

Automatic Door Closer for Walk-in Freezers
This measure is for installing an auto-closer to the main insulated opaque door(s) of a walk-in freezer. The auto-closer must firmly close the door when it is within one inch of full closure.

Beverage Machine Control
The beverage machine is assumed to be a refrigerated vending machine that contains only non-perishable bottled and canned beverages. Controller for both types of systems 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. For the beverage machine, the control logic should power up the machine at 2-hour intervals to maintain product temperature and provide compressor protection.

ENERGY STAR® Refrigerated Beverage Vending Machine
ENERGY STAR beverage vending machines qualify for an incentive. Qualifying machines can be found at http://www.energystar.gov/ia/products/prod_lists/vending_machines_prod_list.pdf.

High-Efficiency Ice Makers
The rebate covers ice machines that generate 60 grams (2 oz.) or lighter ice cubes, flaked, crushed, or fragmented ice. Only air-cooled machines qualify (self contained, ice making heads, or remote condensing). The machine must have a minimum capacity of 101 lbs of ice per 24-hour period (per day). The minimum efficiency required is per ENERGY STAR or CEE Tier 2[1]. A manufacturer's specification sheet must accompany the application that shows rating in accordance to ARI standard 810.

[1] The websites have a list of qualifying model numbers, www.energystar.gov or www.cee1.org.

Motors Incentive Worksheet

NEMA Premium Efficiency Motors - Minimum Qualifying Efficiencies							
	3600 RPM		1800 RPM		1200 RPM		Incentive per Motor
Horse Power	Open	Closed	Open	Closed	Open	Closed	
1	77.00%	77.00%	85.50%	85.50%	82.50%	82.50%	$7.00
1.5	84.00%	84.00%	86.50%	86.50%	86.50%	87.50%	$9.00
2	85.50%	85.50%	86.50%	86.50%	87.50%	88.50%	$11.00
3	85.50%	86.50%	89.50%	89.50%	88.50%	89.50%	$16.00
5	86.50%	88.50%	89.50%	89.50%	89.50%	89.50%	$20.00
7.5	88.50%	89.50%	91.00%	91.70%	90.20%	91.00%	$35.00
10	89.50%	90.20%	91.70%	91.70%	91.00%	91.00%	$45.00
15	90.20%	91.00%	93.00%	92.40%	91.70%	91.70%	$60.00
20	91.00%	91.00%	93.00%	93.00%	92.40%	91.70%	$75.00
25	91.70%	91.70%	93.60%	93.60%	93.00%	93.00%	$80.00
30	91.70%	91.70%	94.10%	93.60%	93.60%	93.00%	$90.00
40	92.40%	92.40%	94.10%	94.10%	94.10%	94.10%	$100.00
50	93.00%	93.00%	94.50%	94.50%	94.10%	94.10%	$125.00
60	93.60%	93.60%	95.00%	95.00%	94.50%	94.50%	$150.00
75	93.60%	93.60%	95.00%	95.40%	94.50%	94.50%	$175.00
100	93.60%	94.10%	95.40%	95.40%	95.00%	95.00%	$250.00
125	94.10%	95.00%	95.40%	95.40%	95.00%	95.00%	$275.00
150	94.10%	95.00%	95.80%	95.80%	95.40%	95.80%	$325.00
200	95.00%	95.40%	95.80%	96.20%	95.40%	95.80%	$450.00

Motor Make/Model	Quantity	Motor Size (HP)	RPM (3600, 1800, 1200) [illegible]			Open or Closed [illegible]		Motor Efficiency	Incentive per Motor	Incentive (Incentive per Motor × Quantity)
									0	$0
									0	$0
									0	$0
									0	$0
									0	$0
									0	$0
									0	$0
Total*										$0

Specifications for Premium Motors

Motors eligible for an incentive are three-phase AC induction motors, 1-200 HP, of open drip-proof (open) and totally enclosed fan-cooled (closed) classifications. Rewound motors do not qualify. Incentives are based on the motor's Nominal Full Load Efficiencies, tested in accordance with IEEE (Institute of Electrical and Electronics Engineers) Standard 112, method B, that meet or exceed the NEMA premium efficiency standards on the Motors Incentive Worksheet. The application must include the manufacturer's performance data sheet that at least shows equipment type, equipment size, model number, and efficiency rating. Customers should consider matching RPMs of the existing pump or fan when installing energy efficient motors that inherently have higher speeds (less slip), which may affect electric energy use.

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

Specifications for Premium Motors

Motors eligible for an incentive are three-phase AC induction motors, 1-200 HP, of open drip-proof (open) and totally enclosed fan-cooled (closed) classifications. Rewound motors do not qualify. Incentives are based on the motor's Nominal Full Load Efficiencies, tested in accordance with IEEE (Institute of Electrical and Electronics Engineers) Standard 112, method B, that meet or exceed the NEMA premium efficiency standards on the Motors Incentive Worksheet. The application must include the manufacturer's performance data sheet that at least shows equipment type, equipment size, model number, and efficiency rating. Customers should consider matching RPMs of the existing pump or fan when installing energy efficient motors that inherently have higher speeds (less slip), which may affect electric energy use.

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

d

e

Total Standard Incentive

Lighting	$0
HVAC	$11,600
Refrigeration	$0
Motors	$0
Total Incentive	**$11,600**

Robbins, H. Bruce

From: Kim Sherman [kims@mcdonoughmech.com]
Sent: Wednesday, March 18, 2009 1:17 PM
To: Robbins, H. Bruce
Subject: Chiller Grant Money Request

Hello Bruce,

The following is the breakdown per your request:

1.) New chiller cost - $145,000.00.
2.) Cost of installation including tower, piping, pumps, and labor - $328,000.00.
3.) McQuay chiller model no. WMC290D.
4.) Nominal cooling capacity – 235 tons.

If you have any questions, please feel free to contact me.

Respectfully,

Kim N. Sherman, President
McDonough Mechanical Services, Inc.
4081 Joseph Drive
Waukegan, IL 60087

Phone: (847) 244-7451
Fax: (847) 244-7521
Email: kims@mcdonoughmech.com
www.mcdonoughmech.com

HVAC Incentive Worksheet

Unitary and Split Air Conditioning Systems and Air Source Heat Pumps	<65,000 Btuh (5.4 tons)	14 SEER	$15.00
		15 SEER	$30.00
	≥65,000 Btuh and <240,000 Btuh (5.5-20 tons)	11.5 EER/11.9 IPLV	$15.00
		12 EER/12.4 IPLV	$30.00
	≥240,000 Btuh and <760,000 Btuh (21-63 tons)	10.5 EER/10.9 IPLV	$15.00
		10.8 EER/12.0 IPLV	$30.00
	≥760,000 Btuh (> 63 tons)	9.7 EER/11.0 IPLV	$15.00
		10.2 EER/11.0 IPLV	$30.00
Water-Cooled Chillers	ALL	Level 1 (see specifications)	$20.00
		Level 2 (see specifications)	$40.00
Air-Cooled Chillers	ALL	1.04 kW/ton-IPLV	$30.00
Room Air Conditioners	ALL	Level 1 (see specifications)	$30.00
		Level 2 (see specifications)	$50.00
PTAC	ALL	13.08-(0.2556 x Btuh/1000) EER	$30.00

Water-cooled chillers	McQuay WMC090	0.528	290	7.81	40	$11,600.00
						$0.00
						$0.00
						$0.00
						$0.00
						$0.00
						$0.00
Total**						$11,600.00

$50 Per horsepower

			$50	$0.00
			$50	$0.00
			$50	$0.00
Total**				$0.00

* Unit efficiency for chillers should be provided in kW per ton – IPLV. Unit efficiency for ac units less than 65,000 Btuh should be provided in SEER. Unit efficiency for all other equipment should be provided in EER.

IPLV– Integrated Part Load Value

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

APPENDIX A: APPLICATION FOR STANDARD AND CUSTOM INCENTIVE PROGRAMS

Applying for incentives from Ameren or ComEd and DCEO for same energy efficiency measure is prohibited.

☐ **Pre-approval** ☑ **Final Application**

Name of Applicant*	Lake County, Illinois			**Public Entity Type:** (Check One)
Name as it Appears on Your Utility Bill	Lake County Health Department			
Name of Contact Person	Bruce Robbins	**Title**	Facilities Manager	
Telephone #	847-377-8041	**Fax #**	847-360-6556	Local govt. X
Email Address	brobbins@lakecountyil.gov			K-12 School
Address Where Measures Installed	3010 Grand Ave.			Community College
City, State, Zip+4 (Measures Installed)	Waukegan, IL 60085			University
Mailing Address	Same			State Agency
City, State, Zip+4 (Mailing Address)	Same			Federal Agency
Account Number (Where Measures Installed)	1950350018	**Electric Utility Company**	ComEd	
Taxpayer ID Number (SSN / FEIN)	36-6006600	**Tax Status** (Individual, Partnership, Corp, Exempt)	Exempt	
Contracting Company	A.J. Massio Co.			
Contractor Contact Name	Kurt Goudy	**Contractor Phone #**	847-437-7300	
Contractor Email	Kurt@AJMassio.com			
Contractor Address	567 West Algonquin Rd. Mt. Prospect, IL 60056			

5774

Complete this form along with the appropriate forms in Appendices B and C.

*Applicant means (i) a unit of local, state and federal government, (ii) public school district, (iii) public community college district, or (iv) public college or university proposing an electrical energy efficiency project in Illinois that receives electric delivery service from Ameren or ComEd wires regardless of which retail electric supplier the applicant has chosen to purchase power from.

Incentive** Total	$11,600.00
Total Project Cost	$473,000

** Incentive Cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

Chiller $145,000
Cat Dunkelf 328,000
$473,000

PUBLIC SECTOR ELECTRIC EFFICIENCY PROGRAM

APPLICATION AND WORKSHEETS FOR STANDARD INCENTIVE PROGRAMS

dceo

ILLINOIS DEPARTMENT OF COMMERCE AND ECONOMIC OPPORTUNITY

PROGRAM CONTACT INFORMATION

For additional information on the
DCEO Standard and Custom Incentive Programs
under the Public Sector Electric Efficiency Program:

Visit our website at
www.illinoisenergy.org

or

Phone: 217/785-2863
(TDD: 217/785-6055)

or

Email us at
illinois.energy@illinois.gov

An on-line application system is available
for DCEO applicants in the ComEd Electric service territory at:
www.ComEd.com

Paper applications may be mailed or delivered to DCEO's program office:

Illinois Department of Commerce and Economic Opportunity
Bureau of Energy and Recycling
Attn: PSEE
620 East Adams Street
Springfield, IL 62701

or faxed: 217/785-2618

or submitted electronically:
illinois.energy@illinois.gov

APPENDIX A: APPLICATION FOR STANDARD AND CUSTOM INCENTIVE PROGRAMS

Applying for incentives from Ameren or ComEd and DCEO for same energy efficiency measure is prohibited.

☐ **Pre-approval** ☑ **Final Application**

Name of Applicant*	Lake County Illinois		
Name as it Appears on Your Utility Bill	County of Lake - Facilities Opearations		
Name of Contact Person	Chris Kutchin	**Title**	Administrative Assistant
Telephone #	847-377-2987	**Fax #**	847-984-5980
Email Address	ckutchin@lakecountyil.gov		
Address Where Measures Installed	500 W. Winchester Rd.		
City, State, Zip+4 (Measures Installed)	Libertyville, IL 60048		
Mailing Address	18 N. County St., Room 105		
City, State, Zip+4 (Mailing Address)	Waukegan, IL 60085		
Account Number (Where Measures Installed)	2723137051	**Electric Utility Company**	ComEd
Taxpayer ID Number (SSN / FEIN)	36-6006600	**Tax Status** (Individual, Partnership, Corp, Exempt)	Exempt
Contracting Company	Mortenson Construction		
Contractor Contact Name	Neil Wisker	**Contractor Phone #**	847-489-3449
Contractor Email	neil.wisker@mortenson.com		
Contractor Address	25 Northwest Point Blvd., Suite 100, Elk Grove Village, IL 60007		

Public Entity Type: *(Check One)*	
Local govt.	X
K-12 School	
Community College	
University	
State Agency	
Federal Agency	

Complete this form along with the appropriate forms in Appendices B and C.

*Applicant means (i) a unit of local, state and federal government, (ii) public school district, (iii) public community college district, or (iv) public college or university proposing an electrical energy efficiency project in Illinois that receives electric delivery service from Ameren or ComEd wires regardless of which retail electric supplier the applicant has chosen to purchase power from.

Incentive** Total	$12,492.00
Total Project Cost	$181,769.00

** Incentive Cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

APPLICANT CERTIFICATIONS FOR STANDARD AND CUSTOM INCENTIVE PROGRAMS

Applicant hereby certifies that:

- The project receives electric delivery service from Ameren Illinois or ComEd. **A copy of the electric utility bill or other documentation must be submitted with this Application.**
- All authorizations required to perform the project, described in its application, have either been obtained or will be obtained no later than 90 days following the grant beginning date set forth in the Notice of Grant Award issued by the Department.
- The project complies with all applicable state, federal, and local environmental and zoning laws, ordinances, and regulations and that all required licenses, permits, etc., have either been obtained or will be obtained no later than 90 days following an award by DCEO.
- It is not in violation of the prohibitions against bribery of any officer or employee of the state of Illinois as set forth in 30 ILCS 505/10.1.
- It has not been barred from contracting with a unit of state or local government as a result of a violation of Section 33E-3 or 33E-4 of the Criminal Code of 1961 (720 ILCS 5/33 E-3 and 5/33 E-4).
- It is not in violation of the Educational Loan Default Act (5 ILCS 385/3).
- I understand that the State Finance Act, 30 ILCS 105/30 may apply and that payments under this incentive program are contingent upon the existence of a valid appropriation, and that no officer, institution, department, board or commission shall contract any indebtedness on behalf of the State, or assume to bind the State in an amount in excess of the money appropriated, unless expressly authorized by law.
- I understand that the Illinois Prevailing Wage Act (820 ILCS 130/0.01) may apply and that Grantees are responsible for determining if their projects will trigger compliance.
- As of the submittal date, the information provided in its application is accurate, and the individuals signing below are authorized to submit this application.

Authorized Official (signature*)	Project Manager (signature*)
Typed/Printed Name	MATTHEW R GUARNERY Typed/Printed Name
Title Date	CONSTRUCTION MNGR 3/24/09 Title Date

Authorized Signature Address

Authorized Signature City, 9 Digit Zip

Authorized Signature E-mail address

*Electronic Signatures not acceptable. Please supply Certifications (this page) with original signature via mail, fax, or electronically (scanned document).

Building Name	

Lighting Incentive Worksheet

Equipment Type	Incentive	Unit	# of Units	Incentive Subtotal			
Compact Fluorescent Lamps (Screw-in)							
15 W or Less	$1.50	Lamp		$0.00			
16 W - 26 W	$1.50	Lamp		$0.00			
27 W or Greater	$2.00	Lamp		$0.00			
Hardwired Compact Fluorescent Fixtures							
29 W or Less	$25.00	Fixture		$0.00			
30 W or Greater	$50.00	Fixture		$0.00			
Permanent Lamp Removal - *Pre-approval application required*							
Remove 4-foot lamp	$6.00	Lamp		$0.00			
Remove 8-foot lamp	$8.00	Lamp		$0.00			
Remove 4-foot lamp with reflector	$12.00	Lamp		$0.00			
Remove 8-foot lamp with reflector	$16.00	Lamp		$0.00			
High Performance 4-foot T8							
4-foot lamp and ballast	$7.00	Lamp		$0.00			
Reduced Wattage 4-foot T8							
4-foot lamp and ballast	$7.00	Lamp		$0.00			
4-foot lamp only	$1.00	Lamp		$0.00			
Reduced Wattage 8-foot T8							
8-foot and ballast	$10.00	Lamp		$0.00			
8-foot lamp only	$1.00	Lamp		$0.00			
Metal Halides - Pulse Start or Ceramic							
100 W or Less	$20.00	Fixture		$0.00			
101 W - 200 W	$35.00	Fixture		$0.00			
201 W - 350 W	$40.00	Fixture		$0.00			
Cold Cathode							
Cold Cathode	$3.00	Lamp		$0.00			
Exit Signs							
LED, T-1, or Electroluminescent	$22.00	Signs	23	$506.00			
Controls	Incentive per Watt Controlled		Connected Watts Controlled				
Occupancy Sensors	$0.10	Connected Watts Controlled	11861	$1,186.10			
T8/T5 Highbay Fluorescent Fixtures with Electronic Ballast (i.e., Highbay Fixtures) - *Pre-approval application required*	Incentive per Watt Reduced		Watts Reduced		Existing Fixture Wattage	New Fixture Wattage	Number of Fixtures
Total Existing Fixture Watts less Total New Fixture Watts	$0.40	Connected Watt Reduction	0	$0.00			
Total Existing Fixture Watts less Total New Fixture Watts	$0.40	Connected Watt Reduction	0	$0.00			
Total Existing Fixture Watts less Total New Fixture Watts	$0.40	Connected Watt Reduction	0	$0.00			
LED traffic signal modules LED Signal Head consists of Red, Green and Yellow ball module. Arrow and Pedestrian LED Modules consist of 1 module of any color. Pedestrian Combo consists of [illegible]							
8" Traffic LED Signal Head	$75	Module		$0.00			
12" Traffic LED Signal Head	$90	Module		$0.00			
8" Arrow LED Module	$20	Module		$0.00			
12" Arrow LED Module	$35	Module		$0.00			
8"-9" Pedestrian LED Module	$30	Module		$0.00			
12" Pedestrian LED Module	$35	Module		$0.00			
16"x18" Pedestrian Combo	$35	Module		$0.00			
Total*				$1,692.10			

* Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost

Lighting Specifications

All lighting projects are expected to comply with the Illuminating Engineering Society of North America (IESNA) recommended lighting levels or the local code.

Compact Fluorescent Lamps (Screw-in)
This incentive applies to screw-in compact fluorescent lamps (CFLs) and applies only if an incandescent or high intensity discharge (HID) lamp is being replaced. All screw-in CFLs must be ENERGY STAR®-rated. The lamp/ballast combination must have an efficacy of ≥40 lumens per Watt (LPW). For screw-in CFLs, electronic ballasts are required for lamps ≥18 Watts.

Hardwired Compact Fluorescent Fixtures
For hardwired CFL fixtures, only complete new fixtures or modular hardwired retrofits with hardwired electronic ballasts qualify. The CFL ballast must be programmed start or programmed rapid start with a power factor (PF) ≥90 and a total harmonic distortion (THD) ≤20%.

Permanent Lamp Removal
Incentives are paid for the permanent removal of existing fluorescent lamps. Customers are responsible for determining whether or not to use reflectors in combination with lamp removal in order to maintain adequate lighting levels. Lighting levels are expected to meet the Illuminating Engineering Society of North America (IESNA) recommended light levels. Unused lamps, lamp holders, and ballasts must be permanently removed from the fixture and disposed of in accordance with local regulations. This measure is applicable when retrofitting from T12 lamps to T8 lamps or reconfiguring a T8 fixture to reduce the number of lamps. Removing lamps from a T12 fixture that is not being retrofitted with T8 lamps are not eligible for this incentive. A **Pre-approval Application is required** for lamp removal projects in order for DCEO to conduct a pre-retrofit inspection.

High Performance 4-foot T8 Lamps and Ballast
This measure consists of replacing existing T12 lamps and magnetic ballasts with high performance T8 lamps and electronic ballasts. This measure is based on the Consortium for Energy Efficiency (CEE) high performance T8 specification (www.cee1.org)[1] and is summarized below. A list of qualified lamps and ballasts can be found at: http://www.cee1.org/com/com-lt/com-lt-main.php3. Both the lamp and ballast must meet the specification in order to qualify for an incentive. Incentives for this measure are calculated per lamp installed. A manufacturer's specification sheet must accompany the application.

<table>
<tr><td colspan="5">Performance Characteristics for Systems</td></tr>
<tr><td>Mean System Efficacy</td><td colspan="4">≥ 90 Mean Lumens per Watt (MLPW) for Instant Start Ballasts
≥ 88 MLPW for Programmed Rapid Start Ballasts</td></tr>
<tr><td colspan="5">Performance Characteristics for Lamps</td></tr>
<tr><td>Color Rendering Index (CRI)</td><td colspan="4">≥ 80</td></tr>
<tr><td>Minimum Initial Lamp Lumens</td><td colspan="4">≥ 3100 Lumens</td></tr>
<tr><td>Lamp Life</td><td colspan="4">≥ 24,000 hours</td></tr>
<tr><td>Lumen Maintenance or
Minimum Mean Lumens</td><td colspan="4">≥ 90% or
≥ 2,900 Mean Lumens</td></tr>
<tr><td colspan="5">Performance Characteristics for Ballasts</td></tr>
<tr><td rowspan="10">Ballast Efficacy Factor (BEF)

BEF = (BF x 100) / Ballast Input Watts</td><td colspan="4">Instant-Start Ballast (BEF)</td></tr>
<tr><td>Lamps</td><td>Low BF ≤ 0.85</td><td>Norm 0.85 < BF ≤ 1.0</td><td>High BF ≥ 1.01</td></tr>
<tr><td>1</td><td>> 3.08</td><td>> 3.11</td><td>NA</td></tr>
<tr><td>2</td><td>> 1.60</td><td>> 1.58</td><td>>1.55</td></tr>
<tr><td>3</td><td>≥1.04</td><td>≥ 1.05</td><td>≥ 1.04</td></tr>
<tr><td>4</td><td>≥ 0.79</td><td>≥ 0.80</td><td>≥ 0.77</td></tr>
<tr><td colspan="4">Programmed Rapid Start Ballast (BEF)</td></tr>
<tr><td>1</td><td>≥ 2.84</td><td>≥ 2.84</td><td>NA</td></tr>
<tr><td>2</td><td>≥1.48</td><td>≥ 1.47</td><td>≥ 1.51</td></tr>
<tr><td>3</td><td>≥0.97</td><td>≥ 1.00</td><td>≥ 1.00</td></tr>
<tr><td>4</td><td>≥0.76</td><td>≥ 0.75</td><td>≥ 0.75</td></tr>
<tr><td>Ballast Frequency</td><td colspan="4">20 to 33 kHz or ≥ 40 kHz</td></tr>
<tr><td>Power Factor</td><td colspan="4">≥ 0.90</td></tr>
<tr><td>Total Harmonic Distortion</td><td colspan="4">≤20%</td></tr>
</table>

[1] This website contains a list of eligible components.

Reduced Wattage 4-foot T8

Incentives are available for replacing T12 or T8 systems with reduced wattage lamp and electronic ballast systems. The lamps and ballasts must meet the Consortium for Energy Efficiency (CEE) specification (www.cee1.org)[1]. Qualified lamps and ballast products can be found at http://www.cee1.org/com/com-lt/com-lt-main.php3. Both the lamp and ballast must qualify in order to receive an incentive for the system. The mean system efficacy must be ≥90 MLPW, CRI ≥80, and lumen maintenance at 94%. A manufacturer's specification sheet must accompany the application.

Incentives are also available for when replacing 32 Watt T8 lamps with reduced wattage T8 lamps when an electronic ballast is already present. The lamps must be reduced wattage in accordance with the Consortium for Energy Efficiency (CEE) specification (www.cee1.org)[2]. Qualified product can be found at http://www.cee1.org/com/com-lt/com-lt-main.php3. The nominal wattage must be 28W (≥2585 Lumens) or 25W (≥2400 Lumens) to qualify.

Reduced Wattage 8-foot T8

This measure is for the replacement of existing T12 lamps and magnetic ballasts with reduced wattage 8-foot T8 lamps and electronic ballasts. Lamps must have a minimum MLPW of 90 and must have a nominal wattage of less than 57W. A manufacturer's specification sheet must accompany the application. Incentives are also available for replacing 59 Watt T8 lamps with reduced wattage 8-foot T8 lamps. Lamps must have a minimum MLPW of 90 and must have a nominal wattage of less than 57W. The incentive level is calculated on a per lamp basis and ballast replacement is not necessary. A manufacturer's specification sheet must accompany the application.

Metal Halide Fixtures - Pulse Start or Ceramic

This incentive applies to retrofits of high intensity discharge fixtures with either pulse start metal halide or ceramic metal halide fixtures. Total replacement wattage must be lower than existing wattage to insure energy savings. This measure is subject to possible pre-inspection. Retrofit kits may be used on existing Mercury Vapor, Standard Metal Halide or High Pressure Sodium Fixtures only.

Cathode

All Cold Cathode Fluorescent lamps (CCFLs) must replace incandescent lamps of greater than or equal to 10 Watts and not greater than 40 Watts. Cold cathode lamps may be medium (Edison) or candelabra base. Product must be rated for at least 18,000 average life hours.

Exit Signs

High-efficiency exit signs must replace or retrofit an existing incandescent exit sign. Electroluminescent, photoluminescent, T1 and light-emitting diode (LED) exit signs are eligible under this category. Non-electrified and remote exit signs are not eligible. All new exit signs or retrofit exit signs must be UL or ETL listed, have a minimum lifetime of 10 years, and have an input wattage ≤5 Watts or be ENERGY STAR qualified.

Controls

Passive infrared, ultrasonic detectors and fixture-integrated sensors or sensors with a combination thereof are eligible. All sensors must be hard-wired and control interior lighting fixtures. The incentive is per Watt controlled. To assist in rebate processing, please provide the inventory of the controlled fixtures with the Final Application.

New T8/T5 Highbay Fluorescent Fixtures with electronic ballast (Example-Highbay Fixtures)

This measure consists of replacing one or more existing fixtures with new fixtures containing T8 or T5 lamps and electronic ballasts. The T8 or T5 lamps must have a color rendering index (CRI) ≥80. The electronic ballast must be high frequency (≥20 kHz), 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 distortion (THD) ≤20% at full light output. For 2- and 3-foot lamps, ballasts must have THD ≤32% at full light output. High output T5/T8 lamps also qualify for this rebate. This incentive can be used in highbay and lowbay fluorescent applications.

Incentives for this measure are calculated based on the reduction in connected watts. **A Pre-approval Application is required** for this measure in order for DCEO to conduct a pre-retrofit inspection. Specifications of the new fixtures must accompany the final application. Incentives are only available for new fixtures.

Note: PCB ballasts and lamps are hazardous materials and should be disposed of properly.

LED Traffic and Pedestrian Signals

LED traffic and pedestrian signals must replace or retrofit an existing incandescent traffic signal. Each lamp must have a maximum LED module wattage of 25. Incentives are not available for spare lights. Lights must be hardwired and single lamp replacements are not eligible, with the exception of pedestrian hand signals. The traffic signal LED modules shall fully comply with the Institute of Transportation Engineers (ITE) latest adopted specifications.

[1, 3] This website contains a list of eligible lamps.

HVAC Incentive Worksheet

Equipment Type	Size Category	Minimum Efficiency*	Incentive ($/unit)
Unitary and Split Air Conditioning Systems and Air Source Heat Pumps	< 65,000 Btuh (5.4 tons)	14 SEER	$15.00
		15 SEER	$30.00
	≥65,000 Btuh and <240,000 Btuh (5.5-20 tons)	11.5 EER/11.9 IPLV	$15.00
		12 EER/12.4 IPLV	$30.00
	≥240,000 Btuh and <760,000 Btuh (21-63 tons)	10.5 EER/10.9 IPLV	$15.00
		10.8 EER/12.0 IPLV	$30.00
	≥760,000 Btuh (> 63 tons)	9.7 EER/11.0 IPLV	$15.00
		10.2 EER/11.0 IPLV	$30.00
Water-Cooled Chillers	ALL	Level 1 (see specifications)	$20.00
		Level 2 (see specifications)	$40.00
Air-Cooled Chillers	ALL	1.04 kW/ton-IPLV	$30.00
Room Air Conditioners	ALL	Level 1 (see specifications)	$30.00
		Level 2 (see specifications)	$50.00
PTAC	ALL	13.08-(0.2556 x Btuh/1000) EER	$30.00

Equipment Type	Make and Model	Unit Efficiency*	(A) Unit Size (tons)	(B) Quantity	(C) Incentive Per Unit	(A x B x C) Incentive
Water-cooled chillers	York YR	0.506	270	2	20	$10,800.00
						$0.00
						$0.00
						$0.00
						$0.00
						$0.00
						$0.00
Total**						$10,800.00

Variable Speed Drive on HVAC Motors
$50 Per horsepower

Is VSD applicable for this equipment?	(A) VSD Size (HP)	(B) Quantity	(C) Unit Incentive ($/HP)	(A x B x C) Incentive
			$50	$0.00
			$50	$0.00
			$50	$0.00
Total**				**$0.00**

* Unit efficiency for chillers should be provided in kW per ton – IPLV. Unit efficiency for ac units less than 65,000 Btuh should be provided in SEER. Unit efficiency for all other equipment should be provided in EER.

IPLV= Integrated Part Load Value

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

Specifications for HVAC Measures

Unitary and Split Air Conditioning Systems and Air Source Heat Pumps

New unitary air conditioning units or air source heat pumps that meet or exceed the qualifying cooling efficiency shown in the HVAC Incentive Worksheet Table are eligible for an incentive. They can be either split systems or single package units. The efficiency of split systems is based on an ARI reference number. Water-cooled systems, evaporative coolers, and water source heat pumps do not qualify under this program, but may qualify under the Custom Incentive Program. All packaged and split system cooling equipment must meet Air Conditioning and Refrigeration Institute (ARI) standards (210/240, 320 or 340/360), be UL listed, use a minimum ozone-depleting refrigerant (e.g., HCFC or HFC). All required efficiencies are based on the Consortium for Energy Efficiency (CEE) high efficiency commercial air conditioning and heat pump specifications (www.cee1.org)[1]. A manufacturer's specification sheet indicating the system efficiency must accompany the application. Disposal of the existing unit must comply with local codes and ordinances.

Water- and Air-cooled Chillers

Chillers are eligible for an incentive if they have a rated kW/ton for the Integrated Part Load Value (IPLV) that is less than or equal to the qualifying Level 1 and Level 2 efficiency shown in the table below. The chiller efficiency rating must be based on ARI Standard 550/590-2003 for IPLV conditions and not based on full-load conditions. The chillers must meet ARI standards 550/590-2003, be UL listed, and use a minimum ozone-depleting refrigerant (e.g., HCFC or HFC). The ARI net capacity value should be used to determine the chiller tons. A manufacturer specification sheet with the rated kW/Ton-IPLV or COP-IPLV must accompany the application. Qualifying efficiencies for chillers are summarized below.

Chiller type	Size (Tons)	Level 1 kW/ton-IPLV	Level 2 kW/ton-IPLV
Scroll or Helical-Rotary	< 150	0.61	0.54
	150 to 300	0.57	0.50
	>= 300	0.51	0.46
Centrifugal	< 150	0.60	0.54
	150 to 300	0.54	0.48
	>= 300	0.49	0.44
Reciprocating	ALL	0.63	0.56
Air-Cooled	ALL	1.04	NA

Room Air Conditioners

Room air conditioning units are through-the-wall (or built-in) self-contained units that are 2 tons or less. There are two eligible efficiency levels as listed by the Consortium for Energy Efficiency. A unit can either qualify under ENERGY STAR standards or under Super Efficient Home Appliance (SEHA) Tier 1 standards. The minimum requirements and eligible equipment are listed Consortium for Energy Efficiency (CEE) high efficiency room air conditioning specifications (www.cee1.org)[2]. These units are with and without louvered sides, without reverse cycle (i.e., heating), and casement. The qualifying efficiencies for both levels are provided below. Disposal of existing unit must comply with local codes and ordinances.

	Level 1	Level 2
Size (Btuh)	2000 ENERGY STAR (EER)	SEHA Tier 1 (EER)
< 8,000	10.7	11.2
8000 to 13,999	10.8	11.3
14,000 to 19,999	10.7	11.2
>= 20,000	9.4	9.8

Package Terminal AC and Heat Pump Units (PTAC/PTHP)

Package terminal air conditioners and heat pumps are through-the-wall self contained units that are 2 tons (24,000 Btuh) or less. Only units that have an EER greater than or equal to 13.08 – (0.2556 * Capacity / 1000), where capacity is in Btuh, qualify for the incentive. All EER values must be rated at 95 °F outdoor dry-bulb temperature.

Variable Speed Drives on HVAC Motors

Variable-speed drives (VSDs) which are installed on existing chillers, HVAC fans, or HVAC pumps are eligible for this incentive. New chillers with integrated VSDs are eligible under the chiller incentive. The installation of a VSD must accompany the permanent removal or disabling of any throttling devices such as inlet vanes, bypass dampers, and throttling valves. VSDs for non-HVAC applications may be eligible for a custom incentive.

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[1] This website also has a list of eligible systems.

[2] This website also has a list of eligible units.

Refrigeration Incentive Worksheet

Refrigeration Measures				
Measure	Incentive Basis	Quantity	Incentive Rate	Incentive
Strip Curtains on Walk-Ins	Per Square Foot		$4.00	$0.00
Anti-Sweat Heater Control	Per Linear Foot		$30.00	$0.00
EC Motor for Walk-in	Per Motor		$50.00	$0.00
EC Motor for Reach-in	Per Motor		$35.00	$0.00
Evaporative Fan Control	Per Motor		$60.00	$0.00
Automatic Door Closers for Walk-in Freezers	Per Door		$160.00	$0.00
Beverage Machine Control	Per Unit		$100.00	$0.00
ENERGY STAR Vending Machine	Per Unit		$100.00	$0.00
Snack Machine Control	Per Unit		$30.00	$0.00
Total**				**$0.00**

High Efficiency Ice Makers					
Size (lbs. / day)	Annual kWh per 100 lbs.	Annual kWh per 100 lbs.	Quantity	Incentive per Unit per Market	Incentive
101-200	8.5			$100.00	$0.00
201-300	7.7			$150.00	$0.00
301-400	6.5			$200.00	$0.00
401-500	5.5			$200.00	$0.00
501-1000	5.2			$300.00	$0.00
1001-1500	5			$400.00	$0.00
>1500	4.6			$400.00	$0.00
Total**					**$0.00**

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

Specifications for Refrigeration Measures

Strip Curtains on Walk-in Coolers and Freezers
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 that have useful life left. A pre-inspection may be performed. Incentive is based on square footage of doorway.

Anti-Sweat Heater Controls
For this measure, a device is installed that senses the relative humidity in the air outside of the display case and reduces or turns off the glass door (if applicable) and frame anti-sweat heaters at low-humidity conditions. Technologies that can turn off anti-sweat heaters based on sensing condensation (on the inner glass pane) also qualify. Rebate is based on the total linear footage of the case.

Electrically Commutated Evaporator Fan Motor (Refrigerated Cases or Walk-ins)
This measure is applicable to the replacement of an existing standard-efficiency shaded-pole evaporator fan motor in refrigerated display cases or fan coil in walk-ins. The replacement unit must be an Electronically Commutated Motor (ECM). This measure cannot be used in conjunction with the Evaporator Fan Controller measure.

Evaporative Fan Controls
This measure is for the installation of controls in medium temperature walk-in coolers. The controller reduces airflow of the evaporator fans when there is no refrigerant flow. The measure must control a minimum of 1/20 HP where fans operate continuously at full speed. The measure also must reduce fan motor power by at least 75% during the off cycle.

This measure is not applicable if any of the following conditions apply:

1) The compressor runs all the time with high duty cycle
2) The evaporator fan does not run at full speed all the time
3) The evaporator fan motor runs on poly-phase power
4) The evaporator fan motor is not shaded-pole or permanent split capacitor (PSC)
5) Evaporator does not use off-cycle or time-off defrost.

Automatic Door Closer for Walk-in Freezers
This measure is for installing an auto-closer to the main insulated opaque door(s) of a walk-in freezer. The auto-closer must firmly close the door when it is within one inch of full closure.

Beverage Machine Control
The beverage machine is assumed to be a refrigerated vending machine that contains only non-perishable bottled and canned beverages. Controller for both types of systems 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. For the beverage machine, the control logic should power up the machine at 2-hour intervals to maintain product temperature and provide compressor protection.

ENERGY STAR® Refrigerated Beverage Vending Machine
ENERGY STAR beverage vending machines qualify for an incentive. Qualifying machines can be found at http://www.energystar.gov/ia/products/prod_lists/vending_machines_prod_list.pdf.

High-Efficiency Ice Makers
The rebate covers ice machines that generate 60 grams (2 oz.) or lighter ice cubes, flaked, crushed, or fragmented ice. Only air-cooled machines qualify (self contained, ice making heads, or remote condensing). The machine must have a minimum capacity of 101 lbs of ice per 24-hour period (per day). The minimum efficiency required is per ENERGY STAR or CEE Tier 2[1]. A manufacturer's specification sheet must accompany the application that shows rating in accordance to ARI standard 810.

[1] The websites have a list of qualifying model numbers, www.energystar.gov or www.cee1.org.

Motors Incentive Worksheet

NEMA Premium Efficiency Motors – Minimum Qualifying Efficiencies							
	3600 RPM		1800 RPM		1200 RPM		Incentive per Motor
Horse Power	Open	Closed	Open	Closed	Open	Closed	
1	77.00%	77.00%	85.50%	85.50%	82.50%	82.50%	$7.00
1.5	84.00%	84.00%	86.50%	86.50%	86.50%	87.50%	$9.00
2	85.50%	85.50%	86.50%	86.50%	87.50%	88.50%	$11.00
3	85.50%	86.50%	89.50%	89.50%	88.50%	89.50%	$16.00
5	86.50%	88.50%	89.50%	89.50%	89.50%	89.50%	$20.00
7.5	88.50%	89.50%	91.00%	91.70%	90.20%	91.00%	$35.00
10	89.50%	90.20%	91.70%	91.70%	91.00%	91.00%	$45.00
15	90.20%	91.00%	93.00%	92.40%	91.70%	91.70%	$60.00
20	91.00%	91.00%	93.00%	93.00%	92.40%	91.70%	$75.00
25	91.70%	91.70%	93.60%	93.60%	93.00%	93.00%	$80.00
30	91.70%	91.70%	94.10%	93.60%	93.60%	93.00%	$90.00
40	92.40%	92.40%	94.10%	94.10%	94.10%	94.10%	$100.00
50	93.00%	93.00%	94.50%	94.50%	94.10%	94.10%	$125.00
60	93.60%	93.60%	95.00%	95.00%	94.50%	94.50%	$150.00
75	93.60%	93.60%	95.00%	95.40%	94.50%	94.50%	$175.00
100	93.60%	94.10%	95.40%	95.40%	95.00%	95.00%	$250.00
125	94.10%	95.00%	95.40%	95.40%	95.00%	95.00%	$275.00
150	94.10%	95.00%	95.80%	95.80%	95.40%	95.80%	$325.00
200	95.00%	95.40%	95.80%	96.20%	95.40%	95.80%	$450.00

Motor Make/Model	Quantity	Motor Size (HP)	3600 RPM	1800 RPM	1200 RPM	Open	Closed	Motor Efficiency	Incentive per Motor	Incentive (Incentive per Motor x Quantity)
			(Please place an X in one of three options in each column)			(Please place an X in one of the options below)				
									0	$0
									0	$0
									0	$0
									0	$0
									0	$0
									0	$0
									0	$0
Total*										$0

Specifications for Premium Motors

Motors eligible for an incentive are three-phase AC induction motors, 1-200 HP, of open drip-proof (open) and totally enclosed fan-cooled (closed) classifications. Rewound motors do not qualify. Incentives are based on the motor's Nominal Full Load Efficiencies, tested in accordance with IEEE (Institute of Electrical and Electronics Engineers) Standard 112, method B, that meet or exceed the NEMA premium efficiency standards on the Motors Incentive Worksheet. The application must include the manufacturer's performance data sheet that at least shows equipment type, equipment size, model number, and efficiency rating. Customers should consider matching RPMs of the existing pump or fan when installing energy efficient motors that inherently have higher speeds (less slip), which may affect electric energy use.

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

Specifications for Premium Motors

Motors eligible for an incentive are three-phase AC induction motors, 1-200 HP, of open drip-proof (open) and totally enclosed fan-cooled (closed) classifications. Rewound motors do not qualify. Incentives are based on the motor's Nominal Full Load Efficiencies, tested in accordance with IEEE (Institute of Electrical and Electronics Engineers) Standard 112, method B, that meet or exceed the NEMA premium efficiency standards on the Motors Incentive Worksheet. The application must include the manufacturer's performance data sheet that at least shows equipment type, equipment size, model number, and efficiency rating. Customers should consider matching RPMs of the existing pump or fan when installing energy efficient motors that inherently have higher speeds (less slip), which may affect electric energy use.

** Incentive cannot exceed 100 percent of the incremental measure cost and 50 percent of total project cost.

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Total Standard Incentive

Lighting	$1,692
HVAC	$10,800
Refrigeration	$0
Motors	$0
Total Incentive	**$12,492**

Inventory of Fixtures Controlled by Occupancy Sensors

Fixture Tag	Type of Fixture	Fixture Wattage	Number of Fixtures
F1A	2'x2' 2-lamp T8	34	138
F2	2'x2' 2-lamp T5HO	36	40
F4	2'x4' 2-lamp T8	56	28
F5	2'x4' 3-lamp T8	56	3
F9	4' 2-lamp T8	55	26
F14	4' 1-lamp T5HO	56	23
F14A	3' 1-lamp T5HO	41	6
F15	32W-TRT	35	21
F16	32W-TRT	39	5
F19D	26W-TRT	33	3
Total Controlled Wattage:			

Total Wattage for all Fixtures
4,692
1,440
1,568
168
1,430
1,288
246
735
195
99
11,861