



LOW INCOME
EFFICIENT LIVING ENERGY PROGRAM • 2011
Program Guidelines for Year 4

EFFICIENT LIVING: ILLINOIS PUBLIC HOUSING AUTHORITY ENERGY PROGRAM GUIDELINES AND APPLICATION

Program Year 4 Start Date: June 1, 2011

STANDARD & CUSTOM INCENTIVES
for
LOW INCOME HOUSING, RESIDENTIAL &
COMMON AREAS



Pat Quinn, Governor • Warren Ribley, Director

ILLINOIS DEPARTMENT OF COMMERCE AND
ECONOMIC OPPORTUNITY
Illinois Energy Office
500 East Monroe Street, Springfield, Illinois, 62701



SECTION 1

GENERAL INFORMATION

1.1 Introduction. The Smart Energy Design Assistance Center (SEDAC) at the University of Illinois in partnership with the Illinois Department of Commerce and Economic Opportunity invites eligible public housing authorities to participate in the Efficient Living: Illinois Public Housing Authority Energy Program. This program encourages public housing authorities and their residents to incorporate energy cost reduction practices into their daily operations. The program will support implementation of cost-effective energy efficiency measures that help meet annual state energy savings targets. In addition, implementing such measures will also enhance economic development in the State of Illinois through job creation and business development.

1.2 Who Is Eligible. Eligibility is limited to applicants that manage public housing authorities located in the State of Illinois. In addition, public housing authorities to which funding can be applied must receive electric delivery services from Ameren Illinois, ComEd, and/or natural gas services from Ameren Illinois, Nicor, Peoples, or North Shore. If you are a PHA with properties located in these service areas, you are eligible to participate in the Illinois PHA Efficient Living Energy Project. Applicants will be required to submit documentation that projects are located in the appropriate utility service territories.

This program will allow you to save money and energy consumption when you improve your properties with energy-efficiency upgrades to common areas and residential units. Specifically, the installation of energy efficiency measures in common areas and/or residential units must produce electricity and/or natural gas savings through improvements in building equipment, appliances, and operations. Targeted public housing authorities include residential households at or below 30% of Average Median Income (Extremely Low-Income), 50% of Average Median Income (Very Low-Income), and 80% of Average Median Income (Low-Income). Average Median Income Levels are defined by individual counties where the properties are located.

1.3 How Much Is Available. The program may provide up to, but not more than, the maximum incentive/grant amount of \$350,000. Funding decisions are made as funding is available and the program is not obligated to provide the maximum incentive/grant amount. Maximum incentive/grant rates for each individual energy efficiency measure are outlined in the Incentive/Grant Worksheets as part of the application process. The total incentive/grant cannot exceed 100 percent of the total project cost. Custom projects are subject to cost effectiveness evaluation.

1.4 What Is Eligible. The program will provide incentives/grants for upgrades in electric and/or natural gas savings measures for both common areas and residential units. Incentives/grants will be awarded in amounts up to but not exceeding the cost of the measure for interior lighting improvement, vending machine management, exit signs replacement, exterior lighting improvement, occupancy sensors, ENERGY STAR rated appliances, and HVAC equipment. However, incentive/grants may not be used for grant recipient's personnel expenses, the purchase of property, operating expenses, projects that replace the use of electricity with other fuels sources, projects that repair or replace existing equipment with like equipment, projects for sole purpose of implementing demand response measures, projects receiving funding for the same equipment through any other funding source, custom projects with simple paybacks greater than the equipment life, and/or the purchase or replacement of used equipment.

SECTION 2

APPLICATION PROCESS

2.1 Step 1: Complete Initial Application & Worksheet. Complete and sign the Initial Application and fill as much information as possible for the Incentive/Grant Worksheet. The Initial Application and draft of the Worksheet will provide basic information on the size and scope of the proposed energy cost reduction project and a general idea of the amount of incentive funds required. Each form submitted should include all of the information required in the application package. Ineligible or otherwise incomplete applications will be immediately rejected and returned to the applicant. Once complete, forms

can be emailed to info@sedac.org, with Subject: Kate Brown, or can be mailed to SEDAC at the following address:

Kate Brown
Building Research Council/SEDAC
One Saint Mary's Rd
Champaign, IL 61820

2.2 Step 2: Conference Call. Once the Initial Application has been reviewed by SEDAC, applicants will be contacted to discuss specifics of the proposal. Specifically, methods of integrating the Energy Cost Reduction Measures (ECRMs) with the applicants' existing programs as well as incentive/grant amounts, payments, and quarterly reporting schedule will be discussed. Conducting a conference call confers no right upon any applicant and SEDAC is not obligated to award a grant or to pay any costs incurred by the applicant as a result of the conference call.

2.3 Step 3: Finalize Worksheet. After the conference call, applicants should finalize their Incentive/Grant Worksheet in order to determine the final incentive/grant amount for their project. Once verified by SEDAC, a Notice of Award will be issued, which will specify the conditions of payment and the payment schedule. SEDAC reserves the right to determine the appropriate payment structure on a project specific basis. The agreement term/performance period will be determined on a project specific basis.

2.4 Step 4: Installation of ECRMs. Once approved, grantees are responsible for ensuring that funded measures meet program requirements and are properly installed. The applicant's signature on the application form is certification that all authorizations required to perform the project have either been obtained or will be obtained no later than 180 days following the grant beginning date set forth in the Notice of Award. As part of the agreement, grantees will be required to certify the project commencement date to SEDAC and are prohibited from the sale, lease, transfer, assignment, or encumbrance of any equipment or material purchased with grant/incentive funds without the express written approval from SEDAC or for the duration of 5 years or end of product life, whichever is less.

2.5 Step 5: Verification & Reporting. SEDAC will monitor compliance with the terms of the agreement and reserve the right to structure reporting requirements on a project specific basis. As acceptance of the agreement, grantees agree to assist with an energy consumption analysis for up to three years following completion and occupancy of the projects. Grantees agree to provide SEDAC with 2 years of utility data on selected buildings. Grantees will be contractually required to allow SEDAC access to the project site and the ability to obtain, publish, disseminate, or distribute any and all information obtained from the project (except any data or information that has been negotiated as being confidential or proprietary), without restriction and without payment or compensation by SEDAC.

In addition, grantees will be required to submit progress reports on a quarterly basis in accordance with the requirements of the agreement. Progress reports must include grant expenditure per project, energy efficiency measures funded by project, total incentive/grant expenditures provided during the quarter, total number of each energy efficiency measure funded during the quarter, addresses of funded projects, addresses of projects completed during the quarter, number of occupants that are at or below 30%, 50%, or 80% of the poverty level, and documentation that projects meet the utility provider requirement.

In the event of a grantee's failure to comply with this requirement, the grant agreement will provide that SEDAC, may at its discretion, require the grantee to return all grant/incentive funds provided by the program, require the grantee to transfer to the state ownership of equipment and materials purchased with funds and bar the grantee from consideration for future funding. When requested, the grantee shall return to SEDAC any and all funds that are determined by SEDAC to have been spent in violation of the grant agreement.

SECTION 3**FUNDED TERRITORIES****3.1 Ameren Illinois.**

Ameren Illinois		
Adams County Housing Authority	Granite City Housing Authority	Montgomery County Housing Authority
Alton Housing Authority	Greene County Housing Authority	Morgan County Housing Authority
Bloomington Housing Authority	Hancock County Housing Authority	Pekin Housing Authority
Bond County Housing Authority Fulton County Housing Authority	Henry County Housing Authority	Peoria Housing Authority Housing Authority
Brown County Housing Authority	Jackson County Housing Authority	Perry County Housing Authority
Calhoun County Housing Authority	Jefferson County Housing Authority	Piatt County Housing Authority
Cass County Housing Authority	Jersey County Housing Authority	Pike County Housing Authority
Champaign County Housing Authority	Johnson County Housing Authority	Pulaski County Housing Authority
Christian County Housing Authority	Knox County Housing Authority	Quincy Housing Authority
Clark County Housing Authority	Lasalle County Housing Authority	Randolph County Housing Authority
Coles County Housing Authority	Lawrence County Housing Authority	Richland County Housing Authority
Cumberland County Housing Authority	Livingston County Housing Authority	Saline County Housing Authority
Danville Housing Authority	Logan County Housing Authority	Scott County Housing Authority
Decatur Housing Authority	Macoupin County Housing Authority	Shelby County Housing Authority
Dewitt County Housing Authority	Madison County Housing Authority	St. Clair County Housing Authority
East St. Louis Housing Authority	Marion City Housing Authority	Union County Housing Authority
Edgar County Housing Authority	Marion County Housing Authority	Vermilion County Housing Authority
Edwards County Housing Authority	Mason County Housing Authority	Warren County Housing Authority
Effingham County Housing Authority	Massac County Housing Authority	White County Housing Authority
Ford County Housing Authority	McDonough County Housing Authority	Williamson County Housing Authority
Franklin County Housing Authority	Menard County Housing Authority	Woodford County Authority
Gallatin County Housing Authority	Mercer County Housing Authority	

3.2 Commonwealth Edison.

Commonwealth Edison		
Aurora Housing Authority	Grundy County Housing Authority	North Chicago Housing Authority
Chicago Housing Authority	Kankakee County Housing Authority	Oak Park Housing Authority
Cook County Housing Authority	Joliet Housing Authority	Ogle County Housing Authority
Dekalb County Housing Authority	Lake County Housing Authority	Rockford Housing Authority
Elgin Housing Authority	Lee County Housing Authority	Waukegan Housing Authority
Freeport Housing Authority	McHenry County Housing Authority	Winnebago County Housing Authority

3.3 Natural Gas. This also includes the natural gas territories of Ameren Illinois, Nicor, People's Gas and North Shore.

3.4 Disclaimer. Applications will be accepted beginning June 1, 2011 and will continue until all of the available funding is obligated. Grantees shall hold the State of Illinois or the University of Illinois harmless

from any and all claims, demands, and actions based upon or arising out of any services performed by the grantee or by their agents or employees under a grant agreement. SEDAC, by entering into an agreement, does not pledge or promise to pledge the assets of the state nor does it promise to pay any compensation to the grantee from any moneys of the treasury or the state except such moneys as shall be appropriated and paid to the grantee by SEDAC. The grantee agrees to assume all risks of loss and to indemnify and hold SEDAC, its officers, agents and employees, harmless from and against any and all liabilities, demands, claims, damages, suits, costs, fees, and expenses, incidents thereto, for injuries or death to persons and for loss of, damage to, or destruction of property because of the grantee's negligence, intentional acts or omissions. In the event of any demand or claim, SEDAC may elect to defend any such demand or claim against SEDAC and will be entitled to be paid by the grantee for all damages.

SECTION 4

DEFINITIONS

- 4.1 Act.** Public Utilities Act.
- 4.2 AFUE.** The Annual Fuel Utilization Efficiency (AFUE) is the actual, season-long, average efficiency of the heating equipment being looked at. The minimum AFUE allowed is 78%.
- 4.3 Applicant.** An eligible public housing authority proposing an energy efficiency project in Illinois.
- 4.4 Application.** An application that reflects the actual measures and equipment to be installed as well as determines the incentives paid.
- 4.5 Common Areas.** Areas open to and for use by all tenants, which typically include, but are not limited to, hallways, stairways, on-site building management offices, laundry rooms, community rooms, exterior lighting, etc.
- 4.6 Custom.** Measures that are not standard projects, which typically include, but are not limited to, lighting projects in which the fixtures are constantly running (24/7).
- 4.7 Delamping.** The net reduction in the number of lamps in a fixture.
- 4.8 Department.** Illinois Department of Commerce and Economic Opportunity, Bureau of Energy and Recycling.
- 4.9 EER.** Energy Efficiency Ratio. A measure of the efficiency of a heating or cooling system, as a heat pump or air conditioner, equal to the ratio of the output in B.T.U./hour to the input in watts. Window A/C units with 8.8 EER or less should be replaced with units that have a 10.7 EER or greater.
- 4.10 EF.** The Energy Factor (EF) is a rating system used by Energy Star to indicate a water heater's overall energy efficiency based on the amount of hot water produced per unit of fuel consumed over a typical day. The higher the factor, the more efficient the water heater.
- 4.11 Energy Efficiency.** Measures that reduce the amount of electricity required to achieve a given end use.
- 4.12 Entity.** Any applicant submitting an application to SEDAC.
- 4.13 Grant Beginning Date.** The date the grant is signed and goes into effect.
- 4.14 Grantee.** An entity that has been awarded a grant.
- 4.15 Incentive.** A grant award or rebate.

4.16 Incremental Measure Cost. The increased equipment cost of upgrading to energy efficiency equipment. For retro fit measures, such as most lighting and vending machines measures, the incremental measure cost is the total cost to purchase and install the qualifying measures. For replacement measures or new equipment the incremental measure cost is the cost to purchase and install the energy efficiency equipment minus the cost to install equipment that meets minimum codes or standards.

4.17 Initial Application. An application for incentives that reflects the estimated number of various measures to be installed (given the best information at the time of the application). It is used to determine if the project is eligible for funding, and to assure that the calculations and methodology used to estimate the energy impacts meet the program requirements. Required information must be submitted using the approved forms and attachments as prescribed in the 2011 Public Housing Authority Efficient Living Energy Program Guidelines.

4.18 Performance Period. The length of time the Grantee is required to operate the project and submit information/data to SEDAC.

4.19 Project. An eligible energy project that is funded through the program.

4.20 Project Completion Date. The date that all necessary procurement is complete, equipment is installed and operational. The project completion date may not exceed nine months after the grant beginning date unless an alternative schedule has been approved by SEDAC.

4.21 SEER. The Seasonal Energy Efficiency Ratio (SEER) is the ratio used to judge how efficiently an air conditioner performs. The minimum SEER allowed is 13.

4.22 Smart Energy Design Assistance Center. The entity that provides advice and analyses enabling public housing authorities in the State of Illinois to increase their economic viability through the efficient use of energy resources. SEDAC is sponsored by the Illinois Department of Commerce and Economic Opportunity in partnership with ComEd, Ameren Illinois Utilities, Nicor, Peoples, and North Shore Gas. SEDAC is managed by the School of Architecture at the University of Illinois at Urbana-Champaign.

4.23 Standard. Measures that have set incentive levels.

4.24 Total Project Cost. The cost to purchase and install the qualifying measures including labor costs.

SECTION 5 ENERGY COST REDUCTION MEASURES SPECIFICATIONS & DEFINITIONS

5.1 Air Conditioner Cover (Exterior). This reusable cover helps reduce drafts and seals out weather, leaves, and dust during the heating season. These covers are used on both window mounted and regular air conditioners.

5.2 Air Conditioner Cover (Interior). This reusable, quilted, insulated cover seals drafts and wind from coming through window mounted air conditioners.

5.3 Bi-Level Stairwell/Hall/Garage Fixtures with Integrated Sensors. Existing fixtures must be a two-lamp T12 fixture. Eligible fixtures are hardwired two-lamp TS fluorescent fixtures with electronic ballasts and manufacturer integrated occupancy sensors used in areas where code requires lighting 24 hours a day (such as stairwells, hall, and garages). Fixtures with manual override capabilities are not eligible. During occupied periods, the fixture should operate at full light output. During unoccupied periods, the fixture should operate at lower light output and wattage. This measure is not eligible for the

occupancy sensor or T12 to TS incentive.

5.4 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.

5.5 CEE Tier 3 for Commercial Washing Machines. The Consortium for Energy Efficiency (CEE) says that a Tier 3 ranking for commercial washing machines must have a MEF of at least 2.20 and a max of 4.5 for its WF. MEF, the Modified Energy Factor, is a measure of the energy consumption for the total laundry drying cycle (washing and drying). It indicates how many cubic feet of laundry can be washed with and dried with one kWh of electricity; the higher the number the greater the efficiency. WF is the Water Factor, or the number of gallons needed for each cubic foot of laundry. The lower the number is the lower the consumption, and therefore, the more efficient use of water.

5.6 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.

5.7 De-lamp, Permanent Lamp Removal. Incentives are paid for de-lamping, permanent removal, of existing fluorescent lamps. De-lamp is the net reduction in the number of lamps in a fixture. Applicants 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 SEDAC to conduct a pre-retrofit inspection.

5.8 ECM Motor. An Electronically Commutated Motor (ECM) is an ultra-high efficiency programmable brushless DC motor utilizing a permanent magnet rotor and a built-in inverter. They are more energy efficient and much easier to control than AC motors. At all speeds, these motors maintain an efficiency of 65-72%.

5.9 Energy Star Rated Bathroom Exhaust Fan. Energy Star qualified ventilation fans use at least 60% less energy than standard models while achieving at least 90 CFM of air flow.

5.10 Energy Star Rated Vending Machine. Vending machines that comply with Energy Star specifications use efficient compressors, fan motors, and lighting systems and are up to 50% more efficient than standard models. Visit www.energystar.gov for more details.

5.10.1 Vending Machine Sensor. Typically, this sensor cuts power to the vending machine after an area has been vacant for 15 minutes. Every two hours or so, if in an area still vacant, the machine will run through an entire compressor cycle to maintain proper temperature. And if needed, the compressor will cycle more often depending on the temperature required.

5.11 Exit Signs. High-efficiency exit signs must replace or retrofit an existing incandescent exit sign. Electroluminescent, photo luminescent, TI 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 924 listed, have a minimum lifetime of 10 years, and have an input wattage ≤5 Watts per face.

5.12 Geothermal Heat Pump including Ground Coupling. This heat pump system uses the relatively consistent temperature of the ground as a source for exchanging heat. During the winter heat is taken from the ground and brought inside. During the summer heat is taken from inside and transferred to the cooler ground. Ground coupling can be done with either horizontal trenches or vertical trenches.

5.13 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) $\leq 20\%$.

5.14 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.cee.l.org). A list of qualified lamps and ballasts can be found at: <http://www.ceel.org/cornlcom-Itlcom-It-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.

5.15 Hybrid Electric Water Heater. This is when an electric water heater draws in heat from the surrounding air by using a built-in evaporator to supplement the heating of the water. The heat gathered is then transferred via condenser coils to the tank then to the water. Compared to traditional electric water heaters, this hybrid can save up to 62% of expenses.

5.16 Indoor/Outdoor Reset Controls. By determining the type of weather outside, the colder it is, the more the boiler would operate. The warmer, nicer weather it is, the less the boiler would operate. It allows a boiler to run based on the weather conditions. With this, heating is smooth and continuous (no high heat for a period then nothing, then high heat, etc.) and is at the proper amount (not too little or too much).

5.17 Integrated Ballast Ceramic Metal Halide Lamps. Qualifying lamps are 25 watt or less integrated ballast ceramic metal halide PAR lamps with a rated life of 10,500 hours or greater.

5.18 Interior Induction Fixtures. Only new, hard-wired induction fixtures qualify. New fixtures must replace, one for one, existing incandescent, mercury vapor, T12/High Output fluorescent, T12Very High Output fluorescent, standard metal halide, or high pressure sodium fixtures in interior installations. The new fixtures must not exceed the maximum wattage listed in the table below for each range of lamp wattage being replaced.

5.19 LED Lighting. LED recessed down light luminaries up to 18 Watts or screw-in base lamps qualify. The LED recessed down light must have a minimum efficacy of 35 lumens per Watt. The product must meet ENERGY STAR® version 1.1 criteria. LED lamps with ANSI sockets will qualify based on the July, 2009 ENERGY STAR® specification. See www.energystar.gov for more information. LED lamps and down light luminaries over 18 Watts may qualify for custom incentives.

5.20 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. Retrofit kits may be used on existing mercury vapor, standard metal halide or high pressure sodium fixtures only.

5.21 Natural Gas Condensing Water Heater. This kind of water heater performs similar to a normal tank-type water heater except that before the combustion gases are vented outside, the heat from the gases is captured and used to supplement the heating of the water.

5.22 Natural Gas Tankless Water Heater. Unlike a typical water heater, a tankless water heater heats water on demand, so it will never run out of hot water. And since there is no tank, water is heated

as it passes through, so the hot water will always be fresh. Without a tank means also much less space is taken up and more flexibility in where it can be located.

5.23 New T8/T5 Fluorescent Fixtures with Electronic Ballast (Pre-Approval Required). 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) $\leq 20\%$ at full light output. For 2- and 3-foot lamps, ballasts must have THD $\leq 32\%$ at full light output. High output T5/T8 lamps also qualify for this rebate.

5.24 Occupancy Sensors. 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.

5.25 Plug Load Occupancy Sensor. This rebate applies to passive infrared and/or ultrasonic detectors only. Plug-load sensors must control electricity using equipment in office or cubicles, including lighting, shared copiers, and/or printers.

5.26 PTHP (replace PTAC). A Packaged Terminal Heat Pump (PTHP) to replace a Packaged Terminal Air Conditioner (PTAC). It is a type of self-contained air conditioning and heating system commonly found in hotels and apartments. It is typically designed to go through a wall, having vents and heat sinks both inside and outside.

5.27 Reduced Wattage 4-foot T8 Lamps and Ballasts. Incentives are available for replacing T12 systems with reduced wattage lamp and electronic ballast systems. The lamps and ballasts must meet the Consortium for Energy Efficiency (CEE) specification (www.ceel.org). Qualified lamps and ballast products can be found at <http://www.ceel.org/com/com-lt/com-lt-main.php3>. Both the lamp and ballast must qualify. Incentives are calculated per lamp installed. A manufacturer's specification sheet must accompany the application.

5.28 Reduced Wattage 4-foot T8 Lamp Only. Incentives are available 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.ceel.org). Qualified products can be found at <http://www.ceel.org/com/com-lt/com-lt-main.php3>. The nominal wattage of new lamps must be 28W (≥ 2585 Lumens) or 25W (≥ 2400 Lumens) to qualify. A manufacturer's specification sheet must accompany the application.

5.29 Reduced Wattage 8-foot T8 Lamp and Ballast. 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 mean lumen per watt (MLPW) of 90 and must have a nominal wattage of less than 57W. A manufacturer's specification sheet must accompany the application.

5.30 Reduced Wattage 8-foot T8 Lamps Only. Incentives are available for replacing 59 Watt TS lamps with reduced wattage 8-foot TS lamps. Lamps must have a minimum mean lumen per watt (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.

5.31 U-tube T8 Lamps and CEE Qualified Ballasts. This measure consists of replacing existing U-tube T12 lamps and magnetic ballasts with U-tube TS lamps and CEE qualified electronic ballasts. The lamp must have a color rendering index (CRI) ≥ 80 . Qualified ballasts can be found at: <http://www.ceel.org/com/com-lt/com-lt-main.php3>. A manufacturer's specification sheet must accompany the application.

5.32 VFD. A Variable Frequency Drive (VFD) is a system for controlling the rotational speed of an AC electric motor by controlling the frequency of the power supplied to the motor. The higher the frequency the higher the voltage supplied. The installation of a VSD must accompany the permanent removal or disabling of existing flow control devices such as inlet vanes, bypass dampers, and throttling valves.

5.33 Water Source Heat Pump Desuperheater. This is a small refrigerant/water heat exchanger that transfers heat from the compressed gas in the compressor to a water line that circulates water to the building's hot water storage tank. However, this only provides water heating when the system is running, so a backup heating supply is needed.

5.34 2 and 3 foot T8 Lamps and Ballasts. This measure consists of replacing existing T12 lamps and magnetic ballasts with T8 lamps and electronic ballasts. The lamp must have a color rendering index (CRI) ≥ 80 and the ballast must have a total harmonic distortion (THD) $\leq 32\%$ at full light output, and the power factor (PF) must be ≥ 90 . A manufacturer's specification sheet must accompany the application.

PROGRAM CONTACT INFORMATION

Application reviewers may be contacted at:

SEDAC

University of Illinois

1 Saint Marys Rd.

Champaign, IL 61820

Att: Efficiency Living Energy Program

Phone: 800/244-6769

Email: info@SEDAC.org

APPLICATION CHECK LIST FOR THE EFFICIENT LIVING ENERGY PROGRAM

Completed **applications** must include:

- Completed and signed application and worksheet
- Brief discription of the project
- Any supporting materials (equipment serial numbers, pictures, etc.)
- Signed project completion certification

**INITIAL APPLICATION & WORKSHEET FOR INCENTIVES/GRANTS IN COMMON AREAS &
RESIDENTIAL UNITS
June 1, 2011**

The Initial Application will provide basic information on the public housing authority, utility territory, and contact information. The Incentive/Grant Worksheet will provide basic information on the size and scope of the proposed lighting project and a general idea of the amount of incentive funds required. The submitted application and worksheet should include all of the information that is applicable to the public housing authority (to the best of thier knowledge).

Public Housing Authority: _____ Number of Units: _____

Applicant Name: _____ Title: _____

Address: _____ City: _____ Zip: _____

Applicant Phone: (_____) _____

Fax Number: (_____) _____

Applicant E-mail Address: _____

Applicant FEIN (9 digit): _____

Alternate Name: _____ Title: _____

Alternate Phone: (_____) _____

Electric Territory (Pick One): ComEd Ameren Illinois Other _____

Natural Gas Territory (Pick One): Ameren Illinois Nicor Peoples North Shore Other _____

Have you previously received funding from the PHA Program or your Utility?

Standard Common Area Worksheet

Type	Replacement Item (ERCM)	Number of Replacements	Incentive	Incentive Amount (Number of Replacements x Incentive)
Screw In Lamp	CFL Screw In (1-26W)		\$1.50/lamp	
Screw In Lamp	CFL Screw In (≥27W)		\$2.00/lamp	
Incandescent Fixture	CFL Fixture (≤29W)		\$45/fixture	
Incandescent Fixture	CFL Fixture (≥30W)		\$82/fixture	
Fluorescent Lamp	4' T8 Lamp		\$1.50/lamp	
Fluorescent Lamp	8' T8 Lamp		\$1.50/lamp	
Fluorescent Lamp	4' T8 Lamp, Ballast		\$11/lamp	
Fluorescent Lamp	8' T8 Lamp, Ballast		\$16/lamp	
Delamping	4' T8 Lamp, Ballast		\$10/lamp	
Delamping	8' T8 Lamp, Ballast		\$13/lamp	
Delamping	4' T8 Lamp, Reflector		\$20/lamp	
Delamping	8' T8 Lamp, Reflector		\$26/lamp	
Occupancy Sensor	<i>Connected Watts Controlled</i>		\$0.20/W Controlled	
Plug Load Occupancy Sensor	Sensor		\$30/sensor	
Bi-level Stairwell/Hall/Garage Fixtures with Integrated Sensors	Fixture		\$70/fixture	
Vending Machine Sensor	Beverage		\$150 /machine	
Vending Machine Sensor	Snack		\$45/machine	
Vending Machine	Energy Star Rated		\$150 /machine	
Exit Sign	LED Exit Sign		\$25/sign	
Exit Sign	LED Lamp		\$15/lamp	
Outdoor Lighting	Metal Halide		\$7.50/fixture	
Outdoor Lighting	Pulse Start (≤100W)		\$33/lamp	
Outdoor Lighting	Pulse Start (101-200W)		\$57/lamp	
Outdoor Lighting	Pulse Start (201-350W)		\$66/lamp	
Variable Frequency Drive on <200HP Motors	VFDs which are installed on existing chillers, fans, and pumps are eligible for this incentive.		\$200/ Controlled HP	
High Efficiency Boiler	Energy Star Rated or Better		(\$3,600 + (\$250 x (AFUE - 85)) + \$20 x MBH) per Boiler	
Indoor/Outdoor Reset Controls	Electronic		\$1,500	
PTHP (replace PTAC)	Energy Star Rated		\$750/unit	

Commercial Washing Machine	CEE Tier 3		\$975/unit	
Total Incentive (Common Areas):				\$

**ERCMS that are not listed in the table above may be applicable for custom incentives at \$0.20 per kWh or \$2.00 per therm saved.*

Standard Residential Area Worksheet

Type	Replacement Item (ERCM)	Number of Replacements	Incentive Amount	Total Incentive Amount (Number of Replacements x Incentive)
Screw In Lamp	CFL Screw In (1-26W)		\$1.50/lamp	
Screw In Lamp	CFL Fixture (≥27W)		\$2.00/lamp	
Incandescent Fixture	Fluorescent Fixture		\$65/fixture	
Fluorescent Lamp	High Performance 4' T8 Lamp w/Electronic Ballast		\$11/lamp	
Bathroom Exhaust Fan	Energy Star Rated		\$300/unit	
Refrigerator	Energy Star Rated		\$550/unit	
Window A/C Unit	Energy Star Rated (EER ≤ 8.8 replaced with EER ≥ 10.7)		\$400/unit	
Central A/C Unit w/Prog. Thermostat	Energy Star Rated or Better		(\$2,000 + (\$250 x (SEER - 14.5)) Maximum award \$3,000/unit	
PTHP (replace PTAC)	Energy Star Rated		\$750/unit	
Air Source Heat Pump	Energy Star Rated or Better		(\$2,000 + (\$250 x (SEER - 14.5)) + \$800/Ton) Maximum award \$4,000/unit	
High Efficiency Gas Furnace w/ECM Motor (<225 MBH)	Energy Star Rated or Better		(\$1,000 + (\$250 x (AFUE - 90)) + (\$10 x kBtuh) Maximum award \$4,000/unit	
Geothermal Heat Pump including Ground Coupling (all electric existing)	Energy Star Rated or Better		(\$3,000 + (\$300 x (SEER - 15)) + \$1,000/Ton) Maximum award \$7,000/unit	
Geothermal Heat Pump including Ground Coupling (gas heating existing)	Energy Star Rated or Better		(\$1,000 + (\$300 x (SEER - 15)) + \$500/Ton) Maximum award \$3,000/unit	
Water Source Heat Pump Desuperheater	Hot Water Heat Recovery		\$500/unit	
Air Conditioner Cover (Exterior)	Outside cover for window air conditioner or through-the-wall air conditioning unit		\$30/unit	
Air Conditioner Cover (Interior)	Insulated inside cover for window air conditioner or through-the-wall air conditioning unit		\$40/unit	
Hybrid Electric Water Heater	Energy Star Rated (EF ≥ 2.0)		\$2,500/unit	
Natural Gas Condensing Water Heater	Energy Star Rated (EF≥0.8)		\$3,000/unit	
High Efficiency Furnace w/ECM Motor & A/C	Both Energy Star Rated or Better		(\$3,000 + (\$250 x (SEER - 14.5)) + (\$800 x A/C Tons) + (\$250 x (AFUE-90)) + (\$400 x Furnace MBH) Maximum award \$5,000/unit	

Combo				
Duct Insulation	Uninsulated ducts in unconditioned space to R-6		\$500/unit	
Duct Sealing	Seal ducts to 6% loss		\$500/unit	
Attic/Ceiling Insulation	Upgrade to R-45		\$0.50/sf	
Low Flow Shower Heads	Replace standard showerheads with lowflow unit not to exceed 1.75 gpm		\$25/unit	
Natural Gas Tankless Water Heater	Energy Star Rated (EF≥0.82)		\$1,600/unit	
Ceiling Fan	Energy Star Rated		\$250/unit	
Residential Washing Machine	Energy Star Rated		\$550/unit	
Total Incentive (Residential Areas):				\$

*ERCMS that are not listed in the table above may be applicable for custom incentives at \$0.20 per kWh or \$2.00 per therm saved.

PHA Lighting Survey Guidance

Light Survey for **new fixtures** to include: room/area, quantity of existing fixtures, description and wattage of existing fixtures, quantity of new fixtures, description and wattage of new fixtures.

Light Survey for all lighting **retrofits** to include: room/area, quantity, description of existing fixtures, number of lamps in existing fixtures and number of lamps in retrofit fixtures. Lamp total shall match number of lamps indicated in the Lighting Incentive Spreadsheet. Retrofit lamps and ballasts shall be listed at: <http://www.cee1.org/com/com-lt/com-lt-main.php3>

Light Survey for Occupancy Sensors to include: room/area, wattage of fixtures controlled.

Description of Existing or Proposed Program (Background Information, Current Status, Objectives and Changes with the PHA Efficient Living Energy Program Funding):

Comments/Questions:

Applicant hereby certifies that:

- All authorizations required to perform the project, described in its application, have either been obtained or will be obtained no later than 180 days following the start date set forth in the Notice of Grant Award issued by SEDAC.
- 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 180 days following an award by SEDAC.
- 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).
- As of the submittal date, the information provided in its application is accurate, and the individuals signing below are authorized to submit this application.
- All projects are located in the ComEd or Ameren electric service territory and/or Ameren, Nicor, Peoples, or North Shore natural gas territory.
- The applicant is targeting households at or below 80% of the poverty level.

Signature: _____ Date: _____