COUNTY OF ESSEX

ECONOMIC DEVELOPMENT CENTER

50 South Clinton Street, East Orange, NJ 07018

LOCAL GOVERNMENT ENERGY AUDIT PROGRAM
FOR
NEW JERSEY
BOARD OF PUBLIC UTILITIES

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CHA PROJECT NO. 29142

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REPORT DISCLAIMER

This audit was conducted in accordance with the standards developed by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) for a Level II audit. Cost and savings calculations for a given measure were estimated to within ±20%, and are based on data obtained from the owner, data obtained during site observations, professional experience, historical data, and standard engineering practice. Cost data does not include soft costs such as engineering fees, legal fees, project management fees, financing, etc.

A thorough walkthrough of the building was performed, which included gathering nameplate information and operating parameters for all accessible equipment and lighting systems. Unless otherwise stated, model, efficiency, and capacity information included in this report were collected directly from equipment nameplates and /or from documentation provided by the owner during the site visit. Typical operation and scheduling information was obtained from interviewing staff and spot measurements taken in the field.

List of Common Energy Audit Abbreviations

- A/C – Air Conditioning
- AHS – Air Handling Unit
- BMS – Building Management System
- Btu – British thermal unit
- CDW – Condenser Water
- CFM – Cubic feet per minute
- CHW – Chilled Water
- DCV – Demand Control Ventilation
- DDC – Direct Digital Control
- DHW – Domestic Hot Water
- DX – Direct Expansion
- EER – Energy Efficiency Ratio
- EF – Exhaust Fan
- EUI – Energy Use Intensity
- Gal – Gallon
- GPD – Gallons per day
- GPF – Gallons Per Flush
- GPH – Gallons per hour
- GPM – Gallons per minute
- GPS – Gallons per second
- HHW – Heating Hot Water
- HID – High Intensity Discharge
- HP – Horsepower
- HRU – Heat Recovery Unit
- HVAC – Heating, Ventilation, Air Conditioning
- HX – Heat Exchanger
- kbtu/mbtu – One thousand (1,000) Btu
- kW – Kilowatt (1,000 watts)
- kWh – Kilowatt-hours
- LED – Light Emitting Diode
- mbh – Thousand Btu per hour
- mmbtu – One million (1,000,000) Btu
- OCC – Occupancy Sensor
- PSI – Pounds per square inch
- RTU – Rooftop Unit
- SBC – System Benefits Charge
- SF – Square foot
- UH – Unit Heater
- V – Volts
- VAV – Variable Air Volume
- VSD – Variable Speed Drive
- W – Watt

1.0 EXECUTIVE SUMMARY

This report summarizes the energy audit performed by CHA for the Economic Development Center in connection with the New Jersey Board of Public Utilities (NJBPU) Local Government Energy Audit (LGEA) Program. The purpose of this report is to identify energy savings opportunities associated with major energy consumers and inefficient practices. Low-cost and no-cost are also identified during the study. This report details the results of the energy audit conducted for the building listed below:

Building Name	Address	Square Feet	Construction Date
Economic Development Center	50 South Clinton Street, East Orange, NJ 07018	113,750	1962

The potential total annual energy and cost savings for the recommended energy conservation measures (ECM) identified in the survey are shown below:

Building Name	Electric Savings (kWh)	NG Savings (therms)	Total Savings ($)	Payback (years)
Economic Development Center	486,670	13,241	89,623	11.4

The annual savings for each individual measure are dependent on that measure alone, there are no interactive effects calculated. There are three options shown for Lighting ECM savings; only one option can be chosen. Incentives shown (if any) are based only on the SmartStart Incentive Program. Other NJBPU or local utility incentives may also be available/ applicable and are discussed in Section 6.0.

Each measure recommended by CHA typically has a stand-alone simple payback period of 15 years or less. However, if the owner choses to pursue an Energy Savings Improvement Plan (ESIP), high payback measures could be bundled with lower payback measures which ultimately can result in a payback which is favorable for an ESIP project to proceed. Occasionally, we will recommend an ECM that has a longer payback period, based on the need to replace that piece(s) of equipment due to its age, such as a boiler for example.

The following table provides a detailed summary of each ECM for the building surveyed, including costs, savings, SmartStart incentives and payback.

Summary of Energy Conservation Measures

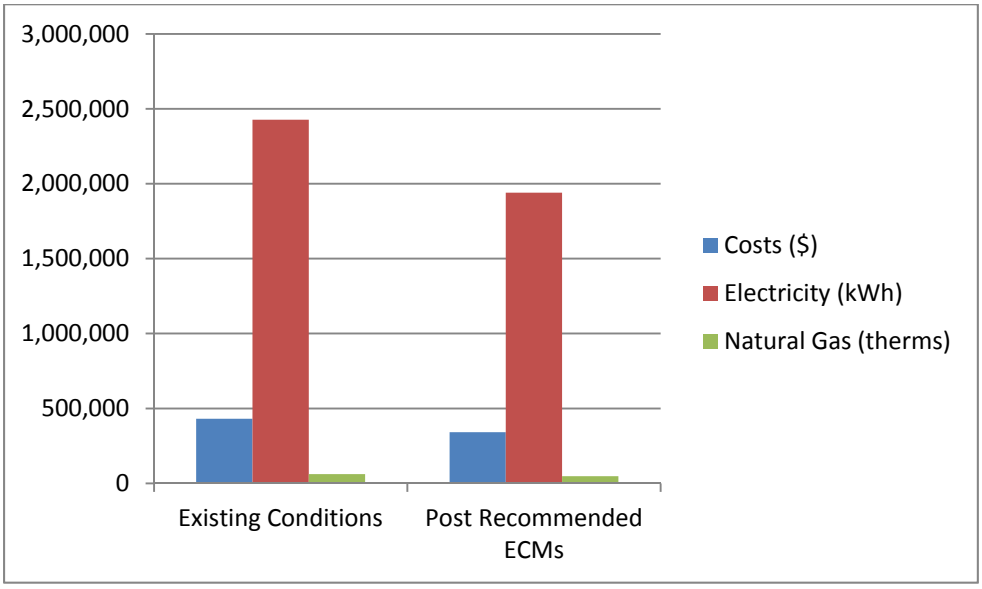
ECM #	Energy Conservation Measure	Est. Costs ($)	Est. Savings ($/year)	Payback w/o Incentive	Potential Incentive ($)*	Payback w/ Incentive	Recommended
1	Insulate Cavity behind Wall Panels	182,206	3,187	57.2	0	57.2	Y
2	Install Window Film	197,600	9,494	20.8	0	20.8	Y
3	Install Condensing Boilers	150,246	2,514	59.8	2,000	59.0	Y
4	Install VFDs on Hot Water Pumps	19,441	2,184	8.9	1,500	8.2	Y
5	Retro-commission DDC Controls	39,427	36,732	1.1	0	1.1	Y
L1**	Lighting Replacements	413,998	32,314	12.8	5,050	12.7	N
L2**	Lighting Controls	19,751	7,245	2.7	3,080	2.3	N
L3	Lighting Replacements with Controls	433,748	35,427	12.2	8,130	12.0	Y
	Total**	**1,022,668**	**89,623**	**11.4**	**11,630**	**11.3**	
	Total (Recommended)	**1,022,668**	**89,623**	**11.4**	**11,630**	**11.3**	

* Incentive shown is per the New Jersey SmartStart Program.
** These ECMs are not included in the Total, as they are alternate measures not recommended.

The alternative energy measure *Solar PV Electricity Generation* is not recommended due to the fact that there is insufficient available roof space for the PV panels.

If Essex County implements the recommended ECMs, energy savings would be as follows:

	Existing Conditions	Post Recommended ECMs	Percent Savings
Costs ($)	431,012	341,389	21%
Electricity (kWh)	2,427,211	1,940,541	20%
Natural Gas (therms)	61,577	48,336	22%
Site EUI (kbtu/SF/Yr)	126.9	100.7	



2.0 BUILDING INFORMATION AND EXISTING CONDITIONS

The following is a summary of building information related to HVAC, plumbing, building envelope, lighting, kitchen equipment and domestic hot water systems as observed during CHAs site visit. See appendix B for detailed information on mechanical equipment, including capacities, model numbers and age. See appendix F for some representative photos of some of the existing conditions observed while onsite.

Building Name: Economic Development Center
Address: 50 South Clinton Street, East Orange, NJ 07018
Gross Floor Area: 113,750 Square Feet
Number of Floors: 5 and a basement
Year Built: 1962, renovated in 2004

Description of Spaces: Social security, welfare, unemployment offices, conference rooms, training rooms, storage rooms, network room, toilet rooms and restrooms.
Description of Occupancy: There are approximately 300 employees, and at any given time there are approximately 150 members of the public within the building.
Number of Computers: The building has approximately 300 desktop and laptop computers.
Building Usage: Hours of operation for the Economic Development Center are 6:30 am to 9:30 pm Monday through Friday.

Building Envelope

Construction Materials: The Economic Development Center is a steel framed building with exterior walls of aluminum spandrel glass and aluminum panel exterior skin without insulation. Interior walls are constructed of metal studs with sheetrock finish, except for elevator core chases which are CMW.

Roof: The roof is flat and surfaced with a rolled asphalt sheeting over rigid insulation and metal decking, and appears to be in good condition. No roof associated ECMs are considered.
Windows The building has aluminum framed tinted single pane windows. These windows are non-operable and are integral to the exterior wall system. No ECMs are included for window replacement, due to the potentially high cost to replace the wall/window system.
Exterior Doors: Exterior doors throughout the building are aluminum framed with full length safety glass, and solid metal doors for employee use only. There is a vestibule at each public entrance. Sweeps and seals are in good condition. No additional ECMs are evaluated for exterior doors.

Heating Ventilation & Air Conditioning (HVAC) Systems

Heating: Two Weil McLain 1188 series cast iron sectional hot water boilers having Webster gas burners, maximum capacity 3392 MBH and minimum capacity 1696 MBH, provide heat to the building. The boilers were installed in 2010. One Boiler has damaged sections that are scheduled to be repaired in the fall of 2014; the second boiler appears to be in good condition. The boilers supply heating hot water to roof mounted air handling units and perimeter finned tube radiation via a primary/ secondary pumping system. Secondary pumps are 25HP, 91.7% efficient and are constant flow. A pair of older Hydrotherm gas boilers are also available as a back-up heat source. These boilers are estimated to be vintage 1980s.

Five Mammoth packaged rooftop air handling units provide heating, cooling and ventilation to the entire building, one for each floor. The units were installed in 2010 and are in excellent condition. The units are equipped with supply fans (VFD controlled), return fans (VFD controlled), DX cooling systems and hot water heating coils (supplied from the boilers). Each unit has 1,600 MBH of heating capacity. The conditioned air is distributed to each floor via ducted distribution systems to variable air volume (VAV) boxes. The VAV boxes do not have re-heat coils.

Each floor has perimeter hydronic finned tube radiation for supplemental heating, supplied by the boilers.

The basement is served by three smaller air handling units each outfitted with hot water coils. and DX cooling coils. The cooling condensing units are located at grade.

Cooling: The building is 100% cooled using the five (5) Mammoth packaged rooftop air handling units which provide conditioned air to each floor (one Mammoth unit serves each floor). The cooling is provided by direct expansion cooling systems, and each Mammoth has 80 tons of capacity. The three smaller air handling units that serve the basement are each outfitted with DX cooling coils, with condensers located outside at grade. Altogether the building utilizes approximately 400 tons of cooling.

Ventilation: Ventilation air is provided to the interior of the building by the five (5) Mammmoth rooftop units and three (3) basement air handling units described above. In general, building ventilation is adequate and no associated ECMs are included.

Exhaust: The facility utilizes exhaust fans of various sizes located on the roof to exhaust air from restrooms and storage areas, and provide general pressure relief.

Controls Systems

The building has a Siemens Appogy (SBT) digital control system that controls the VAV box operation and finned tube radiation operation only. The 5 new rooftop units are not connected to the SBT system. These units are manually controlled by the building operators and by time clocks. One unit is left to operated 24/7 while the other four are turned off after 9:30 pm. Temperatures in the building are maintained between 72 and 75 F heating and cooling during occupied times. It was reported that many of the employees have complained about being too cold in the summer presumably as a result of the VAV boxes not having re-heat coils. Many employees have electric heaters in their spaces to provide heating during the summer as a result. Space temperature setpoints can be adjusted +/-2 F by the occupants. There is no computer gateway provided in this building for county maintenance personnel to operate the system, so Siemens is contracted to provide all controls related adjustments/ repairs. An ECM is included to recommission the controls and add the RTUs to the building automation system (BAS).

Domestic Hot Water Systems

Domestic hot water is provided to lavatory sinks by three (3) new (2014) A.O. Smith tank type gas fired water heaters. Domestic hot water is only used for handwashing. As these units are new, no ECMs related to the DHW are considered.

Kitchen Equipment

The building once had a kitchen, cooking facilities, and a full cafeteria, however these are now abandoned. There is a break room with residential microwaves, refrigerators and other electrical appliances located on each floor. No ECMs were included for kitchen equipment.

Plug Load

The Economic Development Center building has computers, copiers, residential appliances (microwave, refrigerator), printers, and portable heaters which contribute to the plug load in the building. By implementing other ECMs, plug load from the portable heaters may be reduced.

Plumbing Systems

Toilet fixtures have been upgraded to lower flow fixtures, with 1.0 GPF for urinals, 1.8 GPF for water closets, and 2.2 GPM for metering type spring-loaded lavatory faucets. Toilet rooms do not have high flow fixtures, and no ECMs evaluating these fixtures is evaluated.

Lighting Systems

Lighting is primarily T-8 32watt fluorescent lamps mounted in a variety of different fixtures. Recessed CFL lamps are used corridors and in the lobby. All light fixtures are switched. Exterior lighting consists of wall mounted 400watt HPS spotlights. Parking lot lighting is provided by PSEG.

Three lighting ECMs have been included which include adding occupancy sensors to the existing lighting, replacement of the T-8 lighting with LED lighting and a third ECM that evaluates the effect of occupancy sensors used with the LED lighting upgrades.

3.0 UTILITIES

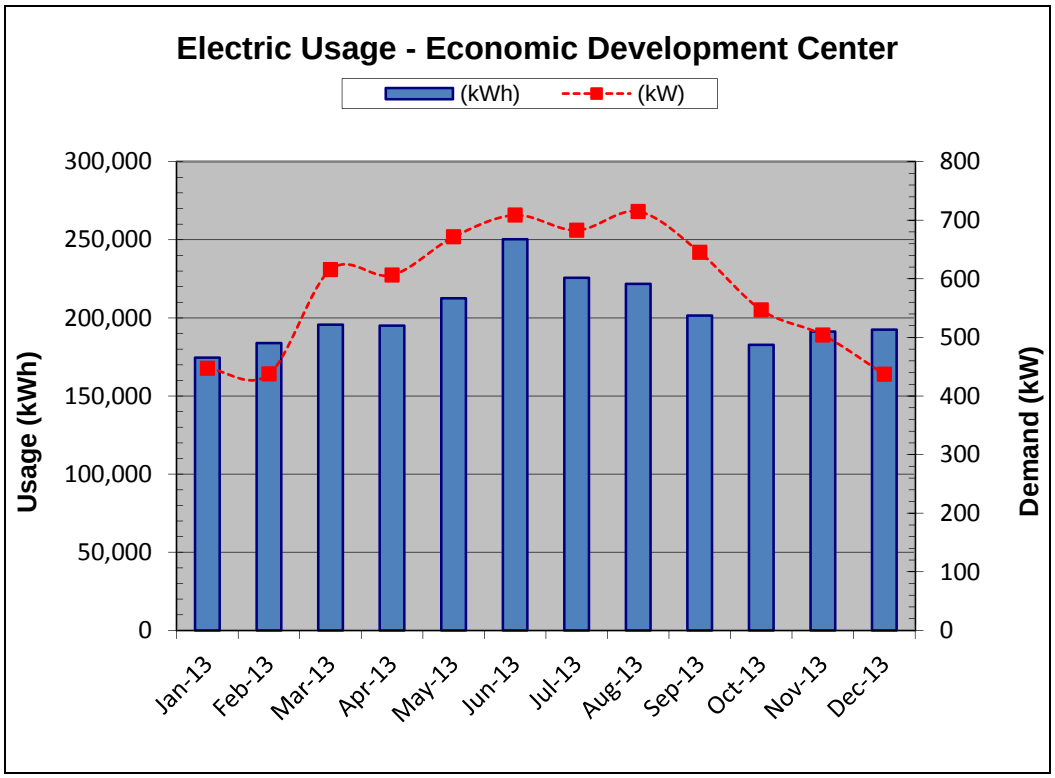
Utilities used by the building are delivered and supplied by the following utility companies:

	Electric	Natural Gas
Deliverer	PSE&G	PSE&G
Supplier	PSE&G	PSE&G

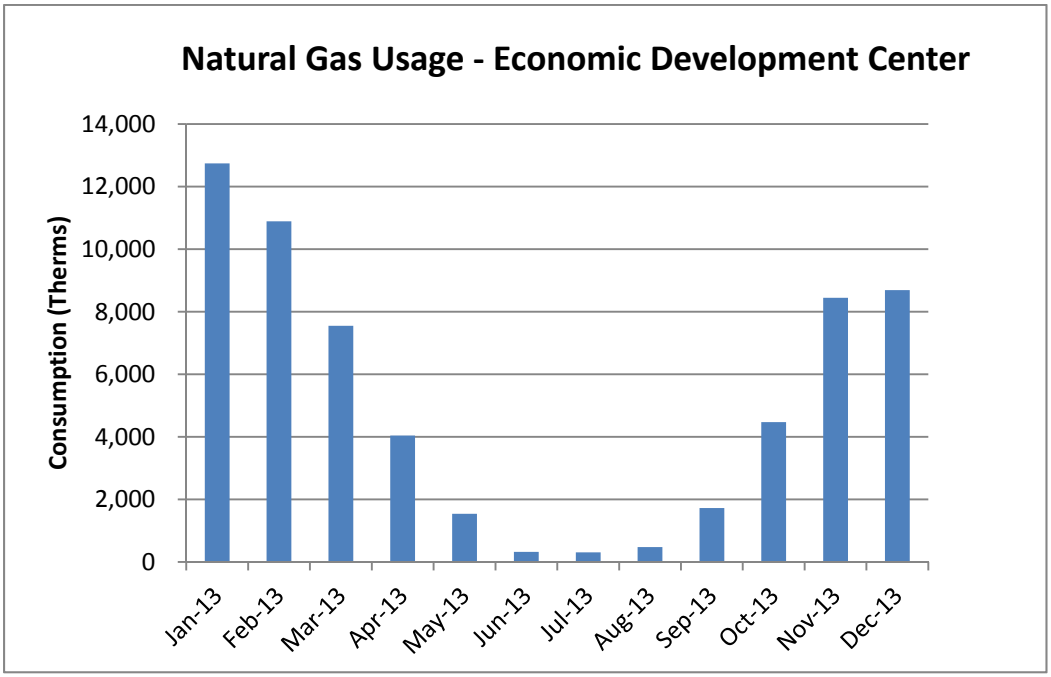
For the 12-month period ending in December 2013, the utilities usages and costs for the building were as follows:

Electric		
Annual Consumption	2,427,211	kWh/yr.
Annual Cost	379,136	$
Blended Unit Rate	0.156	$/kWh
Supply Rate	0.146	$/kWh
Demand Rate	3.53	$/kW
Peak Demand	715.0	kW
Natural Gas		
Annual Usage	61,227	Therms/yr.
Annual Cost	51,876	$
Rate	0.847	$/therm
Water		
Annual Consumption	1,346	gallons/yr.
Annual Cost	7,484	$
Rate	5.560	$/gallon

Blended Rate: Average rate charged determined by the annual cost / annual usage
Supply Rate: Actual rate charged for electricity usage in kWh (based on most recent electric bill)
Demand Rate: Rate charged for actual electrical demand in kW (based on most recent electric bill)



The electrical usage for this building is fairly constant, with increased usage in the summer months for air conditioning. Summer peaks occur during the maximum cooling season. The peaks during winter months which could be caused by electric heaters.



The natural gas usage is mostly driven by space heating in the winter months with a tail-off of usage during the summer months. The building does not have major kitchen use and at least half of domestic hot water is generated by electric water heaters.

See Appendix A for utility analysis.

Under New Jersey's energy deregulation law, the supply portion of the electric (or natural gas) bill is separated from the delivery portion. The supply portion is open to competition, and customers can shop around for the best price for their energy suppliers. The electric and natural gas distribution utilities will still deliver the gas/ electric supplies through their wires and pipes – and respond to emergencies, should they arise – regardless of where those supplies are purchased. Purchasing the energy supplies from a company other than your electric or gas utility is purely an economic decision; it has no impact on the reliability or safety of the service.

Comparison of Utility Rates to NJ State Average Rates*				Recommended to Shop for Third Party Supplier?
Utility	Units	Building Average Rate	NJ Average Rate	
Electricity	$/kWh	$0.16	$0.13	Y
Natural Gas	$/Therm	$0.85	$0.96	N

* Per U.S. Energy Information Administration (2013 data – Electricity and Natural Gas, 2012 data – Fuel Oil)

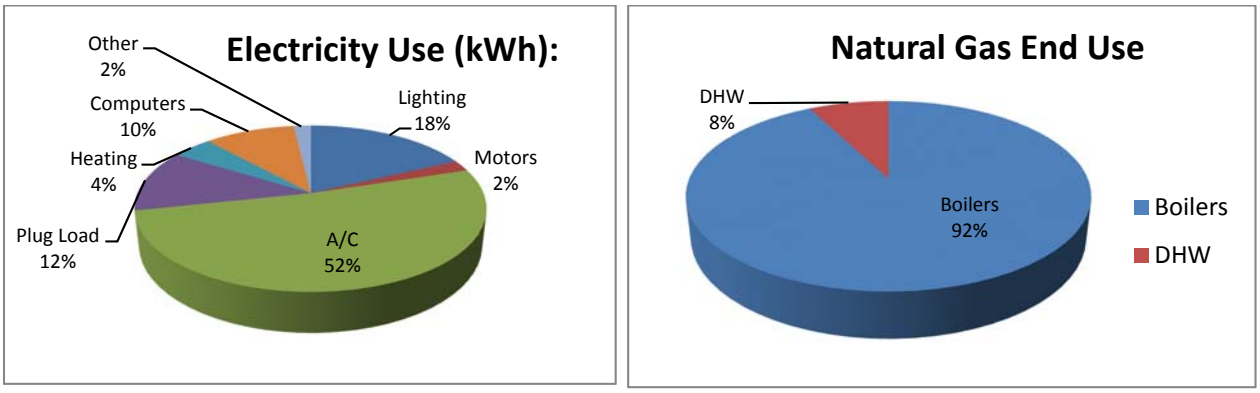
Additional information on selecting a third party energy supplier is available here:

http://www.state.nj.us/bpu/commercial/shopping.html.

See Appendix A for a list of third-party energy suppliers licensed by the Board of Public Utilities to sell within the building's service area.

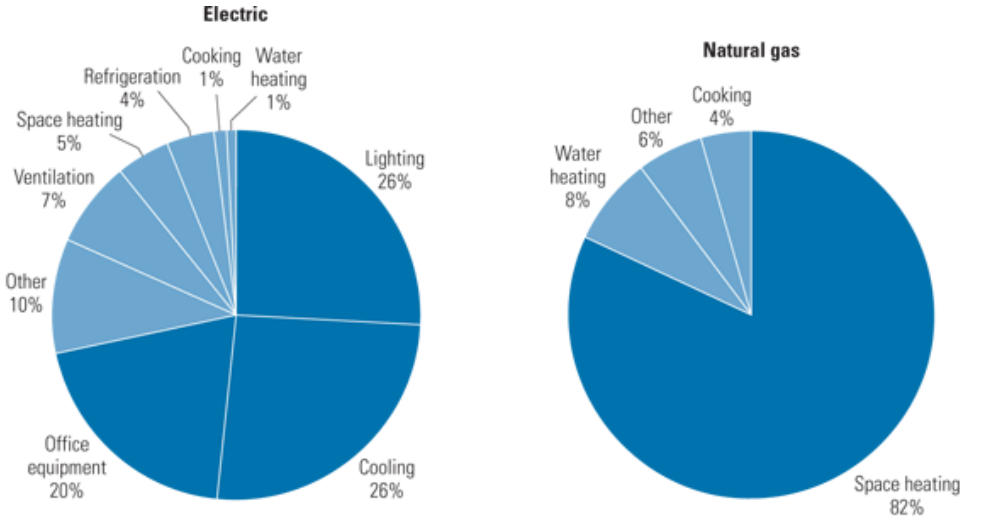
The charts below represent estimated utility end-use utility profiles for the building. The values used within the charts were estimated from a review of the utility analysis and the energy savings calculations.

Site End-Use Utility Profile



Most of the electricity consumed by municipal buildings is used to for lighting, cooling, and plug loads such as computers and copiers; most of the natural gas is used for space heating. Each building's energy profile is different, and the following charts represent typical utility profiles for commercial buildings per U.S. Department of Energy.

Typical End-Use Utility Profile for Commercial Buildings



Courtesy: E SOURCE; from Commercial Building Energy Consumption Survey, 1999 data

4.0 BENCHMARKING

The EPA Portfolio Manager benchmarking tool provides a site and source Energy Use Intensity (EUI), as well as an Energy Star performance rating for qualifying building types. The EUIs are provided in kBtu/ft^2/year, and the performance rating represents how energy efficient a building is on a scale of 1 to 100, with 100 being the most efficient. In order for a building to receive and Energy Star label, the energy benchmark rating must be at least 75. As energy use decreases from implementation of the proposed measures, the Energy Star rating will increase.

The site EUI is the amount of heat and electricity consumed by a building as reflected in utility bills. Site energy may be delivered to a facility in the form of primary energy, which is raw fuel burned to create heat or electricity, such as natural gas or oil; or as secondary energy, which is the product created from a raw fuel such as electricity or district steam. To provide an equitable comparison for different buildings with varying proportions of primary and secondary energy consumption, Portfolio Manager uses the convention of source EUIs. The source energy also accounts for losses incurred in production, storage, transmission, and delivery of energy to the site, which provide an equivalent measure for various types of buildings with differing energy sources. The results of the benchmarking are contained in the table below.

Building	Site EUI kBtu/ft^2/yr	Source EUI Btu/ft^2/yr	Energy Star Rating (1-100)
Economic Development Center	238.4	506.7	27

The building has a below average Energy Star Rating Score (50 being the median score). It is likely that one of the largest contributing factors to the low Energy Star Rating is the inadequate insulation in the panelized window/wall system. By implementing the measures discussed in this report, it is expected that the EUI can be reduced and the Energy Star Rating increased.

5.0 ENERGY CONSERVATION MEASURES

The following types of energy savings opportunities are identified in this section of the report:

- Energy conservation measures (ECMs) are energy savings recommendations that typically require a financial investment. For these areas of opportunity, CHA prepared detailed calculations, as summarized in this section and in Appendix C. In general, additional savings may exist from reductions in maintenance activities associated with new equipment or better controls; however for conservatism, maintenance savings are not accounted for in this report; instead the only savings which are reported are those derived directly from reductions in energy which can be tracked by the utility bills.

- Operational and Maintenance measures (O&M) consist of low- or no-cost operational opportunities, which if implemented would have positive impacts on overall building operation, comfort levels, and/or energy usage. There are no estimated savings, costs or paybacks associated with the O&M measures included as part of this study.

Energy savings were quantified in the form of:

- electrical usage (kWh=Kilowatt-hour),
- electrical demand (kW=kilowatts),
- natural gas (therms=100,000 Btu),
- propane gas (gallons=91,650 Btu),
- fuel oil (gallons =138,700 Btu), and
- water (kgal=1,000 gallons).

These recommendations are influenced by the time period that it takes for a proposed project to “break even” referred to as “Simple Payback”. Simple payback is calculated by dividing the estimated cost of implementing the ECM by the energy cost savings (in dollars) of that ECM.

Another financial indicator of the performance of a particular ECM is the Return on Investment or ROI, which represents the benefit (annual savings over the life of a project) of an investment divided by the cost of the investment. The result is expressed as a percentage or ratio.

Two other financial analyses included in this report are Internal Rate of Return (IRR) and Net Present Value (NPV). Internal Rate of Return is the discount rate at which the present value of a project costs equals the present value of the project savings. Net Present Value is the difference between present value of an investment’s future net cash flows and the initial investment. If the NPV equals “0”, the project would equate to investing the same amount of dollars at the desired rate. NPV is sometimes referred to as Net Present Worth. These values are provided in the Summary Tab in Appendix C.

5.1 ECM-1 Insulate Cavity behind Wall Panels

The building exterior walls are constructed of aluminum framed window and aluminum panels. Building personnel as well as investigations during the site visit confirmed that exterior walls, behind the solid panels, are lacking any kind if insulation. In fact heating pipes have frozen and burst on cold days. Significant energy loss from heat transfer due to conduction and air infiltration occurs between the building façade and its surroundings. An assessment has been made which considers the installation of insulation behind the wall panels.

The calculation uses bin weather data estimate the occupied and unoccupied bin hours. This is converted to existing energy for the occupied and unoccupied cases using the existing wall U-factor and the heating and cooling temperature. The two are summed together to create the annual utility usage for the baseline. The same steps are done to calculate the proposed utility usage. The difference in heating losses through the wall results in annual heating natural gas and cooling electricity savings.

The implementation cost and savings related to this ECM are presented in Appendix C and summarized as follows:

ECM-1 Insulate Cavity behind Wall Panels

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$	%	$	Years	Years
182,206	0	10,793	1,775	3,187	(0.6)	0	57.2	57.2

* Does not qualify for Incentive from the New Jersey SmartStart Program. See section 6.0 for other incentive opportunities

This measure is recommended.

5.2 ECM-2 Install Window Film

As an alternative to window replacement, this measure considers installing reflective window film on the windows as a method for reducing solar heat gain. Although not a solution for heat loss and/or infiltration issues, window film can reduce incoming solar radiation by up to 60%. Reduction of solar heat gain will result in a reduced cooling load, thus providing a savings in summertime energy consumption.

The materials involved in this measure have an expected life of 10 years, according to the manufacturer. The implementation cost and savings related to this ECM are presented in Appendix C and summarized below:

ECM-2 Install 3M Window Film onto Windows

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$		$	Years	Years
197,600	0	60,856	0	9,494	(0.3)	0	20.8	20.8

This measure is recommended.

5.3 ECM-3 Install a High Efficiency Condensing Boiler

A pair of vintage 1980's Hydrotherm boilers provide back-up heat for the building. It is recommended that these boilers be replaced by one high efficiency condensing boiler piped into the existing hydronic piping. New modulating condensing gas boilers are available that operate at a minimal efficiency of 88%, and can operate as high as 96%, depending upon the outdoor air temperature. The new boilers could then function as the primary heating boilers, with the older Weil McLain boilers used as back-up for when additional heat is needed on the coldest days.

To implement this ECM, some localized piping and wiring would be needed. New dedicated boiler venting would also need to be installed either through the roof or sidewall. It is possible that asbestos abatement may need to be performed prior to any work and the cost for this is not included in the payback analysis.

The implementation cost and savings related to this ECM are presented in Appendix C and summarized below:

ECM-3 Install a High Efficiency Condensing Boiler

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$		$	Years	Years
150,246	2.0	0	2,969	2,514	(0.7)	2,000	59.8	59.0

* Incentive shown is per the New Jersey SmartStart Program. See section 6.0 for other incentive opportunities.

This measure is recommended.

5.4 ECM-4 Install VFDs on Hot Water Pumps

The existing 25.0 HP secondary base mounted B&G hot water pumps serving the building are not controlled by variable frequency drives (VFDs). Ideally pumps are perfectly selected to match the needs of a system operating a maximum capacity. Most times 1) pumps are over-sized somewhat for safety, and 2) the system is operating at less than full heating capacity. VFDs allow pumps to run at slower RPMs to better meet the needs of the system and in the process, energy is saved.

To implement this ECM, the existing motors would be removed and new motors and VFDs installed in their place. Piping and wiring modifications would be needed.

The order of magnitude implementation costs and savings related to these ECMs are detailed in Appendix H and summarized below:

ECM-4 Install VFDs on Hot Water Pumps

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$	%	$	Years	Years
19,441	24.0	7,984	0	2,184	0.2	1,500	8.9	8.2

* Does not qualify for Incentive from the New Jersey SmartStart Program. See section 6.0 for other incentive opportunities.

This measure is recommended.

5.5 ECM-5 Retro-Commission Existing DDC Controls

The building is equipped with a Siemans Apogy (SBT) DDC controls system. As observed during the site visit, however, only the VAV boxes and finned tube radiation are controlled by this system. This ECM reviews the incorporation of the five (5) rooftop units into the Siemans DDC system.

Commissioning is the process of verifying that systems are designed, installed, functionally tested, and capable of being operated and maintained according to the owner's operational needs. Retro-commissioning is the same systematic process applied to existing buildings.

Both controls and components of the heating and cooling systems present saving opportunities during the retro-commissioning process. The DDC system and controls within a building play a crucial role in providing a comfortable building environment. Over time, temperature sensors or thermostats may drift out of synch. Poorly calibrated sensors can increase heating and cooling loads and lead to occupant discomfort. The following procedure is recommended:

- Calibrate the indoor and outdoor building sensors. Calibration of room thermostats, duct thermostats, humidistats, and pressure and temperature sensors should be in accordance with the original design specifications. Calibrating these controls may require specialized skills or equipment and may require outside expertise.
- Inspect damper and valve controls to verify proper functioning. Dampers should also be examined for proper opening and closing. Stiff dampers can cause improper modulation of the amount of outside air being used in the supply airstream. In some cases, dampers may be wired in a single position or disconnected, violating minimum outside air requirements.
- Review building operating schedules. HVAC controls must be adjusted to heat and cool the building properly during occupied hours. Occupancy schedules can change frequently over the life of a building, and control schedules should be adjusted accordingly. When the building is unoccupied, the temperature should be set back to save heating or cooling energy; however, minimal heating and cooling may be required when the building is unoccupied. In cold climates, for example, heating may be needed to keep water pipes from freezing.

The implementation cost and savings related to this ECM are presented in Appendix C and summarized below:

ECM-5 Retro- commission existing DDC Controls

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$		$	Years	Years
39,427	0	189,322	8,498	36,732	13.0	0	1.1	1.1

* Does not qualify for Incentive from the New Jersey SmartStart Program. See section 6.0 for other incentive opportunities.

This measure is recommended.

5.6.1 ECM-L1 Lighting Replacement / Upgrades

The lighting within the Economic Development Center offices consists of 2x4 and 2x2 recessed and ceiling mounted troffers having 32W T8 fluorescent lamps with prismatic lenses. Several areas also contain recessed cans outfitted with compact fluorescent lamps. The Council Chambers also contains CFLs inside decorative wall mounted sconces, as well as PAR track lighting. T-12 lamps are found in storage areas and stairwells, and a few compact fluorescent and incandescent bulbs were noted. A combination of occupancy sensors and wall switches control the interior lighting.

Overall energy consumption can be reduced by replacing inefficient bulbs and linear fluorescent bulbs with more efficient LED technology. To compute the annual savings for this ECM, the energy consumption of the current lighting fixtures was established and compared to the proposed fixture power requirement with the same annual hours of operation. The difference between the existing and proposed annual energy consumption was the energy savings. These calculations are based on 1 to 1 replacements of the fixtures, and do not take into account lumen output requirements for a given space. A more comprehensive engineering study should be performed to determine correct lighting levels.

Supporting calculations, including assumptions for lighting hours and annual energy usage for each fixture, are provided in Appendix C and summarized below:

ECM-L1 Lighting Replacement / Upgrades

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$		$	Years	Years
413,998	85.9	196,398	0	32,314	(0.2)	5,050	12.8	12.7

* LED retrofits must go through the “custom” measures incentive option under New Jersey SmartStart Program. There are no “prescriptive” incentives for LED retrofits. Projects must achieve a minimum of 75,000 kWh annual savings to qualify for “custom” incentives. See section 6.0 for other incentive opportunities

This measure is not recommended in lieu of ECM L3.

5.6.2 ECM-L2 Install Lighting Controls (Occupancy Sensors)

Presently, interior lighting fixtures are controlled by a combination of wall mounted switches and occupancy sensors. Review of the comprehensive lighting survey determined that lighting in some areas could benefit from installation of occupancy sensors to turn off lights when they are unoccupied.

This measure recommends installing occupancy sensors for the current lighting system. Using a process similar to that utilized in Section 5.7.1, the energy savings for this measure was calculated by applying the known fixture wattages in the space to the estimated existing and proposed times of operation for each fixture.

The implementation cost and savings related to this ECM are presented in Appendix C and summarized below:

ECM-L2 Install Lighting Controls (Occupancy Sensors)

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$		$	Years	Years
19,751	0	49,626	0	7,245	2.9	3,080	2.7	2.3

* Incentive shown is per the New Jersey SmartStart Program. See section 6.0 for other incentive opportunities.

This measure is not recommended in lieu of ECM L3.

5.6.3 ECM-L3 Lighting Replacements with Controls (Occupancy Sensors)

This measure is a combination of ECM-L1 and ECM-L2; recommending replace/upgrade the current lighting fixtures to more efficient ones and installing occupancy sensors on the new lights. Interactive effects of the higher efficiency lights and occupancy sensors lead the energy and cost savings for this measure to not be cumulative or equivalent to the sum of replacing the lighting fixtures alone and installing occupancy sensors without the lighting upgrade. The implementation cost and savings related to this ECM are presented in Appendix C and summarized below:

ECM-L3 Lighting Replacements with Controls (Occupancy Sensors)

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$		$	Years	Years
433,748	85.9	217,715	0	35,427	(0.1)	8,130	12.2	12.0

* LED retrofits must go through the “custom” measures incentive option under New Jersey SmartStart Program. There are no “prescriptive” incentives for LED retrofits. Projects must achieve a minimum of 75,000 kWh annual savings to qualify for “custom” incentives. See section 6.0 for other incentive opportunities

This measure is recommended.

5.7 Additional O&M Opportunities

This list of operations and maintenance (O&M) - type measures represent low-cost or no-cost opportunities, which if implemented will have a positive impact on the overall building operations, comfort and/or energy consumption. The recommended O&M measures for this building are as follows:

- Set computers monitors to turn off and computers to sleep mode when not in use
- Purchase ENERGY STAR® label Appliances
- Disconnect unnecessary or unused small appliances and electronics when not in use to reduce phantom loads
- Train staff to turn off lights when rooms are unoccupied
- Develop an Energy Master Plan to measure and track energy performance

6.0 PROJECT INCENTIVES

6.1 Incentives Overview

The following sections give detailed information on available incentive programs including New Jersey Smart Start, Direct Install, New Jersey Pay for Performance (P4P) and Energy Savings Improvement Plan (ESIP). If Essex County wishes to and is eligible to participate in the Energy Savings Improvement Plan (ESIP) program and/or the Pay for Performance Incentive Program (P4P), it cannot participate in either the Smart Start or Direct Install Programs. Refer to Appendix D for more information on the Smart Start program.

6.1.1 New Jersey Smart Start Program

For this energy audit, The New Jersey Smart Start Incentives are used in the energy savings calculations, where applicable. This program is intended for medium and large energy users and provides incentives for:

- Electric Chillers
- Gas Chillers
- Gas Heating
- Unitary HVAC
- Ground Source Heat Pumps
- Variable frequency Drives/ motors
- Refrigeration
- Prescriptive and performance lighting and lighting controls

The equipment is procured using a typical bid- build method, installed and paid for and then the incentives are reimbursed to the owner.

Refer to Appendix D for more information on the Smart Start program.

6.1.2 Direct Install Program

The Direct Install Program applies to smaller facilities that have a peak electrical demand of 200 kW or less in any of the previous 12 months. Buildings must be located in New Jersey and served by one of the state's public, regulated electric utility companies.

Direct Install is funded through New Jersey's Clean Energy Program and is designed to provide capital for building energy upgrade projects to fast track implementation. The program will pay up to 70% of the costs for lighting, HVAC, motors, refrigeration, and other equipment upgrades with higher efficiency alternatives. If a building is eligible for this funding, the Direct Install Program can reduce the implementation cost of energy conservation projects.

The Direct Install program has specific HVAC equipment and lighting requirements and is generally applicable only to smaller package HVAC units, small boilers and lighting retrofits.

The program pays a maximum amount of $75,000 per building, and up to $250,000 per customer per year. Installations must be completed by an approved Direct Install

participating contractor, a list of which can be found on the New Jersey Clean Energy Website. Contractors will coordinate with the applicant to arrange installation of recommended measures identified in a previous energy assessment, such as this energy audit. The incentive is reimbursed to the Owner upon successful replacement and payment of the equipment.

The building does not qualify for this program because its electrical demand is greater than the maximum peak electrical demand of 200 kW for the last 12 month period.

Refer to Appendix D for more information on this program.

6.1.3 New Jersey Pay For Performance Program (P4P)

This building may be eligible for incentives from the New Jersey Office of Clean Energy. The most significant incentives are available from the New Jersey Pay for Performance (P4P) Program. The P4P program is designed to offset the cost of energy conservation projects for facilities that pay the Societal Benefits Charge (SBC) and whose demand (kW) in any of the preceding 12 months exceeds 100 kW. This demand minimum has been waived for buildings owned by local governments or municipalities and non-profit organizations and *is not applicable to public schools*. Facilities that meet this criterion must also achieve a minimum performance target of 15% energy reduction by using the EPA Portfolio Manager benchmarking tool before and after implementation of the measure(s). Additionally, the overall return on investment (ROI) must exceed 10%. If the participant is a municipal electric company customer, and a customer of a regulated gas New Jersey Utility, only gas measures will be eligible under the Program. Available incentives are as follows:

Incentive #1: Energy Reduction Plan – This incentive is designed to offset the cost of services associated with the development of the Energy Reduction Plan (ERP). The ERP must include a detailed energy audit of the desired ECMs, energy savings calculations (using building modeling software) and inputting of all utility bills into the EPA Portfolio Manager website.

- Incentive Amount: $0.10/SF
- Minimum incentive: $5,000
- Maximum Incentive: $50,000 or 50% of Facility annual energy cost

The standard incentive pays $0.10 per square foot, up to a maximum of $50,000, not to exceed 50% of facility annual energy cost, paid after approval of application. For building audits funded by the New Jersey Board of Public Utilities, which receive an initial 75% incentive toward performance of the energy audit, facilities are only eligible for an additional $0.05 per square foot, up to a maximum of $25,000, rather than the standard incentive noted above. The ERP must be completed by a Certified Energy Manager (CEM) and submitted along with the project application.

Incentive #2: Installation of Recommended Measures – This incentive is based on projected energy savings as determined in Incentive #1 (Minimum 15% savings must be achieved), and is paid upon successful installation of recommended measures.

<u>Electric</u>

- Base incentive based on 15% savings: $0.09/ per projected kWh saved.
- For each % over 15% add: $0.005 per projected kWh saved.
- Maximum incentive: $0.11/ kWh per projected kWh saved.

Gas

- Base incentive based on 15% savings: $0.90/ per projected Therm saved.
- For each % over 15% add: $0.05 per projected Therm saved.
- Maximum incentive: $1.25 per projected Therm saved.

Incentive cap: 25% of total project cost

Incentive #3: Post-Construction Benchmarking Report – This incentive is paid after acceptance of a report proving energy savings over one year utilizing the Environmental Protection Agency (EPA) Portfolio Manager benchmarking tool.

Electric

- Base incentive based on 15% savings: $0.09/ per projected kWh saved.
- For each % over 15% add: $0.005 per projected kWh saved.
- Maximum incentive: $0.11/ kWh per projected kWh saved.

Gas

- Base incentive based on 15% savings: $0.90/ per projected Therm saved.
- For each % over 15% add: $0.05 per projected Therm saved.
- Maximum incentive: $1.25 per projected Therm saved.

Combining Incentives #2 and #3 will provide a total of $0.18/ kWh and $1.8/therm not to exceed 50% of total project cost. Additional Incentives for #2 and #3 are increased by $0.005/kWh and $0.05/therm for each percentage increase above the 15% minimum target to 20%, calculated with the EPA Portfolio Manager benchmarking tool, not to exceed 50% of total project cost.

For the purpose of demonstrating the eligibility of the ECM's to meet the minimum savings requirement of 15% annual savings and 10% ROI for the Pay for Performance Program, all ECM's identified in this report have been included in the incentive calculations. The results for the building are shown in Appendix C, with more detailed program information in Appendix D.

6.1.4 Energy Savings Improvement Plan

The Energy Savings Improvement Program (ESIP) allows government agencies to make energy related improvements to their facilities and pay for the costs using the value of energy savings that result from the improvements. Under the recently enacted Chapter 4 of the Laws of 2009 (the law), the ESIP provides all government agencies in New Jersey with a flexible tool to improve and reduce energy usage with minimal expenditure of new financial resources.

ESIP allows local units to use "energy savings obligations" (ESO) to pay for the capital costs of energy improvements to their facilities. ESIP loans have a maximum loan term of 15 year. ESOs are not considered "new general obligation debt" of a local unit and do not count against debt limits or require voter approval. They may be issued as refunding bonds or leases. Savings generated from the installation of energy conservation measures pay

the principal of and interest on the bonds; for that reason, the debt service created by the ESOs is not paid from the debt service fund, but is paid from the general fund.

For local governments interested in pursuing an ESIP, the first step is to perform an energy audit. Pursuing a Local Government Energy Audit through New Jersey's Clean Energy Program is a valuable first step to the ESIP approach. The “Local Finance Notice” outlines how local governments can develop and implement an ESIP for their facilities. The ESIP can be prepared internally if the entity has qualified staff. If not, the ESIP must be implemented by an independent contractor and not by the energy savings company producing the Energy Reduction Plan.

The ESIP approach may not be appropriate for all energy conservation and energy efficiency improvements. Local units should carefully consider all alternatives to develop an approach that best meets their needs. Refer to Appendix D for more information on this program.

6.1.5 Renewable Energy Incentive Program

The Renewable Energy Incentive Program (REIP) is part of New Jersey's efforts to reach its Energy Master Plan goals of striving to use 30 percent of electricity from renewable sources by 2020.

Incentives for sustainable bio-power projects and for energy storage projects are currently under development, with competitive solicitations for each of those technologies expected to begin in the first quarter of 2014. The wind program is currently on hold.

New solar projects are no longer eligible for REIP incentives, but can register for Solar Renewable Energy Certificates (SRECs) through the SREC Registration Program (SRP).

7.0 ALTERNATIVE ENERGY SCREENING EVALUATION

7.1 Solar

7.1.1 Photovoltaic Rooftop Solar Power Generation

The building was evaluated for the potential to install rooftop photovoltaic (PV) solar panels for power generation. However due to the extensive rooftop equipment on this building and the minimal available space, a solar PV system of sufficient capacity was determined to be not feasible.

7.1.2 Solar Thermal Hot Water Generation

Active solar thermal systems use solar collectors to gather the sun's energy to heat a fluid. An absorber in the collector (usually black colored piping) converts the sun's energy into heat. The heat is transferred to circulating water, antifreeze, or air for immediate use or is storage for later utilization. Applications for active solar thermal energy include supplementing domestic hot water, heating swimming pools, space heating or preheating air in residential and commercial buildings.

A standard solar hot water system is typically composed of solar collectors, heat storage vessel, piping, circulators, and controls. Systems are typically integrated to work alongside a conventional heating system that provides heat when solar resources are not sufficient. The solar collectors are usually placed on the roof of the building, oriented south, and tilted at the same angle as the site's latitude, to maximize the amount of solar radiation collected on a yearly basis.

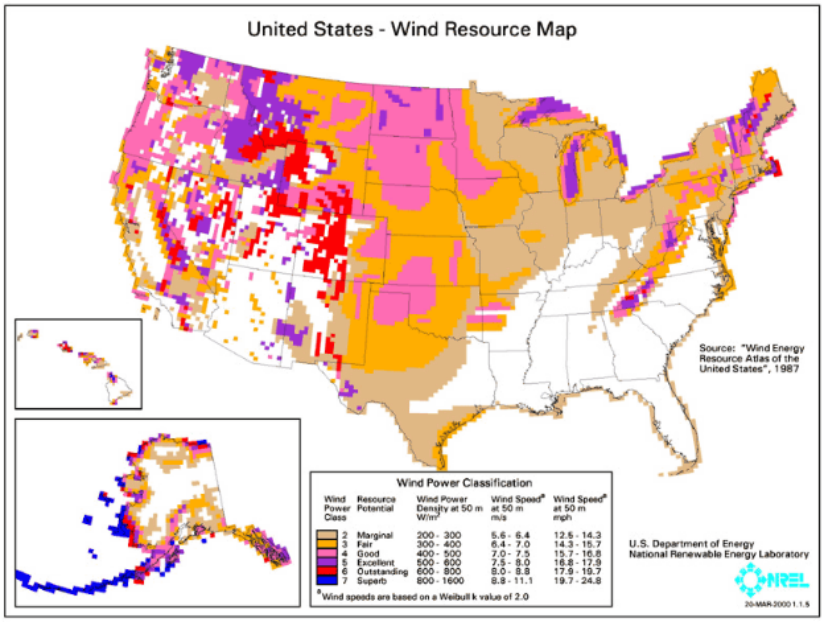
Several options exist for using active solar thermal systems for space heating. The most common method is called a passive solar hot water system involves using glazed collectors to heat a liquid held in a storage tank (similar to an active solar hot water system described above which requires pumping). The most practical system would transfer the heat from the panels to thermal storage tanks and then use the pre-heated water for domestic hot water production. DHW is presently produced by natural gas fired water heaters and, therefore, this measure would offer natural gas utility savings. Unfortunately, the amount of domestic hot water that is currently used by this building is very small. Installing a solar domestic hot water system is not recommended due to the limited amount of domestic hot water presently consumed by the building.

This measure is not recommended due to the relatively low domestic hot water usage.

7.2 Wind Powered Turbines

Wind power is the conversion of kinetic energy from wind into mechanical power that is used to drive a generator which creates electricity by means of a wind turbine. A wind turbine consists of rotor and blades connected to a gearbox and generator that are mounted onto a tower. Newer wind turbines also use advanced technology to generate electricity at a variety of frequencies depending on the wind speed, convert it to DC and then back to AC before sending it to the grid. Wind turbines range from 50 – 750 kW for utility scale turbines down to below 50 kW for residential use. On a scale of 1 (the lowest) to 7 (the highest), Class 3 and above (wind speeds of 13 mph or greater) are generally

considered “good wind resource” according to the Wind Energy Development Programmatic EIS Information Center hosted by the Bureau of Land Management. According to the map below, published by NREL, Newark, NJ is classified as Class 1 at 50m, meaning the city would not be a good candidate for wind power.



This measure is not recommended due to the location of the building.

7.3 Combined Heat and Power Plant

Combined heat and power (CHP), cogeneration, is self-production of electricity on-site with beneficial recovery of the heat byproduct from the electrical generator. Common CHP equipment includes reciprocating engine-driven, micro turbines, steam turbines, and fuel cells. Typical CHP customers include industrial, commercial, institutional, educational institutions, and multifamily residential facilities. CHP systems that are commercially viable at the present time are sized approximately 50 kW and above, with numerous options in blocks grouped around 300 kW, 800 kW, 1,200 kW and larger. Typically, CHP systems are used to produce a portion of the electricity needed by a facility some or all of the time, with the balance of electric needs satisfied by purchase from the grid.

Any proposed CHP project will need to consider many factors, such as existing system load, use of thermal energy produced, system size, natural gas fuel availability, and proposed plant location. The building has sufficient need for electrical generation and the ability to use most of the thermal byproduct during the winter; however thermal usage during the summer months does not exist. Thermal energy produced by the CHP plant in the warmer months will be wasted. An absorption chiller could be installed to utilize the heat to produce chilled water; however, there is no chilled water distribution system in the building. CHP is not recommended due to the building’s limited summer thermal demand.

This measure is not recommended due to the absence of year-round thermal loads which are needed for efficiency CHP operation.

7.4 Demand Response Curtailment

Presently, electricity is delivered by PSE&G, which receives the electricity from regional power grid RFC. PSE&G is the regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia including the State of New Jersey.

Utility Curtailment is an agreement with the utility provider's regional transmission organization and an approved Curtailment Service Provider (CSP) to shed electrical load by either turning major equipment off or energizing all or part of a facility utilizing an emergency generator; therefore, reducing the electrical demand on the utility grid. This program is to benefit the utility company during high demand periods and utility provider offers incentives to the CSP to participate in this program. Enrolling in the program will require program participants to drop electrical load or turn on emergency generators during high electrical demand conditions or during emergencies. Part of the program also will require that program participants reduce their required load or run emergency generators with notice to test the system.

A pre-approved CSP will require a minimum of 100 kW of load reduction to participate in any curtailment program. From January 2013 through December 2013 the following table summarizes the electricity load profile for the building.

Building Electric Load Profile

Peak Demand kW	Min Demand kW	Avg Demand kW	Onsite Generation Y/N	Eligible? Y/N
715	437	585	N	Y

This measure is not recommended for further review because the building usage does not lend itself to load sharing.

8.0 CONCLUSIONS & RECOMMENDATIONS

The following section summarizes the LGEA energy audit conducted by CHA for Building Name.

The following projects should be considered for implementation:

- Install Window Film
- Insulate Wall Cavity
- Add Boiler
- Install VFDs on Pumps
- Retrocommissioning and Controls Modifications
- Lighting Replacements with Controls (Occupancy Sensors)

The potential annual energy and cost savings for the recommended ECMs are shown in the following table.

Electric Savings (kWh)	Natural Gas Savings (therms)	Total Savings ($)	Payback (years)
486,670	13,241	89,623	11.4

If the recommended ECMs are implemented, energy savings would be as follows:

	Existing Conditions	Post Recommended ECMs	Percent Savings
Costs ($)	431,012	341,389	21%
Electricity (kWh)	2,427,211	1,940,541	20%
Natural Gas (therms)	61,577	48,336	22%
Site EUI (kbtu/SF/Yr)	126.9	100.7	

Next Steps: This energy audit has identified several areas of potential energy savings. Essex County can use this information to pursue incentives offered by the NJBPU's NJ Clean Energy Program.

APPENDIX A

Utility Usage Analysis and Alternate Utility Suppliers

Essex County
Economic Development Center

Annual Utilities

12-month Summary

Electric		
Annual Usage	2,427,211	kWh/yr
Annual Cost	379,136	$
Blended Rate	0.156	$/kWh
Consumption Rate	0.146	$/kWh
Demand Rate	3.53	$/kW
Peak Demand	715.0	kW
Min. Demand	437.1	kW
Avg. Demand	585.0	kW
Natural Gas		
Annual Usage	61,227	Therms/yr
Annual Cost	51,876	$
Rate	0.847	$/Therm
Water		
Annual Usage	1,346	gallons/yr
Annual Cost	7,484	$
Rate	5.560	$/gallon

Essex County
Economic Development Center

Utility Bills: Account Numbers

Account Number	Building	Location	Type	Notes
4200958708	Economic Development Center	50 South Clinton Street, East Orange, NJ 07018	Electricity	
PG000009446358527148	Economic Development Center	50 South Clinton Street, East Orange, NJ 07018	Natural Gas	
999-897-993	Economic Development Center	50 South Clinton Street, East Orange, NJ 07018	Water	

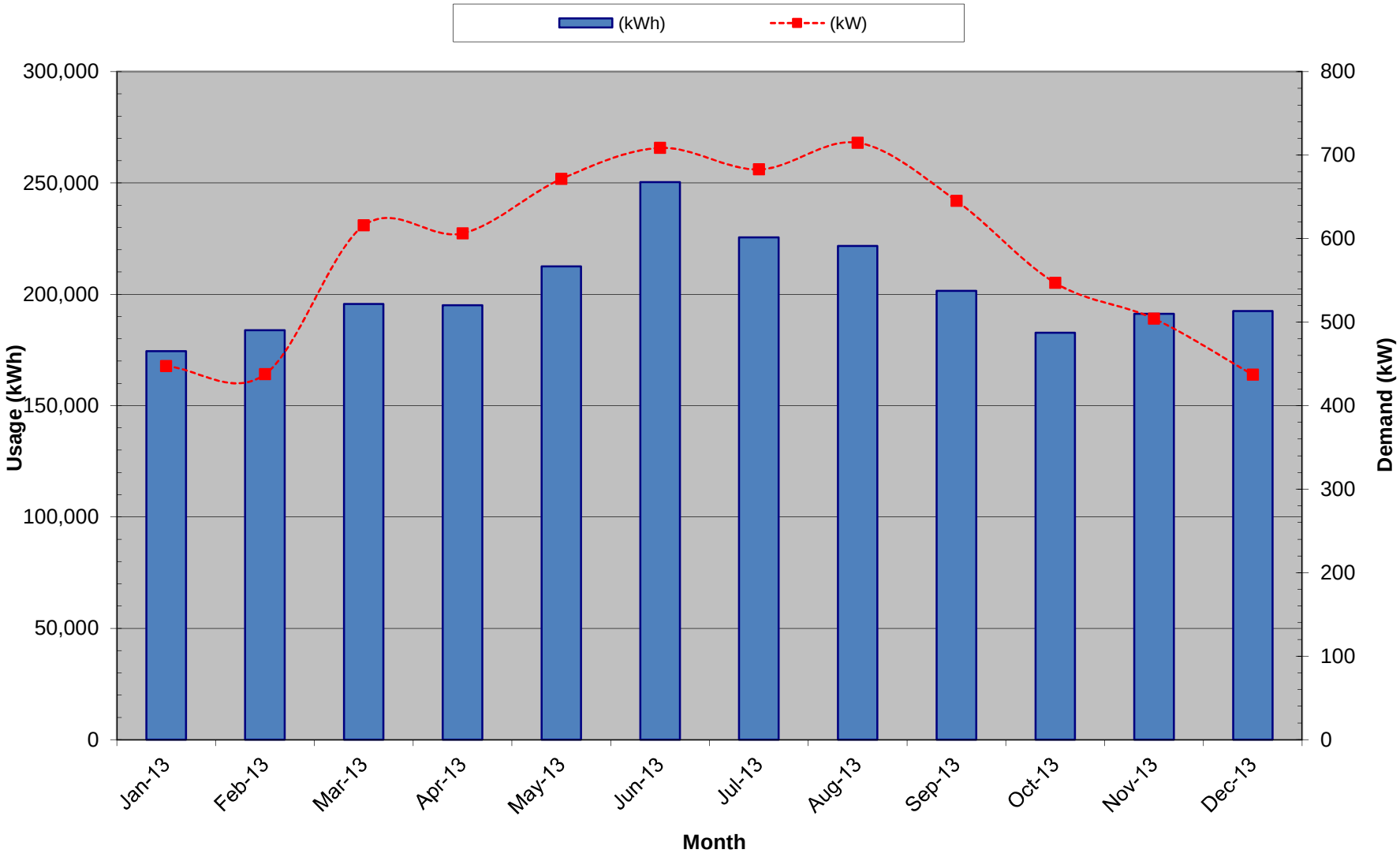
Essex County
Economic Development Center

For Service at: 50 South Clinton Street, East Orange, NJ 07018
Account No.: **4200958708** **Delivery -** PSE&G
Meter No.: **778015043** **Supplier -** N/A
Electric Service

			Provider Charges			Usage (kWh) vs. Demand (kW) Charges		Unit Costs		
Month	**Consumption (kWh)**	**Demand (kW)**	**Delivery ($)**	**Supplier ($)**	**Total ($)**	**Consumption ($)**	**Demand ($)**	**Blended Rate ($/kWh)**	**Consumption ($/kWh)**	**Demand ($/kW)**
January-13	174,529	447.40	7,096.63	18,325.55	25,422.18	23,836.42	1,585.76	0.15	0.14	3.54
February-13	183,862	437.80	7,133.57	19,305.51	26,439.08	24,887.34	1,551.74	0.14	0.14	3.54
March-13	195,651	615.90	8,098.73	20,543.36	28,642.09	26,459.09	2,183.00	0.15	0.14	3.54
April-13	195,059	606.50	8,048.62	20,481.20	28,529.82	26,380.14	2,149.68	0.15	0.14	3.54
May-13	212,498	671.70	14,628.71	22,312.29	36,941.00	34,560.22	2,380.78	0.17	0.16	3.54
June-13	250,370	708.80	16,458.15	26,288.85	42,747.00	40,234.73	2,512.27	0.17	0.16	3.54
July-13	225,605	683.00	15,397.93	23,688.53	39,086.46	36,665.63	2,420.83	0.17	0.16	3.54
August-13	221,759	715.00	15,664.54	23,284.70	38,949.24	36,415.04	2,534.20	0.18	0.16	3.54
September-13	201,526	645.30	8,632.17	21,160.23	29,792.40	27,542.50	2,249.90	0.15	0.14	3.49
October-13	182,700	547.00	7,687.81	19,183.50	26,871.31	24,964.14	1,907.17	0.15	0.14	3.49
November-13	191,216	504.20	7,773.11	20,077.68	27,850.79	26,092.85	1,757.94	0.15	0.14	3.49
December-13	192,436	437.10	7,659.01	20,205.78	27,864.79	26,329.31	1,535.48	0.14	0.14	3.51
Total (All)	**2,427,211**	**715.00**	**$124,278.98**	**$254,857.16**	**$379,136.14**	**$354,367.39**	**$24,768.75**	**$0.16**	**$0.15**	**$3.53**
Total (last 12-months)	**2,427,211**	**715.00**	**$124,278.98**	**$254,857.16**	**$379,136.14**	**$354,367.39**	**$24,768.75**	**$0.16**	**$0.15**	**$3.53**
Notes	1	2	3	4	5	6	7	8	9	10

1.) Number of kWh of electric energy used per month
2.) Number of kW of power measured
3.) Electric charges from Delivery provider
4.) Electric charges from Supply provider
5.) Total charges (Delivery + Supplier)
6.) Charges based on the number of kWh of electric energy used — $0.105 /kWh — Estimated supply rate due to missing data
7.) Charges based on the number of kW of power measured
8.) Total Charges ($) / Consumption (kWh)
9.) Consumption Charges ($) / Consumption (kWh)
10.) Demand Charges ($) / Demand (kW)

Electric Usage - Economic Development Center



Utility Data - Economic Development Center - 2-27-15
Electric Graph

Essex County
Economic Development Center

For Service at: **50 South Clinton Street, East Orange, NJ 07018**
Account No.: **PG000009446358527148**
Meter No:
Natural Gas Service **Delivery -** **PSE&G**
Supplier - **Hess Corp.**

		Charges			Unit Costs		
Month	**Consumption (Therms)**	**Delivery ($)**	**Supply ($)**	**Total ($)**	**Delivery ($/Therm)**	**Supply ($/Therm)**	**Total ($/Therm)**
January-13	12,742	$ 4,302.14	$ 6,893.19	$ 11,195.33	$ 0.338	$ 0.541	$ 0.879
February-13	10,890	$ 3,940.55	$ 5,891.46	$ 9,832.01	$ 0.362	$ 0.541	$ 0.903
March-13	7,554	$ 942.41	$ 4,086.58	$ 5,028.99	$ 0.125	$ 0.541	$ 0.666
April-13	4,045	$ 568.73	$ 2,188.17	$ 2,756.90	$ 0.141	$ 0.541	$ 0.682
May-13	1,543	$ 304.77	$ 834.62	$ 1,139.39	$ 0.198	$ 0.541	$ 0.739
June-13	326	$ 151.10	$ 176.55	$ 327.65	$ 0.463	$ 0.541	$ 1.004
July-13	311	$ 148.83	$ 168.02	$ 316.85	$ 0.479	$ 0.541	$ 1.020
August-13	478	$ 172.88	$ 258.61	$ 431.49	$ 0.362	$ 0.541	$ 0.903
September-13	1,724	$ 310.96	$ 932.66	$ 1,243.62	$ 0.180	$ 0.541	$ 0.721
October-13	4,474	$ 1,978.73	$ 2,420.65	$ 4,399.38	$ 0.442	$ 0.541	$ 0.983
November-13	8,447	$ 2,932.11	$ 4,569.60	$ 7,501.71	$ 0.347	$ 0.541	$ 0.888
December-13	8,694	$ 2,999.30	$ 4,703.61	$ 7,702.91	$ 0.345	$ 0.541	$ 0.886
Total	**61,227**			**$ 51,876.23**			**$ 0.847**

PSE&G ELECTRIC SERVICE TERRITORY
Last Updated: 12/11/14

***CUSTOMER CLASS - R – RESIDENTIAL C – COMMERCIAL I –INDUSTRIAL**

Supplier	Telephone & Web Site	*Customer Class
Abest Power & Gas of NJ, LLC 202 Smith Street Perth Amboy, NJ 08861	(888)987-6937 www.AbestPower.com	**R/C/I** **ACTIVE**
AEP Energy, Inc. f/k/a BlueStar Energy Services 309 Fellowship Road, Fl. 2 Mount Laurel, NJ 08054	(866) 258-3782 www.aepenergy.com	**R/C/I** **ACTIVE**
Alpha Gas and Electric, LLC 641 5th Street Lakewood, NJ 08701	(855) 553-6374 www.alphagasandelectric.com	**R/C** **ACTIVE**
Ambit Northeast, LLC d/b/a Ambit Energy 103 Carnegie Center Suite 300 Princeton, NJ 08540	877-282-6284 www.ambitenergy.com	**R/C** **ACTIVE**
American Powernet Management, LP 437 North Grove St. Berlin, NJ 08009	(877) 977-2636 www.americanpowernet.com	**C/I** **ACTIVE**
Amerigreen Energy, Inc. 333Sylvan Avenue Englewood Cliffs, NJ 07632	888-559-4567 www.amerigreen.com	**R/C** **ACTIVE**
AP Gas & Electric, (NJ) LLC 10 North Park Place, Suite 420 Morristown, NJ 07960	(855) 544-4895 www.apgellc.com	**R/C/I** **ACTIVE**
Astral Energy LLC 16 Tyson Place Bergenfield, NJ 07621	(888)850-1872 www.AstralEnergyLLC.com	**R/C/I** **ACTIVE**
Barclays Capital Services, Inc. 70 Hudson Street Jersey City, NJ 07302-4585	(800) 526-7000 www.barclays.com	**C** **ACTIVE**
BBPC, LLC d/b/a Great Eastern Energy	(888) 651-4121	**C**

116 Village Blvd. Suite 200 Princeton, NJ 08540	www.greateasternenergy.com	**ACTIVE**
Berkshire Energy Partners, LLC 9 Berkshire Road Landenberg, PA 19350 Attn: Dana A. LeSage, P.E.	(610) 255-5070 www.berkshireenergypartners.com	**C/I** **ACTIVE**
Blue Pilot Energy, LLC 197 State Rte. 18 South Ste. 3000 East Brunswick, NJ 08816	(800) 451-6356 www.bluepilotenergy.com	**R/C** **ACTIVE**
Brick Standard, LLC 235 Hudson Street Suite 1 Hoboken, NJ 07030	(201)706-8101 www.standardalternative.com	**C/I** **ACTIVE**
CCES LLC dba Clean Currents Energy Services 566 Terhune Street Teaneck, NJ 07666	(877) 933-2453 www.cleancurrents.com	**R/C** **ACTIVE**
Champion Energy Services, LLC 1200 Route 22 Bridgewater, NJ 08807	(888) 653-0093 www.championenergyservices.com	**R/C/I** **ACTIVE**
Choice Energy, LLC 4257 US Highway 9, Suite 6C Freehold, NJ 07728	(888) 565-4490 www.4choiceenergy.com	**R/C** **ACTIVE**
Clearview Electric, Inc. 1744 Lexington Avenue Pennsauken, NJ 08110	(888) CLR-VIEW (800) 746- 4702 www.clearviewenergy.com	**R/C/I** **ACTIVE**
Commerce Energy, Inc. 7 Cedar Terrace Ramsey, NJ 07446	1-866-587-8674 www.commerceenergy.com	**R/C** **ACTIVE**
Community Energy Inc. 51 Sandbrook Headquarters Road Stockton, NJ 08559	(866)946-3123 www.communityenergyinc.com	**R/C/I** **ACTIVE**
ConEdison Solutions Cherry Tree Corporate Center 535 State Highway Suite 180 Cherry Hill, NJ 08002	(888) 665-0955 www.conedsolutions.com	**C/I** **ACTIVE**

ConocoPhillips Company 224 Strawbridge Drive Suite 107 Moorestown, NJ 08057	(800) 646-4427 www.conocophillips.com	**C/I** **ACTIVE**
Constellation NewEnergy, Inc. 900A Lake Street, Suite 2 Ramsey, NJ 07446	(888) 635-0827 www.constellation.com	**R/C/I** **ACTIVE**
Constellation Energy 900A Lake Street, Suite 2 Ramsey, NJ 07446	(877) 997-9995 www.constellation.com	**R** **ACTIVE**
Credit Suisse, (USA) Inc. 700 College Road East Princeton, NJ 08450	(212) 538-3124 www.creditsuisse.com	**C** **ACTIVE**
Direct Energy Business, LLC 120 Wood Avenue, Suite 611 Iselin, NJ 08830	(888) 925-9115 http://www.business.directenergy.com/	**R** **ACTIVE**
Direct Energy Business Marketing, LLC (fka Hess Energy Marketing) 1 Hess Plaza Woodbridge, NJ 07095	(800) 437-7872 http://www.business.directenergy.com/	**C/I** **ACTIVE**
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DTE Energy Supply, Inc. One Gateway Center, Suite 2600 Newark, NJ 07102	(877) 332-2450 www.dtesupply.com	**C/I** **ACTIVE**

Energy.me Midwest LLC 90 Washington Blvd Bedminster, NJ 07921	(855) 243-7270 www.energy.me	**R/C/I** **ACTIVE**
Energy Plus Holdings LLC 309 Fellowship Road East Gate Center, Suite 200 Mt. Laurel, NJ 08054	(877) 866-9193 www.energypluscompany.com	**R/C** **ACTIVE**
Ethical Electric Benefit Co. d/b/a Ethical Electric 100 Overlook Center, 2nd Fl. Princeton, NJ 08540	(888) 444-9452 www.ethicalelectric.com	**R/C** **ACTIVE**
Energy Service Providers, Inc., d/b/a New Jersey Gas & Electric 1 Bridge Plaza fl. 2 Fort Lee, NJ 07024	(866) 568-0290 www.njgande.com	**R/C** **ACTIVE**
FirstEnergy Solutions 150 West State Street Trenton, NJ 08608	(866) 625-7318 www.fes.com	**C/I** **ACTIVE**
Gateway Energy Services Corp. 120 Wood Avenue Suite 611 Iselin, NJ 08830	(866)348-4193 www.directenergybusiness.com	**R/C** **ACTIVE**
GDF SUEZ Energy Resources NA, Inc. 333 Thornall Street Sixth Floor Edison, NJ 08837	(866) 999-8374 www.gdfsuezenergyresources.com	**C/I** **ACTIVE**
GDF Suez Retail Energy Solutions LLC d/b/a THINK ENERGY 333 Thornall St. Sixth Floor Edison, NJ 08819	1-866-252-0078 www.mythinkenergy.com	**R/C/I** **ACTIVE**
Glacial Energy of New Jersey, Inc. 21 Pine Street, Suite 237 Rockaway, NJ 07866	(888) 452-2425 www.glacialenergy.com	**C/I** **ACTIVE**
Global Energy Marketing LLC 129 Wentz Avenue Springfield, NJ 07081	(800) 542-0778 www.globalp.com	**R/C/I** **ACTIVE**

Green Mountain Energy Company 211 Carnegie Center Drive Princeton, NJ 08540	(866) 767-5818 www.greenmountain.com/commercial-home	**C/I** **ACTIVE**
Harborside Energy LLC 101 Hudson Street Suite 2100 Jersey City, NJ 07302	(877) 940-3835 www.harborsideenergynj.com	**R/C** **ACTIVE**
Hess Corporation 1 Hess Plaza Woodbridge, NJ 07095	(800) 437-7872 www.hess.com	**C/I** **ACTIVE**
HIKO Energy, LLC 655 Suffern Road Teaneck, NJ 07666	(888) 264-4908 www.hikoenergy.com	**R/C/I** **ACTIVE**
Hudson Energy Services, LLC 7 Cedar Street Ramsey, New Jersey 07446	(877) Hudson 9 www.hudsonenergyservices.com	**C** **ACTIVE**
IDT Energy, Inc. 550 Broad Street Newark, NJ 07102	(877) 887-6866 www.idtenergy.com	**R/C** **ACTIVE**
Independence Energy Group, LLC 211 Carnegie Center Princeton, NJ 08540	(877) 235-6708 www.chooseindependence.com	**R/C** **ACTIVE**
Inspire Energy Holdings LLC 923 Haddonfield Road 3rd Fl. Building B2 Cherry Hill, NJ 08002	(866) 403-2620 www.inspireenergy.com	**R/C/I**
Integrys Energy Services, Inc. 33 Wood Ave, South, Suite 610 Iselin, NJ 08830	(800) 536-0151 www.integrysenergy.com	**C/I** **ACTIVE**
Jsynergy, LLC 445 Central Ave. Suite 204 Cedarhurst, NY 11516	(516) 331-2020 Jsynergyllc.com	**R/C/I** **ACTIVE**
Kuehne Chemical Company, Inc. 86 North Hackensack Avenue South Kearney, NJ 07032	(973) 589-0700 kuehnechemical@comcast.net	**I**

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Marathon Power LLC 302 Main Street Paterson, NJ 07505	(888) 779-7255 www.mecny.com	**R/C/I** **ACTIVE**
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Natures Current, LLC 95 Fairmount Avenue Philadelphia, Pennsylvania 19123	(215) 464-6000 www.naturescurrent.com	**R/C/I** **ACTIVE**
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New Jersey Gas & Electric 10 North Park Place Suite 420 Morristown, NJ 07960	(866) 568-0290 www.njgande.com	**R/C/** **ACTIVE**
NextEra Energy Services New Jersey, LLC 651 Jernee Mill Road Sayreville, NJ 08872	(877) 528-2890 Commercial (800) 882-1276 Residential www.nexteraenergyservices.com	**R/C/I** **ACTIVE**
Noble Americas Energy Solutions The Mac-Cali Building 581 Main Street, 8th Floor Woodbridge, NJ 07095	(877) 273-6772 www.noblesolutions.com	**C/I** **ACTIVE**

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Oasis Power, LLC d/b/a Oasis Energy 11152 Westheimer, Suite 901 Houston, TX 77042	(800)324-3046 www.oasisenergy.com	**R/C** **ACTIVE**
Palmco Power NJ, LLC One Greentree Centre 10,000 Lincoln Drive East, Suite 201 Marlton, NJ 08053	(877) 726-5862 www.PalmcoEnergy.com	**R/C/I** **ACTIVE**
Park Power, LLC 1200 South Church St. Suite 23 Mount Laurel, NJ 08054	(856) 778-0079 www.parkpower.com	**R/C/I** **ACTIVE**
Plymouth Rock Energy, LLC 338 Maitland Avenue Teaneck, NJ 07666	(855) 32-POWER (76937) www.plymouthenergy.com	**R/C/I** **ACTIVE**
Power Management Co., LLC b/b/a PMC Lightsavers Limited Liability Company 1600 Moseley Road Victor, NY 14564	(585) 249-1360 www.powermanagementco.com	**C/I** **ACTIVE**
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PPL EnergyPlus Retail, LLC 788 Shrewsbury Avenue, Suite 220 Tinton Falls, NJ 07724	(732) 741-0505 – 2000 www.pplenergyplus.com	**C/I** **ACTIVE**
Progressive Energy Consulting, LLC	(917) 837-7400	**R/C/I**

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Save on Energy, LLC 1101 Red Ventures Drive Fort Mill, SC 29707	1 (877)-658-3183 www.saveonenergy.com	**R/C**
SFE Energy One Gateway Center Suite 2600 Newark, NJ 07012	1 (877) 316-6344 www.sfeenergy.com	**R/C/I** **ACTIVE**
S.J. Energy Partners, Inc. 208 White Horse Pike, Suite 4 Barrington, NJ 08007	(800) 695-0666 www.sjnaturalgas.com	**C** **ACTIVE**
SmartEnergy Holdings, LLC 100 Overlook Center 2nd Floor Princeton, NJ NJ 08540 United States of America	(800) 443-4440 www.smartenergy.com	**R/C/I** **ACTIVE**
South Jersey Energy Company 1 South Jersey Plaza, Route 54 Folsom, NJ 08037	(800) 266-6020 www.southjerseyenergy.com	**R/C/I** **ACTIVE**

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Sperian Energy Corp. 1200 Route 22 East, Suite 2000 Bridgewater, NJ 08807	(888) 682-8082 www.sperianenergy.com	**R/C/I** **ACTIVE**
Starion Energy PA Inc. 101 Warburton Avenue Hawthorne, NJ 07506	(800) 600-3040 www.starionenergy.com	**R/C/I** **ACTIVE**
Stream Energy New Jersey, LLC 309 Fellowship Rd., Suite 200 Mt. Laurel, NJ 08054	(877) 369-8150 www.streamenergy.net	**R/C** **ACTIVE**
Summit Energy Services, Inc. 10350 Ormsby Park Place Suite 400 Louisville, KY 40223	1 (800) 90-SUMMIT www.summitenergy.com	**C/I** **ACTIVE**
Texas Retail Energy LLC Park 80 West Plaza II, Suite 200 Saddle Brook, NJ 07663 Attn: Chris Hendrix	(866) 532-0761 Texasretailenergy.com	**C/I** **ACTIVE**
TransCanada Power Marketing Ltd. 190 Middlesex Essex Turnpike, Suite 200 Iselin, NJ 08830	(877) MEGAWAT www.transcanada.com/powermarketing	**C/I** **ACTIVE**
TriEagle Energy, LP 90 Washington Valley Rd Bedminster, NJ 07921	(877) 933-2453 www.trieagleenergy.com	**R/C/I** **ACTIVE**
UGI Energy Services, Inc. dba UGI Energy Link 224 Strawbridge Drive Suite 107 Moorestown, NJ 08057	(800) 427-8545 www.ugienergylink.com	**C/I** **ACTIVE**
Verde Energy USA, Inc. 2001 Route 46 Waterview Plaza Suite 301 Parsippany, NJ 07054	(800) 388-3862 www.lowcostpower.com	**R/C** **ACTIVE**

Viridian Energy 2001 Route 46, Waterview Plaza Suite 310 Parsippany, NJ 07054	(866) 663-2508 www.viridian.com	**R/C/I** **ACTIVE**
XOOM Energy New Jersey, LLC 744 Broad Street. 16th Floor Newark, NJ 07102	(888) 997-8979 www.xoomenergy.com	**R/C/I** **ACTIVE**
YEP Energy 89 Headquarters Plaza North #1463 Morristown, NJ 07960	(855) 363-7736 www.yepenergyNJ.com	**R/C/I** **ACTIVE**
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Abest Power & Gas of NJ, LLC 202 Smith Street Perth Amboy, NJ 08861	(888)987-6937 www.AbestPower.com	**R/C/I** **ACTIVE**
AEP Energy, Inc. f/k/a BlueStar Energy Services 309 Fellowship Road, Fl. 2 Mount Laurel, NJ 08054	(866) 258-3782 www.aepenergy.com	**R/C/I** **ACTIVE**
Alpha Gas and Electric, LLC 641 5th Street Lakewood, NJ 08701	(855) 553-6374 www.alphagasandelectric.com	**R/C** **ACTIVE**
Ambit Northeast, LLC d/b/a Ambit Energy 103 Carnegie Center Suite 300 Princeton, NJ 08540	877-282-6284 www.ambitenergy.com	**R/C** **ACTIVE**
American Powernet Management, LP 437 North Grove St. Berlin, NJ 08009	(877) 977-2636 www.americanpowernet.com	**C/I** **ACTIVE**
Amerigreen Energy, Inc. 333Sylvan Avenue Englewood Cliffs, NJ 07632	888-559-4567 www.amerigreen.com	**R/C** **ACTIVE**
AP Gas & Electric, (NJ) LLC 10 North Park Place, Suite 420 Morristown, NJ 07960	(855) 544-4895 www.apgellc.com	**R/C/I** **ACTIVE**
Astral Energy LLC 16 Tyson Place Bergenfield, NJ 07621	(888)850-1872 www.AstralEnergyLLC.com	**R/C/I** **ACTIVE**
Barclays Capital Services, Inc. 70 Hudson Street Jersey City, NJ 07302-4585	(800) 526-7000 www.barclays.com	**C** **ACTIVE**
BBPC, LLC d/b/a Great Eastern Energy	(888) 651-4121	**C**

116 Village Blvd. Suite 200 Princeton, NJ 08540	www.greateasternenergy.com	**ACTIVE**
Berkshire Energy Partners, LLC 9 Berkshire Road Landenberg, PA 19350 Attn: Dana A. LeSage, P.E.	(610) 255-5070 www.berkshireenergypartners.com	**C/I** **ACTIVE**
Blue Pilot Energy, LLC 197 State Rte. 18 South Ste. 3000 East Brunswick, NJ 08816	(800) 451-6356 www.bluepilotenergy.com	**R/C** **ACTIVE**
Brick Standard, LLC 235 Hudson Street Suite 1 Hoboken, NJ 07030	(201)706-8101 www.standardalternative.com	**C/I** **ACTIVE**
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Residents Energy, LLC 550 Broad Street Newark, NJ 07102	(888) 828-7374 www.residentsenergy.com	**R/C**
Respond Power LLC 1001 East Lawn Drive Teaneck, NJ 07666	(877) 973-7763 www.majorenergy.com	**R/C/I** **ACTIVE**
Save on Energy, LLC 1101 Red Ventures Drive Fort Mill, SC 29707	1 (877)-658-3183 www.saveonenergy.com	**R/C**
SFE Energy One Gateway Center Suite 2600 Newark, NJ 07012	1 (877) 316-6344 www.sfeenergy.com	**R/C/I** **ACTIVE**
S.J. Energy Partners, Inc. 208 White Horse Pike, Suite 4 Barrington, NJ 08007	(800) 695-0666 www.sjnaturalgas.com	**C** **ACTIVE**
SmartEnergy Holdings, LLC 100 Overlook Center 2nd Floor Princeton, NJ NJ 08540 United States of America	(800) 443-4440 www.smartenergy.com	**R/C/I** **ACTIVE**
South Jersey Energy Company 1 South Jersey Plaza, Route 54 Folsom, NJ 08037	(800) 266-6020 www.southjerseyenergy.com	**R/C/I** **ACTIVE**

Spark Energy Gas, LP/ Spark Energy 2105 City West Blvd. Suite 100 Houston, TX 77042	(713)600-2600 www.sparkenergy.com	**R/C/I** **ACTIVE**
Sperian Energy Corp. 1200 Route 22 East, Suite 2000 Bridgewater, NJ 08807	(888) 682-8082 www.sperianenergy.com	**R/C/I** **ACTIVE**
Starion Energy PA Inc. 101 Warburton Avenue Hawthorne, NJ 07506	(800) 600-3040 www.starionenergy.com	**R/C/I** **ACTIVE**
Stream Energy New Jersey, LLC 309 Fellowship Rd., Suite 200 Mt. Laurel, NJ 08054	(877) 369-8150 www.streamenergy.net	**R/C** **ACTIVE**
Summit Energy Services, Inc. 10350 Ormsby Park Place Suite 400 Louisville, KY 40223	1 (800) 90-SUMMIT www.summitenergy.com	**C/I** **ACTIVE**
Texas Retail Energy LLC Park 80 West Plaza II, Suite 200 Saddle Brook, NJ 07663 Attn: Chris Hendrix	(866) 532-0761 Texasretailenergy.com	**C/I** **ACTIVE**
TransCanada Power Marketing Ltd. 190 Middlesex Essex Turnpike, Suite 200 Iselin, NJ 08830	(877) MEGAWAT www.transcanada.com/powermarketing	**C/I** **ACTIVE**
TriEagle Energy, LP 90 Washington Valley Rd Bedminster, NJ 07921	(877) 933-2453 www.trieagleenergy.com	**R/C/I** **ACTIVE**
UGI Energy Services, Inc. dba UGI Energy Link 224 Strawbridge Drive Suite 107 Moorestown, NJ 08057	(800) 427-8545 www.ugienergylink.com	**C/I** **ACTIVE**
Verde Energy USA, Inc. 2001 Route 46 Waterview Plaza Suite 301 Parsippany, NJ 07054	(800) 388-3862 www.lowcostpower.com	**R/C** **ACTIVE**

Viridian Energy 2001 Route 46, Waterview Plaza Suite 310 Parsippany, NJ 07054	(866) 663-2508 www.viridian.com	**R/C/I** **ACTIVE**
XOOM Energy New Jersey, LLC 744 Broad Street. 16th Floor Newark, NJ 07102	(888) 997-8979 www.xoomenergy.com	**R/C/I** **ACTIVE**
YEP Energy 89 Headquarters Plaza North #1463 Morristown, NJ 07960	(855) 363-7736 www.yepenergyNJ.com	**R/C/I** **ACTIVE**
Your Energy Holdings, LLC One International Boulevard Suite 400 Mahwah, NJ 07495-0400	(855) 732-2493 www.thisisyourenergy.com	**R/C/I** **ACTIVE**

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APPENDIX B

Equipment Inventory

Essex County
CHA Project# 29412
Economic Development Center

Description	QTY	Manufacturer Name	Model No.	Serial No.	Equipment Type / Utility	Capacity/Size	Efficiency	Location	Areas/Equipment Served	Date Installed	Remaining Useful Life (years)	Other Info.
B-1, 2	2	Weil McLain	1188 series	N/A	Hot water Boiler	N/A	80%	Boiler Room	Building	N/A	~10	
B-3, 4	2	Hydro-therm	MR-1800B	MNL-2656	Hot water Boiler	1,440 MBH	80%	Boiler Room	Building	N/A	N/A	
Burner	2	Webster	JB2G-15-EP170-M25-IRI	U67359A-01-10-02	Nat. Gas Burner	1696-3392 MBH		Boiler Room	Building		N/A	
HWP-1, 2	2	Marathon Electr / B&G	2VD 284TT0P4026C8L	N/A	Hot water pump	25 HP	91.7%	Boiler Room	Building	N/A	N/A	
HWP-3, 4	2	Armstrong	4001322-083	3406	Hot water pump	5 HP		Boiler Room	Building	N/A	N/A	
RTU-1	1	Mammoth	N/A	320291-0104	Packaged RTU	80 tons	N/A	Roof	1st floor	N/A	N/A	
RTU-2	1	Mammoth	N/A	320291-0104	Packaged RTU	80 tons	N/A	Roof	2nd floor	N/A	N/A	
RTU-3	1	Mammoth	N/A	320291-0104	Packaged RTU	80 tons	N/A	Roof	3rd floor	N/A	N/A	
RTU-4	1	Mammoth	N/A	320291-0104	Packaged RTU	80 tons	N/A	Roof	4th floor	N/A	N/A	
RTU-5	1	Mammoth	N/A	320291-0104	Packaged RTU	80 tons	N/A	Roof	5th floor	N/A	N/A	
DHW-1	3	A.O.Smith	BTR 200 118	1034M0D1380	Dom. Hot Water Htr	199,000 BTUH	80%	Boiler Room	Building	2010	11	
CU-1	1	Carrier	38AKS044	2401F91150	Condensing unit	3 tons	N/A	Outside on pad	Old Café	N/A	N/A	
CU-2	1	Carrier	38AKS016	1701F78682	Condensing unit	3 tons	N/A	Outside on pad	Basement	N/A	N/A	

Energy Audit of the Economic Development Center
CHA Project No.29142
Existing Lighting & Audit Input

Cost of Electricity: **$0.146** **$/kWh**
$3.53 **$/kW**

			EXISTING CONDITIONS									Retrofit Control	
	Area Description	Usage	No. of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh		
Field Code	Unique description of the location - Room number/Room name: Floor number (if applicable)	Describe Usage Type using Operating Hours	No. of fixtures before the retrofit	Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fixt) * (Fixt No.)	Pre-inst. control device	Estimated annual hours for the usage group	(kW/space) * (Annual Hours)	Retrofit control device	Notes
274LED	Corridor Lighting: 5th Floor	Hallways	9	CFQ/18/2 RC	CFQ18/2	45	0.41	Breaker	2280	923	None	
168	Corridor Lighting: 5th Floor	Hallways	3	W 40 C F 2 (MAG)	F42SS	94	0.28	Breaker	2280	643	None	
35LED	Conference Room: 5th Floor	Conference	10	T 32 R F 3 (ELE)	F43ILL/2	90	0.90	SW	1200	1,080	OCC	
40LED	Closet: 5th Floor	Linen/Utility/Wet/Janitor/Electrical	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	1000	120	None	
35LED	Tax Board: 5th Floor	Conference	11	T 32 R F 3 (ELE)	F43ILL/2	90	0.99	SW	1200	1,188	OCC	
35LED	Kitchen: 5th Floor	Kitchen	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW	3000	1,350	None	
35LED	Storage - Room 5213: 5th Floor	Linen/Utility/Wet/Janitor/Electrical	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	1000	180	None	
40LED	Staff WR: 5th Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	OCC	1000	60	None	
35LED	Office: 5th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Office - Room 5211: 5th Floor	Offices	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW	2400	1,080	OCC	
168	Corridor Lighting: 5th Floor	Hallways	3	W 40 C F 2 (MAG)	F42SS	94	0.28	Breaker	2280	643	None	
35LED	Corridor Lighting: 5th Floor	Hallways	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	Breaker	2280	205	None	
35LED	Room 5212: 5th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
40LED	Men's Room: 5th Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	OCC	1000	60	None	
35LED	Tax Room: 5th Floor	Conference	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.54	SW	1200	648	OCC	
168	Corridor Lighting: 5th Floor	Hallways	3	W 40 C F 2 (MAG)	F42SS	94	0.28	SW	2280	643	None	
35LED	Corridor Lighting: 5th Floor	Hallways	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2280	410	None	
35LED	File Storage - Room 5205: 5th Floor	Storage Areas	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	1000	360	None	
35LED	Corridor Lighting: 5th Floor	Hallways	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	Breaker	2280	821	None	
35LED	Corridor Lighting: 5th Floor	Hallways	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	Breaker	2280	1,847	None	
35LED	Corridor Lighting: 5th Floor	Hallways	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	Breaker	2280	1,847	None	
35LED	Courtroom: 5th Floor	Multi Purpose/Court	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	520	421	None	
35LED	Classroom - Room 5312: 5th Floor	Classrooms	12	T 32 R F 3 (ELE)	F43ILL/2	90	1.08	SW	2400	2,592	OCC	
35LED	Corridor Lighting: 5th Floor	Hallways	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	Breaker	2280	1,847	None	
35LED	Staff MTR: 5th Floor	Restroom w/ OCC	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	OCC	1000	180	None	
35LED	Room 5313: 5th Floor	Offices	14	T 32 R F 3 (ELE)	F43ILL/2	90	1.26	SW	2400	3,024	OCC	
40LED	Toilet Room - Room 5313: 5th Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	OCC	1000	60	None	
35LED	Room 5304: 5th Floor	Offices	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.54	SW	2400	1,296	OCC	
35LED	Room 5311: 5th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 5310: 5th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Staff WTR: 5th Floor	Restroom w/ OCC	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	OCC	1000	180	None	
35LED	Room 5305: 5th Floor	Offices	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	2400	1,944	OCC	
35LED	Room 5306: 5th Floor	Offices	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	2400	1,944	OCC	
35LED	Room 5307: 5th Floor	Offices	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	2400	1,944	OCC	
35LED	Room 5308: 5th Floor	Offices	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW	2400	1,080	OCC	
35LED	Kitchen - Room 5309: 5th Floor	Kitchen	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	3000	1,080	None	
168	Closet: 5th Floor	Linen/Utility/Wet/Janitor/Electrical	2	W 40 C F 2 (MAG)	F42SS	94	0.19	SW	1000	188	None	
61LED	Closet: 5th Floor	Linen/Utility/Wet/Janitor/Electrical	2	T 34 R F 3 (MAG)	F43EE	115	0.23	SW	1000	230	None	
40LED	Room 5417: 5th Floor	Offices	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	2400	144	OCC	
35LED	Director's Office: 5th Floor	Offices	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.72	SW	2400	1,728	OCC	
35LED	Conference Room: 5th Floor	Conference	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	1200	324	OCC	
168	Corridor Director's Office: 5th Floor	Hallways	10	W 40 C F 2 (MAG)	F42SS	94	0.94	Breaker	2280	2,143	None	
35LED	Office: 5th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
40LED	Staff MTR: 5th Floor	Conference	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1200	72	OCC	
35LED	Room 5405: 5th Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Room 5406: 5th Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Storage - Room 5412: 5th Floor	Storage Areas	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	1000	180	None	
35LED	Room 5415: 5th Floor	Offices	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW	2400	1,080	OCC	
35LED	Room 5413: 5th Floor	Offices	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	2400	216	OCC	
35LED	Room 5408: 5th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Copy Room - Room 5414: 5th Floor	Copy Room	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	2125	191	None	
35LED	Staff WTR: 5th Floor	Restroom w/ OCC	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Room 5409: 5th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Kitchen: 5th Floor	Kitchen	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	3000	810	None	
35LED	Room 5410: 5th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 5407: 5th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
61LED	Room 5407: 5th Floor	Offices	8	T 34 R F 3 (MAG)	F43EE	115	0.92	SW	2400	2,208	OCC	
40LED	Closet: 4th Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	Closet: 4th Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	Closet: 4th Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	Men's Room: 4th Floor	Restroom w/ OCC	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	1000	180	None	
40LED	Ladies' Room: 4th Floor	Restroom w/ OCC	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	1000	180	None	
35LED	Room 4400: 4th Floor	Offices	70	T 32 R F 3 (ELE)	F43ILL/2	90	6.30	SW	2400	15,120	OCC	
35LED	Room 4414: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
168	Room 4400: 4th Floor	Offices	42	W 40 C F 2 (MAG)	F42SS	94	3.95	SW	2400	9,475	OCC	
35LED	Room 4411: 4th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Room 4412: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 4413: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
61LED	Room 4413: 4th Floor	Offices	2	T 34 R F 3 (MAG)	F43EE	115	0.23	SW	2400	552	OCC	
168	Staff TR: 4th Floor	Restroom w/ OCC	2	W 40 C F 2 (MAG)	F42SS	94	0.19	SW	1000	188	None	
168	Staff TR: 4th Floor	Restroom w/ OCC	1	W 40 C F 2 (MAG)	F42SS	94	0.09	SW	1000	94	None	

Energy Audit of the Economic Development Center
CHA Project No.29142
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$3.53 **$/kW**

			EXISTING CONDITIONS									Retrofit Control	
	Area Description	Usage	No. of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh		
Field Code	Unique description of the location - Room number/Room name: Floor number (if applicable)	Describe Usage Type using Operating Hours	No. of fixtures before the retrofit	Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fixt) * (Fixt No.)	Pre-inst. control device	Estimated annual hours for the usage group	(kW/space) * (Annual Hours)	Retrofit control device	Notes
35LED	Reception: 4th Floor	General Common	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	2912	2,359	None	
168	Reception: 4th Floor	General Common	4	W 40 C F 2 (MAG)	F42SS	94	0.38	SW	2912	1,095	None	
35LED	Room 4102: 4th Floor	Offices	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	2400	1,944	OCC	
168	Room 4102: 4th Floor	Offices	3	W 40 C F 2 (MAG)	F42SS	94	0.28	SW	2400	677	OCC	
168	Room 4103: 4th Floor	Offices	3	W 40 C F 2 (MAG)	F42SS	94	0.28	SW	2400	677	OCC	
35LED	Room 4103: 4th Floor	Offices	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.17	SW	2400	2,808	OCC	
35LED	Economic Growth: 4th Floor	Conference	25	T 32 R F 3 (ELE)	F43ILL/2	90	2.25	SW	1200	2,700	OCC	
168	Economic Growth: 4th Floor	Conference	8	W 40 C F 2 (MAG)	F42SS	94	0.75	SW	1200	902	OCC	
35LED	Room 4205: 4th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Room 4206: 4th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Room 4207: 4th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Room 4208: 4th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Room 4209: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
168	Room 4210: 4th Floor	Offices	4	W 40 C F 2 (MAG)	F42SS	94	0.38	SW	2400	902	OCC	
35LED	Room 4210: 4th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Closet 4201: 4th Floor	Linen/Utility/Wet/Janitor/Electrical	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	1000	180	None	
168	Staff MTR: 4th Floor	Restroom w/ OCC	1	W 40 C F 2 (MAG)	F42SS	94	0.09	SW	1000	94	None	
168	Staff WTR: 4th Floor	Restroom w/ OCC	1	W 40 C F 2 (MAG)	F42SS	94	0.09	SW	1000	94	None	
168	Child Health: 4th Floor	Offices	15	W 40 C F 2 (MAG)	F42SS	94	1.41	SW	2400	3,384	OCC	
35LED	Child Health: 4th Floor	Offices	24	T 32 R F 3 (ELE)	F43ILL/2	90	2.16	SW	2400	5,184	OCC	
35LED	Room 4305: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 4306: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 4307: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 4308: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 4309: 4th Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Room 4310: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 4311: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 4312: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 4313: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 4314: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 4315: 4th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Room 4318: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 4316: 4th Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Staff TR: 4th Floor	Restroom w/ OCC	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Staff TR: 4th Floor	Restroom w/ OCC	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Room 4321: 4th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Room 4301: 4th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
274LED	Corridor Lighting: 4th Floor	Hallways	13	CFQ/18/2 RC	CFQ18/2	45	0.59	Breaker	2280	1,334	None	
35LED	Corridor Lighting: 4th Floor	Hallways	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	Breaker	2280	205	None	
35LED	Room 3104: 3rd Floor	Offices	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.72	SW	2400	1,728	OCC	
35LED	3MP - Room 3104: 3rd Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Classroom #2: 3rd Floor	Classrooms	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.54	SW	2400	1,296	OCC	
35LED	Classroom #1: 3rd Floor	Classrooms	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.54	SW	2400	1,296	OCC	
35LED	Room 3104 : 3rd Floor	Offices	21	T 32 R F 3 (ELE)	F43ILL/2	90	1.89	SW	2400	4,536	OCC	
168	Room 3104: 3rd Floor	Offices	1	W 40 C F 2 (MAG)	F42SS	94	0.09	SW	2400	226	OCC	
35LED	Staff TR: 3rd Floor	Restroom w/ OCC	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Bus Cards: 3rd Floor	General Common	28	T 32 R F 3 (ELE)	F43ILL/2	90	2.52	SW	2912	7,338	None	
168	Bus Cards: 3rd Floor	General Common	10	W 40 C F 2 (MAG)	F42SS	94	0.94	SW	2912	2,737	None	
35LED	Room 3234: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3235: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3236: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3237: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3238: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3239: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3240: 3rd Floor	Offices	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW	2400	1,080	OCC	
35LED	Kitchen: 3rd Floor	Kitchen	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	3000	540	None	
35LED	Room 3212: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3211: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3210: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3214: 3rd Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Room 3209: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Staff TR: 3rd Floor	Restroom w/ OCC	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Room 3213: 3rd Floor	Offices	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW	2400	1,080	OCC	
168	Corridor Lighting: 3rd Floor	Hallways	16	W 40 C F 2 (MAG)	F42SS	94	1.50	Breaker	2280	3,429	None	
35LED	Room 3208: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3207: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
40LED	WTR: 3rd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	MTR: 3rd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Room 3206: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3205: 3rd Floor	Offices	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW	2400	1,080	OCC	
35LED	Kitchen: 3rd Floor	Kitchen	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	3000	270	None	

Energy Audit of the Economic Development Center
CHA Project No.29142
Existing Lighting & Audit Input

Cost of Electricity: $0.146 $/kWh
$3.53 $/kW

			EXISTING CONDITIONS									
	Area Description	**Usage**	**No. of Fixtures**	**Standard Fixture Code**	**Fixture Code**	**Watts per Fixture**	**kW/Space**	**Exist Control**	**Annual Hours**	**Annual kWh**	**Retrofit Control**	
Field Code	**Unique description of the location - Room number/Room name: Floor number (if applicable)**	**Describe Usage Type using Operating Hours**	**No. of fixtures before the retrofit**	**Lighting Fixture Code**	**Code from Table of Standard Fixture Wattages**	**Value from Table of Standard Fixture Wattages**	**(Watts/Fixt) * (Fixt No.)**	**Pre-inst. control device**	**Estimated annual hours for the usage group**	**(kW/space) * (Annual Hours)**	**Retrofit control device**	**Notes**
35LED	Room 3203: 3rd Floor	Offices	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	2400	216	OCC	
40LED	WTR: 3rd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	OCC	1000	60	None	
35LED	Reception: 3rd Floor	General Common	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	2912	262	None	
35LED	Reception: 3rd Floor	General Common	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2912	524	None	
274LED	Reception: 3rd Floor	General Common	1	CFQ/18/2 RC	CFQ18/2	45	0.05	SW	2912	131	None	
22	Lobby: 3rd Floor	General Common	5	1T 34 R F 4 (MAG)	F44EE	144	0.72	SW	2912	2,097	None	
35LED	Corridor Lighting: 3rd Floor	Hallways	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	Breaker	2280	410	None	
274LED	Corridor Lighting: 3rd Floor	Hallways	15	CFQ/18/2 RC	CFQ18/2	45	0.68	Breaker	2280	1,539	None	
274LED	Lobby: 3rd Floor	General Common	7	CFQ/18/2 RC	CFQ18/2	45	0.32	SW	2912	917	None	
35LED	Closet: 3rd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Closet: 3rd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Closet: 3rd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Closet: 3rd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
40LED	WTR: 3rd Floor	Restroom w/ OCC	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	1000	180	None	
40LED	MTR: 3rd Floor	Restroom w/ OCC	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	1000	180	None	
274LED	Corridor Lighting: 3rd Floor	Hallways	5	CFQ/18/2 RC	CFQ18/2	45	0.23	SW	2280	513	None	
35LED	Closet: 3rd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Room 3101: 3rd Floor	Offices	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	2400	1,944	OCC	
35LED	Closet - Room 3101: 3rd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Kitchen: 3rd Floor	Kitchen	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	3000	1,080	None	
61LED	Room 3103: 3rd Floor	Offices	2	T 34 R F 3 (MAG)	F43EE	115	0.23	SW	2400	552	OCC	
61LED	Room 3102: 3rd Floor	Offices	2	T 34 R F 3 (MAG)	F43EE	115	0.23	SW	2400	552	OCC	
168	Corridor Lighting: 3rd Floor	Hallways	10	W 40 C F 2 (MAG)	F42SS	94	0.94	Breaker	2280	2,143	None	
35LED	Room 3312: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3311: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3310: 3rd Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
40LED	WTR: 3rd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Room 3309: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3308: 3rd Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Room 3307: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3300: 3rd Floor	Offices	86	T 32 R F 3 (ELE)	F43ILL/2	90	7.74	SW	2400	18,576	OCC	
168	Room 3300: 3rd Floor	Offices	3	W 40 C F 2 (MAG)	F42SS	94	0.28	SW	2400	677	OCC	
40LED	TR: 3rd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	TR: 3rd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Room 3317: 3rd Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Room 3318: 3rd Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Room 3319: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3320: 3rd Floor	Offices	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW	2400	1,080	OCC	
35LED	Corridor Lighting: 2nd Floor	Hallways	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	Breaker	2280	821	None	
35LED	Corridor Lighting: 2nd Floor	Hallways	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	Breaker	2280	410	None	
40LED	Closet: 2nd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	Closet: 2nd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	Closet: 2nd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	Closet: 2nd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	MTR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	WTR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Room 2065: 2nd Floor	Offices	11	T 32 R F 3 (ELE)	F43ILL/2	90	0.99	SW	2400	2,376	OCC	
35LED	Unemployment Office: 2nd Floor	Offices	111	T 32 R F 3 (ELE)	F43ILL/2	90	9.99	SW	2400	23,976	OCC	
40LED	Staff TR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Corridor Lighting: 2nd Floor	Hallways	7	T 32 R F 3 (ELE)	F43ILL/2	90	0.63	Breaker	2280	1,436	None	
35LED	Room 2138: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 2139: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 2140: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 2141: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Kitchen: 2nd Floor	Kitchen	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	3000	2,430	None	
35LED	Corridor Lighting: 2nd Floor	Hallways	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	Breaker	2280	1,026	None	
40LED	WTR: 2nd Floor	Restroom w/ OCC	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	1000	120	None	
35LED	Room 2142: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	None	
35LED	Room 2143: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	None	
40LED	MTR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Room 2144: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 2145: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 2146: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 2147: 2nd Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Room 2148: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Reception - Room 2102: 2nd Floor	General Common	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.72	SW	2912	2,097	None	
35LED	Room 2149: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 2150: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 2151: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 2152: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
40LED	WTR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	

Energy Audit of the Economic Development Center
CHA Project No.29142
Existing Lighting & Audit Input

Cost of Electricity: **$0.146** **$/kWh**
$3.53 **$/kW**

			EXISTING CONDITIONS									Retrofit Control	
	Area Description	Usage	No. of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh		
Field Code	Unique description of the location - Room number/Room name: Floor number (if applicable)	Describe Usage Type using Operating Hours	No. of fixtures before the retrofit	Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fixt) * (Fixt No.)	Pre-inst. control device	Estimated annual hours for the usage group	(kW/space) * (Annual Hours)	Retrofit control device	Notes
35LED	Room 2153: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 2154: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
40LED	MTR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Room 2104: 2nd Floor	Offices	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.72	SW	2400	1,728	OCC	
35LED	Computer Room: 2nd Floor	Linen/Utility/Wet/Janitor/Electrical	50	T 32 R F 3 (ELE)	F43ILL/2	90	4.50	SW	1000	4,500	None	
35LED	Room 2024: 2nd Floor	Offices	15	T 32 R F 3 (ELE)	F43ILL/2	90	1.35	SW	2400	3,240	OCC	
35LED	Closet: 2nd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Room 2072: 2nd Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Room 2071: 2nd Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
40LED	TR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Room 2070: 2nd Floor	Offices	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	2400	1,944	OCC	
35LED	Room 2069: 2nd Floor	Offices	15	T 32 R F 3 (ELE)	F43ILL/2	90	1.35	SW	2400	3,240	OCC	
35LED	Room 2067: 2nd Floor	Offices	12	T 32 R F 3 (ELE)	F43ILL/2	90	1.08	SW	2400	2,592	OCC	
40LED	TR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Office: 1st Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Office: 1st Floor	Offices	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.54	SW	2400	1,296	OCC	
35LED	Office: 1st Floor	Offices	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	2400	216	OCC	
168	Welfare Office: 1st Floor	Offices	22	W 40 C F 2 (MAG)	F42SS	94	2.07	SW	2400	4,963	OCC	
35LED	Welfare Office: 1st Floor	Offices	97	T 32 R F 3 (ELE)	F43ILL/2	90	8.73	SW	2400	20,952	OCC	
274LED	Records Office: 1st Floor	Offices	4	CFQ/18/2 RC	CFQ18/2	45	0.18	SW	2400	432	OCC	
35LED	Records Office: 1st Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 1411: 1st Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 1412: 1st Floor	Offices	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	2400	216	OCC	
35LED	Room 1410: 1st Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 1409: 1st Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
40LED	WTR: 1st Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	MTR: 1st Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Café: 1st Floor	Cafeteria	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.72	SW	1600	1,152	OCC	
40LED	WTR: 1st Floor	Restroom w/ OCC	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	1000	180	None	
274LED	Corridor Lighting: 1st Floor	Hallways	7	CFQ/18/2 RC	CFQ18/2	45	0.32	Breaker	2280	718	None	
40LED	MTR: 1st Floor	Restroom w/ OCC	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	1000	180	None	
40LED	Closet: 1st Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	Closet: 1st Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
22	Lobby: 1st Floor	General Common	1	1T 34 R F 4 (MAG)	F44EE	144	0.14	SW	2912	419	None	
274LED	Bus Card: 1st Floor	General Common	3	CFQ/18/2 RC	CFQ18/2	45	0.14	SW	2912	393	None	
35LED	Bus Card: 1st Floor	General Common	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2912	524	None	
22	Lobby: 1st Floor	General Common	15	1T 34 R F 4 (MAG)	F44EE	144	2.16	SW	2912	6,290	None	
274LED	Lobby: 1st Floor	General Common	28	CFQ/18/2 RC	CFQ18/2	45	1.26	SW	2912	3,669	None	
22	Vestibule: 1st Floor	General Common	2	1T 34 R F 4 (MAG)	F44EE	144	0.29	SW	2912	839	None	
35LED	Waiting Area: 1st Floor	Waiting/Family/Play	17	T 32 R F 3 (ELE)	F43ILL/2	90	1.53	SW	3000	4,590	None	
40LED	TR: 1st Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	TR: 1st Floor	Restroom w/ OCC	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	1000	120	None	
40LED	TR: 1st Floor	Restroom w/ OCC	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	1000	120	None	
40LED	TR: 1st Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Reception: 1st Floor	General Common	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2912	1,048	None	
35LED	Welfare Office: 1st Floor	Offices	40	T 32 R F 3 (ELE)	F43ILL/2	90	3.60	SW	2400	8,640	OCC	
168	Welfare Office: 1st Floor	Offices	14	W 40 C F 2 (MAG)	F42SS	94	1.32	SW	2400	3,158	OCC	
35LED	Welfare Office: 1st Floor	Offices	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.54	SW	2400	1,296	OCC	
35LED	Room 1109: 1st Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
40LED	TR: 1st Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
274LED	Vestibule: 1st Floor	General Common	2	CFQ/18/2 RC	CFQ18/2	45	0.09	SW	2912	262	None	
40LED	Closet: 1st Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	Closet: 1st Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
80	Stairs: 1st Floor	Stairway	15	SP 36 R CF 1	CFT36/1	51	0.77	SW	3200	2,448	None	
168	Old Kitchen: Basement	Kitchen	20	W 40 C F 2 (MAG)	F42SS	94	1.88	SW	3000	5,640	None	
35LED	Old Kitchen: Basement	Kitchen	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	3000	270	None	
168	Old Kitchen: Basement	Kitchen	20	W 40 C F 2 (MAG)	F42SS	94	1.88	SW	3000	5,640	None	
168	Old Kitchen: Basement	Kitchen	4	W 40 C F 2 (MAG)	F42SS	94	0.38	SW	3000	1,128	None	
168	Lobby: Basement	General Common	10	W 40 C F 2 (MAG)	F42SS	94	0.94	SW	2912	2,737	None	
35LED	Corridor Lighting: Basement	Hallways	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	Breaker	2280	821	None	
35LED	Switch Room : Basement	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Server Room: Basement	Linen/Utility/Wet/Janitor/Electrical	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.72	SW	1000	720	None	
35LED	Office: Basement	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Cleaning Room: Basement	Linen/Utility/Wet/Janitor/Electrical	10	T 32 R F 3 (ELE)	F43ILL/2	90	0.90	SW	1000	900	None	
35LED	Office: Basement	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Lock Shop: Basement	Linen/Utility/Wet/Janitor/Electrical	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	1000	180	None	
35LED	??	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864	OCC	
35LED	Corridor Lighting: Basement	Hallways	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.72	Breaker	2280	1,642	None	
168	Files: Basement	Storage Areas	10	W 40 C F 2 (MAG)	F42SS	94	0.94	SW	1000	940	None	
168	Files: Basement	Storage Areas	8	W 40 C F 2 (MAG)	F42SS	94	0.75	SW	1000	752	None	
35LED	DWI Office: Basement	Offices	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.17	SW	2400	2,808	OCC	

Energy Audit of the Economic Development Center
CHA Project No.29142
Existing Lighting & Audit Input

Cost of Electricity: **$0.146** **$/kWh**
$3.53 **$/kW**

			EXISTING CONDITIONS									Retrofit Control	
	Area Description	Usage	No. of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh		
Field Code	Unique description of the location - Room number/Room name: Floor number (if applicable)	Describe Usage Type using Operating Hours	No. of fixtures before the retrofit	Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fixt) * (Fixt No.)	Pre-inst. control device	Estimated annual hours for the usage group	(kW/space) * (Annual Hours)	Retrofit control device	Notes
35LED	DWI Office: Basement	Offices	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	2400	216	OCC	
35LED	DWI Office: Basement	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
274LED	DWI Office: Basement	Offices	11	CFQ/18/2 RC	CFQ18/2	45	0.50	SW	2400	1,188	OCC	
168	DWI Office: Basement	Offices	2	W 40 C F 2 (MAG)	F42SS	94	0.19	SW	2400	451	OCC	
168	Room LL10: Basement	Offices	2	W 40 C F 2 (MAG)	F42SS	94	0.19	SW	2400	451	OCC	
168	Electrical Room: Basement	Linen/Utility/Wet/Janitor/Electrical	4	W 40 C F 2 (MAG)	F42SS	94	0.38	SW	1000	376	None	
168	Pump Room: Basement	Mechanical Room	1	W 40 C F 2 (MAG)	F42SS	94	0.09	SW	1000	94	None	
40LED	Boiler Room: Basement	Boiler Room	10	T 32 R F 2 (ELE)	F42LL	60	0.60	SW	1820	1,092	None	
40LED	Elevator: Basement	Stairway	6	T 32 R F 2 (ELE)	F42LL	60	0.36	SW	3200	1,152	None	
168	Corridor Lighting: Basement	Hallways	1	W 40 C F 2 (MAG)	F42SS	94	0.09	Breaker	2280	214	None	
215	Exterior Lighting	Outdoor Lighting	4	High Bay MH 350	MHPS/SCWA/350/1	400	1.60	SW	4368	6,989	None	
	Total		**1,768**				**155.43**			**355,999**		

Energy Audit of the Economic Development Center
CHA Project No.29142
ECM-L1 Lighting Replacements

		EXISTING CONDITIONS								RETROFIT CONDITIONS								COST & SAVINGS ANALYSIS						
	Area Description	No. of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh	Number of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Retrofit Control	Annual Hours	Annual kWh	Annual kWh Saved	Annual kW Saved	Annual $ Saved	Retrofit Cost	NJ Smart Start Lighting Incentive	Simple Payback With Out Incentive	Simple Payback
Field Code	**Unique description of the location - Room number/Room name: Floor number (if applicable)**	**No. of fixtures before the retrofit**	**"Lighting Fixture Code" Example 2T 40 R F(U) = 2'x2' Troff 40 w Recess. Floor 2 lamps U shape**	**Code from Table of Standard Fixture Wattages**	**Value from Table of Standard Fixture Wattages**	**(Watts/Fixt) * (Fixt No.)**	**Pre-inst. control device**	**Estimated daily hours for the usage group**	**(kW/space) * (Annual Hours)**	**No. of fixtures after the retrofit**	**"Lighting Fixture Code" Example 2T 40 R F(U) = 2'x2' Troff 40 w Recess. Floor 2 lamps U shape**	**Code from Table of Standard Fixture Wattages**	**Value from Table of Standard Fixture Wattages**	**(Watts/Fixt) * (Number of Fixtures)**	**Retrofit control device**	**Estimated annual hours for the usage group**	**(kW/space) * (Annual Hours)**	**(Original Annual kWh) - (Retrofit Annual kWh)**	**(Original Annual kW) - (Retrofit Annual kW)**	**(kWh Saved) * ($/kWh)**	**Cost for renovations to lighting system**	**Prescriptive Lighting Measures**	**Length of time for renovations cost to be recovered**	**Length of time for renovations cost to be recovered**
274LED	Corridor Lighting: 5th Floo	9	CFQ/18/2 RC	CFQ18/2	45	0.4	Breaker	2280	923	9	6BLMWLED	6BLMWLED	13	0.1	Breaker	2,280	267	657	0.3	$ 108.07	$ 1,458.00	$0	13.5	13.5
168	Corridor Lighting: 5th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	Breaker	2280	643	3	W 28 C F 2	F42SSILL	48	0.1	Breaker	2,280	328	315	0.1	$ 51.78	$ 810.00	$0	15.6	15.6
35LED	Conference Room: 5th Floo	10	T 32 R F 3 (ELE)	F43ILL/2	90	0.9	SW	1200	1,080	10	T 59 R LED	RTLED38	38	0.4	SW	1,200	456	624	0.5	$ 113.13	$ 2,362.50	$0	20.9	20.9
40LED	Closet: 5th Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120	2	T 38 R LED	RTLED38	38	0.1	SW	1,000	76	44	0.0	$ 8.29	$ 472.50	$100	57.0	44.9
35LED	Tax Board: 5th Floo	11	T 32 R F 3 (ELE)	F43ILL/2	90	1.0	SW	1200	1,188	11	T 59 R LED	RTLED38	38	0.4	SW	1,200	502	686	0.6	$ 124.44	$ 2,598.75	$0	20.9	20.9
35LED	Kitchen: 5th Floor	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	3000	1,350	5	T 59 R LED	RTLED38	38	0.2	SW	3,000	570	780	0.3	$ 124.89	$ 1,181.25	$0	9.5	9.5
35LED	Storage - Room 5213: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180	2	T 59 R LED	RTLED38	38	0.1	SW	1,000	76	104	0.1	$ 19.59	$ 472.50	$0	24.1	24.1
40LED	Staff WR: 5th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60	1	T 38 R LED	RTLED38	38	0.0	OCC	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Office: 5th Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Office - Room 5211: 5th Floor	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	SW	2,400	456	624	0.3	$ 102.12	$ 1,181.25	$0	11.6	11.6
168	Corridor Lighting: 5th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	Breaker	2280	643	3	W 28 C F 2	F42SSILL	48	0.1	Breaker	2,280	328	315	0.1	$ 51.78	$ 810.00	$0	15.6	15.6
35LED	Corridor Lighting: 5th Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	Breaker	2280	205	1	T 59 R LED	RTLED38	38	0.0	Breaker	2,280	87	119	0.1	$ 19.51	$ 236.25	$0	12.1	12.1
35LED	Room 5212: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
40LED	Men's Room: 5th Floo	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60	1	T 38 R LED	RTLED38	38	0.0	OCC	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Tax Room: 5th Floo	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	1200	648	6	T 59 R LED	RTLED38	38	0.2	SW	1,200	274	374	0.3	$ 67.88	$ 1,417.50	$0	20.9	20.9
168	Corridor Lighting: 5th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	SW	2280	643	3	W 28 C F 2	F42SSILL	48	0.1	SW	2,280	328	315	0.1	$ 51.78	$ 810.00	$0	15.6	15.6
35LED	Corridor Lighting: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2280	410	2	T 59 R LED	RTLED38	38	0.1	SW	2,280	173	237	0.1	$ 39.02	$ 472.50	$0	12.1	12.1
35LED	File Storage - Room 5205: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	1000	360	4	T 59 R LED	RTLED38	38	0.2	SW	1,000	152	208	0.2	$ 39.18	$ 945.00	$0	24.1	24.1
35LED	Corridor Lighting: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	Breaker	2280	821	4	T 59 R LED	RTLED38	38	0.2	Breaker	2,280	347	474	0.2	$ 78.05	$ 945.00	$0	12.1	12.1
35LED	Corridor Lighting: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	Breaker	2280	1,847	9	T 59 R LED	RTLED38	38	0.3	Breaker	2,280	780	1,067	0.5	$ 175.61	$ 2,126.25	$0	12.1	12.1
35LED	Corridor Lighting: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	Breaker	2280	1,847	9	T 59 R LED	RTLED38	38	0.3	Breaker	2,280	780	1,067	0.5	$ 175.61	$ 2,126.25	$0	12.1	12.1
35LED	Courtroom: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	520	421	9	T 59 R LED	RTLED38	38	0.3	SW	520	178	243	0.5	$ 55.36	$ 2,126.25	$0	38.4	38.4
35LED	Classroom - Room 5312: 5th Floo	12	T 32 R F 3 (ELE)	F43ILL/2	90	1.1	SW	2400	2,592	12	T 59 R LED	RTLED38	38	0.5	SW	2,400	1,094	1,498	0.6	$ 245.08	$ 2,835.00	$0	11.6	11.6
35LED	Corridor Lighting: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	Breaker	2280	1,847	9	T 59 R LED	RTLED38	38	0.3	Breaker	2,280	780	1,067	0.5	$ 175.61	$ 2,126.25	$0	12.1	12.1
35LED	Staff MTR: 5th Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1000	180	2	T 59 R LED	RTLED38	38	0.1	OCC	1,000	76	104	0.1	$ 19.59	$ 472.50	$0	24.1	24.1
35LED	Room 5313: 5th Floo	14	T 32 R F 3 (ELE)	F43ILL/2	90	1.3	SW	2400	3,024	14	T 59 R LED	RTLED38	38	0.5	SW	2,400	1,277	1,747	0.7	$ 285.93	$ 3,307.50	$0	11.6	11.6
40LED	Toilet Room - Room 5313: 5th Floo	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60	1	T 38 R LED	RTLED38	38	0.0	OCC	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Room 5304: 5th Floo	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296	6	T 59 R LED	RTLED38	38	0.2	SW	2,400	547	749	0.3	$ 122.54	$ 1,417.50	$0	11.6	11.6
35LED	Room 5311: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 5310: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Staff WTR: 5th Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1000	180	2	T 59 R LED	RTLED38	38	0.1	OCC	1,000	76	104	0.1	$ 19.59	$ 472.50	$0	24.1	24.1
35LED	Room 5305: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944	9	T 59 R LED	RTLED38	38	0.3	SW	2,400	821	1,123	0.5	$ 183.81	$ 2,126.25	$0	11.6	11.6
35LED	Room 5306: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944	9	T 59 R LED	RTLED38	38	0.3	SW	2,400	821	1,123	0.5	$ 183.81	$ 2,126.25	$0	11.6	11.6
35LED	Room 5307: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944	9	T 59 R LED	RTLED38	38	0.3	SW	2,400	821	1,123	0.5	$ 183.81	$ 2,126.25	$0	11.6	11.6
35LED	Room 5308: 5th Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	SW	2,400	456	624	0.3	$ 102.12	$ 1,181.25	$0	11.6	11.6
35LED	Kitchen - Room 5309: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	3000	1,080	4	T 59 R LED	RTLED38	38	0.2	SW	3,000	456	624	0.2	$ 99.91	$ 945.00	$0	9.5	9.5
168	Closet: 5th Floor	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	1000	188	2	W 28 C F 2	F42SSILL	48	0.1	SW	1,000	96	92	0.1	$ 17.33	$ 540.00	$0	31.2	31.2
61LED	Closet: 5th Floor	2	T 34 R F 3 (MAG)	F43EE	115	0.2	SW	1000	230	2	T 59 R LED	RTLED38	38	0.1	SW	1,000	76	154	0.2	$ 29.01	$ 472.50	$100	16.3	12.8
40LED	Room 5417: 5th Floo	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144	1	T 38 R LED	RTLED38	38	0.0	SW	2,400	91	53	0.0	$ 8.64	$ 236.25	$50	27.3	21.6
35LED	Director's Office: 5th Floor	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	2400	1,728	8	T 59 R LED	RTLED38	38	0.3	SW	2,400	730	998	0.4	$ 163.39	$ 1,890.00	$0	11.6	11.6
35LED	Conference Room: 5th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	1200	324	3	T 59 R LED	RTLED38	38	0.1	SW	1,200	137	187	0.2	$ 33.94	$ 708.75	$0	20.9	20.9
168	Corridor Director's Office: 5th Floo	10	W 40 C F 2 (MAG)	F42SS	94	0.9	Breaker	2280	2,143	10	W 28 C F 2	F42SSILL	48	0.5	Breaker	2,280	1,094	1,049	0.5	$ 172.61	$ 2,700.00	$0	15.6	15.6
35LED	Office: 5th Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
40LED	Staff MTR: 5th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1200	72	1	T 38 R LED	RTLED38	38	0.0	SW	1,200	46	26	0.0	$ 4.79	$ 236.25	$50	49.4	38.9
35LED	Room 5405: 5th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	SW	2,400	274	374	0.2	$ 61.27	$ 708.75	$0	11.6	11.6
35LED	Room 5406: 5th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	SW	2,400	274	374	0.2	$ 61.27	$ 708.75	$0	11.6	11.6
35LED	Storage - Room 5412: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180	2	T 59 R LED	RTLED38	38	0.1	SW	1,000	76	104	0.1	$ 19.59	$ 472.50	$0	24.1	24.1
35LED	Room 5415: 5th Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	SW	2,400	456	624	0.3	$ 102.12	$ 1,181.25	$0	11.6	11.6
35LED	Room 5413: 5th Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216	1	T 59 R LED	RTLED38	38	0.0	SW	2,400	91	125	0.1	$ 20.42	$ 236.25	$0	11.6	11.6
35LED	Room 5408: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Copy Room - Room 5414: 5th Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2125	191	1	T 59 R LED	RTLED38	38	0.0	SW	2,125	81	111	0.1	$ 18.34	$ 236.25	$0	12.9	12.9
35LED	Staff WTR: 5th Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
35LED	Room 5409: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Kitchen: 5th Floor	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	3000	810	3	T 59 R LED	RTLED38	38	0.1	SW	3,000	342	468	0.2	$ 74.94	$ 708.75	$0	9.5	9.5
35LED	Room 5410: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 5407: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
61LED	Room 5407: 5th Floo	8	T 34 R F 3 (MAG)	F43EE	115	0.9	SW	2400	2,208	8	T 59 R LED	RTLED38	38	0.3	SW	2,400	730	1,478	0.6	$ 241.94	$ 1,890.00	$400	7.8	6.2
40LED	Closet: 4th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	Closet: 4th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	Closet: 4th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	Men's Room: 4th Floo	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180	3	T 38 R LED	RTLED38	38	0.1	SW	1,000	114	66	0.1	$ 12.43	$ 708.75	$150	57.0	44.9
40LED	Ladies' Room: 4th Floo	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180	3	T 38 R LED	RTLED38	38	0.1	SW	1,000	114	66	0.1	$ 12.43	$ 708.75	$150	57.0	44.9
35LED	Room 4400: 4th Floo	70	T 32 R F 3 (ELE)	F43ILL/2	90	6.3	SW	2400	15,120	70	T 59 R LED	RTLED38	38	2.7	SW	2,400	6,384	8,736	3.6	$ 1,429.65	$ 16,537.50	$0	11.6	11.6
35LED	Room 4414: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
168	Room 4400: 4th Floo	42	W 40 C F 2 (MAG)	F42SS	94	3.9	SW	2400	9,475	42	W 28 C F 2	F42SSILL	48	2.0	SW	2,400	4,838	4,637	1.9	$ 758.81	$ 11,340.00	$0	14.9	14.9
35LED	Room 4411: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Room 4412: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 4413: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
61LED	Room 4413: 4th Floo	2	T 34 R F 3 (MAG)	F43EE	115	0.2	SW	2400	552	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	370	0.2	$ 60.49	$ 472.50	$100	7.8	6.2
168	Staff TR: 4th Floor	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	1000	188	2	W 28 C F 2	F42SSILL	48	0.1	SW	1,000	96	92	0.1	$ 17.33	$ 540.00	$0	31.2	31.2
168	Staff TR: 4th Floor	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94	1	W 28 C F 2	F42SSILL	48	0.0	SW	1,000	48	46	0.0	$ 8.66	$ 270.00	$0	31.2	31.2
35LED	Reception: 4th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2912	2,359	9	T 59 R LED	RTLED38	38	0.3	SW	2,912	996	1,363	0.5	$ 218.80	$ 2,126.25	$0	9.7	9.7
168	Reception: 4th Floo	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	2912	1,095	4	W 28 C F 2	F42SSILL	48	0.2	SW	2,912	559	536	0.2	$ 86.02	$ 1,080.00	$0	12.6	12.6
35LED	Room 4102: 4th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944	9	T 59 R LED	RTLED38	38	0.3	SW	2,400	821	1,123	0.5	$ 183.81	$ 2,126.25	$0	11.6	11.6
168	Room 4102: 4th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	SW	2400	677	3	W 28 C F 2	F42SSILL	48	0.1	SW	2,400	346	331	0.1	$ 54.20	$ 810.00	$0	14.9	14.9
168	Room 4103: 4th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	SW	2400	677	3	W 28 C F 2	F42SSILL	48	0.1	SW	2,400	346	331	0.1	$ 54.20	$ 810.00	$0	14.9	14.9
35LED	Room 4103: 4th Floo	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.2	SW	2400	2,808	13	T 59 R LED	RTLED38	38	0.5	SW	2,400	1,186	1,622	0.7	$ 265.51	$ 3,071.25	$0	11.6	11.6
35LED	Economic Growth: 4th Floo	25	T 32 R F 3 (ELE)	F43ILL/2	90	2.3	SW	1200	2,700	25	T 59 R LED	RTLED38	38	1.0	SW	1,200	1,140	1,560	1.3	$ 282.83	$ 5,906.25	$0	20.9	20.9
168	Economic Growth: 4th Floo	8	W 40 C F 2 (MAG)	F42SS	94	0.8	SW	1200	902	8	W 28 C F 2	F42SSILL	48	0.4	SW	1,200	461	442	0.4	$ 80.06	$ 2,160.00	$0	27.0	27.0
35LED	Room 4205: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Room 4206: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Room 4207: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Room 4208: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Room 4209: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
168	Room 4210: 4th Floo	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	2400	902	4	W 28 C F 2	F42SSILL	48	0.2	SW	2,400	461	442	0.2	$ 72.27	$ 1,080.00	$0	14.9	14.9
35LED	Room 4210: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Closet 4201: 4th Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180	2	T 59 R LED	RTLED38	38	0.1	SW	1,000	76	104	0.1	$ 19.59	$ 472.50	$0	24.1	24.1
168	Staff MTR: 4th Floor	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94	1	W 28 C F 2	F42SSILL	48	0.0	SW	1,000	48	46	0.0	$ 8.66	$ 270.00	$0	31.2	31.2
168	Staff WTR: 4th Floor	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94	1	W 28 C F 2	F42SSILL	48	0.0	SW	1,000	48	46	0.0	$ 8.66	$ 270.00	$0	31.2	31.2
168	Child Health: 4th Floo	15	W 40 C F 2 (MAG)	F42SS	94	1.4	SW	2400	3,384	15	W 28 C F 2	F42SSILL	48	0.7	SW	2,400	1,728	1,656	0.7	$ 271.00	$ 4,050.00	$0	14.9	14.9
35LED	Child Health: 4th Floo	24	T 32 R F 3 (ELE)	F43ILL/2	90	2.2	SW	2400	5,184	24	T 59 R LED	RTLED38	38	0.9	SW	2,400	2,189	2,995	1.2	$ 490.16	$ 5,670.00	$0	11.6	11.6
35LED	Room 4305: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 4306: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 4307: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 4308: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 4309: 4th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	SW	2,400	274	374	0.2	$ 61.27	$ 708.75	$0	11.6	11.6
35LED	Room 4310: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 4311: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 4312: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 4313: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 4314: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 4315: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Room 4318: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 4316: 4th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	SW	2,400	274	374	0.2	$ 61.27	$ 708.75	$0	11.6	11.6
35LED	Staff TR: 4th Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
35LED	Staff TR: 4th Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
35LED	Room 4321: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Room 4301: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
274LED	Corridor Lighting: 4th Floo	13	CFQ/18/2 RC	CFQ18/2	45	0.6	Breaker	2280	1,334	13	6BLMWLED	6BLMWLED	13	0.2	Breaker	2,280	385	948	0.4	$ 156.10	$ 2,106.00	$0	13.5	13.5
35LED	Corridor Lighting: 4th Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	Breaker	2280	205	1	T 59 R LED	RTLED38	38	0.0	Breaker	2,280	87	119	0.1	$ 19.51	$ 236.25	$0	12.1	12.1
35LED	Room 3104: 3rd Floo	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	2400	1,728	8	T 59 R LED	RTLED38	38	0.3	SW	2,400	730	998	0.4	$ 163.39	$ 1,890.00	$0	11.6	11.6
35LED	3MP - Room 3104: 3rd Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Classroom #2: 3rd Floo	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296	6	T 59 R LED	RTLED38	38	0.2	SW	2,400	547	749	0.3	$ 122.54	$ 1,417.50	$0	11.6	11.6
35LED	Classroom #1: 3rd Floo	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296	6	T 59 R LED	RTLED38	38	0.2	SW	2,400	547	749	0.3	$ 122.54	$ 1,417.50	$0	11.6	11.6
35LED	Room 3104 : 3rd Floo	21	T 32 R F 3 (ELE)	F43ILL/2	90	1.9	SW	2400	4,536	21	T 59 R LED	RTLED38	38	0.8	SW	2,400	1,915	2,621	1.1	$ 428.89	$ 4,961.25	$0	11.6	11.6
168	Room 3104: 3rd Floo	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	2400	226	1	W 28 C F 2	F42SSILL	48	0.0	SW	2,400	115	110	0.0	$ 18.07	$ 270.00	$0	14.9	14.9
35LED	Staff TR: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
35LED	Bus Cards: 3rd Floor	28	T 32 R F 3 (ELE)	F43ILL/2	90	2.5	SW	2912	7,338	28	T 59 R LED	RTLED38	38	1.1	SW	2,912	3,098	4,240	1.5	$ 680.70	$ 6,615.00	$0	9.7	9.7
168	Bus Cards: 3rd Floor	10	W 40 C F 2 (MAG)	F42SS	94	0.9	SW	2912	2,737	10	W 28 C F 2	F42SSILL	48	0.5	SW	2,912	1,398	1,340	0.5	$ 215.06	$ 2,700.00	$0	12.6	12.6
35LED	Room 3234: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3235: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3236: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6

Energy Audit of the Economic Development Center
CHA Project No.29142
ECM-L1 Lighting Replacements

		EXISTING CONDITIONS								RETROFIT CONDITIONS								COST & SAVINGS ANALYSIS						
	Area Description	No. of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh	Number of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Retrofit Control	Annual Hours	Annual kWh	Annual kWh Saved	Annual kW Saved	Annual $ Saved	Retrofit Cost	NJ Smart Start Lighting Incentive	Simple Payback With Out Incentive	Simple Payback
Field Code	**Unique description of the location - Room number/Room name: Floor number (if applicable)**	**No. of fixtures before the retrofit**	**"Lighting Fixture Code" Example 2T 40 R F(U) = 2'x2' Troff 40 w Recess. Floor 2 lamps U shape**	**Code from Table of Standard Fixture Wattages**	**Value from Table of Standard Fixture Wattages**	**(Watts/Fixt) * (Fixt No.)**	**Pre-inst. control device**	**Estimated daily hours for the usage group**	**(kW/space) * (Annual Hours)**	**No. of fixtures after the retrofit**	**"Lighting Fixture Code" Example 2T 40 R F(U) = 2'x2' Troff 40 w Recess. Floor 2 lamps U shape**	**Code from Table of Standard Fixture Wattages**	**Value from Table of Standard Fixture Wattages**	**(Watts/Fixt) * (Number of Fixtures)**	**Retrofit control device**	**Estimated annual hours for the usage group**	**(kW/space) * (Annual Hours)**	**(Original Annual kWh) - (Retrofit Annual kWh)**	**(Original Annual kW) - (Retrofit Annual kW)**	**(kWh Saved) * ($/kWh)**	**Cost for renovations to lighting system**	**Prescriptive Lighting Measures**	**Length of time for renovations cost to be recovered**	**Length of time for renovations cost to be recovered**
35LED	Room 3237: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3238: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3239: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3240: 3rd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	SW	2,400	456	624	0.3	$ 102.12	$ 1,181.25	$0	11.6	11.6
35LED	Kitchen: 3rd Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	3000	540	2	T 59 R LED	RTLED38	38	0.1	SW	3,000	228	312	0.1	$ 49.96	$ 472.50	$0	9.5	9.5
35LED	Room 3212: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3211: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3210: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3214: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	SW	2,400	274	374	0.2	$ 61.27	$ 708.75	$0	11.6	11.6
35LED	Room 3209: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Staff TR: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
35LED	Room 3213: 3rd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	SW	2,400	456	624	0.3	$ 102.12	$ 1,181.25	$0	11.6	11.6
168	Corridor Lighting: 3rd Floo	16	W 40 C F 2 (MAG)	F42SS	94	1.5	Breaker	2280	3,429	16	W 28 C F 2	F42SSILL	48	0.8	Breaker	2,280	1,751	1,678	0.7	$ 276.18	$ 4,320.00	$0	15.6	15.6
35LED	Room 3208: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3207: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
40LED	WTR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	MTR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Room 3206: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3205: 3rd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	SW	2,400	456	624	0.3	$ 102.12	$ 1,181.25	$0	11.6	11.6
35LED	Kitchen: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	3000	270	1	T 59 R LED	RTLED38	38	0.0	SW	3,000	114	156	0.1	$ 24.98	$ 236.25	$0	9.5	9.5
35LED	Room 3203: 3rd Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216	1	T 59 R LED	RTLED38	38	0.0	SW	2,400	91	125	0.1	$ 20.42	$ 236.25	$0	11.6	11.6
40LED	WTR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60	1	T 38 R LED	RTLED38	38	0.0	OCC	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Reception: 3rd Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2912	262	1	T 59 R LED	RTLED38	38	0.0	SW	2,912	111	151	0.1	$ 24.31	$ 236.25	$0	9.7	9.7
35LED	Reception: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2912	524	2	T 59 R LED	RTLED38	38	0.1	SW	2,912	221	303	0.1	$ 48.62	$ 472.50	$0	9.7	9.7
274LED	Reception: 3rd Floo	1	CFQ/18/2 RC	CFQ18/2	45	0.0	SW	2912	131	1	6BLMWLED	6BLMWLED	13	0.0	SW	2,912	38	93	0.0	$ 14.96	$ 162.00	$0	10.8	10.8
22	Lobby: 3rd Floor	5	1T 34 R F 4 (MAG)	F44EE	144	0.7	SW	2912	2,097	5	1T 28 R F 4	F44SSILL	96	0.5	SW	2,912	1,398	699	0.2	$ 112.20	$ 708.75	$0	6.3	6.3
35LED	Corridor Lighting: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	Breaker	2280	410	2	T 59 R LED	RTLED38	38	0.1	Breaker	2,280	173	237	0.1	$ 39.02	$ 472.50	$0	12.1	12.1
274LED	Corridor Lighting: 3rd Floo	15	CFQ/18/2 RC	CFQ18/2	45	0.7	Breaker	2280	1,539	15	6BLMWLED	6BLMWLED	13	0.2	Breaker	2,280	445	1,094	0.5	$ 180.12	$ 2,430.00	$0	13.5	13.5
274LED	Lobby: 3rd Floor	7	CFQ/18/2 RC	CFQ18/2	45	0.3	SW	2912	917	7	6BLMWLED	6BLMWLED	13	0.1	SW	2,912	265	652	0.2	$ 104.72	$ 1,134.00	$0	10.8	10.8
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
40LED	WTR: 3rd Floor	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180	3	T 38 R LED	RTLED38	38	0.1	SW	1,000	114	66	0.1	$ 12.43	$ 708.75	$150	57.0	44.9
40LED	MTR: 3rd Floor	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180	3	T 38 R LED	RTLED38	38	0.1	SW	1,000	114	66	0.1	$ 12.43	$ 708.75	$150	57.0	44.9
274LED	Corridor Lighting: 3rd Floo	5	CFQ/18/2 RC	CFQ18/2	45	0.2	SW	2280	513	5	6BLMWLED	6BLMWLED	13	0.1	SW	2,280	148	365	0.2	$ 60.04	$ 810.00	$0	13.5	13.5
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
35LED	Room 3101: 3rd Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944	9	T 59 R LED	RTLED38	38	0.3	SW	2,400	821	1,123	0.5	$ 183.81	$ 2,126.25	$0	11.6	11.6
35LED	Closet - Room 3101: 3rd Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
35LED	Kitchen: 3rd Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	3000	1,080	4	T 59 R LED	RTLED38	38	0.2	SW	3,000	456	624	0.2	$ 99.91	$ 945.00	$0	9.5	9.5
61LED	Room 3103: 3rd Floo	2	T 34 R F 3 (MAG)	F43EE	115	0.2	SW	2400	552	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	370	0.2	$ 60.49	$ 472.50	$100	7.8	6.2
61LED	Room 3102: 3rd Floo	2	T 34 R F 3 (MAG)	F43EE	115	0.2	SW	2400	552	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	370	0.2	$ 60.49	$ 472.50	$100	7.8	6.2
168	Corridor Lighting: 3rd Floo	10	W 40 C F 2 (MAG)	F42SS	94	0.9	Breaker	2280	2,143	10	W 28 C F 2	F42SSILL	48	0.5	Breaker	2,280	1,094	1,049	0.5	$ 172.61	$ 2,700.00	$0	15.6	15.6
35LED	Room 3312: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3311: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3310: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	SW	2,400	274	374	0.2	$ 61.27	$ 708.75	$0	11.6	11.6
40LED	WTR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Room 3309: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3308: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	SW	2,400	274	374	0.2	$ 61.27	$ 708.75	$0	11.6	11.6
35LED	Room 3307: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3300: 3rd Floo	86	T 32 R F 3 (ELE)	F43ILL/2	90	7.7	SW	2400	18,576	86	T 59 R LED	RTLED38	38	3.3	SW	2,400	7,843	10,733	4.5	$ 1,756.42	$ 20,317.50	$0	11.6	11.6
168	Room 3300: 3rd Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	SW	2400	677	3	W 28 C F 2	F42SSILL	48	0.1	SW	2,400	346	331	0.1	$ 54.20	$ 810.00	$0	14.9	14.9
40LED	TR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	TR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Room 3317: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	SW	2,400	274	374	0.2	$ 61.27	$ 708.75	$0	11.6	11.6
35LED	Room 3318: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	SW	2,400	274	374	0.2	$ 61.27	$ 708.75	$0	11.6	11.6
35LED	Room 3319: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 3320: 3rd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	SW	2,400	456	624	0.3	$ 102.12	$ 1,181.25	$0	11.6	11.6
35LED	Corridor Lighting: 2nd Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	Breaker	2280	821	4	T 59 R LED	RTLED38	38	0.2	Breaker	2,280	347	474	0.2	$ 78.05	$ 945.00	$0	12.1	12.1
35LED	Corridor Lighting: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	Breaker	2280	410	2	T 59 R LED	RTLED38	38	0.1	Breaker	2,280	173	237	0.1	$ 39.02	$ 472.50	$0	12.1	12.1
40LED	Closet: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	Closet: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	Closet: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	Closet: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	MTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	WTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Room 2065: 2nd Floo	11	T 32 R F 3 (ELE)	F43ILL/2	90	1.0	SW	2400	2,376	11	T 59 R LED	RTLED38	38	0.4	SW	2,400	1,003	1,373	0.6	$ 224.66	$ 2,598.75	$0	11.6	11.6
35LED	Unemployment Office: 2nd Floo	111	T 32 R F 3 (ELE)	F43ILL/2	90	10.0	SW	2400	23,976	111	T 59 R LED	RTLED38	38	4.2	SW	2,400	10,123	13,853	5.8	$ 2,267.01	$ 26,223.75	$0	11.6	11.6
40LED	Staff TR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Corridor Lighting: 2nd Floo	7	T 32 R F 3 (ELE)	F43ILL/2	90	0.6	Breaker	2280	1,436	7	T 59 R LED	RTLED38	38	0.3	Breaker	2,280	606	830	0.4	$ 136.59	$ 1,653.75	$0	12.1	12.1
35LED	Room 2138: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 2139: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 2140: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 2141: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Kitchen: 2nd Floor	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	3000	2,430	9	T 59 R LED	RTLED38	38	0.3	SW	3,000	1,026	1,404	0.5	$ 224.81	$ 2,126.25	$0	9.5	9.5
35LED	Corridor Lighting: 2nd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	Breaker	2280	1,026	5	T 59 R LED	RTLED38	38	0.2	Breaker	2,280	433	593	0.3	$ 97.56	$ 1,181.25	$0	12.1	12.1
40LED	WTR: 2nd Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120	2	T 38 R LED	RTLED38	38	0.1	SW	1,000	76	44	0.0	$ 8.29	$ 472.50	$100	57.0	44.9
35LED	Room 2142: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 2143: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
40LED	MTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Room 2144: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 2145: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 2146: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 2147: 2nd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	SW	2,400	274	374	0.2	$ 61.27	$ 708.75	$0	11.6	11.6
35LED	Room 2148: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Reception - Room 2102: 2nd Floo	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	2912	2,097	8	T 59 R LED	RTLED38	38	0.3	SW	2,912	885	1,211	0.4	$ 194.48	$ 1,890.00	$0	9.7	9.7
35LED	Room 2149: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 2150: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 2151: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 2152: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
40LED	WTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Room 2153: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 2154: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
40LED	MTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Room 2104: 2nd Floo	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	2400	1,728	8	T 59 R LED	RTLED38	38	0.3	SW	2,400	730	998	0.4	$ 163.39	$ 1,890.00	$0	11.6	11.6
35LED	Computer Room: 2nd Floo	50	T 32 R F 3 (ELE)	F43ILL/2	90	4.5	SW	1000	4,500	50	T 59 R LED	RTLED38	38	1.9	SW	1,000	1,900	2,600	2.6	$ 489.74	$ 11,812.50	$0	24.1	24.1
35LED	Room 2024: 2nd Floo	15	T 32 R F 3 (ELE)	F43ILL/2	90	1.4	SW	2400	3,240	15	T 59 R LED	RTLED38	38	0.6	SW	2,400	1,368	1,872	0.8	$ 306.35	$ 3,543.75	$0	11.6	11.6
35LED	Closet: 2nd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
35LED	Room 2072: 2nd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	SW	2,400	274	374	0.2	$ 61.27	$ 708.75	$0	11.6	11.6
35LED	Room 2071: 2nd Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
40LED	TR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Room 2070: 2nd Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944	9	T 59 R LED	RTLED38	38	0.3	SW	2,400	821	1,123	0.5	$ 183.81	$ 2,126.25	$0	11.6	11.6
35LED	Room 2069: 2nd Floo	15	T 32 R F 3 (ELE)	F43ILL/2	90	1.4	SW	2400	3,240	15	T 59 R LED	RTLED38	38	0.6	SW	2,400	1,368	1,872	0.8	$ 306.35	$ 3,543.75	$0	11.6	11.6
35LED	Room 2067: 2nd Floo	12	T 32 R F 3 (ELE)	F43ILL/2	90	1.1	SW	2400	2,592	12	T 59 R LED	RTLED38	38	0.5	SW	2,400	1,094	1,498	0.6	$ 245.08	$ 2,835.00	$0	11.6	11.6
40LED	TR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Office: 1st Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Office: 1st Floor	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296	6	T 59 R LED	RTLED38	38	0.2	SW	2,400	547	749	0.3	$ 122.54	$ 1,417.50	$0	11.6	11.6
35LED	Office: 1st Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216	1	T 59 R LED	RTLED38	38	0.0	SW	2,400	91	125	0.1	$ 20.42	$ 236.25	$0	11.6	11.6
168	Welfare Office: 1st Floor	22	W 40 C F 2 (MAG)	F42SS	94	2.1	SW	2400	4,963	22	W 28 C F 2	F42SSILL	48	1.1	SW	2,400	2,534	2,429	1.0	$ 397.47	$ 5,940.00	$0	14.9	14.9
35LED	Welfare Office: 1st Floor	97	T 32 R F 3 (ELE)	F43ILL/2	90	8.7	SW	2400	20,952	97	T 59 R LED	RTLED38	38	3.7	SW	2,400	8,846	12,106	5.0	$ 1,981.08	$ 22,916.25	$0	11.6	11.6
274LED	Records Office: 1st Floor	4	CFQ/18/2 RC	CFQ18/2	45	0.2	SW	2400	432	4	6BLMWLED	6BLMWLED	13	0.1	SW	2,400	125	307	0.1	$ 50.27	$ 648.00	$0	12.9	12.9
35LED	Records Office: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 1411: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 1412: 1st Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216	1	T 59 R LED	RTLED38	38	0.0	SW	2,400	91	125	0.1	$ 20.42	$ 236.25	$0	11.6	11.6
35LED	Room 1410: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
35LED	Room 1409: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
40LED	WTR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	MTR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Café: 1st Floor	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	1600	1,152	8	T 59 R LED	RTLED38	38	0.3	SW	1,600	486	666	0.4	$ 114.80	$ 1,890.00	$0	16.5	16.5
40LED	WTR: 1st Floor	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180	3	T 38 R LED	RTLED38	38	0.1	SW	1,000	114	66	0.1	$ 12.43	$ 708.75	$150	57.0	44.9
274LED	Corridor Lighting: 1st Floo	7	CFQ/18/2 RC	CFQ18/2	45	0.3	Breaker	2280	718	7	6BLMWLED	6BLMWLED	13	0.1	Breaker	2,280	207	511	0.2	$ 84.05	$ 1,134.00	$0	13.5	13.5
40LED	MTR: 1st Floor	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180	3	T 38 R LED	RTLED38	38	0.1	SW	1,000	114	66	0.1	$ 12.43	$ 708.75	$150	57.0	44.9

Energy Audit of the Economic Development Center
CHA Project No.29142
ECM-L1 Lighting Replacements

		EXISTING CONDITIONS								RETROFIT CONDITIONS							COST & SAVINGS ANALYSIS						
Field Code	Area Description Unique description of the location - Room number/Room name: Floor number (if applicable)	No. of Fixtures No. of fixtures before the retrofit	Standard Fixture Code "Lighting Fixture Code" Example 2T 40 R F(U) = 2'x2' Troff 40 w Recess. Floor 2 lamps U shape	Fixture Code Code from Table of Standard Fixture Wattages	Watts per Fixture Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fixt) * (Fixt No.)	Exist Control Pre-inst. control device	Annual Hours Estimated daily hours for the usage group	Annual kWh (kW/space) * (Annual Hours)	Number of Fixtures No. of fixtures after the retrofit	Standard Fixture Code "Lighting Fixture Code" Example 2T 40 R F(U) = 2'x2' Troff 40 w Recess. Floor 2 lamps U shape	Fixture Code Code from Table of Standard Fixture Wattages	Watts per Fixture Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fixt) * (Number of Fixtures)	Retrofit Control Retrofit control device	Annual Hours Estimated annual hours for the usage group	Annual kWh (kW/space) * (Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kW Saved (Original Annual kW) - (Retrofit Annual kW)	Annual $ Saved (kWh Saved) * ($/kWh)	Retrofit Cost Cost for renovations to lighting system	NJ Smart Start Lighting Incentive Prescriptive Lighting Measures	Simple Payback With Out Incentive Length of time for renovations cost to be recovered	Simple Payback Length of time for renovations cost to be recovered
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
22	Lobby: 1st Floor	1	1T 34 R F 4 (MAG)	F44EE	144	0.1	SW	2912	419	1	1T 28 R F 4	F44SSILL	96	0.1	SW	2,912	280	140	0.0	$ 22.44	$ 141.75	$0	6.3	6.3
274LED	Bus Card: 1st Floor	3	CFQ/18/2 RC	CFQ18/2	45	0.1	SW	2912	393	3	6BLMWLED	6BLMWLED	13	0.0	SW	2,912	114	280	0.1	$ 44.88	$ 486.00	$0	10.8	10.8
35LED	Bus Card: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2912	524	2	T 59 R LED	RTLED38	38	0.1	SW	2,912	221	303	0.1	$ 48.62	$ 472.50	$0	9.7	9.7
22	Lobby: 1st Floor	15	1T 34 R F 4 (MAG)	F44EE	144	2.2	SW	2912	6,290	15	1T 28 R F 4	F44SSILL	96	1.4	SW	2,912	4,193	2,097	0.7	$ 336.61	$ 2,126.25	$0	6.3	6.3
274LED	Lobby: 1st Floor	28	CFQ/18/2 RC	CFQ18/2	45	1.3	SW	2912	3,669	28	6BLMWLED	6BLMWLED	13	0.4	SW	2,912	1,060	2,609	0.9	$ 418.89	$ 4,536.00	$0	10.8	10.8
22	Vestibule: 1st Floor	2	1T 34 R F 4 (MAG)	F44EE	144	0.3	SW	2912	839	2	1T 28 R F 4	F44SSILL	96	0.2	SW	2,912	559	280	0.1	$ 44.88	$ 283.50	$0	6.3	6.3
35LED	Waiting Area: 1st Floor	17	T 32 R F 3 (ELE)	F43ILL/2	90	1.5	SW	3000	4,590	17	T 59 R LED	RTLED38	38	0.6	SW	3,000	1,938	2,652	0.9	$ 424.64	$ 4,016.25	$0	9.5	9.5
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	TR: 1st Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120	2	T 38 R LED	RTLED38	38	0.1	SW	1,000	76	44	0.0	$ 8.29	$ 472.50	$100	57.0	44.9
40LED	TR: 1st Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120	2	T 38 R LED	RTLED38	38	0.1	SW	1,000	76	44	0.0	$ 8.29	$ 472.50	$100	57.0	44.9
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
35LED	Reception: 1st Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2912	1,048	4	T 59 R LED	RTLED38	38	0.2	SW	2,912	443	606	0.2	$ 97.24	$ 945.00	$0	9.7	9.7
35LED	Welfare Office: 1st Floor	40	T 32 R F 3 (ELE)	F43ILL/2	90	3.6	SW	2400	8,640	40	T 59 R LED	RTLED38	38	1.5	SW	2,400	3,648	4,992	2.1	$ 816.94	$ 9,450.00	$0	11.6	11.6
168	Welfare Office: 1st Floor	14	W 40 C F 2 (MAG)	F42SS	94	1.3	SW	2400	3,158	14	W 28 C F 2	F42SSILL	48	0.7	SW	2,400	1,613	1,546	0.6	$ 252.94	$ 3,780.00	$0	14.9	14.9
35LED	Welfare Office: 1st Floor	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296	6	T 59 R LED	RTLED38	38	0.2	SW	2,400	547	749	0.3	$ 122.54	$ 1,417.50	$0	11.6	11.6
35LED	Room 1109: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
274LED	Vestibule: 1st Floor	2	CFQ/18/2 RC	CFQ18/2	45	0.1	SW	2912	262	2	6BLMWLED	6BLMWLED	13	0.0	SW	2,912	76	186	0.1	$ 29.92	$ 324.00	$0	10.8	10.8
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	$ 4.14	$ 236.25	$50	57.0	44.9
80	Stairs: 1st Floor	15	SP 36 R CF 1	CFT36/1	51	0.8	SW	3200	2,448	15	SP 36 R CF 1	CFT36/1	51	0.8	SW	3,200	2,448	-	0.0	$ -	$ -	$0		#DIV/0!
168	Old Kitchen: Basement	20	W 40 C F 2 (MAG)	F42SS	94	1.9	SW	3000	5,640	20	W 28 C F 2	F42SSILL	48	1.0	SW	3,000	2,880	2,760	0.9	$ 441.93	$ 5,400.00	$0	12.2	12.2
35LED	Old Kitchen: Basement	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	3000	270	1	T 59 R LED	RTLED38	38	0.0	SW	3,000	114	156	0.1	$ 24.98	$ 236.25	$0	9.5	9.5
168	Old Kitchen: Basement	20	W 40 C F 2 (MAG)	F42SS	94	1.9	SW	3000	5,640	20	W 28 C F 2	F42SSILL	48	1.0	SW	3,000	2,880	2,760	0.9	$ 441.93	$ 5,400.00	$0	12.2	12.2
168	Old Kitchen: Basement	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	3000	1,128	4	W 28 C F 2	F42SSILL	48	0.2	SW	3,000	576	552	0.2	$ 88.39	$ 1,080.00	$0	12.2	12.2
168	Lobby: Basement	10	W 40 C F 2 (MAG)	F42SS	94	0.9	SW	2912	2,737	10	W 28 C F 2	F42SSILL	48	0.5	SW	2,912	1,398	1,340	0.5	$ 215.06	$ 2,700.00	$0	12.6	12.6
35LED	Corridor Lighting: Basement	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	Breaker	2280	821	4	T 59 R LED	RTLED38	38	0.2	Breaker	2,280	347	474	0.2	$ 78.05	$ 945.00	$0	12.1	12.1
35LED	Switch Room : Basement	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	$ 9.79	$ 236.25	$0	24.1	24.1
35LED	Server Room: Basement	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	1000	720	8	T 59 R LED	RTLED38	38	0.3	SW	1,000	304	416	0.4	$ 78.36	$ 1,890.00	$0	24.1	24.1
35LED	Office: Basement	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	SW	2,400	274	374	0.2	$ 61.27	$ 708.75	$0	11.6	11.6
35LED	Cleaning Room: Basement	10	T 32 R F 3 (ELE)	F43ILL/2	90	0.9	SW	1000	900	10	T 59 R LED	RTLED38	38	0.4	SW	1,000	380	520	0.5	$ 97.95	$ 2,362.50	$0	24.1	24.1
35LED	Office: Basement	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Lock Shop: Basement	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180	2	T 59 R LED	RTLED38	38	0.1	SW	1,000	76	104	0.1	$ 19.59	$ 472.50	$0	24.1	24.1
35LED	??	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	SW	2,400	365	499	0.2	$ 81.69	$ 945.00	$0	11.6	11.6
35LED	Corridor Lighting: Basement	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	Breaker	2280	1,642	8	T 59 R LED	RTLED38	38	0.3	Breaker	2,280	693	948	0.4	$ 156.10	$ 1,890.00	$0	12.1	12.1
168	Files: Basement	10	W 40 C F 2 (MAG)	F42SS	94	0.9	SW	1000	940	10	W 28 C F 2	F42SSILL	48	0.5	SW	1,000	480	460	0.5	$ 86.65	$ 2,700.00	$0	31.2	31.2
168	Files: Basement	8	W 40 C F 2 (MAG)	F42SS	94	0.8	SW	1000	752	8	W 28 C F 2	F42SSILL	48	0.4	SW	1,000	384	368	0.4	$ 69.32	$ 2,160.00	$0	31.2	31.2
35LED	DWI Office: Basement	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.2	SW	2400	2,808	13	T 59 R LED	RTLED38	38	0.5	SW	2,400	1,186	1,622	0.7	$ 265.51	$ 3,071.25	$0	11.6	11.6
35LED	DWI Office: Basement	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216	1	T 59 R LED	RTLED38	38	0.0	SW	2,400	91	125	0.1	$ 20.42	$ 236.25	$0	11.6	11.6
35LED	DWI Office: Basement	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	$ 40.85	$ 472.50	$0	11.6	11.6
274LED	DWI Office: Basement	11	CFQ/18/2 RC	CFQ18/2	45	0.5	SW	2400	1,188	11	6BLMWLED	6BLMWLED	13	0.1	SW	2,400	343	845	0.4	$ 138.25	$ 1,782.00	$0	12.9	12.9
168	DWI Office: Basement	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	2400	451	2	W 28 C F 2	F42SSILL	48	0.1	SW	2,400	230	221	0.1	$ 36.13	$ 540.00	$0	14.9	14.9
168	Room L140: Basement	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	2400	451	2	W 28 C F 2	F42SSILL	48	0.1	SW	2,400	230	221	0.1	$ 36.13	$ 540.00	$0	14.9	14.9
168	Electrical Room: Basemen	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	1000	376	4	W 28 C F 2	F42SSILL	48	0.2	SW	1,000	192	184	0.2	$ 34.66	$ 1,080.00	$0	31.2	31.2
168	Pump Room: Basemen	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94	1	W 28 C F 2	F42SSILL	48	0.0	SW	1,000	48	46	0.0	$ 8.66	$ 270.00	$0	31.2	31.2
40LED	Boiler Room: Basemen	10	T 32 R F 2 (ELE)	F42LL	60	0.6	SW	1820	1,092	10	T 38 R LED	RTLED38	38	0.4	SW	1,820	692	400	0.2	$ 67.78	$ 2,362.50	$500	34.9	27.5
40LED	Elevator: Basemen	6	T 32 R F 2 (ELE)	F42LL	60	0.4	SW	3200	1,152	6	T 38 R LED	RTLED38	38	0.2	SW	3,200	730	422	0.1	$ 67.26	$ 1,417.50	$300	21.1	16.6
168	Corridor Lighting: Basemen	1	W 40 C F 2 (MAG)	F42SS	94	0.1	Breaker	2280	214	1	W 28 C F 2	F42SSILL	48	0.0	Breaker	2,280	109	105	0.0	$ 17.26	$ 270.00	$0	15.6	15.6
215	Exterior Lighting	4	High Bay MH 350	MHPS/SCWA/350/1	400	1.6	SW	4368	6,989	4	F48T5/HO	F44GHL	234	0.9	SW	4,368	4,088	2,900	0.7	$ 451.58	$ 1,890.00	$400	4.2	3.3
	Total	**1,768**				**155.4**			**355,999**	**1,768**			**11,691**	**69.5**			**159,601**	**196,398**	**85.9**	**$32,314**	**$413,998**	**$5,050**		
																	Demand Savings			**85.9**	**$3,640**			
																	kWh Savings			**196,398**	**$28,674**			
																	Total savings				**$32,314**		**12.8**	**12.7**

Energy Audit of the Economic Development Center
CHA Project No.29142
ECM-L2 Install Occupancy Sensors

		EXISTING CONDITIONS								RETROFIT CONDITIONS								COST & SAVINGS ANALYSIS						
	Area Description	No. of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh	Number of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Retrofit Control	Annual Hours	Annual kWh	Annual kWh Saved	Annual kW Saved	Annual $ Saved	Retrofit Cost	NJ Smart Start Lighting Incentive	Simple Payback With Out Incentive	Simple Payback
Field Code	Unique description of the location - Room number/Room name: Floor number (if applicable)	No. of fixtures before the retrofit	Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fixt) * (Fixt No.)	Pre-inst. control device	Estimated annual hours for the usage group	(kW/space) * (Annual Hours)	No. of fixtures after the retrofit	"Lighting Fixture Code" Example 2T 40 R F(U) = 2'x2' Troff 40 w Recess. Floor 2 lamps U shape	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fixt) * (Number of Fixtures)	Retrofit control device	Estimated annual hours for the usage group	(kW/space) * (Annual Hours)	(Original Annual kWh) - (Retrofit Annual kWh)	(Original Annual kW) - (Retrofit Annual kW)	(kW Saved) * ($/kWh)	Cost for renovations to lighting system		Length of time for renovations cost to be recovered	Length of time for renovations cost to be recovered
274LED	Corridor Lighting: 5th Floo	9	CFQ/18/2 RC	CFQ18/2	45	0.4	Breaker	2280	923.4	9	CFQ/18/2 RC	CFQ18/2	45	0.4	None	2280	923.4	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Corridor Lighting: 5th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	Breaker	2280	643.0	3	W 40 C F 2 (MAG)	F42SS	94	0.3	None	2280	643.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Conference Room: 5th Floo	10	T 32 R F 3 (ELE)	F43ILL/2	90	0.9	SW	1200	1,080.0	10	T 32 R F 3 (ELE)	F43ILL/2	90	0.9	OCC	1000	900.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
40LED	Closet: 5th Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120.0	2	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	120.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Tax Board: 5th Floo	11	T 32 R F 3 (ELE)	F43ILL/2	90	1.0	SW	1200	1,188.0	11	T 32 R F 3 (ELE)	F43ILL/2	90	1.0	OCC	1000	990.0	198.0	0.0	$28.91	$128.25	$20.00	4.4	3.7
35LED	Kitchen: 5th Floor	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	3000	1,350.0	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	None	3000	1,350.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Storage - Room 5213: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	1000	180.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Staff WR: 5th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Office: 5th Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Office - Room 5211: 5th Floor	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080.0	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1900	855.0	225.0	0.0	$32.85	$128.25	$20.00	3.9	3.3
168	Corridor Lighting: 5th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	Breaker	2280	643.0	3	W 40 C F 2 (MAG)	F42SS	94	0.3	None	2280	643.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Corridor Lighting: 5th Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	Breaker	2280	205.2	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	2280	205.2	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 5212: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
40LED	Men's Room: 5th Floo	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Tax Room: 5th Floo	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	1200	648.0	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1000	540.0	108.0	0.0	$15.77	$128.25	$20.00	8.1	6.9
168	Corridor Lighting: 5th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	SW	2280	643.0	3	W 40 C F 2 (MAG)	F42SS	94	0.3	None	2280	643.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Corridor Lighting: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2280	410.4	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	2280	410.4	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	File Storage - Room 5205: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	1000	360.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	None	1000	360.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Corridor Lighting: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	Breaker	2280	820.8	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	None	2280	820.8	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Corridor Lighting: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	Breaker	2280	1,846.8	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	None	2280	1,846.8	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Corridor Lighting: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	Breaker	2280	1,846.8	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	None	2280	1,846.8	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Courtroom: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	520	421.2	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	None	520	421.2	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Classroom - Room 5312: 5th Floo	12	T 32 R F 3 (ELE)	F43ILL/2	90	1.1	SW	2400	2,592.0	12	T 32 R F 3 (ELE)	F43ILL/2	90	1.1	OCC	1800	1,944.0	648.0	0.0	$94.61	$128.25	$20.00	1.4	1.1
35LED	Corridor Lighting: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	Breaker	2280	1,846.8	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	None	2280	1,846.8	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Staff MTR: 5th Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1000	180.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	1000	180.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 5313: 5th Floo	14	T 32 R F 3 (ELE)	F43ILL/2	90	1.3	SW	2400	3,024.0	14	T 32 R F 3 (ELE)	F43ILL/2	90	1.3	OCC	1900	2,394.0	630.0	0.0	$91.98	$128.25	$20.00	1.4	1.2
40LED	Toilet Room - Room 5313: 5th Floo	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 5304: 5th Floo	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296.0	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1900	1,026.0	270.0	0.0	$39.42	$128.25	$20.00	3.3	2.7
35LED	Room 5311: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 5310: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Staff WTR: 5th Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1000	180.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	1000	180.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 5305: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944.0	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	OCC	1900	1,539.0	405.0	0.0	$59.13	$128.25	$20.00	2.2	1.8
35LED	Room 5306: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944.0	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	OCC	1900	1,539.0	405.0	0.0	$59.13	$128.25	$20.00	2.2	1.8
35LED	Room 5307: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944.0	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	OCC	1900	1,539.0	405.0	0.0	$59.13	$128.25	$20.00	2.2	1.8
35LED	Room 5308: 5th Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080.0	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1900	855.0	225.0	0.0	$32.85	$128.25	$20.00	3.9	3.3
35LED	Kitchen - Room 5309: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	3000	1,080.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	None	3000	1,080.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Closet: 5th Floor	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	1000	188.0	2	W 40 C F 2 (MAG)	F42SS	94	0.2	None	1000	188.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
61LED	Closet: 5th Floor	2	T 34 R F 3 (MAG)	F43EE	115	0.2	SW	1000	230.0	2	T 34 R F 3 (MAG)	F43EE	115	0.2	None	1000	230.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Room 5417: 5th Floo	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1900	114.0	30.0	0.0	$4.38	$128.25	$20.00	29.3	24.7
35LED	Director's Office: 5th Floor	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	2400	1,728.0	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	OCC	1900	1,368.0	360.0	0.0	$52.56	$128.25	$20.00	2.4	2.1
35LED	Conference Room: 5th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	1200	324.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1000	270.0	54.0	0.0	$7.88	$128.25	$20.00	16.3	13.7
168	Corridor Director's Office: 5th Floo	10	W 40 C F 2 (MAG)	F42SS	94	0.9	Breaker	2280	2,143.2	10	W 40 C F 2 (MAG)	F42SS	94	0.9	None	2280	2,143.2	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Office: 5th Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
40LED	Staff MTR: 5th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1200	72.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60.0	12.0	0.0	$1.75	$128.25	$20.00	73.2	61.8
35LED	Room 5405: 5th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	$19.71	$128.25	$20.00	6.5	5.5
35LED	Room 5406: 5th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	$19.71	$128.25	$20.00	6.5	5.5
35LED	Storage - Room 5412: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	1000	180.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 5415: 5th Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080.0	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1900	855.0	225.0	0.0	$32.85	$128.25	$20.00	3.9	3.3
35LED	Room 5413: 5th Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	OCC	1900	171.0	45.0	0.0	$6.57	$128.25	$20.00	19.5	16.5
35LED	Room 5408: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Copy Room - Room 5414: 5th Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2125	191.3	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	2125	191.3	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Staff WTR: 5th Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 5409: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Kitchen: 5th Floor	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	3000	810.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	None	3000	810.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 5410: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 5407: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
61LED	Room 5407: 5th Floo	8	T 34 R F 3 (MAG)	F43EE	115	0.9	SW	2400	2,208.0	8	T 34 R F 3 (MAG)	F43EE	115	0.9	OCC	1900	1,748.0	460.0	0.0	$67.16	$128.25	$20.00	1.9	1.6
40LED	Closet: 4th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Closet: 4th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Closet: 4th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Men's Room: 4th Floo	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180.0	3	T 32 R F 2 (ELE)	F42LL	60	0.2	None	1000	180.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Ladies' Room: 4th Floo	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180.0	3	T 32 R F 2 (ELE)	F42LL	60	0.2	None	1000	180.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 4400: 4th Floo	70	T 32 R F 3 (ELE)	F43ILL/2	90	6.3	SW	2400	15,120.0	70	T 32 R F 3 (ELE)	F43ILL/2	90	6.3	OCC	1900	11,970.0	3,150.0	0.0	$459.90	$128.25	$20.00	0.3	0.2
35LED	Room 4414: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
168	Room 4400: 4th Floo	42	W 40 C F 2 (MAG)	F42SS	94	3.9	SW	2400	9,475.2	42	W 40 C F 2 (MAG)	F42SS	94	3.9	OCC	1900	7,501.2	1,974.0	0.0	$288.20	$128.25	$20.00	0.4	0.4
35LED	Room 4411: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Room 4412: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 4413: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
61LED	Room 4413: 4th Floo	2	T 34 R F 3 (MAG)	F43EE	115	0.2	SW	2400	552.0	2	T 34 R F 3 (MAG)	F43EE	115	0.2	OCC	1900	437.0	115.0	0.0	$16.79	$128.25	$20.00	7.6	6.4
168	Staff TR: 4th Floor	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	1000	188.0	2	W 40 C F 2 (MAG)	F42SS	94	0.2	None	1000	188.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Staff TR: 4th Floor	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94.0	1	W 40 C F 2 (MAG)	F42SS	94	0.1	None	1000	94.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Reception: 4th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2912	2,358.7	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	None	2912	2,358.7	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Reception: 4th Floo	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	2912	1,094.9	4	W 40 C F 2 (MAG)	F42SS	94	0.4	None	2912	1,094.9	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 4102: 4th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944.0	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	OCC	1900	1,539.0	405.0	0.0	$59.13	$128.25	$20.00	2.2	1.8
168	Room 4102: 4th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	SW	2400	676.8	3	W 40 C F 2 (MAG)	F42SS	94	0.3	OCC	1900	535.8	141.0	0.0	$20.59	$128.25	$20.00	6.2	5.3
168	Room 4103: 4th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	SW	2400	676.8	3	W 40 C F 2 (MAG)	F42SS	94	0.3	OCC	1900	535.8	141.0	0.0	$20.59	$128.25	$20.00	6.2	5.3
35LED	Room 4103: 4th Floo	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.2	SW	2400	2,808.0	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.2	OCC	1900	2,223.0	585.0	0.0	$85.41	$128.25	$20.00	1.5	1.3
35LED	Economic Growth: 4th Floo	25	T 32 R F 3 (ELE)	F43ILL/2	90	2.3	SW	1200	2,700.0	25	T 32 R F 3 (ELE)	F43ILL/2	90	2.3	OCC	1000	2,250.0	450.0	0.0	$65.70	$128.25	$20.00	2.0	1.6
168	Economic Growth: 4th Floo	8	W 40 C F 2 (MAG)	F42SS	94	0.8	SW	1200	902.4	8	W 40 C F 2 (MAG)	F42SS	94	0.8	OCC	1000	752.0	150.4	0.0	$21.96	$128.25	$20.00	5.8	4.9
35LED	Room 4205: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Room 4206: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Room 4207: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Room 4208: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Room 4209: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
168	Room 4210: 4th Floo	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	2400	902.4	4	W 40 C F 2 (MAG)	F42SS	94	0.4	OCC	1900	714.4	188.0	0.0	$27.45	$128.25	$20.00	4.7	3.9
35LED	Room 4210: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Closet 4201: 4th Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	1000	180.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Staff MTR: 4th Floor	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94.0	1	W 40 C F 2 (MAG)	F42SS	94	0.1	None	1000	94.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Staff WTR: 4th Floor	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94.0	1	W 40 C F 2 (MAG)	F42SS	94	0.1	None	1000	94.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Child Health: 4th Floo	15	W 40 C F 2 (MAG)	F42SS	94	1.4	SW	2400	3,384.0	15	W 40 C F 2 (MAG)	F42SS	94	1.4	OCC	1900	2,679.0	705.0	0.0	$102.93	$128.25	$20.00	1.2	1.1
35LED	Child Health: 4th Floo	24	T 32 R F 3 (ELE)	F43ILL/2	90	2.2	SW	2400	5,184.0	24	T 32 R F 3 (ELE)	F43ILL/2	90	2.2	OCC	1900	4,104.0	1,080.0	0.0	$157.68	$128.25	$20.00	0.8	0.7
35LED	Room 4305: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 4306: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 4307: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 4308: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 4309: 4th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	$19.71	$128.25	$20.00	6.5	5.5
35LED	Room 4310: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 4311: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 4312: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 4313: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 4314: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 4315: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Room 4318: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 4316: 4th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	$19.71	$128.25	$20.00	6.5	5.5
35LED	Staff TR: 4th Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Staff TR: 4th Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 4321: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Room 4301: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
274LED	Corridor Lighting: 4th Floo	13	CFQ/18/2 RC	CFQ18/2	45	0.6	Breaker	2280	1,333.8	13	CFQ/18/2 RC	CFQ18/2	45	0.6	None	2280	1,333.8	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Corridor Lighting: 4th Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	Breaker	2280	205.2	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	2280	205.2	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 3104: 3rd Floo	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	2400	1,728.0	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	OCC	1900	1,368.0	360.0	0.0	$52.56	$128.25	$20.00	2.4	2.1
35LED	3MP - Room 3104: 3rd Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Classroom #2: 3rd Floo	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296.0	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1800	972.0	324.0	0.0	$47.30	$128.25	$20.00	2.7	2.3
35LED	Classroom #1: 3rd Floo	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296.0	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1800	972.0	324.0	0.0	$47.30	$128.25	$20.00	2.7	2.3
35LED	Room 3104 : 3rd Floo	21	T 32 R F 3 (ELE)	F43ILL/2	90	1.9	SW	2400	4,536.0	21	T 32 R F 3 (ELE)	F43ILL/2	90	1.9	OCC	1900	3,591.0	945.0	0.0	$137.97	$128.25	$20.00	0.9	0.8
168	Room 3104: 3rd Floo	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	2400	225.6	1	W 40 C F 2 (MAG)	F42SS	94	0.1	OCC	1900	178.6	47.0	0.0	$6.86	$128.25	$20.00	18.7	15.8
35LED	Staff TR: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Bus Cards: 3rd Floor	28	T 32 R F 3 (ELE)	F43ILL/2	90	2.5	SW	2912	7,338.2	28	T 32 R F 3 (ELE)	F43ILL/2	90	2.5	None	2912	7,338.2	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Bus Cards: 3rd Floor	10	W 40 C F 2 (MAG)	F42SS	94	0.9	SW	2912	2,737.3	10	W 40 C F 2 (MAG)	F42SS	94	0.9	None	2912	2,737.3	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 3234: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3235: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3236: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2

Energy Audit of the Economic Development Center
CHA Project No.29142
ECM-L2 Install Occupancy Sensors

		EXISTING CONDITIONS								RETROFIT CONDITIONS								COST & SAVINGS ANALYSIS						
	Area Description	No. of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh	Number of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Retrofit Control	Annual Hours	Annual kWh	Annual kWh Saved	Annual kW Saved	Annual $ Saved	Retrofit Cost	NJ Smart Start Lighting Incentive	Simple Payback With Out Incentive	Simple Payback
Field Code	**Unique description of the location - Room number/Room name: Floor number (if applicable)**	**No. of fixtures before the retrofit**	**Lighting Fixture Code**	**Code from Table of Standard Fixture Wattages**	**Value from Table of Standard Fixture Wattages**	**(Watts/Fixt) * (Fixt No.)**	**Pre-inst. control device**	**Estimated annual hours for the usage group**	**(kW/space) * (Annual Hours)**	**No. of fixtures after the retrofit**	**"Lighting Fixture Code" Example 2T 40 R F(U) = 2'x2' Troff 40 w Recess. Floor 2 lamps U shape**	**Code from Table of Standard Fixture Wattages**	**Value from Table of Standard Fixture Wattages**	**(Watts/Fixt) * (Number of Fixtures)**	**Retrofit control device**	**Estimated annual hours for the usage group**	**(kW/space) * (Annual Hours)**	**(Original Annual kWh) - (Retrofit Annual kWh)**	**(Original Annual kW) - (Retrofit Annual kW)**	**(kW Saved) * ($/kWh)**	**Cost for renovations to lighting system**		**Length of time for renovations cost to be recovered**	**Length of time for renovations cost to be recovered**
35LED	Room 3237: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3238: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3239: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3240: 3rd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080.0	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1900	855.0	225.0	0.0	$32.85	$128.25	$20.00	3.9	3.3
35LED	Kitchen: 3rd Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	3000	540.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	3000	540.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 3212: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3211: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3210: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3214: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	$19.71	$128.25	$20.00	6.5	5.5
35LED	Room 3209: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Staff TR: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 3213: 3rd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080.0	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1900	855.0	225.0	0.0	$32.85	$128.25	$20.00	3.9	3.3
168	Corridor Lighting: 3rd Floo	16	W 40 C F 2 (MAG)	F42SS	94	1.5	Breaker	2280	3,429.1	16	W 40 C F 2 (MAG)	F42SS	94	1.5	None	2280	3,429.1	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 3208: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3207: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
40LED	WTR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	MTR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 3206: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3205: 3rd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080.0	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1900	855.0	225.0	0.0	$32.85	$128.25	$20.00	3.9	3.3
35LED	Kitchen: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	3000	270.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	3000	270.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 3203: 3rd Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	OCC	1900	171.0	45.0	0.0	$6.57	$128.25	$20.00	19.5	16.5
40LED	WTR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Reception: 3rd Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2912	262.1	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	2912	262.1	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Reception: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2912	524.2	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	2912	524.2	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
274LED	Reception: 3rd Floo	1	CFQ/18/2 RC	CFQ18/2	45	0.0	SW	2912	131.0	1	CFQ/18/2 RC	CFQ18/2	45	0.0	None	2912	131.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
22	Lobby: 3rd Floor	5	1T 34 R F 4 (MAG)	F44EE	144	0.7	SW	2912	2,096.6	5	1T 34 R F 4 (MAG)	F44EE	144	0.7	None	2912	2,096.6	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Corridor Lighting: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	Breaker	2280	410.4	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	2280	410.4	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
274LED	Corridor Lighting: 3rd Floo	15	CFQ/18/2 RC	CFQ18/2	45	0.7	Breaker	2280	1,539.0	15	CFQ/18/2 RC	CFQ18/2	45	0.7	None	2280	1,539.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
274LED	Lobby: 3rd Floor	7	CFQ/18/2 RC	CFQ18/2	45	0.3	SW	2912	917.3	7	CFQ/18/2 RC	CFQ18/2	45	0.3	None	2912	917.3	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	WTR: 3rd Floor	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180.0	3	T 32 R F 2 (ELE)	F42LL	60	0.2	None	1000	180.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	MTR: 3rd Floor	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180.0	3	T 32 R F 2 (ELE)	F42LL	60	0.2	None	1000	180.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
274LED	Corridor Lighting: 3rd Floo	5	CFQ/18/2 RC	CFQ18/2	45	0.2	SW	2280	513.0	5	CFQ/18/2 RC	CFQ18/2	45	0.2	None	2280	513.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 3101: 3rd Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944.0	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	OCC	1900	1,539.0	405.0	0.0	$59.13	$128.25	$20.00	2.2	1.8
35LED	Closet - Room 3101: 3rd Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Kitchen: 3rd Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	3000	1,080.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	None	3000	1,080.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
61LED	Room 3103: 3rd Floo	2	T 34 R F 3 (MAG)	F43EE	115	0.2	SW	2400	552.0	2	T 34 R F 3 (MAG)	F43EE	115	0.2	OCC	1900	437.0	115.0	0.0	$16.79	$128.25	$20.00	7.6	6.4
61LED	Room 3102: 3rd Floo	2	T 34 R F 3 (MAG)	F43EE	115	0.2	SW	2400	552.0	2	T 34 R F 3 (MAG)	F43EE	115	0.2	OCC	1900	437.0	115.0	0.0	$16.79	$128.25	$20.00	7.6	6.4
168	Corridor Lighting: 3rd Floo	10	W 40 C F 2 (MAG)	F42SS	94	0.9	Breaker	2280	2,143.2	10	W 40 C F 2 (MAG)	F42SS	94	0.9	None	2280	2,143.2	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 3312: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3311: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3310: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	$19.71	$128.25	$20.00	6.5	5.5
40LED	WTR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 3309: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3308: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	$19.71	$128.25	$20.00	6.5	5.5
35LED	Room 3307: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3300: 3rd Floo	86	T 32 R F 3 (ELE)	F43ILL/2	90	7.7	SW	2400	18,576.0	86	T 32 R F 3 (ELE)	F43ILL/2	90	7.7	OCC	1900	14,706.0	3,870.0	0.0	$565.02	$128.25	$20.00	0.2	0.2
168	Room 3300: 3rd Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	SW	2400	676.8	3	W 40 C F 2 (MAG)	F42SS	94	0.3	OCC	1900	535.8	141.0	0.0	$20.59	$128.25	$20.00	6.2	5.3
40LED	TR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	TR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 3317: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	$19.71	$128.25	$20.00	6.5	5.5
35LED	Room 3318: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	$19.71	$128.25	$20.00	6.5	5.5
35LED	Room 3319: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 3320: 3rd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080.0	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1900	855.0	225.0	0.0	$32.85	$128.25	$20.00	3.9	3.3
35LED	Corridor Lighting: 2nd Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	Breaker	2280	820.8	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	None	2280	820.8	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Corridor Lighting: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	Breaker	2280	410.4	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	2280	410.4	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Closet: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Closet: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Closet: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Closet: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	MTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	WTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 2065: 2nd Floo	11	T 32 R F 3 (ELE)	F43ILL/2	90	1.0	SW	2400	2,376.0	11	T 32 R F 3 (ELE)	F43ILL/2	90	1.0	OCC	1900	1,881.0	495.0	0.0	$72.27	$128.25	$20.00	1.8	1.5
35LED	Unemployment Office: 2nd Floo	111	T 32 R F 3 (ELE)	F43ILL/2	90	10.0	SW	2400	23,976.0	111	T 32 R F 3 (ELE)	F43ILL/2	90	10.0	OCC	1900	18,981.0	4,995.0	0.0	$729.27	$128.25	$20.00	0.2	0.1
40LED	Staff TR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Corridor Lighting: 2nd Floo	7	T 32 R F 3 (ELE)	F43ILL/2	90	0.6	Breaker	2280	1,436.4	7	T 32 R F 3 (ELE)	F43ILL/2	90	0.6	None	2280	1,436.4	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 2138: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 2139: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 2140: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 2141: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Kitchen: 2nd Floor	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	3000	2,430.0	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	None	3000	2,430.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Corridor Lighting: 2nd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	Breaker	2280	1,026.0	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	None	2280	1,026.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	WTR: 2nd Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120.0	2	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	120.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 2142: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	2400	432.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 2143: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	2400	432.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	MTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 2144: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 2145: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 2146: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 2147: 2nd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	$19.71	$128.25	$20.00	6.5	5.5
35LED	Room 2148: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Reception - Room 2102: 2nd Floo	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	2912	2,096.6	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	None	2912	2,096.6	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 2149: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 2150: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 2151: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 2152: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
40LED	WTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 2153: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 2154: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
40LED	MTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 2104: 2nd Floo	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	2400	1,728.0	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	OCC	1900	1,368.0	360.0	0.0	$52.56	$128.25	$20.00	2.4	2.1
35LED	Computer Room: 2nd Floo	50	T 32 R F 3 (ELE)	F43ILL/2	90	4.5	SW	1000	4,500.0	50	T 32 R F 3 (ELE)	F43ILL/2	90	4.5	None	1000	4,500.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 2024: 2nd Floo	15	T 32 R F 3 (ELE)	F43ILL/2	90	1.4	SW	2400	3,240.0	15	T 32 R F 3 (ELE)	F43ILL/2	90	1.4	OCC	1900	2,565.0	675.0	0.0	$98.55	$128.25	$20.00	1.3	1.1
35LED	Closet: 2nd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 2072: 2nd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	$19.71	$128.25	$20.00	6.5	5.5
35LED	Room 2071: 2nd Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
40LED	TR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Room 2070: 2nd Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944.0	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	OCC	1900	1,539.0	405.0	0.0	$59.13	$128.25	$20.00	2.2	1.8
35LED	Room 2069: 2nd Floo	15	T 32 R F 3 (ELE)	F43ILL/2	90	1.4	SW	2400	3,240.0	15	T 32 R F 3 (ELE)	F43ILL/2	90	1.4	OCC	1900	2,565.0	675.0	0.0	$98.55	$128.25	$20.00	1.3	1.1
35LED	Room 2067: 2nd Floo	12	T 32 R F 3 (ELE)	F43ILL/2	90	1.1	SW	2400	2,592.0	12	T 32 R F 3 (ELE)	F43ILL/2	90	1.1	OCC	1900	2,052.0	540.0	0.0	$78.84	$128.25	$20.00	1.6	1.4
40LED	TR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Office: 1st Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Office: 1st Floor	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296.0	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1900	1,026.0	270.0	0.0	$39.42	$128.25	$20.00	3.3	2.7
35LED	Office: 1st Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	OCC	1900	171.0	45.0	0.0	$6.57	$128.25	$20.00	19.5	16.5
168	Welfare Office: 1st Floor	22	W 40 C F 2 (MAG)	F42SS	94	2.1	SW	2400	4,963.2	22	W 40 C F 2 (MAG)	F42SS	94	2.1	OCC	1900	3,929.2	1,034.0	0.0	$150.96	$128.25	$20.00	0.8	0.7
35LED	Welfare Office: 1st Floor	97	T 32 R F 3 (ELE)	F43ILL/2	90	8.7	SW	2400	20,952.0	97	T 32 R F 3 (ELE)	F43ILL/2	90	8.7	OCC	1900	16,587.0	4,365.0	0.0	$637.29	$128.25	$20.00	0.2	0.2
274LED	Records Office: 1st Floor	4	CFQ/18/2 RC	CFQ18/2	45	0.2	SW	2400	432.0	4	CFQ/18/2 RC	CFQ18/2	45	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Records Office: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 1411: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 1412: 1st Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	OCC	1900	171.0	45.0	0.0	$6.57	$128.25	$20.00	19.5	16.5
35LED	Room 1410: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
35LED	Room 1409: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
40LED	WTR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	MTR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Café: 1st Floor	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	1600	1,152.0	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	OCC	1200	864.0	288.0	0.0	$42.05	$128.25	$20.00	3.1	2.6
40LED	WTR: 1st Floor	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180.0	3	T 32 R F 2 (ELE)	F42LL	60	0.2	None	1000	180.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
274LED	Corridor Lighting: 1st Floo	7	CFQ/18/2 RC	CFQ18/2	45	0.3	Breaker	2280	718.2	7	CFQ/18/2 RC	CFQ18/2	45	0.3	None	2280	718.2	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	MTR: 1st Floor	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180.0	3	T 32 R F 2 (ELE)	F42LL	60	0.2	None	1000	180.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!

Energy Audit of the Economic Development Center
CHA Project No.29142
ECM-L2 Install Occupancy Sensors

		EXISTING CONDITIONS							RETROFIT CONDITIONS								COST & SAVINGS ANALYSIS						
	Area Description	No. of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh	Number of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Retrofit Control	Annual Hours	Annual kWh	Annual kWh Saved	Annual kW Saved	Annual $ Saved	Retrofit Cost	NJ Smart Start Lighting Incentive	Simple Payback With Out Incentive	Simple Payback
Field Code	Unique description of the location - Room number/Room name: Floor number (if applicable)	No. of fixtures before the retrofit	Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fixt) * (Fixt No.)	Pre-inst. control device	Estimated annual hours for the usage group	(kWh/space) * (Annual Hours)	No. of fixtures after the retrofit	"Lighting Fixture Code" Example 2T 40 R F(U) = 2'x2' Troff 40 w Recess. Floor 2 lamps U shape	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fixt) * (Number of Fixtures)	Retrofit control device	Estimated annual hours for the usage group	(kW/space) * (Annual Hours)	(Original Annual kWh) - (Retrofit Annual kWh)	(Original Annual kW) - (Retrofit Annual kW)	($/kWh) * (kW Saved)	Cost for renovations to lighting system		Length of time for renovations cost to be recovered	Length of time for renovations cost to be recovered
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
22	Lobby: 1st Floor	1	1T 34 R F 4 (MAG)	F44EE	144	0.1	SW	2912	419.3	1	1T 34 R F 4 (MAG)	F44EE	144	0.1	None	2912	419.3	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
274LED	Bus Card: 1st Floor	3	CFQ/18/2 RC	CFQ18/2	45	0.1	SW	2912	393.1	3	CFQ/18/2 RC	CFQ18/2	45	0.1	None	2912	393.1	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Bus Card: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2912	524.2	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	2912	524.2	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
22	Lobby: 1st Floor	15	1T 34 R F 4 (MAG)	F44EE	144	2.2	SW	2912	6,289.9	15	1T 34 R F 4 (MAG)	F44EE	144	2.2	None	2912	6,289.9	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
274LED	Lobby: 1st Floor	28	CFQ/18/2 RC	CFQ18/2	45	1.3	SW	2912	3,669.1	28	CFQ/18/2 RC	CFQ18/2	45	1.3	None	2912	3,669.1	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
22	Vestibule: 1st Floor	2	1T 34 R F 4 (MAG)	F44EE	144	0.3	SW	2912	838.7	2	1T 34 R F 4 (MAG)	F44EE	144	0.3	None	2912	838.7	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Waiting Area: 1st Floor	17	T 32 R F 3 (ELE)	F43ILL/2	90	1.5	SW	3000	4,590.0	17	T 32 R F 3 (ELE)	F43ILL/2	90	1.5	None	3000	4,590.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	TR: 1st Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120.0	2	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	120.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	TR: 1st Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120.0	2	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	120.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Reception: 1st Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2912	1,048.3	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	None	2912	1,048.3	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Welfare Office: 1st Floor	40	T 32 R F 3 (ELE)	F43ILL/2	90	3.6	SW	2400	8,640.0	40	T 32 R F 3 (ELE)	F43ILL/2	90	3.6	OCC	1900	6,840.0	1,800.0	0.0	$262.80	$128.25	$20.00	0.5	0.4
168	Welfare Office: 1st Floor	14	W 40 C F 2 (MAG)	F42SS	94	1.3	SW	2400	3,158.4	14	W 40 C F 2 (MAG)	F42SS	94	1.3	OCC	1900	2,500.4	658.0	0.0	$96.07	$128.25	$20.00	1.3	1.1
35LED	Welfare Office: 1st Floor	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296.0	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1900	1,026.0	270.0	0.0	$39.42	$128.25	$20.00	3.3	2.7
35LED	Room 1109: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
274LED	Vestibule: 1st Floor	2	CFQ/18/2 RC	CFQ18/2	45	0.1	SW	2912	262.1	2	CFQ/18/2 RC	CFQ18/2	45	0.1	None	2912	262.1	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	T 32 R F 2 (ELE)	F42LL	60	0.1	None	1000	60.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
80	Stairs: 1st Floor	15	SP 36 R CF 1	CFT36/1	51	0.8	SW	3200	2,448.0	15	SP 36 R CF 1	CFT36/1	51	0.8	None	3200	2,448.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Old Kitchen: Basement	20	W 40 C F 2 (MAG)	F42SS	94	1.9	SW	3000	5,640.0	20	W 40 C F 2 (MAG)	F42SS	94	1.9	None	3000	5,640.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Old Kitchen: Basement	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	3000	270.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	3000	270.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Old Kitchen: Basement	20	W 40 C F 2 (MAG)	F42SS	94	1.9	SW	3000	5,640.0	20	W 40 C F 2 (MAG)	F42SS	94	1.9	None	3000	5,640.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Old Kitchen: Basement	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	3000	1,128.0	4	W 40 C F 2 (MAG)	F42SS	94	0.4	None	3000	1,128.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Lobby: Basement	10	W 40 C F 2 (MAG)	F42SS	94	0.9	SW	2912	2,737.3	10	W 40 C F 2 (MAG)	F42SS	94	0.9	None	2912	2,737.3	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Corridor Lighting: Basement	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	Breaker	2280	820.8	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	None	2280	820.8	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Switch Room : Basement	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None	1000	90.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Server Room: Basement	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	1000	720.0	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	None	1000	720.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Office: Basement	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	$19.71	$128.25	$20.00	6.5	5.5
35LED	Cleaning Room: Basement	10	T 32 R F 3 (ELE)	F43ILL/2	90	0.9	SW	1000	900.0	10	T 32 R F 3 (ELE)	F43ILL/2	90	0.9	None	1000	900.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	Office: Basement	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Lock Shop: Basement	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None	1000	180.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	??	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	$26.28	$128.25	$20.00	4.9	4.1
35LED	Corridor Lighting: Basement	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	Breaker	2280	1,641.6	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	None	2280	1,641.6	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Files: Basement	10	W 40 C F 2 (MAG)	F42SS	94	0.9	SW	1000	940.0	10	W 40 C F 2 (MAG)	F42SS	94	0.9	None	1000	940.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Files: Basement	8	W 40 C F 2 (MAG)	F42SS	94	0.8	SW	1000	752.0	8	W 40 C F 2 (MAG)	F42SS	94	0.8	None	1000	752.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
35LED	DWI Office: Basement	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.2	SW	2400	2,808.0	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.2	OCC	1900	2,223.0	585.0	0.0	$85.41	$128.25	$20.00	1.5	1.3
35LED	DWI Office: Basement	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216.0	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	OCC	1900	171.0	45.0	0.0	$6.57	$128.25	$20.00	19.5	16.5
35LED	DWI Office: Basement	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	$13.14	$128.25	$20.00	9.8	8.2
274LED	DWI Office: Basement	11	CFQ/18/2 RC	CFQ18/2	45	0.5	SW	2400	1,188.0	11	CFQ/18/2 RC	CFQ18/2	45	0.5	OCC	1900	940.5	247.5	0.0	$36.14	$128.25	$20.00	3.5	3.0
168	DWI Office: Basement	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	2400	451.2	2	W 40 C F 2 (MAG)	F42SS	94	0.2	OCC	1900	357.2	94.0	0.0	$13.72	$128.25	$20.00	9.3	7.9
168	Room L110: Basement	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	2400	451.2	2	W 40 C F 2 (MAG)	F42SS	94	0.2	OCC	1900	357.2	94.0	0.0	$13.72	$128.25	$20.00	9.3	7.9
168	Electrical Room: Basement	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	1000	376.0	4	W 40 C F 2 (MAG)	F42SS	94	0.4	None	1000	376.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Pump Room: Basement	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94.0	1	W 40 C F 2 (MAG)	F42SS	94	0.1	None	1000	94.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Boiler Room: Basement	10	T 32 R F 2 (ELE)	F42LL	60	0.6	SW	1820	1,092.0	10	T 32 R F 2 (ELE)	F42LL	60	0.6	None	1820	1,092.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
40LED	Elevator: Basement	6	T 32 R F 2 (ELE)	F42LL	60	0.4	SW	3200	1,152.0	6	T 32 R F 2 (ELE)	F42LL	60	0.4	None	3200	1,152.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
168	Corridor Lighting: Basement	1	W 40 C F 2 (MAG)	F42SS	94	0.1	Breaker	2280	214.3	1	W 40 C F 2 (MAG)	F42SS	94	0.1	None	2280	214.3	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
215	Exterior Lighting	4	High Bay MH 350	MHPS/SCWA/350/1	400	1.6	SW	4368	6,988.8	4	High Bay MH 350	MHPS/SCWA/350/1	400	1.6	None	4368	6,988.8	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
	Total	**1,768**				**155.4**			**355998.7**	**1768.0**				**155.4**				**306372.8**	**49625.9**	**0.0**	**7245.4**	**19750.5**	**3080.0**	
																		Demand Savings		**$0**				
																		kWh Savings		**$7,245**				
																		Total Savings		**$7,245**			**2.7**	**2.3**

Energy Audit of the Economic Development Center
CHA Project No.29142
ECM-L3 Lighting Replacements with Occupancy Sensors

		EXISTING CONDITIONS								RETROFIT CONDITIONS								COST & SAVINGS ANALYSIS						
	Area Description	No. of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh	Number of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Retrofit Control	Annual Hours	Annual kWh	Annual kWh Saved	Annual kW Saved	Annual $ Saved	Retrofit Cost	NJ Smart Start Lighting Incentive	Simple Payback With Out Incentive	Simple Payback
Field Code	**Unique description of the location - Room number/Room name: Floor number (if applicable)**	**No. of fixtures before the retrofit**	**Lighting Fixture Code**	**Code from Table of Standard Fixture Wattages**	**Value from Table of Standard Fixture Wattages**	**(Watts/Fixt) * (Fixt No.)**	**Pre-inst. control device**	**Estimated daily hours for the usage group**	**(kW/space) * (Annual Hours)**	**No. of fixtures after the retrofit**	**Lighting Fixture Code**	**Code from Table of Standard Fixture Wattages**	**Value from Table of Standard Fixture Wattages**	**(Watts/Fixt) * (Number of Fixtures)**	**Retrofit control device**	**Estimated annual hours for the usage group**	**(kW/space) * (Annual Hours)**	**(Original Annual kWh) - (Retrofit Annual kWh)**	**(Original Annual kW) - (Retrofit Annual kW)**	**(kWh Saved) * ($/kWh)**	**Cost for renovations to lighting system**	**Prescriptive Lighting Measures**	**Length of time for renovations cost to be recovered**	**Length of time for renovations cost to be recovered**
274LED	Corridor Lighting: 5th Floo	9	CFQ/18/2 RC	CFQ18/2	45	0.4	Breaker	2280	923	9	6BLMWLED	6BLMWLED	13	0.1	None	2,280	267	657	0.3	$ 108.07	$ 1,458.00	$ -	13.5	13.5
168	Corridor Lighting: 5th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	Breaker	2280	643	3	W 28 C F 2	F42SSILL	48	0.1	None	2,280	328	315	0.1	$ 51.78	$ 810.00	$ -	15.6	15.6
35LED	Conference Room: 5th Floo	10	T 32 R F 3 (ELE)	F43ILL/2	90	0.9	SW	1200	1,080	10	T 59 R LED	RTLED38	38	0.4	OCC	1,000	380	700	0.5	$ 124.23	$ 2,490.75	$ 20	20.0	19.9
40LED	Closet: 5th Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120	2	T 38 R LED	RTLED38	38	0.1	None	1,000	76	44	0.0	$ 8.29	$ 472.50	$ 100	57.0	44.9
35LED	Tax Board: 5th Floo	11	T 32 R F 3 (ELE)	F43ILL/2	90	1.0	SW	1200	1,188	11	T 59 R LED	RTLED38	38	0.4	OCC	1,000	418	770	0.6	$ 136.65	$ 2,727.00	$ 20	20.0	19.8
35LED	Kitchen: 5th Floor	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	3000	1,350	5	T 59 R LED	RTLED38	38	0.2	None	3,000	570	780	0.3	$ 124.89	$ 1,181.25	$ -	9.5	9.5
35LED	Storage - Room 5213: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180	2	T 59 R LED	RTLED38	38	0.1	None	1,000	76	104	0.1	$ 19.59	$ 472.50	$ -	24.1	24.1
40LED	Staff WR: 5th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Office: 5th Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Office - Room 5211: 5th Floor	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	OCC	1,900	361	719	0.3	$ 115.99	$ 1,309.50	$ 20	11.3	11.1
168	Corridor Lighting: 5th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	Breaker	2280	643	3	W 28 C F 2	F42SSILL	48	0.1	None	2,280	328	315	0.1	$ 51.78	$ 810.00	$ -	15.6	15.6
35LED	Corridor Lighting: 5th Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	Breaker	2280	205	1	T 59 R LED	RTLED38	38	0.0	None	2,280	87	119	0.1	$ 19.51	$ 236.25	$ -	12.1	12.1
35LED	Room 5212: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
40LED	Men's Room: 5th Floo	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Tax Room: 5th Floo	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	1200	648	6	T 59 R LED	RTLED38	38	0.2	OCC	1,000	228	420	0.3	$ 74.54	$ 1,545.75	$ 20	20.7	20.5
168	Corridor Lighting: 5th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	SW	2280	643	3	W 28 C F 2	F42SSILL	48	0.1	None	2,280	328	315	0.1	$ 51.78	$ 810.00	$ -	15.6	15.6
35LED	Corridor Lighting: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2280	410	2	T 59 R LED	RTLED38	38	0.1	None	2,280	173	237	0.1	$ 39.02	$ 472.50	$ -	12.1	12.1
35LED	File Storage - Room 5205: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	1000	360	4	T 59 R LED	RTLED38	38	0.2	None	1,000	152	208	0.2	$ 39.18	$ 945.00	$ -	24.1	24.1
35LED	Corridor Lighting: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	Breaker	2280	821	4	T 59 R LED	RTLED38	38	0.2	None	2,280	347	474	0.2	$ 78.05	$ 945.00	$ -	12.1	12.1
35LED	Corridor Lighting: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	Breaker	2280	1,847	9	T 59 R LED	RTLED38	38	0.3	None	2,280	780	1,067	0.5	$ 175.61	$ 2,126.25	$ -	12.1	12.1
35LED	Corridor Lighting: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	Breaker	2280	1,847	9	T 59 R LED	RTLED38	38	0.3	None	2,280	780	1,067	0.5	$ 175.61	$ 2,126.25	$ -	12.1	12.1
35LED	Courtroom: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	520	421	9	T 59 R LED	RTLED38	38	0.3	None	520	178	243	0.5	$ 55.36	$ 2,126.25	$ -	38.4	38.4
35LED	Classroom - Room 5312: 5th Floo	12	T 32 R F 3 (ELE)	F43ILL/2	90	1.1	SW	2400	2,592	12	T 59 R LED	RTLED38	38	0.5	OCC	1,800	821	1,771	0.6	$ 285.03	$ 2,963.25	$ 20	10.4	10.3
35LED	Corridor Lighting: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	Breaker	2280	1,847	9	T 59 R LED	RTLED38	38	0.3	None	2,280	780	1,067	0.5	$ 175.61	$ 2,126.25	$ -	12.1	12.1
35LED	Staff MTR: 5th Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1000	180	2	T 59 R LED	RTLED38	38	0.1	None	1,000	76	104	0.1	$ 19.59	$ 472.50	$ -	24.1	24.1
35LED	Room 5313: 5th Floo	14	T 32 R F 3 (ELE)	F43ILL/2	90	1.3	SW	2400	3,024	14	T 59 R LED	RTLED38	38	0.5	OCC	1,900	1,011	2,013	0.7	$ 324.77	$ 3,435.75	$ 20	10.6	10.5
40LED	Toilet Room - Room 5313: 5th Floo	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Room 5304: 5th Floo	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296	6	T 59 R LED	RTLED38	38	0.2	OCC	1,900	433	863	0.3	$ 139.19	$ 1,545.75	$ 20	11.1	11.0
35LED	Room 5311: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 5310: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Staff WTR: 5th Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1000	180	2	T 59 R LED	RTLED38	38	0.1	None	1,000	76	104	0.1	$ 19.59	$ 472.50	$ -	24.1	24.1
35LED	Room 5305: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944	9	T 59 R LED	RTLED38	38	0.3	OCC	1,900	650	1,294	0.5	$ 208.78	$ 2,254.50	$ 20	10.8	10.7
35LED	Room 5306: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944	9	T 59 R LED	RTLED38	38	0.3	OCC	1,900	650	1,294	0.5	$ 208.78	$ 2,254.50	$ 20	10.8	10.7
35LED	Room 5307: 5th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944	9	T 59 R LED	RTLED38	38	0.3	OCC	1,900	650	1,294	0.5	$ 208.78	$ 2,254.50	$ 20	10.8	10.7
35LED	Room 5308: 5th Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	OCC	1,900	361	719	0.3	$ 115.99	$ 1,309.50	$ 20	11.3	11.1
35LED	Kitchen - Room 5309: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	3000	1,080	4	T 59 R LED	RTLED38	38	0.2	None	3,000	456	624	0.2	$ 99.91	$ 945.00	$ -	9.5	9.5
168	Closet: 5th Floor	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	1000	188	2	W 28 C F 2	F42SSILL	48	0.1	None	1,000	96	92	0.1	$ 17.33	$ 540.00	$ -	31.2	31.2
61LED	Closet: 5th Floor	2	T 34 R F 3 (MAG)	F43EE	115	0.2	SW	1000	230	2	T 59 R LED	RTLED38	38	0.1	None	1,000	76	154	0.2	$ 29.01	$ 472.50	$ 100	16.3	12.8
40LED	Room 5417: 5th Floo	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144	1	T 38 R LED	RTLED38	38	0.0	OCC	1,900	72	72	0.0	$ 11.41	$ 364.50	$ 70	31.9	25.8
35LED	Director's Office: 5th Floor	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	2400	1,728	8	T 59 R LED	RTLED38	38	0.3	OCC	1,900	578	1,150	0.4	$ 185.58	$ 2,018.25	$ 20	10.9	10.8
35LED	Conference Room: 5th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	1200	324	3	T 59 R LED	RTLED38	38	0.1	OCC	1,000	114	210	0.2	$ 37.27	$ 837.00	$ 20	22.5	21.9
168	Corridor Director's Office: 5th Floo	10	W 40 C F 2 (MAG)	F42SS	94	0.9	Breaker	2280	2,143	10	W 28 C F 2	F42SSILL	48	0.5	None	2,280	1,094	1,049	0.5	$ 172.61	$ 2,700.00	$ -	15.6	15.6
35LED	Office: 5th Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
40LED	Staff MTR: 5th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1200	72	1	T 38 R LED	RTLED38	38	0.0	OCC	1,000	38	34	0.0	$ 5.90	$ 364.50	$ 70	61.8	49.9
35LED	Room 5405: 5th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	OCC	1,900	217	431	0.2	$ 69.59	$ 837.00	$ 20	12.0	11.7
35LED	Room 5406: 5th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	OCC	1,900	217	431	0.2	$ 69.59	$ 837.00	$ 20	12.0	11.7
35LED	Storage - Room 5412: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180	2	T 59 R LED	RTLED38	38	0.1	None	1,000	76	104	0.1	$ 19.59	$ 472.50	$ -	24.1	24.1
35LED	Room 5415: 5th Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	OCC	1,900	361	719	0.3	$ 115.99	$ 1,309.50	$ 20	11.3	11.1
35LED	Room 5413: 5th Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216	1	T 59 R LED	RTLED38	38	0.0	OCC	1,900	72	144	0.1	$ 23.20	$ 364.50	$ 20	15.7	14.9
35LED	Room 5408: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Copy Room - Room 5414: 5th Floc	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2125	191	1	T 59 R LED	RTLED38	38	0.0	None	2,125	81	111	0.1	$ 18.34	$ 236.25	$ -	12.9	12.9
35LED	Staff WTR: 5th Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
35LED	Room 5409: 5th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Kitchen: 5th Floor	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	3000	810	3	T 59 R LED	RTLED38	38	0.1	None	3,000	342	468	0.2	$ 74.94	$ 708.75	$ -	9.5	9.5
35LED	Room 5410: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 5407: 5th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
61LED	Room 5407: 5th Floo	8	T 34 R F 3 (MAG)	F43EE	115	0.9	SW	2400	2,208	8	T 59 R LED	RTLED38	38	0.3	OCC	1,900	578	1,630	0.6	$ 264.13	$ 2,018.25	$ 420	7.6	6.1
40LED	Closet: 4th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	Closet: 4th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	Closet: 4th Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	Men's Room: 4th Floo	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180	3	T 38 R LED	RTLED38	38	0.1	None	1,000	114	66	0.1	$ 12.43	$ 708.75	$ 150	57.0	44.9
40LED	Ladies' Room: 4th Floo	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180	3	T 38 R LED	RTLED38	38	0.1	None	1,000	114	66	0.1	$ 12.43	$ 708.75	$ 150	57.0	44.9
35LED	Room 4400: 4th Floo	70	T 32 R F 3 (ELE)	F43ILL/2	90	6.3	SW	2400	15,120	70	T 59 R LED	RTLED38	38	2.7	OCC	1,900	5,054	10,066	3.6	$ 1,623.83	$ 16,665.75	$ 20	10.3	10.3
35LED	Room 4414: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
168	Room 4400: 4th Floo	42	W 40 C F 2 (MAG)	F42SS	94	3.9	SW	2400	9,475	42	W 28 C F 2	F42SSILL	48	2.0	OCC	1,900	3,830	5,645	1.9	$ 905.98	$ 11,468.25	$ 20	12.7	12.6
35LED	Room 4411: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Room 4412: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 4413: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
61LED	Room 4413: 4th Floo	2	T 34 R F 3 (MAG)	F43EE	115	0.2	SW	2400	552	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	408	0.2	$ 66.03	$ 600.75	$ 120	9.1	7.3
168	Staff TR: 4th Floor	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	1000	188	2	W 28 C F 2	F42SSILL	48	0.1	None	1,000	96	92	0.1	$ 17.33	$ 540.00	$ -	31.2	31.2
168	Staff TR: 4th Floor	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94	1	W 28 C F 2	F42SSILL	48	0.0	None	1,000	48	46	0.0	$ 8.66	$ 270.00	$ -	31.2	31.2
35LED	Reception: 4th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2912	2,359	9	T 59 R LED	RTLED38	38	0.3	None	2,912	996	1,363	0.5	$ 218.80	$ 2,126.25	$ -	9.7	9.7
168	Reception: 4th Floo	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	2912	1,095	4	W 28 C F 2	F42SSILL	48	0.2	None	2,912	559	536	0.2	$ 86.02	$ 1,080.00	$ -	12.6	12.6
35LED	Room 4102: 4th Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944	9	T 59 R LED	RTLED38	38	0.3	OCC	1,900	650	1,294	0.5	$ 208.78	$ 2,254.50	$ 20	10.8	10.7
168	Room 4102: 4th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	SW	2400	677	3	W 28 C F 2	F42SSILL	48	0.1	OCC	1,900	274	403	0.1	$ 64.71	$ 938.25	$ 20	14.5	14.2
168	Room 4103: 4th Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	SW	2400	677	3	W 28 C F 2	F42SSILL	48	0.1	OCC	1,900	274	403	0.1	$ 64.71	$ 938.25	$ 20	14.5	14.2
35LED	Room 4103: 4th Floo	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.2	SW	2400	2,808	13	T 59 R LED	RTLED38	38	0.5	OCC	1,900	939	1,869	0.7	$ 301.57	$ 3,199.50	$ 20	10.6	10.5
35LED	Economic Growth: 4th Floo	25	T 32 R F 3 (ELE)	F43ILL/2	90	2.3	SW	1200	2,700	25	T 59 R LED	RTLED38	38	1.0	OCC	1,000	950	1,750	1.3	$ 310.57	$ 6,034.50	$ 20	19.4	19.4
168	Economic Growth: 4th Floo	8	W 40 C F 2 (MAG)	F42SS	94	0.8	SW	1200	902	8	W 28 C F 2	F42SSILL	48	0.4	OCC	1,000	384	518	0.4	$ 91.27	$ 2,288.25	$ 20	25.1	24.9
35LED	Room 4205: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Room 4206: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Room 4207: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Room 4208: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Room 4209: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
168	Room 4210: 4th Floo	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	2400	902	4	W 28 C F 2	F42SSILL	48	0.2	OCC	1,900	365	538	0.2	$ 86.28	$ 1,208.25	$ 20	14.0	13.8
35LED	Room 4210: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Closet 4201: 4th Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180	2	T 59 R LED	RTLED38	38	0.1	None	1,000	76	104	0.1	$ 19.59	$ 472.50	$ -	24.1	24.1
168	Staff MTR: 4th Floor	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94	1	W 28 C F 2	F42SSILL	48	0.0	None	1,000	48	46	0.0	$ 8.66	$ 270.00	$ -	31.2	31.2
168	Staff WTR: 4th Floor	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94	1	W 28 C F 2	F42SSILL	48	0.0	None	1,000	48	46	0.0	$ 8.66	$ 270.00	$ -	31.2	31.2
168	Child Health: 4th Floo	15	W 40 C F 2 (MAG)	F42SS	94	1.4	SW	2400	3,384	15	W 28 C F 2	F42SSILL	48	0.7	OCC	1,900	1,368	2,016	0.7	$ 323.56	$ 4,178.25	$ 20	12.9	12.9
35LED	Child Health: 4th Floo	24	T 32 R F 3 (ELE)	F43ILL/2	90	2.2	SW	2400	5,184	24	T 59 R LED	RTLED38	38	0.9	OCC	1,900	1,733	3,451	1.2	$ 556.74	$ 5,798.25	$ 20	10.4	10.4
35LED	Room 4305: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 4306: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 4307: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 4308: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 4309: 4th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	OCC	1,900	217	431	0.2	$ 69.59	$ 837.00	$ 20	12.0	11.7
35LED	Room 4310: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 4311: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 4312: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 4313: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 4314: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 4315: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Room 4318: 4th Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 4316: 4th Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	OCC	1,900	217	431	0.2	$ 69.59	$ 837.00	$ 20	12.0	11.7
35LED	Staff TR: 4th Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
35LED	Staff TR: 4th Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
35LED	Room 4321: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Room 4301: 4th Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
274LED	Corridor Lighting: 4th Floo	13	CFQ/18/2 RC	CFQ18/2	45	0.6	Breaker	2280	1,334	13	6BLMWLED	6BLMWLED	13	0.2	None	2,280	385	948	0.4	$ 156.10	$ 2,106.00	$ -	13.5	13.5
35LED	Corridor Lighting: 4th Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	Breaker	2280	205	1	T 59 R LED	RTLED38	38	0.0	None	2,280	87	119	0.1	$ 19.51	$ 236.25	$ -	12.1	12.1
35LED	Room 3104: 3rd Floo	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	2400	1,728	8	T 59 R LED	RTLED38	38	0.3	OCC	1,900	578	1,150	0.4	$ 185.58	$ 2,018.25	$ 20	10.9	10.8
35LED	3MP - Room 3104: 3rd Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Classroom #2: 3rd Floo	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296	6	T 59 R LED	RTLED38	38	0.2	OCC	1,800	410	886	0.3	$ 142.51	$ 1,545.75	$ 20	10.8	10.7
35LED	Classroom #1: 3rd Floo	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296	6	T 59 R LED	RTLED38	38	0.2	OCC	1,800	410	886	0.3	$ 142.51	$ 1,545.75	$ 20	10.8	10.7
35LED	Room 3104 : 3rd Floo	21	T 32 R F 3 (ELE)	F43ILL/2	90	1.9	SW	2400	4,536	21	T 59 R LED	RTLED38	38	0.8	OCC	1,900	1,516	3,020	1.1	$ 487.15	$ 5,089.50	$ 20	10.4	10.4
168	Room 3104: 3rd Floo	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	2400	226	1	W 28 C F 2	F42SSILL	48	0.0	OCC	1,900	91	134	0.0	$ 21.57	$ 398.25	$ 20	18.5	17.5
35LED	Staff TR: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
35LED	Bus Cards: 3rd Floor	28	T 32 R F 3 (ELE)	F43ILL/2	90	2.5	SW	2912	7,338	28	T 59 R LED	RTLED38	38	1.1	None	2,912	3,098	4,240	1.5	$ 680.70	$ 6,615.00	$ -	9.7	9.7
168	Bus Cards: 3rd Floor	10	W 40 C F 2 (MAG)	F42SS	94	0.9	SW	2912	2,737	10	W 28 C F 2	F42SSILL	48	0.5	None	2,912	1,398	1,340	0.5	$ 215.06	$ 2,700.00	$ -	12.6	12.6
35LED	Room 3234: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3235: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3236: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5

Energy Audit of the Economic Development Center
CHA Project No.29142
ECM-L3 Lighting Replacements with Occupancy Sensors

		EXISTING CONDITIONS								RETROFIT CONDITIONS								COST & SAVINGS ANALYSIS						
	Area Description	No. of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh	Number of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Retrofit Control	Annual Hours	Annual kWh	Annual kWh Saved	Annual kW Saved	Annual $ Saved	Retrofit Cost	NJ Smart Start Lighting Incentive	Simple Payback With Out Incentive	Simple Payback
Field Code	Unique description of the location - Room number/Room name: Floor number (if applicable)	No. of fixtures before the retrofit	Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fixt) * (Fixt No.)	Pre-inst. control device	Estimated daily hours for the usage group	(kW/space) * (Annual Hours)	No. of fixtures after the retrofit	Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fixt) * (Number of Fixtures)	Retrofit control device	Estimated annual hours for the usage group	(kW/space) * (Annual Hours)	(Original Annual kWh) - (Retrofit Annual kWh)	(Original Annual kW) - (Retrofit Annual kW)	(kWh Saved) * ($/kWh)	Cost for renovations to lighting system	Prescriptive Lighting Measures	Length of time for renovations cost to be recovered	Length of time for renovations cost to be recovered
35LED	Room 3237: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3238: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3239: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3240: 3rd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	OCC	1,900	361	719	0.3	$ 115.99	$ 1,309.50	$ 20	11.3	11.1
35LED	Kitchen: 3rd Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	3000	540	2	T 59 R LED	RTLED38	38	0.1	None	3,000	228	312	0.1	$ 49.96	$ 472.50	$ -	9.5	9.5
35LED	Room 3212: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3211: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3210: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3214: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	OCC	1,900	217	431	0.2	$ 69.59	$ 837.00	$ 20	12.0	11.7
35LED	Room 3209: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Staff TR: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
35LED	Room 3213: 3rd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	OCC	1,900	361	719	0.3	$ 115.99	$ 1,309.50	$ 20	11.3	11.1
168	Corridor Lighting: 3rd Floo	16	W 40 C F 2 (MAG)	F42SS	94	1.5	Breaker	2280	3,429	16	W 28 C F 2	F42SSILL	48	0.8	None	2,280	1,751	1,678	0.7	$ 276.18	$ 4,320.00	$ -	15.6	15.6
35LED	Room 3208: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3207: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
40LED	WTR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	MTR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Room 3206: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3205: 3rd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	OCC	1,900	361	719	0.3	$ 115.99	$ 1,309.50	$ 20	11.3	11.1
35LED	Kitchen: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	3000	270	1	T 59 R LED	RTLED38	38	0.0	None	3,000	114	156	0.1	$ 24.98	$ 236.25	$ -	9.5	9.5
35LED	Room 3203: 3rd Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216	1	T 59 R LED	RTLED38	38	0.0	OCC	1,900	72	144	0.1	$ 23.20	$ 364.50	$ 20	15.7	14.9
40LED	WTR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Reception: 3rd Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2912	262	1	T 59 R LED	RTLED38	38	0.0	None	2,912	111	151	0.1	$ 24.31	$ 236.25	$ -	9.7	9.7
35LED	Reception: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2912	524	2	T 59 R LED	RTLED38	38	0.1	None	2,912	221	303	0.1	$ 48.62	$ 472.50	$ -	9.7	9.7
274LED	Reception: 3rd Floo	1	CFQ/18/2 RC	CFQ18/2	45	0.0	SW	2912	131	1	6BLMWLED	6BLMWLED	13	0.0	None	2,912	38	93	0.0	$ 14.96	$ 162.00	$ -	10.8	10.8
22	Lobby: 3rd Floor	5	1T 34 R F 4 (MAG)	F44EE	144	0.7	SW	2912	2,097	5	1T 28 R F 4	F44SSILL	96	0.5	None	2,912	1,398	699	0.2	$ 112.20	$ 708.75	$ -	6.3	6.3
35LED	Corridor Lighting: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	Breaker	2280	410	2	T 59 R LED	RTLED38	38	0.1	None	2,280	173	237	0.1	$ 39.02	$ 472.50	$ -	12.1	12.1
274LED	Corridor Lighting: 3rd Floo	15	CFQ/18/2 RC	CFQ18/2	45	0.7	Breaker	2280	1,539	15	6BLMWLED	6BLMWLED	13	0.2	None	2,280	445	1,094	0.5	$ 180.12	$ 2,430.00	$ -	13.5	13.5
274LED	Lobby: 3rd Floor	7	CFQ/18/2 RC	CFQ18/2	45	0.3	SW	2912	917	7	6BLMWLED	6BLMWLED	13	0.1	None	2,912	265	652	0.2	$ 104.72	$ 1,134.00	$ -	10.8	10.8
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
40LED	WTR: 3rd Floor	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180	3	T 38 R LED	RTLED38	38	0.1	None	1,000	114	66	0.1	$ 12.43	$ 708.75	$ 150	57.0	44.9
40LED	MTR: 3rd Floor	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180	3	T 38 R LED	RTLED38	38	0.1	None	1,000	114	66	0.1	$ 12.43	$ 708.75	$ 150	57.0	44.9
274LED	Corridor Lighting: 3rd Floo	5	CFQ/18/2 RC	CFQ18/2	45	0.2	SW	2280	513	5	6BLMWLED	6BLMWLED	13	0.1	None	2,280	148	365	0.2	$ 60.04	$ 810.00	$ -	13.5	13.5
35LED	Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
35LED	Room 3101: 3rd Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944	9	T 59 R LED	RTLED38	38	0.3	OCC	1,900	650	1,294	0.5	$ 208.78	$ 2,254.50	$ 20	10.8	10.7
35LED	Closet - Room 3101: 3rd Floo	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
35LED	Kitchen: 3rd Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	3000	1,080	4	T 59 R LED	RTLED38	38	0.2	None	3,000	456	624	0.2	$ 99.91	$ 945.00	$ -	9.5	9.5
61LED	Room 3103: 3rd Floo	2	T 34 R F 3 (MAG)	F43EE	115	0.2	SW	2400	552	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	408	0.2	$ 66.03	$ 600.75	$ 120	9.1	7.3
61LED	Room 3102: 3rd Floo	2	T 34 R F 3 (MAG)	F43EE	115	0.2	SW	2400	552	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	408	0.2	$ 66.03	$ 600.75	$ 120	9.1	7.3
168	Corridor Lighting: 3rd Floo	10	W 40 C F 2 (MAG)	F42SS	94	0.9	Breaker	2280	2,143	10	W 28 C F 2	F42SSILL	48	0.5	None	2,280	1,094	1,049	0.5	$ 172.61	$ 2,700.00	$ -	15.6	15.6
35LED	Room 3312: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3311: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3310: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	OCC	1,900	217	431	0.2	$ 69.59	$ 837.00	$ 20	12.0	11.7
40LED	WTR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Room 3309: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3308: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	OCC	1,900	217	431	0.2	$ 69.59	$ 837.00	$ 20	12.0	11.7
35LED	Room 3307: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3300: 3rd Floo	86	T 32 R F 3 (ELE)	F43ILL/2	90	7.7	SW	2400	18,576	86	T 59 R LED	RTLED38	38	3.3	OCC	1,900	6,209	12,367	4.5	$ 1,994.99	$ 20,445.75	$ 20	10.2	10.2
168	Room 3300: 3rd Floo	3	W 40 C F 2 (MAG)	F42SS	94	0.3	SW	2400	677	3	W 28 C F 2	F42SSILL	48	0.1	OCC	1,900	274	403	0.1	$ 64.71	$ 938.25	$ 20	14.5	14.2
40LED	TR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	TR: 3rd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Room 3317: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	OCC	1,900	217	431	0.2	$ 69.59	$ 837.00	$ 20	12.0	11.7
35LED	Room 3318: 3rd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	OCC	1,900	217	431	0.2	$ 69.59	$ 837.00	$ 20	12.0	11.7
35LED	Room 3319: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 3320: 3rd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,080	5	T 59 R LED	RTLED38	38	0.2	OCC	1,900	361	719	0.3	$ 115.99	$ 1,309.50	$ 20	11.3	11.1
35LED	Corridor Lighting: 2nd Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	Breaker	2280	821	4	T 59 R LED	RTLED38	38	0.2	None	2,280	347	474	0.2	$ 78.05	$ 945.00	$ -	12.1	12.1
35LED	Corridor Lighting: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	Breaker	2280	410	2	T 59 R LED	RTLED38	38	0.1	None	2,280	173	237	0.1	$ 39.02	$ 472.50	$ -	12.1	12.1
40LED	Closet: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	Closet: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	Closet: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	Closet: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	MTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	WTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Room 2065: 2nd Floo	11	T 32 R F 3 (ELE)	F43ILL/2	90	1.0	SW	2400	2,376	11	T 59 R LED	RTLED38	38	0.4	OCC	1,900	794	1,582	0.6	$ 255.17	$ 2,727.00	$ 20	10.7	10.6
35LED	Unemployment Office: 2nd Floo	111	T 32 R F 3 (ELE)	F43ILL/2	90	10.0	SW	2400	23,976	111	T 59 R LED	RTLED38	38	4.2	OCC	1,900	8,014	15,962	5.8	$ 2,574.92	$ 26,352.00	$ 20	10.2	10.2
40LED	Staff TR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Corridor Lighting: 2nd Floo	7	T 32 R F 3 (ELE)	F43ILL/2	90	0.6	Breaker	2280	1,436	7	T 59 R LED	RTLED38	38	0.3	None	2,280	606	830	0.4	$ 136.59	$ 1,653.75	$ -	12.1	12.1
35LED	Room 2138: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 2139: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 2140: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 2141: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Kitchen: 2nd Floor	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	3000	2,430	9	T 59 R LED	RTLED38	38	0.3	None	3,000	1,026	1,404	0.5	$ 224.81	$ 2,126.25	$ -	9.5	9.5
35LED	Corridor Lighting: 2nd Floo	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	Breaker	2280	1,026	5	T 59 R LED	RTLED38	38	0.2	None	2,280	433	593	0.3	$ 97.56	$ 1,181.25	$ -	12.1	12.1
40LED	WTR: 2nd Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120	2	T 38 R LED	RTLED38	38	0.1	None	1,000	76	44	0.0	$ 8.29	$ 472.50	$ 100	57.0	44.9
35LED	Room 2142: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	None	2,400	182	250	0.1	$ 40.85	$ 472.50	$ -	11.6	11.6
35LED	Room 2143: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	None	2,400	182	250	0.1	$ 40.85	$ 472.50	$ -	11.6	11.6
40LED	MTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Room 2144: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 2145: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 2146: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 2147: 2nd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	OCC	1,900	217	431	0.2	$ 69.59	$ 837.00	$ 20	12.0	11.7
35LED	Room 2148: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Reception - Room 2102: 2nd Floo	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	2912	2,097	8	T 59 R LED	RTLED38	38	0.3	None	2,912	885	1,211	0.4	$ 194.48	$ 1,890.00	$ -	9.7	9.7
35LED	Room 2149: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 2150: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 2151: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 2152: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
40LED	WTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Room 2153: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 2154: 2nd Floo	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
40LED	MTR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Room 2104: 2nd Floo	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	2400	1,728	8	T 59 R LED	RTLED38	38	0.3	OCC	1,900	578	1,150	0.4	$ 185.58	$ 2,018.25	$ 20	10.9	10.8
35LED	Computer Room: 2nd Floo	50	T 32 R F 3 (ELE)	F43ILL/2	90	4.5	SW	1000	4,500	50	T 59 R LED	RTLED38	38	1.9	None	1,000	1,900	2,600	2.6	$ 489.74	$ 11,812.50	$ -	24.1	24.1
35LED	Room 2024: 2nd Floo	15	T 32 R F 3 (ELE)	F43ILL/2	90	1.4	SW	2400	3,240	15	T 59 R LED	RTLED38	38	0.6	OCC	1,900	1,083	2,157	0.8	$ 347.96	$ 3,672.00	$ 20	10.6	10.5
35LED	Closet: 2nd Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
35LED	Room 2072: 2nd Floo	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	OCC	1,900	217	431	0.2	$ 69.59	$ 837.00	$ 20	12.0	11.7
35LED	Room 2071: 2nd Floo	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
40LED	TR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Room 2070: 2nd Floo	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	2400	1,944	9	T 59 R LED	RTLED38	38	0.3	OCC	1,900	650	1,294	0.5	$ 208.78	$ 2,254.50	$ 20	10.8	10.7
35LED	Room 2069: 2nd Floo	15	T 32 R F 3 (ELE)	F43ILL/2	90	1.4	SW	2400	3,240	15	T 59 R LED	RTLED38	38	0.6	OCC	1,900	1,083	2,157	0.8	$ 347.96	$ 3,672.00	$ 20	10.6	10.5
35LED	Room 2067: 2nd Floo	12	T 32 R F 3 (ELE)	F43ILL/2	90	1.1	SW	2400	2,592	12	T 59 R LED	RTLED38	38	0.5	OCC	1,900	866	1,726	0.6	$ 278.37	$ 2,963.25	$ 20	10.6	10.6
40LED	TR: 2nd Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Office: 1st Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Office: 1st Floor	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296	6	T 59 R LED	RTLED38	38	0.2	OCC	1,900	433	863	0.3	$ 139.19	$ 1,545.75	$ 20	11.1	11.0
35LED	Office: 1st Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216	1	T 59 R LED	RTLED38	38	0.0	OCC	1,900	72	144	0.1	$ 23.20	$ 364.50	$ 20	15.7	14.9
168	Welfare Office: 1st Floor	22	W 40 C F 2 (MAG)	F42SS	94	2.1	SW	2400	4,963	22	W 28 C F 2	F42SSILL	48	1.1	OCC	1,900	2,006	2,957	1.0	$ 474.56	$ 6,068.25	$ 20	12.8	12.7
35LED	Welfare Office: 1st Floor	97	T 32 R F 3 (ELE)	F43ILL/2	90	8.7	SW	2400	20,952	97	T 59 R LED	RTLED38	38	3.7	OCC	1,900	7,003	13,949	5.0	$ 2,250.16	$ 23,044.50	$ 20	10.2	10.2
274LED	Records Office: 1st Floor	4	CFQ/18/2 RC	CFQ18/2	45	0.2	SW	2400	432	4	6BLMWLED	6BLMWLED	13	0.1	OCC	1,900	99	333	0.1	$ 54.07	$ 776.25	$ 20	14.4	14.0
35LED	Records Office: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 1411: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 1412: 1st Floor	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216	1	T 59 R LED	RTLED38	38	0.0	OCC	1,900	72	144	0.1	$ 23.20	$ 364.50	$ 20	15.7	14.9
35LED	Room 1410: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
35LED	Room 1409: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
40LED	WTR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	MTR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Café: 1st Floor	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	1600	1,152	8	T 59 R LED	RTLED38	38	0.3	OCC	1,200	365	787	0.4	$ 132.55	$ 2,018.25	$ 20	15.2	15.1
40LED	WTR: 1st Floor	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180	3	T 38 R LED	RTLED38	38	0.1	None	1,000	114	66	0.1	$ 12.43	$ 708.75	$ 150	57.0	44.9
274LED	Corridor Lighting: 1st Floo	7	CFQ/18/2 RC	CFQ18/2	45	0.3	Breaker	2280	718	7	6BLMWLED	6BLMWLED	13	0.1	None	2,280	207	511	0.2	$ 84.05	$ 1,134.00	$ -	13.5	13.5
40LED	MTR: 1st Floor	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1000	180	3	T 38 R LED	RTLED38	38	0.1	None	1,000	114	66	0.1	$ 12.43	$ 708.75	$ 150	57.0	44.9

Energy Audit of the Economic Development Center
CHA Project No.29142
ECM-L3 Lighting Replacements with Occupancy Sensors

		EXISTING CONDITIONS							RETROFIT CONDITIONS								COST & SAVINGS ANALYSIS						
Field Code	Area Description Unique description of the location - Room number/Room name: Floor number (if applicable)	No. of Fixtures No. of fixtures before the retrofit	Standard Fixture Code Lighting Fixture Code	Fixture Code Code from Table of Standard Fixture Wattages	Watts per Fixture Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fixt) * (Fixt No.)	Exist Control Pre-inst. control device	Annual Hours Estimated daily hours for the usage group	Annual kWh (kW/space) * (Annual Hours)	Number of Fixtures No. of fixtures after the retrofit	Standard Fixture Code Lighting Fixture Code	Fixture Code Code from Table of Standard Fixture Wattages	Watts per Fixture Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fixt) * (Number of Fixtures)	Retrofit control Retrofit control device	Annual Hours Estimated annual hours for the usage group	Annual kWh (kW/space) * (Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kW Saved (Original Annual kW) - (Retrofit Annual kW)	Annual $ Saved (kWh Saved) * ($/kWh)	Retrofit Cost Cost for renovations to lighting system	NJ Smart Start Lighting Incentive Prescriptive Lighting Measures	Simple Payback With Out Incentive Length of time for renovations cost to be recovered	Simple Payback Length of time for renovations cost to be recovered
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
22	Lobby: 1st Floor	1	1T 34 R F 4 (MAG)	F44EE	144	0.1	SW	2912	419	1	1T 28 R F 4	F44SSILL	96	0.1	None	2,912	280	140	0.0	$ 22.44	$ 141.75	$ -	6.3	6.3
274LED	Bus Card: 1st Floor	3	CFQ18/2 RC	CFQ18/2	45	0.1	SW	2912	393	3	6BLMWLED	6BLMWLED	13	0.0	None	2,912	114	280	0.1	$ 44.88	$ 486.00	$ -	10.8	10.8
35LED	Bus Card: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2912	524	2	T 59 R LED	RTLED38	38	0.1	None	2,912	221	303	0.1	$ 48.62	$ 472.50	$ -	9.7	9.7
22	Lobby: 1st Floor	15	1T 34 R F 4 (MAG)	F44EE	144	2.2	SW	2912	6,290	15	1T 28 R F 4	F44SSILL	96	1.4	None	2,912	4,193	2,097	0.7	$ 336.61	$ 2,126.25	$ -	6.3	6.3
274LED	Lobby: 1st Floor	28	CFQ18/2 RC	CFQ18/2	45	1.3	SW	2912	3,669	28	6BLMWLED	6BLMWLED	13	0.4	None	2,912	1,060	2,609	0.9	$ 418.89	$ 4,536.00	$ -	10.8	10.8
22	Vestibule: 1st Floor	2	1T 34 R F 4 (MAG)	F44EE	144	0.3	SW	2912	839	2	1T 28 R F 4	F44SSILL	96	0.2	None	2,912	559	280	0.1	$ 44.88	$ 283.50	$ -	6.3	6.3
35LED	Waiting Area: 1st Floor	17	T 32 R F 3 (ELE)	F43ILL/2	90	1.5	SW	3000	4,590	17	T 59 R LED	RTLED38	38	0.6	None	3,000	1,938	2,652	0.9	$ 424.64	$ 4,016.25	$ -	9.5	9.5
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	TR: 1st Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120	2	T 38 R LED	RTLED38	38	0.1	None	1,000	76	44	0.0	$ 8.29	$ 472.50	$ 100	57.0	44.9
40LED	TR: 1st Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120	2	T 38 R LED	RTLED38	38	0.1	None	1,000	76	44	0.0	$ 8.29	$ 472.50	$ 100	57.0	44.9
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
35LED	Reception: 1st Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2912	1,048	4	T 59 R LED	RTLED38	38	0.2	None	2,912	443	606	0.2	$ 97.24	$ 945.00	$ -	9.7	9.7
35LED	Welfare Office: 1st Floor	40	T 32 R F 3 (ELE)	F43ILL/2	90	3.6	SW	2400	8,640	40	T 59 R LED	RTLED38	38	1.5	OCC	1,900	2,888	5,752	2.1	$ 927.90	$ 9,578.25	$ 20	10.3	10.3
168	Welfare Office: 1st Floor	14	W 40 C F 2 (MAG)	F42SS	94	1.3	SW	2400	3,158	14	W 28 C F 2	F42SSILL	48	0.7	OCC	1,900	1,277	1,882	0.6	$ 301.99	$ 3,908.25	$ 20	12.9	12.9
35LED	Welfare Office: 1st Floor	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296	6	T 59 R LED	RTLED38	38	0.2	OCC	1,900	433	863	0.3	$ 139.19	$ 1,545.75	$ 20	11.1	11.0
35LED	Room 1109: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
274LED	Vestibule: 1st Floor	2	CFQ18/2 RC	CFQ18/2	45	0.1	SW	2912	262	2	6BLMWLED	6BLMWLED	13	0.0	None	2,912	76	186	0.1	$ 29.92	$ 324.00	$ -	10.8	10.8
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	None	1,000	38	22	0.0	$ 4.14	$ 236.25	$ 50	57.0	44.9
80	Stairs: 1st Floor	15	SP 36 R CF 1	CFT36/1	51	0.8	SW	3200	2,448	15	SP 36 R CF 1	CFT36/1	51	0.8	None	3,200	2,448	-	0.0	$ -	$ -	$ -	-	-
168	Old Kitchen: Basement	20	W 40 C F 2 (MAG)	F42SS	94	1.9	SW	3000	5,640	20	W 28 C F 2	F42SSILL	48	1.0	None	3,000	2,880	2,760	0.9	$ 441.93	$ 5,400.00	$ -	12.2	12.2
35LED	Old Kitchen: Basement	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	3000	270	1	T 59 R LED	RTLED38	38	0.0	None	3,000	114	156	0.1	$ 24.98	$ 236.25	$ -	9.5	9.5
168	Old Kitchen: Basement	20	W 40 C F 2 (MAG)	F42SS	94	1.9	SW	3000	5,640	20	W 28 C F 2	F42SSILL	48	1.0	None	3,000	2,880	2,760	0.9	$ 441.93	$ 5,400.00	$ -	12.2	12.2
168	Old Kitchen: Basement	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	3000	1,128	4	W 28 C F 2	F42SSILL	48	0.2	None	3,000	576	552	0.2	$ 88.39	$ 1,080.00	$ -	12.2	12.2
168	Lobby: Basement	10	W 40 C F 2 (MAG)	F42SS	94	0.9	SW	2912	2,737	10	W 28 C F 2	F42SSILL	48	0.5	None	2,912	1,398	1,340	0.5	$ 215.06	$ 2,700.00	$ -	12.6	12.6
35LED	Corridor Lighting: Basement	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	Breaker	2280	821	4	T 59 R LED	RTLED38	38	0.2	None	2,280	347	474	0.2	$ 76.05	$ 945.00	$ -	12.1	12.1
35LED	Switch Room : Basement	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	None	1,000	38	52	0.1	$ 9.79	$ 236.25	$ -	24.1	24.1
35LED	Server Room: Basement	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	1000	720	8	T 59 R LED	RTLED38	38	0.3	None	1,000	304	416	0.4	$ 78.36	$ 1,890.00	$ -	24.1	24.1
35LED	Office: Basement	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648	3	T 59 R LED	RTLED38	38	0.1	OCC	1,900	217	431	0.2	$ 69.59	$ 837.00	$ 20	12.0	11.7
35LED	Cleaning Room: Basemen	10	T 32 R F 3 (ELE)	F43ILL/2	90	0.9	SW	1000	900	10	T 59 R LED	RTLED38	38	0.4	None	1,000	380	520	0.5	$ 97.95	$ 2,362.50	$ -	24.1	24.1
35LED	Office: Basement	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Lock Shop: Basemen	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180	2	T 59 R LED	RTLED38	38	0.1	None	1,000	76	104	0.1	$ 19.59	$ 472.50	$ -	24.1	24.1
35LED	??	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864	4	T 59 R LED	RTLED38	38	0.2	OCC	1,900	289	575	0.2	$ 92.79	$ 1,073.25	$ 20	11.6	11.4
35LED	Corridor Lighting: Basemen	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	Breaker	2280	1,642	8	T 59 R LED	RTLED38	38	0.3	None	2,280	693	948	0.4	$ 156.10	$ 1,890.00	$ -	12.1	12.1
168	Files: Basement	10	W 40 C F 2 (MAG)	F42SS	94	0.9	SW	1000	940	10	W 28 C F 2	F42SSILL	48	0.5	None	1,000	480	460	0.5	$ 86.65	$ 2,700.00	$ -	31.2	31.2
168	Files: Basement	8	W 40 C F 2 (MAG)	F42SS	94	0.8	SW	1000	752	8	W 28 C F 2	F42SSILL	48	0.4	None	1,000	384	368	0.4	$ 69.32	$ 2,160.00	$ -	31.2	31.2
35LED	DWI Office: Basement	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.2	SW	2400	2,808	13	T 59 R LED	RTLED38	38	0.5	OCC	1,900	939	1,869	0.7	$ 301.57	$ 3,199.50	$ 20	10.6	10.5
35LED	DWI Office: Basement	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216	1	T 59 R LED	RTLED38	38	0.0	OCC	1,900	72	144	0.1	$ 23.20	$ 364.50	$ 20	15.7	14.9
35LED	DWI Office: Basement	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	OCC	1,900	144	288	0.1	$ 46.40	$ 600.75	$ 20	12.9	12.5
274LED	DWI Office: Basement	11	CFQ/18/2 RC	CFQ18/2	45	0.5	SW	2400	1,188	11	6BLMWLED	6BLMWLED	13	0.1	OCC	1,900	272	916	0.4	$ 148.69	$ 1,910.25	$ 20	12.8	12.7
168	DWI Office: Basement	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	2400	451	2	W 28 C F 2	F42SSILL	48	0.1	OCC	1,900	182	269	0.1	$ 43.14	$ 668.25	$ 20	15.5	15.0
168	Room LL10: Basement	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	2400	451	2	W 28 C F 2	F42SSILL	48	0.1	OCC	1,900	182	269	0.1	$ 43.14	$ 668.25	$ 20	15.5	15.0
168	Electrical Room: Basemen	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	1000	376	4	W 28 C F 2	F42SSILL	48	0.2	None	1,000	192	184	0.2	$ 34.66	$ 1,080.00	$ -	31.2	31.2
168	Pump Room: Basemen	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94	1	W 28 C F 2	F42SSILL	48	0.0	None	1,000	48	46	0.0	$ 8.66	$ 270.00	$ -	31.2	31.2
40LED	Boiler Room: Basemen	10	T 32 R F 2 (ELE)	F42LL	60	0.6	SW	1820	1,092	10	T 38 R LED	RTLED38	38	0.4	None	1,820	692	400	0.2	$ 67.78	$ 2,362.50	$ 500	34.9	27.5
40LED	Elevator: Basemen	6	T 32 R F 2 (ELE)	F42LL	60	0.4	SW	3200	1,152	6	T 38 R LED	RTLED38	38	0.2	None	3,200	730	422	0.1	$ 67.26	$ 1,417.50	$ 300	21.1	16.6
168	Corridor Lighting: Basemen	1	W 40 C F 2 (MAG)	F42SS	94	0.1	Breaker	2280	214	1	W 28 C F 2	F42SSILL	48	0.0	None	2,280	109	105	0.0	$ 17.26	$ 270.00	$ -	-	15.6
215	Exterior Lighting	4	High Bay MH 350	MHPS/SCWA/350/1	400	1.6	SW	4368	6,989	4	F48T5/HO	F44GHL	234	0.9	None	4,368	4,088	2,900	0.7	$ 451.58	$ 1,890.00	$ 400	4.2	3.3
S	Total	1,768				155.4			355,999	1,768				69.5			138,283		85.9	35,427	433,748	$8,130		
S																	Demand Savings			85.9	$3,640			
S																	kWh Savings			217,715	$31,786			
S																	Total Savings				$35,427		12.2	12.0

APPENDIX C

ECM Calculations

Essex County
CHA Project Number: 29142

Rate of Discount (used for NPV) 3.0%

Utility Costs		Yearly Usage	Metric Ton Carbon Dioxide Equivalent	Building Area	Annual Utility Cost		
$ 0.156	$/kWh blended		0.000420205	113,750	Electric	Natural Gas	Fuel Oil
$ 0.146	$/kWh supply	2,427,211	0.000420205		$ 379,136	$ 51,876	
$ 3.53	$/kW	715.0	0				
$ 0.85	$/Therm	61,577	0.00533471				
$ 5.56	$/kgals	1	0				
	$/Gal						

Economic Development Center

Recommend? Y or N		Item	Savings kW	kWh	therms	No. 2 Oil gal	Water kgal	$	Cost	Simple Payback	Life Expectancy	Equivalent CO_2 (Metric tons)	NJ Smart Start Incentives	Direct Install Eligible (Y/N)	Payback w/ Incentives	Simple Projected Lifetime Savings kW	kWh	therms	kgal/yr	$	ROI	NPV	IRR
Y	ECM-1	Insulate Wall Cavity behind Wall Panels	0.0	10,793	1,775	0	0	3,187	$ 182,206	57.2	25.0	14.0		N	57.2	0.0	269,822	44,363	0	$ 79,667	(0.6)	($126,716)	-5.6%
Y	ECM-2	Install Window Film	0.0	60,856	0	0	0	9,494	$ 197,600	20.8	15.0	25.6		N	20.8	0.0	912,842	0	0	$ 142,403	(0.3)	($84,267)	-3.8%
Y	ECM-3	Install Condensing Boilers	0.0	0	2,969	0	0	2,514	$ 150,246	59.8	20.0	15.8	$ 2,000	N	59.0	0.0	0	59,371	0	$ 50,287	(0.7)	($110,838)	-8.6%
Y	ECM-4	Install VFDs on Hot Water Pumps	24.0	7,984	0	0	0	2,184	$ 19,441	8.9	10.0	3.4	$ 1,500	N	8.2	240.5	79,835	0	0	$ 22,641	0.2	$692	3.7%
Y	ECM-5	Retro-Commission DDC Controls	0.0	189,322	8,498	0	0	36,732	$ 39,427	1.1	15.0	124.9		N	0.0	0.0	2,839,837	127,464	0	$ 550,977	13.0	$399,075	93.2%
N	ECM-L1	Lighting Replacements / Upgrades	85.9	196,398	0	0	0	32,314	$ 413,998	12.8	10.0	82.5	$ 5,050	N	12.7	859.0	1,963,980	0	0	$ 342,768	(0.2)	($133,303)	-4.1%
N	ECM-L2	Install Lighting Controls (Add Occupancy Sensors)	0.0	49,626	0	0	0	7,245	$ 19,751	2.7	10.0	20.9	$ 3,080	N	2.3	0.0	496,260	0	0	$ 77,417	2.9	$45,130	42.2%
Y	ECM-L3	Lighting Replacements with Controls (Occupancy Sensors)	85.9	217,715	0	0	0	35,427	$ 433,748	12.2	10.0	91.5	$ 8,130	N	12.0	859.0	2,177,150	0	0	$ 376,023	(0.1)	($123,419)	-3.2%
		Total (Not Including ECMs L1, L2)	**109.9**	**486,670**	**13,241**	**0**	**0**	**$ 89,538**	**$ 1,022,668**	**11.4**	**10.6**	**305**	**$ 13,630**		**11.3**	**1,099**	**6,279,487**	**231,198**	**-**	**$ 1,221,998**	**0.2**	**($245,263)**	**-2.1%**
		Recommended Measures (highlighted green above)	**109.9**	**486,670**	**13,241**	**0**	**0**	**$ 89,538**	**$ 1,022,668**	**11.4**	**10.6**	**275**	**$ 11,630**	**0**	**11.3**	**1,099**	**6,279,487**	**231,198**	**-**	**$ 1,221,998**	**0.2**	**($247,263)**	**-2.2%**
		% of Existing	**15%**	**20.05%**	**21.50%**	**0**	**0**																

		City:	Newark, NJ				
		Occupied Hours/Week	70	70	70	70	50
			Building Operating Hours	Auditorium Occupied Hours	Gymnasium Occupied Hours	Library Occupied Hours	Classrooms Occupied Hours
Temp	Enthalpy h (Btu/lb)	Bin Hours					
102.5							
97.5	35.4	6	3	3	3	3	2
92.5	37.4	31	13	13	13	13	9
87.5	35.0	131	55	55	55	55	39
82.5	33.0	500	208	208	208	208	149
77.5	31.5	620	258	258	258	258	185
72.5	29.9	664	277	277	277	277	198
67.5	27.2	854	356	356	356	356	254
62.5	24.0	927	386	386	386	386	276
57.5	20.3	600	250	250	250	250	179
52.5	18.2	730	304	304	304	304	217
47.5	16.0	491	205	205	205	205	146
42.5	14.5	656	273	273	273	273	195
37.5	12.5	1,023	426	426	426	426	304
32.5	10.5	734	306	306	306	306	218
27.5	8.7	334	139	139	139	139	99
22.5	7.0	252	105	105	105	105	75
17.5	5.4	125	52	52	52	52	37
12.5	3.7	47	20	20	20	20	14
7.5	2.1	34	14	14	14	14	10
2.5	1.3	1	0	0	0	0	0
-2.5							
-7.5							

Multipliers	
Material:	1.027
Labor:	1.246
Equipment:	1.124

Heating System Efficiency	80%
Cooling Eff (kW/ton)	1.2

Heating		
Hours	4,427	Hrs
Weighted Avg	40	F
Avg	28	F

Cooling		
Hours	4,333	Hrs
Weighted Avg	68	F
Avg	78	F

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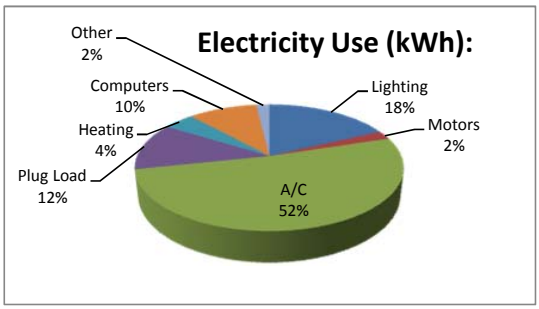
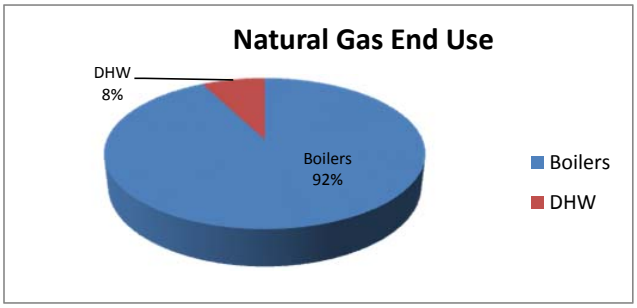
Utility End Use Analysis			
Electricity Use (kWh):		**Notes/Comments:**	
2,427,211	Total	Based on utility analysis	
436,000	Lighting	From Lighting Calculations	17.96%
53,000	Motors	Estimated	2.18%
1,250,000	A/C	Estimated	51.50%
295,000	Plug Load	Estimated	12.15%
107,000	Heating	Estimated	4.41%
240,000	Computers	Estimated	9.89%
46,211	Other	Remaining	1.90%
			100.00%
Natural Gas Use (Therms):		**Notes/Comments:**	
61,577	Total	Based on utility analysis	
61,577	Boilers	Therms/SF x Square Feet Served	1
5,075	DHW	Based on utility analysis	0.082417136
0	Kitchen	Based on utility analysis	0





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ECM-1 Insulate Wall Cavity

Existing: wall insulation is minimal, assumed to be R-13 .
Proposed: Install 2" rigid styrofoam insulation behind all exterior metal wall panels

Area of exterior wall	40,320	SF	Cooling System Efficiency	1.2	kW/ton	Heating System Efficiency	80%	
Existing Infiltration Factor	**0.06**	**cfm/SF**	Ex Occupied Clng Temp.	74	*F	Heating On Point	55	*F
Proposed Infiltration Facto	**0.02**	**cfm/SF**	Ex Unoccupied Clng Temp.	74	*F	Ex Occupied Htg Temp.	72	*F
Existing U Value	**0.076**	**Btuh/SF/°F**	Cooling Occ Enthalpy Setpoi	27.5	Btu/lb	Ex Unoccupied Htg Temp.	72	*F
Proposed U Value	**0.053**	**Btuh/SF/°F**	Cooling Unocc Enthalpy Setp	27.5	Btu/lb	Cooling Electricity	$ 0.156	$/kWh
						Heating NG Cost	$ 0.85	$/Therm

					EXISTING LOADS		PROPOSED LOADS		COOLING ENERGY		HEATING ENERGY	
					Occupied	Unoccupied	Occupied	Unoccupied				
Avg Ext Wall Temp. Bins °F	**Avg Outdoor Air Enthalpy**	**Existing Equipment Bin Hours**	**Occupied Equipment Bin Hours**	**Unoccupied Equipment Bin Hours**	**Infiltration & Heat Load BTUH**	**Infiltration & Heat Load BTUH**	**Infiltration & Heat Load BTUH**	**Infiltration & Heat Load BTUH**	**Existing Cooling Energy kWh**	**Proposed Cooling Energy kWh**	**Existing Heating Energy Therms**	**Proposed Heating Energy Therms**
A		**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**
117.5	35.4	6	3	4	-219,379	-219,379	-120,950	-120,950	132	73	0	0
112.5	37.4	31	13	18	-225,773	-225,773	-117,584	-117,584	700	365	0	0
107.5	35.0	131	55	76	-184,137	-184,137	-98,208	-98,208	2412	1287	0	0
102.5	33.0	500	208	292	-147,721	-147,721	-80,573	-80,573	7386	4029	0	0
97.5	31.5	620	258	362	-116,078	-116,078	-64,528	-64,528	7197	4001	0	0
92.5	29.9	664	277	387	-82,882	-82,882	-47,966	-47,966	5503	3185	0	0
87.5	27.2	854	356	498	-37,940	-37,940	-27,488	-27,488	3240	2348	0	0
82.5	24.0	927	386	541	12,124	12,124	-5,303	-5,303	0	492	140	0
77.5	20.3	600	250	350	68,199	68,199	18,885	18,885	0	0	511	142
72.5	18.2	730	304	426	0	0	0	0	0	0	0	0
67.5	16.0	491	205	286	0	0	0	0	0	0	0	0
62.5	14.5	656	273	383	0	0	0	0	0	0	0	0
57.5	12.5	1,023	426	597	0	0	0	0	0	0	0	0
52.5	10.5	734	306	428	110,703	110,703	58,339	58,339	0	0	1,016	535
47.5	8.7	334	139	195	139,088	139,088	73,298	73,298	0	0	581	306
42.5	7.0	252	105	147	167,473	167,473	88,256	88,256	0	0	528	278
37.5	5.4	125	52	73	195,858	195,858	103,215	103,215	0	0	306	161
32.5	3.7	47	20	27	224,244	224,244	118,174	118,174	0	0	132	69
27.5	2.1	34	14	20	252,629	252,629	133,133	133,133	0	0	107	57
22.5	1.3	1	0	1	281,014	281,014	148,091	148,091	0	0	4	2
TOTALS		**8,760**	**3,650**	**5,110**					26570	15777	**3,325**	**1,550**

Existing Wall Infiltration	**2,419**	**cfm**
Existing Wall Heat Transfer	**3,064**	**Btuh/°F**
Proposed Wall Infiltration	**806**	**cfm**
Proposed Wall Heat Transfer	**2,121**	**Btuh/°F**

Savings	**1,775**	**Therms**	**$ 1,503**
	10,793	**kWh**	**$ 1,684**
			$ 3,187

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ECM-1 Insulate Wall Cavity - Cost

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
						$ -	$ -		$ -	
2" rigid styrofoam board insulation	40,320	SF	$ 0.800	$ 1.000	$ 0.130	$ 33,224	$ 50,400	$ 5,871	$ 89,494	Vendor quote
-- exterior wall panel access	40,320	SF		$ 1.000	$ 0.130	$ -	$ 50,400	$ 5,871	$ 56,271	Engineeing estimate
						$ -	$ -	$ -	$ -	

Note: Cost estimates are for energy savings calculations only, do not use for procurement

$ 145,765	Subtotal
$ 36,441	25% Contingency
$ 182,206	**Total**

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ECM-2: Window Film

Existing: Clear glazing has high solar gain requiring additional cooling
Proposed: Install window film to reduce solar heat gain and therefore reduce cooling load

Linear Feet of window Edge	15,120.0	LF	Cooling System Efficiency	1.2	kW/ton	Heating System Efficiency	0%	
Area of window glass	15,120.0	SF	Ex Occupied Clng Temp.	74	*F	Heating On Temp.	55	*F
Existing Infiltration Factor	0.00	cfm/LF	Ex Unoccupied Clng Temp.	85	*F	Ex Occupied Htg Temp.	72	*F
Proposed Infiltration Factor	0.00	cfm/LF	Cooling Occ Enthalpy Setpoi	27.5	Btu/lb	Ex Unoccupied Htg Temp.	72	*F
Existing U Value	0.00	Btuh/SF/°F	Cooling Unocc Enthalpy Setp	27.5	Btu/lb	Electricity	$ 0.156	$/kWh
Proposed U Value	0.00	Btuh/SF/°F						

Average Transmitted Solar Radiation (Btu/ft2/day) for Double Glazing, Uncertainty +/-9% *

Months	Horizontal Unshaded	North Unshaded	North Shaded	East Unshaded	East Shaded	South Unshaded	South Shaded	West Unshaded	West Shaded	Averages	Total Btu/Windows per Day	BTUH daily average	Cooling Energy per Year (kWh)
January	390	130	120	280	250	730	710	280	250	349	5,275,200	219800	0
February	590	180	160	320	340	800	730	380	340	427	6,451,200	268800	0
March	860	240	210	520	450	770	600	520	450	513	7,761,600	323400	0
April **	1120	310	270	650	550	650	430	630	530	571	8,635,200	359800	6476.4
May	1300	370	320	700	590	550	370	690	580	608	9,189,600	382900	28487.8
June	1400	410	360	740	610	510	370	730	610	638	9,643,200	401800	28929.6
July	1380	400	350	740	620	530	380	730	610	638	9,643,200	401800	29893.9
August	1230	340	300	690	580	620	400	670	560	599	9,055,200	377300	28071.1
September	980	270	240	580	500	740	530	570	490	544	8,232,000	343000	24696.0
October **	700	200	180	450	400	820	720	440	380	477	7,207,200	300300	5585.6
November	430	140	130	300	260	700	670	280	250	351	5,308,800	221200	0
December	320	120	100	230	210	650	630	230	200	299	4,519,200	188300	0
													152140.38

Effectiveness of Window Film:	40%	**Savings**	**0**	**Therms**	**$ -**
			60,856	**kWh**	**$ 9,494**
					$ 9,494

Window ID	Location	Quantity	Width (ft)	Height (ft)	Linear Feet (LF)	Area (SF)	Infiltration Rate (CFM/LF)	U Value (Btuh/SF/°F)	Infiltration (CFM)	Heat Transfer (Btuh/°F)
1	building	840	3	6	15120.0	15120.0	0.2	0.8	3024.0	12096.0
Total		**840**	**6**	**12**	**15,120.0**	**15,120.0**	**0.20**	**0.80**	**3024.0**	**12096.0**

Notes * Data provided for Latitude: 40.78°N Longitude: 73.97°W Elevation: 187 feet, New York City, NY
** Solar heat gain is conservatively reduced by 75% in these months to offset days that require heating

Essex County
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Economic Development Center

ECM-2 Window Film - Cost

Multipliers	
Material:	1.03
Labor:	1.35
Equipment:	1.10

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
Window Film Installation	15,120	sq.ft	$ 8.00	$ 1.00	$ -	$ 120,960	$ 15,120	$ -	$ 136,080	Vendor Est per SF

***Cost estimated are for Energy Savings only- do not use for procurement**

$ 136,080	Subtotal
$ 13,608	10% Contingency
$ 29,938	20% Contractor O&P
$ 17,963	10% Engineering Fees
$ 197,600	**Total**

Essex County
CHA Project Number: 29142
Economic Development Center

ECM-3: Boiler Replacement

Description: This ECM evaluates the replacement of one existing hot water boiler with a high efficiency condensing gas boiler. The existing boiler efficiency is 80% (per NJBPU protocols) and the proposed boiler efficiency is 90% (average seasonal efficiency). Electrical power consumption due to pumps is considered to be the same for both the proposed system and the baseline system. The new boilerwould be the primary heat source and operate during shoulder months.

Item	Value	Units	Formula/Comments
Baseline Fuel Cost	$ 0.85	/ Therm	Natural Gas
Baseline Fuel Cost		/ Gal	No. 2 Oil
FORMULA CONSTANTS			
Oversize Factor	0.8		
Hours per Day	24		
Design Outdoor Temp	14	F	
Infrared Conversion Factor	1.0		1.0 if Boiler, 0.8 if Infrared Heater
EXISTING			
Capacity	2,000,000	btu/hr	
Heating Combustion Efficiency	80%		
Heating Degree-Day	2,783	Degree-day	
Design Temperature Difference	75	F	
Fuel Conversion	100,000	btu/therm	
PROPOSED			
Capacity	2,000,000	btu/hr	
Efficiency	96%		Operates in shoulder months only
SAVINGS			
Fuel Savings	2,969	Therms	NJ Protocols Calculation
Fuel Cost Savings	$ 2,514		

Savings calculation formulas are taken from NJ Protocols document for Occupancy Controlled Thermostats

Algorithms

$$Gas\ Savings\ (Therms) = \frac{OF \times ((CAPY_{Bi} \times EFF_Q) - (CAPY_{Qi} \times EFF_B \times ICF)) \times HDD_{mod} \times 24}{\Delta T \times HC_{fuel} \times EFF_B \times ICF \times EFF_Q}$$

Definition of Variables

OF = Oversize factor of standard boiler or furnace (OF=0.8)

$CAPY_{Bi}$ = Total input capacity of the baseline furnace, boiler or heater in Btu/hour

$CAPY_{Qi}$ = Total input capacity of the qualifying furnace, boiler or heater in Btu/hour

HDD_{mod} = HDD by zone and building type

24 = Hours/Day

ΔT = design temperature difference

HC_{fuel} = Conversion from Btu to therms of gas or gallons of oil or propane (100,000 btu/therm; 138,700 btu/gal of #2 oil; 92,000 btu/gal of propane)

EFF_Q = Efficiency of qualifying heater(s) (AFUE %)

EFF_B = Efficiency of baseline heaters (AFUE %)

ICF = Infrared Compensation Factor (ICF = 0.8 for IR Heaters, 1.0 for furnaces/boilers)[2]

Furnaces and Boilers

Component	Type	Value	Source
$AFUE_q$	Variable		Application
$AFUE_b$	Fixed	Furnaces: 78% Boilers: 80% Infrared: 78%	EPACT Standard for furnaces and boilers
$CAPY_{in}$	Variable		Application
ΔT	Variable	See Table Below	1
HDD_{mod}	Fixed	See Table Below	1

Sources:

1. KEMA, *Smartstart Program Protocol Review*. 2009.
2. http://www.spaceray.com/1_space-ray_faqs.php

Adjusted Heating Degree Days by Building Type

Building Type	Heating Energy Density (kBtu/sf)	Degree Day Adjustment Factor	Atlantic City (HDD)	Newark (HDD)	Philadelphia (HDD)	Monticello (HDD)
Education	29.5	0.55	2792	2783	2655	3886
Food Sales	35.6	0.66	3369	3359	3204	4689
Food Service	39.0	0.73	3691	3680	3510	5137
Health Care	53.6	1.00	5073	5057	4824	7060
Lodging	15.0	0.28	1420	1415	1350	1976
Retail	29.3	0.55	2773	2764	2637	3859
Office	28.1	0.52	2660	2651	2529	3701
Public Assembly	33.8	0.63	3199	3189	3042	4452
Public Order/Safety	24.1	0.45	2281	2274	2169	3174
Religious Worship	29.1	0.54	2754	2745	2619	3833
Service	47.8	0.89	4524	4510	4302	6296
Warehouse/Storage	20.2	0.38	1912	1906	1818	2661

Heating Degree Days and Outdoor Design Temperature by Zone

Weather Station	HDD	Outdoor Design Temperature (F)
Atlantic City	5073	13
Newark	5057	14
Philadelphia, PA	4824	15
Monticello, NY	7060	8

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ECM-3: Boiler Replacement - Cost

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
Aerco BMK2000 w/ condensate	1	EA	$ 32,000	$ 12,000		$ 32,864	$ 14,952	$ 1,000	$ 48,816	Vendor Estimate
Flue Installation	1	LS	$ 25,000.0	$ 25,000.00		$ 25,675	$ 31,150	$ -	$ 56,825	Vendor Estimate
controls	1	EA	$ 1,000.0	$ 1,500.00		$ 1,027	$ 1,869	$ -	$ 2,896	RS Means 2012
Miscellaneous Electrical	1	LS	$ 1,500	$ 1,500		$ 1,541	$ 1,869	$ -	$ 3,410	RS Means 2012
Miscellaneous HW Piping	1	LS	$ 5,000	$ 2,500		$ 5,135	$ 3,115	$ -	$ 8,250	RS Means 2012
						$ -	$ -	$ -	$ -	
						$ -	$ -	$ -	$ -	
						$ -	$ -	$ -	$ -	
						$ -	$ -	$ -	$ -	
						$ -	$ -	$ -	$ -	

**Cost Estimates are for Energy Savings calculations only, do not use for procurement

$ 120,197	Subtotal
$ 30,049	25% Contingency
$ 150,246	**Total**

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ECM-4: Install High Efficiency Motors & Variable Speed Drives

Description: This ECM evaluates the energy (electrical) savings associated with replacing existing 25 HP heating pumps motors with high efficiency motors (based on ASHRAE 2010 NEMA ratings) and adding variable frequency drives to control motor speed based on actual load verses constant volume / constant flow. Pumps operate in a lead/ lag fashion, therefore run hours are 50% for each pump.

Variable Inputs

Electric Rate	$0.146	**$/kWh**
Demand Rate	$3.53	**$/kW**

MOTOR SCHEDULE										Savings Factor		Existing Motor Energy		Proposed Motor Energy		Energy Savings	
Motor ID	Motor Type	Qty	HP	Total HP	Upgrade Motor	Load Factor	Existing Motor Eff.	New Motor Eff.	Annual Hours	Demand Savings Factor	Energy Savings Factor	Demand Energy (kW)	Electrical Energy (kWh)	Demand Energy (kW)	Electrical Energy (kWh)	Peak Demand Savings (kW)	Annual Energy Savings (kWh)
HWP-1,2	HW	2	25.0	50.0	N	0.75	91.7%	93.6%	2,213	0.216	0.240	30.5	67,503	6.5	59,520	24.0	7,983.5
															Total:	24.0	7,983.5
																$ 1,019	$ 1,166
																	$ 2,184

Savings calculation formulas are taken from NJ Protocols document for VFDs

Essex County
CHA Project Number: 29142
Economic Development Center

ECM-4: Install Variable Speed Drives - Cost

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.00

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
						$ -	$ -	$ -	$ -	
VFDs for Hot Water Pumps	2	ea	$ 4,016	$ 1,024		$ 8,249	$ 2,551	$ -	$ 10,801	RS Means 2012
Motors -25 HP	2	ea	$ 1,286	$ 141		$ 2,642	$ 351	$ -	$ 2,993	RS Means 2012
Electrical - misc.	2	ls	$ 250	$ 500		$ 514	$ 1,246	$ -	$ 1,760	RS Means 2012
						$ -	$ -	$ -	$ -	
						$ -	$ -	$ -	$ -	

$ 15,553	Subtotal
$ 3,888	25% Contingency
$ 19,441	**Total**

**Cost Estimates are for Energy Savings calculations only, do not use for procurement

Essex County
CHA Project Number: 29142
Economic Development Center

ECM-5: Re-Commission Building Controls System

Summary: The existing controls system consists of a Siemens Apogy DDC system for VAVs, while (5) new RTUs are not part of the BAS. This ECM reviews adding the (5) RTUs to the DDC system and re-commissioning the entire controls system.

Building Information:

113,750	Sq Footage	$0.16	$/kWh Blended
		$0.85	$/Therm

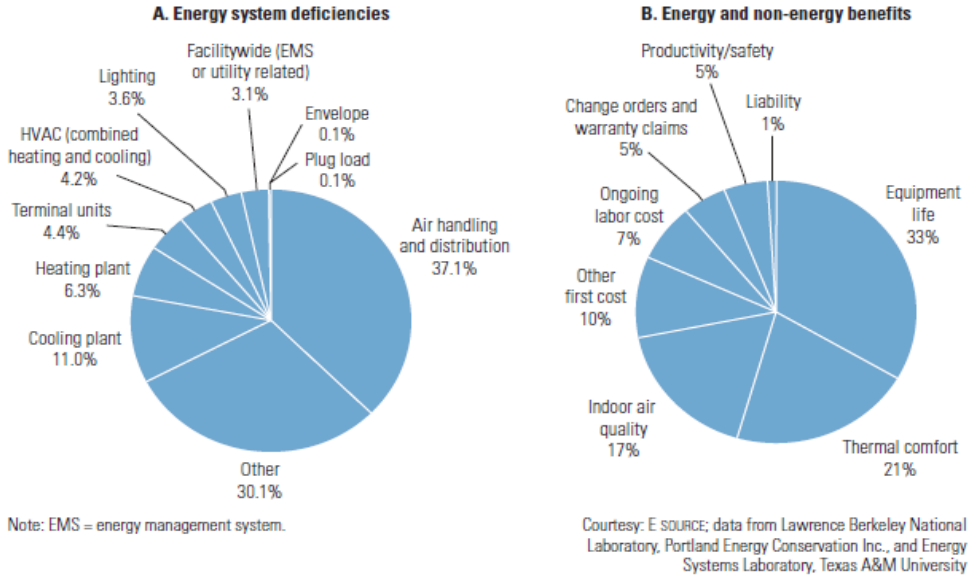
EXISTING CONDITIONS		
Existing Facility Total Electric usage	2,427,211	kWh
Existing Facility Total Gas usage	61,577	Therms
Existing Facility Cooling Electric usage	1,262,150	kWh[1]
Existing Facility Heating Natural Gas usage	56650.84	Therms[2]
PROPOSED CONDITIONS		
Proposed Facility Cooling Electric Savings	189,322	kWh
Proposed Facility Natural Gas Savings	8497.626	Therms
SAVINGS		
Retro-Commissioning Electric Savings	189,322	**kWh**
Retro-Commissioning Natural Gas Savings	8,498	**Therms**
Total cost savings	$ 36,732	

Assumptions

1	52%	of facility total electricity dedicated to Cooling based on Building Utility Analysis
2	92%	of facility total natural gas dedicated to Heating based on Building Utility Analysis
3	15%	Typical Savings associated with Retro-Commissioning of controls based on EPA Energy Star Report (CH 5 - Retrocommissioning)

Figure 5.2: Retrocommissioning results

Building energy system deficiencies: A recent study of retrocommissioning revealed a wide variety of problems—those related to the overall HVAC system were the most common type (A). Energy and non-energy benefits: Retrocommissioning provided both energy and non-energy benefits—the most common of these, noted in one-third of the buildings surveyed, was the extension of equipment life (B).



Note: EMS = energy management system.

Courtesy: E SOURCE; data from Lawrence Berkeley National Laboratory, Portland Energy Conservation Inc., and Energy Systems Laboratory, Texas A&M University

Essex County
CHA Project Number: 29142
Economic Development Center

ECM-5: Re-Commission Building Controls System - Cost

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
									$ -	
Controls and Sensors Retro-Commissioning	113750	SF	$ 0.27	INC	INC	$ 31,542	INC	INC	$ 31,542	EPA Estimate
						$ -	$ -	$ -	$ -	

**Cost Estimates are for Energy Savings calculations only, do not use for procurement

$ 31,542	Subtotal
$ 7,885	25% Contingency
$ 39,427	**Total**

Essex County
CHA Project Number: 29142
Economic Development Center

New Jersey Pay For Performance Incentive Program

Note: The following calculation is based on the New Jersey Pay For Performance Incentive Program per April, 2012.
Building must have a minimum average electric demand of 100 kW. This minimum is waived for buildings owned by local governements or non-profit organizations.
At a minimum, all recommended measures were used for this calculation. To qualify for P4P incentives, the following P4P requirements must be met:

- At least 15% source energy savings
- No more than 50% savings from lighting measures
- Scope includes more than one measure
- Project has at least a 10% internal rate of return
- At least 50% of the source energy savings must come from investor-owned electricity and/or natural gas (note: exemption for fuel conversions)

Total Building Area (Square Feet)	113,750
Is this audit funded by NJ BPU (Y/N)	Yes

Board of Public Utilites (BPU)

Incentive #1		
Audit is funded by NJ BPU	$0.05	$/sqft

	Annual Utilities	
	kWh	Therms
Existing Cost (from utility)	$379,136	$51,876
Existing Usage (from utility)	2,427,211	61,577
Proposed Savings	486,670	13,241
Existing Total MMBtus	14,442	
Proposed Savings MMBtus	2,985	
% Energy Reduction	**20.7%**	
Proposed Annual Savings	$89,538	

	Min (Savings = 15%)		Increase (Savings > 15%)		Max Incentive		Achieved Incentive	
	$/kWh	$/therm	$/kWh	$/therm	$/kWh	$/therm	$/kWh	$/therm
Incentive #2	$0.09	$0.90	$0.005	$0.05	$0.11	$1.25	$0.11	$1.18
Incentive #3	$0.09	$0.90	$0.005	$0.05	$0.11	$1.25	$0.11	$1.18

	Incentives $		
	Elec	Gas	Total
			$5,688
Incentive #1	$0	$0	$5,688
Incentive #2	$53,534	$15,670	$69,204
Incentive #3	$53,534	$15,670	$69,204
Total All Incentives	**$107,067**	**$31,340**	**$144,095**

Total Project Cost	$1,022,668

		Allowable Incentive
% Incentives #1 of Utility Cost*	1.3%	$5,688
% Incentives #2 of Project Cost**	6.8%	$69,204
% Incentives #3 of Project Cost**	6.8%	$69,204
Total Eligible Incentives***	**$144,095**	
Project Cost w/ Incentives	$878,573	

Project Payback (years)	
w/o Incentives	w/ Incentives
11.4	9.8

* Maximum allowable incentive is 50% of annual utility cost if not funded by NJ BPU, and %25 if it is.

** Maximum allowable amount of Incentive #2 is 25% of total project cost.
Maximum allowable amount of Incentive #3 is 25% of total project cost.

*** Maximum allowable amount of Incentive #1 is $50,000 if not funded by NJ BPU, and $25,000 if it is.
Maximum allowable amount of Incentive #2 & #3 is $1 million per gas account and $1 million per electric account; maximum 2 million per project

APPENDIX D

New Jersey Board of Public Utilities Incentives

i. **Smart Start**

ii. **Direct Install**

iii. **Pay for Performance (P4P)**

iv. **Energy Savings Improvement Plan (ESIP)**

I. SMART START

NJ SmartStart Buildings

Program Overview

With New Jersey SmartStart Buildings ...

... A smart start now means better performance later! Whether you're starting a commer industrial project from the ground up, renovating existing space, or upgrading equipmen unique opportunities to upgrade the energy efficiency of the project.

Special Notice

Enhanced incentives are available for NJ SmartStart Building upgrades in buildings im Hurricane Sandy. Eligible projects receive an additional 50% and new incentives have added for high efficiency food service equipment.

Visit the Sandy web page for details and important links.

New Jersey SmartStart Buildings can provide a range of support — at no cost to you — substantial energy savings, both now and for the future. Learn more about:

- Project Categories
- Custom Measures
- Incentives for Qualifying Equipment and Projects
- Program Terms and Conditions
- Find a Trade Ally

Please note: pre-approval is required for almost all energy efficiency incentives. T you must submit an application form (and applicable worksheets) and receive an approv from the program before any equipment is installed (click here for complete Terms and (Upon receipt of an approval letter, you may proceed to install the equipment listed on yc approved application. Equipment installed prior to the date of the approval letter is not e an incentive. **Any customer and/or agent who purchases equipment prior to the re incentive approval letter does so at his/her own risk.**

Getting Started

Submit your project application form as soon as you know you will be doing a constructi or replacing/adding equipment.

PAST PROGRAMS

TOOLS AND RESOURCES

PROGRAM UPDATES

CONTACT US

Apply for pre-approval by submitting an application for the type of equipment you have c install. The application should be accompanied by a related worksheet, where applicabl manufacturer's specification sheet (refer to the specific program requirements on the ba application for specs needed for your project) for the equipment you are planning to inst (Program representatives will review your application package and approve it, reject it, a advise you of upgrades in equipment that will save energy costs and/or increase your in

Support for Custom Energy-Efficiency Measures

Custom measures allows program participants the opportunity to receive an incentive fo energy-efficiency measures that are not on the prescriptive equipment Incentive list, but project/facility specific.

Incentives for Qualifying Equipment and Projects

Financial incentives are available for large and small projects. These incentives offset s maybe even all! — of the added cost to purchase qualifying energy-efficient equipment, provides significant long-term energy savings. Ranges of incentives are available for qu equipment (depending on type, size, and efficiency) in several categories.

Find out more about equipment incentives

For specific details on equipment requirements and financial incentives, including ince equipment not listed here, contact a program representative. Fiscal year financial incent be limited to a maximum of $500,000 per customer utility account and are available as f permits.

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COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT

HURRICANE SANDY

PROGRAMS

NJ SMARTSTART BUILDINGS

EQUIPMENT INCENTIVES

FOOD SERVICE EQUIPMENT

APPLICATION FORMS

TOOLS AND RESOURCES

PAY FOR PERFORMANCE

COMBINED HEAT & POWER AND FUEL CELLS

LOCAL GOVERNMENT ENERGY AUDIT

LARGE ENERGY USERS PROGRAM

ENERGY SAVINGS IMPROVEMENT PROGRAM

DIRECT INSTALL

ENERGY BENCHMARKING

OIL, PROPANE & MUNICIPAL ELECTRIC CUSTOMERS

EDA PROGRAMS

SBC CREDIT PROGRAM

Home » Commercial & Industrial » Programs » NJ SmartStart Buildings

Equipment Incentives

Special Notice

Enhanced incentives are available for NJ SmartStart Building upgrades in buildings im Hurricane Sandy. Eligible projects receive an additional 50% and new incentives have added for high efficiency food service equipment.

Visit the Sandy web page for details and important links.

More reasons for a smart start on your next project!

New Jersey SmartStart Buildings provides **financial incentives for qualifying equipment**. These incentives were developed to help our customers offset some of the added cost to purchase qualifying energy-efficient equipment, which provides significant long-term energy savings. A wide range of incentives are available for qualifying equipment (depending on type, size and efficiency).

Listed below are the types of qualifying equipment and ranges of incentives. For details on equipment requirements and full listings of incentives, refer to the **online application forms**.

Please note that almost all equipment incentives require pre-approval before equipment is installed. (**click for exceptions**)To start the pre-approval process, submit an Equipment Application, and appropriate Equipment Worksheets, for the type types of equipment you are planning to install along with equipment specification sheets (refer to the specific program requirements on the back of the application for specificatic needed for your project) and a current utility bill(s).

In order to be eligible to receive financial incentives under this Program, Applicants mus receive electric and/or gas service from one of the regulated electric and/or gas utilities the State of New Jersey. They are: Atlantic City Electric, Jersey Central Power & Light, Rockland Electric Company, New Jersey Natural Gas, Elizabethtown Gas, PSE&G, and South Jersey Gas.

Electric Chillers

Water-cooled chillers ($12 - $170 per ton)
Air-cooled chillers ($8 - $52 per ton)

Gas Cooling

Gas absorption chillers ($185-$450 per ton)
Gas Engine-Driven Chillers (Calculated through Custom Measure F

PAST PROGRAMS

TOOLS AND RESOURCES

PROGRAM UPDATES

CONTACT US

Desiccant Systems ($1.00 per cfm - gas or electric)

Electric Unitary HVAC

Unitary AC and split systems ($73 - $92 per ton)
Air-to-air heat pumps ($73 - $92 per ton)
Water-source heat pumps ($81 per ton)
Packaged terminal AC & HP ($65 per ton)
Central DX AC Systems ($40 - $72 per ton)
Dual Enthalpy Economizer Controls ($250)
Occupancy Controlled Thermostats ($75 each)
A/C Economizing Controls ($85 - $170 each)

Ground Source Heat Pumps

Closed Loop ($450-750 per ton)

Gas Heating

Gas-fired boilers < 300 MBH ($300 per unit)
Gas-fired boilers ≥ 300 MBH - 1500 MBH ($1.75 per MBH)
Gas-fired boilers ≥ 1500 MBH - ≤ 4000 MBH ($1.00 per MBH)
Gas-fired boilers > 4000 MBH (Calculated through Custom Measur
Gas furnaces ($300-$400 per unit)
Gas infrared heaters - indoor only ($300 - $500 per unit)
Boiler economizing controls ($1,200 - $2,700 per unit)

Variable Frequency Drives

Variable air volume ($65 - $155 per hp)
Chilled-water pumps ($60 per hp)
Compressors ($5,250 to $12,500 per drive)

Natural Gas Water Heating

Gas water heaters ≤ 50 gallons ($50 per unit)
Gas-fired water heaters > 50 gallons ($1.00 - $2.00 per MBH)
Tankless water heaters replacing a free standing water heater > 82 energy factor ($300 per heater)
Gas-fired booster water heaters ($17 - $35 per MBH)

Premium Motors

Three-phase motors ($45 - $700 per motor) **(Incentive was discor effective March 1, 2013 except for buildings impacted by Hurri Sandy. Approved applications will have the standard timefram year from the program commitment date to complete the instal**

Refrigerator/Freezer Case Premium Efficiency Motors (ECM)

Fractional (< 1 HP) Electronic Commutated Motors (ECM) ($40 per for replacement of existing shaded-pole motor in refrigerated/freeze

Prescriptive Lighting

New Linear Fluorescent

- T-12, HID and Incandescent to T-5 and T-8 ($25 - $200 p fixture) **(Note: T12 replacements are only available for buildings impacted by Hurricane Sandy)**
- New Induction ($70 per replaced HID fixture)
- New LED
  - Screw-in/Plug-in ($10 - $20 per lamp)
  - Refrigerator/Freezer Case ($30 - $65 per fixture)
  - Outdoor pole/arm/wall-mounted luminaires ($100 - $175 p fixture)
  - Display case ($30 per case)
  - Shelf-mounted display and task ($15 per linear foot)
  - Wall-wash, desk, recessed ($20 - $35 per fixture)
  - Parking garage luminaires ($100 per fixture)
  - Track or Mono-Point directional ($50 per fixture)
  - Stairwell and Passageway luminaires ($40 per fixture)
  - High-Bay, Low-Bay ($150 per fixture)
  - Bollard ($50 per fixture)
  - luminaires for Ambient Lighting of Interior Commercial Spa *Linear panels ($50 per fixture)*
  - Fuel pump canopy ($100 per fixture)
  - LED retrofit kits (custom measures)
- New Pulse-Start Metal Hallide ($25 per fixture)
- Linear Fluorescent Retrofit ($10 - $20 per fixture)
- Induction Retrofit ($50 per retrofitted HID fixture)
- New Construction/Complete Renovation (performance-based)

Note: Incentives for T-12 to T-5 and T-8 lamps with electronic ballast in facilities ($10 per fixture, 1-4 lamps) and T-5/T-8 high bay fixtures ($16 - per fixture) were discontinued effective March 1, 2013 for T-12 retrofits replacements except for buildings impacted by Hurricane Sandy. Appr applications will have the standard timeframe of one year from the pro commitment date to complete the installation

Lighting Controls

- Occupancy Sensors
  - Wall mounted ($20 per control)
  - Remote mounted ($35 per control)
  - Daylight dimmers ($25 per fixture controlled, $50 per fixtu office applications only)
  - Occupancy controlled hi-low fluorescent controls ($25 per controlled)
- HID or Fluorescent Hi-Bay Controls
  - Occupancy hi-low ($35 per fixture controlled)
  - Daylight dimming ($45 per fixture controlled)

Refrigeration

- Covers and Doors
  - Energy-Efficient doors for open refrigerated doors/covers per door)
  - Aluminum Night Curtains for open refrigerated cases ($3.5 linear foot)
- Controls
  - Door Heater Control ($50 per control)
  - Electric Defrost Control ($50 per control)
  - Evaporator Fan Control ($75 per control)
  - Novelty Cooler Shutoff ($50 per control)

Food Service Equipment

Cooking
- Combination Electric Oven/Steamer ($1,000 per oven)
- Combination Gas Oven/Steamer ($750 per oven)
- Electric Convection Oven ($350 per oven)
- Gas Convection Oven ($500 per oven)
- Gas Rack Oven ($1,000 single, $2,000 double)
- Gas Conveyor Oven ($500 small deck, $750 large deck)
- Electric Fryer ($200 per vat)
- Gas Fryer ($749 per vat)
- Electric Large Vat Fryer ($200 per vat)
- Gas Large Vat Fryer ($500 per vat)
- Electric Griddle ($300 per griddle)
- Gas Griddle ($125 per griddle)
- Electric Steam Cooker ($1,250 per steamer)
- Gas Steam Cooker ($2,000 per steamer)

Holding
- Full Size Insulated Cabinets ($300 per cabinet)
- Three Quarter Size Insulated Cabinets ($250 per cabinet)
- Half Size Insulated Cabinets ($200 per cabinet)

Cooling
- Glass Door Refrigerators ($75 - $150 per unit)
- Solid Door Refrigerators ($50 - $200 per unit)
- Glass Door Freezers ($200 - $1,000 per unit)
- Solid Door Freezers ($100 - $600 per unit)
- Ice Machines ($50 - $500 per unit)

Cleaning
- Dishwashers ($400 - $1,500 per unit)

Other Equipment Incentives*

- Performance Lighting ($1.00 per watt per square foot below prograi incentive threshold, currently 5% more energy efficient than ASHR/ 2007 for New Construction only.)
- Custom electric and gas equipment incentives (not prescriptive)

*Equipment incentives are calculated based on type, efficiency, size, and ap and are evaluated on a case-by-case basis. Contact us for details.

II. DIRECT INSTALL

COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT

HURRICANE SANDY

PROGRAMS

NJ SMARTSTART BUILDINGS

PAY FOR PERFORMANCE

COMBINED HEAT & POWER AND FUEL CELLS

LOCAL GOVERNMENT ENERGY AUDIT

LARGE ENERGY USERS PROGRAM

ENERGY SAVINGS IMPROVEMENT PROGRAM

DIRECT INSTALL

PARTICIPATION STEPS

PARTICIPATING CONTRACTORS

SUSTAINABLE JERSEY

ENERGY BENCHMARKING

OIL, PROPANE & MUNICIPAL ELECTRIC CUSTOMERS

EDA PROGRAMS

SBC CREDIT PROGRAM

Direct Install

NEW JERSEY'S CLEAN ENERGY PROGRAM
DIRECT Install

Let us pay up to 70% of your energy efficiency upgrade.

Sometimes, the biggest challenge to improving energy efficiency is knowing where t and how to get through the process. Created specifically for existing small to mediun facilities, Direct Install is a turnkey solution that makes it easy and affordable to upgr high efficiency equipment. Direct Install is designed to cut your facility's energy costs replacing lighting, HVAC and other outdated operational equipment with energy effic alternatives. The program pays up to 70% of retrofit costs, dramatically improving yo payback on the project. There is a $125,000 incentive cap on each project.

ELIGIBILITY

Existing small to mid-sized commercial and industrial f with a peak electric demand that did not exceed 200 k any of the preceding 12 months are eligible to participa Direct Install. Applicants will submit the last 12 months electric utility bills indicating that they are below the de threshold and have occupied the building during that ti Buildings must be located in New Jersey and served b the state's public, regulated electric or natural gas utilit companies.

SYSTEMS & EQUIPMENT ADDRESSED BY THE PROGRAM

- Lighting
- Heating, Cooling & Ventilation (HVAC)
- Refrigeration
- Motors
- Natural Gas
- Variable Frequency Drives

Measures eligible for Direct Install are limited to specific equipment categories, type capacities. Boilers may not exceed 500,000 Btuh and furnaces may not exceed 140,

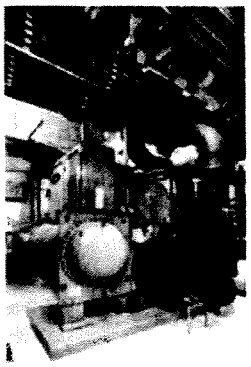
III. PAY FOR PERFORMANCE (P4P)

Pay for Performance - Existing Buildings

Download program applications and incentive forms.

The Greater the Savings, the Greater Your Incentives

Take a comprehensive, whole-building approach to saving energy in your existing facilit earn incentives that are directly linked to your savings. Pay for Performance relies on a program partners who provide technical services under direct you. Acting as your energy expert, your partner will develop a reduction plan for each project with a whole-building technica component of a traditional energy audit, a financial plan for fu energy efficient measures and a construction schedule for ins



Eligibility

Existing commercial, industrial and institutional buildings with demand over 100 kW for any of the preceding twelve months to participate including hotels and casinos, large office buildir family buildings, supermarkets, manufacturing facilities, scho shopping malls and restaurants. Buildings that fall into the fol customer classes are not required to meet the 100 kW dema to participate in the program: hospitals, public colleges and universities, 501(c)(3) non-p affordable multifamily housing, and local governmental entities. Your energy reduction p define a comprehensive package of measures capable of reducing the existing energy consumption of your building by 15% or more.

Exceptions to the 15% threshold requirement may be made for certain industrial, manuf water treatment and datacenter building types whose annual energy consumption is hea weighted on process loads. Details are available in the high energy intensity section of t page.

ENERGY STAR Portfolio Manager

Pay for Performance takes advantage of the ENERGY STAR Program with Portfolio Manager, EPA's interactive tool that allows facility managers to track and evaluate energy and water consumption across all of their buildings. The tool provides the opportunity to load in the characteristics and energy usage of your buildings and determine an energy performance benchmark score. You can then assess energy management goals over time, identify strategic opportunities for savings, and receive EPA recognition for superior energy performance.

This rating system assesses building performance by tracking and scoring energy use ir facilities and comparing it to similar buildings. That can be a big help in locating opportu cost-justified energy efficiency upgrades. And, based on our findings, you may be invite participate in the Building Performance with ENERGY STAR initiative and receive speci recognition as an industry leader in energy efficiency.

Incentives

OIL, PROPANE & MUNICIPAL ELECTRIC CUSTOMERS

EDA PROGRAMS

SBC CREDIT PROGRAM

PAST PROGRAMS

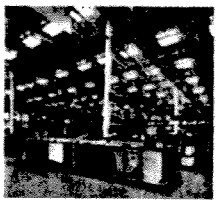
TOOLS AND RESOURCES

PROGRAM UPDATES

CONTACT US

Pay for Performance incentives are awarded upon the satisfactory completion of three p milestones:

Incentive #1 - Submittal of complete energy reduction plan prepared by an app program partner - Contingent on moving forward, incentives will be between $5 $50,000 based on approximately $.10 per square foot, not to exceed 50% of th annual energy expense.



Incentive #2 - Installation of recommended measures - Incentives are based on the projected level of electricity and natural gas savings resulting from the installation of comprehensive energy-efficiency measures.

Incentive #3 - Completion of Post-Construction Benchmarking Report - A completed report verifying energy reductions based on one year of post-implementation results. Incentives for electricity and natural gas savings will be based on actual savings, provided that the minimum performance threshold of savings has been achieved.

A detailed Incentive Structure document is available on the applications and form

Steps to Participation

Click here for a step-by-step description of the program.

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New Jersey's Clean Energy PROGRAM
Your Power to Save
njcleanenergy.com

BPU New Jersey Board of Public Utilities

PAY FOR PERFORMANCE APPLICATION FORM

July 1, 2014 – June 30, 2015

Utility Serving Applicant: ☐ Atlantic City Electric ☐ Jersey Central Power & Light ☐ PSE&G
☐ New Jersey Natural Gas ☐ Elizabethtown Gas ☐ Rockland Electric Co. ☐ South Jersey Gas
☐ Other Electric Service Provider (please specify): _____
☐ Other Fuel Provider: _____ ☐ Oil: _____ ☐ Other (Please specify): _____

Instructions

1. Read the program material to determine project qualification.
2. Read the Participation Agreement and sign where indicated.
3. Fill out all applicable spaces on this form.
4. Provide a copy of the customer's company W-9 form.
5. Provide the most recent consecutive 12 month period of utility bills for the project for all accounts, organized in chronological order and separated by account. Utilize Utility Tool for applications with multiple accounts to organize data.
6. Provide brief description of facility, noting any special or unusual circumstances and/or site conditions.
7. Partner must submit the application package via e-mail, mail or fax DIRECTLY to the Market Manager – see back of this form.

Approval of this Application is not an approval of the project's scope of work. Scope of work is only approved upon approval of the Energy Reduction Plan. See application and program guidelines for more information.

Customer/Owner Information (payment will be made to entity entered here)

Company Name		Project Contact/Title	
Company Address	City	State	Zip
Phone/Fax	E-mail	Federal ID/SSN	

Partner Information

Company Name		Project Contact/Title	
Company Address	City	State	Zip
Phone	Fax	E-mail	

Project Information

Project Name			
Building Address	City	State	Zip
Utility Account Number(s): Electric		Gas	
* Note: Please use the back of this page for additional utility accounts if quantity exceeds space allotment.			
Annual Peak kW Demand	Building Type		Number of Buildings
Size of Building(s) (gross sq/ft)	Direct, Master or Sub Metered		

Funding

☐ Check the box if an Energy Savings Improvement Program (ESIP) will be a source of funding. ESIP allows government agencies to pay for energy related improvements using the value of the resulting energy savings.

Do you expect to receive funding under any other efficiency programs? ☐ No ☐ Yes If Yes, please specify below:

Utility Program #1 – Utility: _____ Program Name: _____
Utility Program #2 – Utility: _____ Program Name: _____
Federal Program #1 – Organization: _____ Program Name: _____
Federal Program #2 – Organization: _____ Program Name: _____
Other Program – Organization: _____ Program Name: _____

Additional Project information

Additional Utility Account(s)

Account type	Account number
Account type	Account number
Account type	Account number
Account type	Account number
Account type	Account number
Account type	Account number
Account type	Account number
Account type	Account number
Account type	Account number
Account type	Account number
Account type	Account number
Account type	Account number

Additional Comments:

Complete this application form and send it directly to the Commercial/Industrial Market Manager by e-mail, mail or fax.

New Jersey's Clean Energy Program
c/o TRC Energy Services-P4P
900 Route 9 North, Suite 404 • Woodbridge, NJ 07095

Phone: 866-657-6278 • Fax: 732-855-0422
E-mail: P4P@NJCleanEnergy.com

Visit our website: NJCleanEnergy.com/P4P

Pay For Performance-Existing Buildings

Participation Agreement

Definitions:

ADMINISTRATOR – New Jersey Board of Public Utilities (NJBPU)

APPLICATION PROCESS – The Program pays incentives in phases upon satisfactory completion of each of three Program milestones - approval of a complete Energy Reduction Plan, installation of all recommended measures per the Energy Reduction Plan, completion of Post-Construction Benchmarking Report (for incentive amounts, please refer to Incentive Amounts). In order to be eligible for Program Incentives,a Participating Customer or an agent authorized by a Customer, must submit to the Market Manager a properly completed application package – application form, Participating Customer's company W-9, twelve consecutive months of the project's utility bills and executed Participation Agreement. All components of the application package must be filled out completely, truthfully and accurately. This application package must be received on or before June 30, 2015 in order to be eligible for the Fiscal Year 2015 Incentives. The Market Manager will review the application package to determine if the project is eligible for a Program Incentive. When approved, the Participating Customer will receive an approval letter from their Case Manager with the estimated authorized first incentive amount and the date by which the Energy Reduction Plan must be submitted. Upon receipt of the approval letter, the Participating Customer and Partner may proceed with work on the Energy Reduction Plan. The Market Manager or agent thereof reserves the right to conduct a pre-inspection of the facility prior to the installation of equipment. This will be done prior to the issuance of the Energy Reduction Plan approval letter. Approval of this Application is not an approval of the project's scope of work. Scope of work is only approved upon approval of the Energy Reduction Plan. See application and program guidelines for more information.

CHANGES TO THE PROGRAM – The Program and Participation Agreements may be changed by the Market Manager at any time without notice. Approved applications, however, will be processed to completion under the agreements in effect at the time of the Market Manager's approval.

ELIGIBILITY - Program Incentives are available to existing commercial, industrial and certain multifamily buildings with peak kilowatt demand usage of more than 100 kW in any of the most recent preceding twelve months of utility bills and a customer of the New Jersey Utilities. Market Manager has the discretion to approve applications that fall below the 100 kW minimum by no more than 10%. If the Participant is a municipal electric company customer, and a customer of an investor-owned gas New Jersey Utility, only gas measures will be eligible for incentives under the Program. Similarly, if the Participant is an oil/propane customer and a customer of an investor-owned electric New Jersey Utility, only electricity measures will be eligible for incentives under the Program.

Equipment procured by participating Customer through another program offered by the New Jersey Utilities, as applicable, is not eligible for incentives through this Program. Customers who, from July 1, 2013 – June 30, 2014, have not contributed to the Societal benefits Charge of the applicable New Jersey Utility may not be eligible for incentives offered through this program.

ENDORSEMENT – The Market Manager and Administrator do not endorse, support or recommend any particular manufacturer, product or system design in promoting this Program.

ENERGY-EFFICIENT MEASURES – Any device eligible to receive a Program Incentive payment through the New Jersey's Clean Energy Commercial and Industrial Program. The total package of measures as presented in the Energy Reduction Plan must have at least a 10% internal rate of return (IRR).

ENERGY REDUCTION PLAN – A document created by the Participating Customer's selected Partner that defines several key aspects of the project including (but not limited to) existing conditions as a result of a whole-building technical analysis, benchmarking summaries, recommended measures, financing plan and implementation schedule.

ENERGY REDUCTION PLAN APPROVAL – After application approval, the Participating Customer and Partner must work together to finalize and submit an Energy Reduction Plan which incorporates a work scope that will achieve the minimum 15% reduction in source energy performance target in accordance with the Program rules and policies along with the Benchmarking Tool, modeling software file, a copy of the executed Partner and Participating Customer contract, an original copy of the executed Installation Agreement and a Request for Incentive #1 Payment form. All components of the submittal package must be filled out completely, truthfully and accurately. The Market Manager, agents thereof and/or the selected Partner must be provided reasonable access to the Participating Customer's facility, staff, tenants and/or others necessary to develop an Energy Reduction Plan that will achieve the minimum 15% performance target as well as the necessary utility billing data as dictated by the Program. The Energy Reduction Plan submittal package will be reviewed and must be approved by the Market Manager prior to payment of Incentive #1. Upon approval of the submittal package, the Customer will receive an Incentive #1 approval letter indicating the date by which all measures in the Energy Reduction Plan must be installed (no later than twelve months following the Energy Reduction Plan submittal approval date).

INCENTIVE AMOUNTS – Incentive #1 - $0.10 per square foot of the project with a maximum amount of $50,000 and minimum of $5,000, not to exceed 50% of the project's annual energy cost and contingent on installation of measures in the Energy Reduction Plan and receipt of a signed Installation Agreement. If installation does not commence within the required timeframe, Incentive #1 may be required to be returned to the program. In the event the project is cancelled and Incentive #1 is not returned, the project may reapply to the program in the future but another Incentive #1 will not be paid. Incentive #2 – 50% of the total performance-based incentive (combination of Incentives #2 and #3) calculated per Program's incentive structure; Incentive #3 – remaining amount based on the realized energy savings of the project. For customers that have successfully participated in the Local Government Energy Audit Program, Incentive #1 will be reduced by 50% to $0.05 per square foot up to $25,000. Actual Incentive #1 paid shall not be higher than 5% over the committed amount. Actual Incentive #2 paid shall not be higher than the committed amount, unless the Energy Reduction Plan has been resubmitted due to changes in the work scope. Actual Incentive #3 paid shall be higher or lower than the committed amount based on actual energy savings but shall not be greater than program Incentive Caps.

The Market Manager will provide incentives according to those described in this section or as modified upon notice to Participating Customer. All incentive payments are paid directly to the Participating Customer or the Participating Customer's designee as indicated on the application form. The Program is not bound to pay any incentive unless the submittal package associated with the incentive payment is approved by the Market Manager who reserves the sole discretion of approving or disapproving the submittal packages.

INCENTIVE CAP – Program Incentives #2 and #3 will be capped not to exceed 50% of the total actual project cost. Incentive #1 will be capped not to exceed 50% of the project's annual energy cost. The Market Manager reserves the right to limit the amount of the Program Incentives (Incentive #1, #2 and #3) to $1M per gas and electric account (limited to $2M per project) in a program year. Campus style facilities, which are mastered-metered, are subject to the annual incentive cap of $1 million per gas and electric account. The Participating Customer will also be subject to an annual Entity Cap of $4M (Definition of an Entity can be found in the Board Order Docket No. EO07030203).

INSTALLATION AGREEMENT – The Participating Customer must submit an executed Installation Agreement as part of the Request for Incentive #1 Form. By executing the Installation Agreement, the Customer agrees to install all of the measures in the Energy Reduction Plan, which are estimated to result in meeting or exceeding the minimum 15% performance target. The Customer agrees to the performance-based incentives (Incentives #2 & #3) as indicated in the document which are based on the results of the Energy Reduction Plan. Implementation of the measures must commence in the time period twelve months following the approval date of the Energy Reduction Plan. Failure to complete the installation of the measures in the Energy Reduction Plan may result in the repayment of Incentive #1. In the event the project is cancelled and Incentive #1 is not returned, the project may reapply to the program in the future but another Incentive #1 will not be paid.

LIMITATION OF LIABILITY – By virtue of participating in this Program, Participating Customers agree to waive any and all claims or damages against TRC Energy Services, the Market Manager, and the Administrator, except the receipt of the Program Incentive. Participating Customers agree that the Market Manager's and Administrator's liability, in connection with this Program, is limited to paying the Program Incentive specified. Under no circumstances shall the Market Manager, its representatives, or subcontractors, or the Administrator be liable for any lost profits, special, punitive, consequential or incidental damages or for any other damages or claims connected with or resulting from participation in this Program. Further, any liability attributed to the Market Manager under this Program shall be individual, and not joint and/or several.

The Market Manager's review and approval of the Energy Reduction Plan cannot be construed to be a determination as to performance, applicability, dollar savings, energy savings, or any other aspect of the proposed project. The Market Manager and Administrator offer no guarantee or warranty of performance of the project's equipment or system. The participant assumes full responsibility and liability for the installation of all equipment, including but not limited to design, specification, all permits, installation, maintenance, performance and financing. By participating in the program and accepting incentive dollars, you agree to hold harmless the Market Manager and Administrator and their respective staffs with respect to the Project

MARKET MANAGER – TRC Energy Services is responsible for managing the New Jersey Clean Energy Commercial & Industrial Programs.

MEASUREMENT & VERIFICATION APPROVAL – Twelve months subsequent to the Incentive #2 Payment Submittal package submission date, measurement and verification of the projected energy reduction will be conducted by the Participating Customer's Partner using the project's post-installation utility data (supplied by the Customer). The Participating Customer must work with their Partner to submit the Incentive #3 Payment Submittal, consisting of the Post-Construction Benchmarking Pay For Performance-Existing Buildings Report, Benchmarking Tool, and Request for Incentive #3 form. All components of the submittal package must be filled out

completely, truthfully and accurately. Upon review of the submittal package (by the Market Manager or agent thereof), the remaining 50% of the total performance-based incentive (Incentives #2 & #3) will be released to the Participating Customer. If the Post-Construction Benchmarking Report indicates that the project did not meet the minimum performance target, the post-installation completion period may be extended to up to twenty-four months subsequent to the Incentive Payment #2 package submission date. Upon approval of the submittal package, the Customer will receive an Incentive #3 Submittal approval letter indicating successful completion of the program.

NEW JERSEY UTILITIES – The investor-owned electric and/or gas utilities in the State of New Jersey. They are: Atlantic City Electric, Jersey Central Power & Light, Rockland Electric Company, New Jersey Natural Gas, Elizabethtown Gas, PSE&G, and South Jersey Gas.

PARTICIPATING CUSTOMERS – Those non-residential electric and/or gas service customers of the New Jersey Utilities who participate in this Program.

PARTICIPATING CUSTOMER'S CERTIFICATION – Participating Customer agrees that all information is true and that he/she has conformed to all of the Program and equipment requirements per the Program Guidelines. Participating Customer certifies that he/she purchased and installed the equipment listed in the Energy Reduction Plan at their defined New Jersey project location.

PARTNER– An approved professional who provides technical building performance services to Participating Customers, acting as their "energy efficiency expert". Participating Customers are required to hire an approved Pay for Performance Partner to develop the Energy Reduction Plan and facilitate installation of the recommended package of Energy-Efficient Measures. Participants are required to enter into a contractual agreement with a selected Partner which outlines the set of minimum services the Partner will provide to the Participating Customer throughout the life of the project. It is strongly recommended that Participating Customers perform due diligence in selecting a Pay for Performance Partner. Fees charged by the Partner are not regulated by the Program and could vary between Partners.

PERFORMANCE-BASED INCENTIVES – The combination of Incentives #2 and #3, which are based on the projected and actual energy reduction performance of the project.

PERFORMANCE TARGET – A minimum of a 15% annual source energy savings performance target must be achieved in order to participate. The performance target is based on reducing the total energy consumption for the facility. No more than 50% of the total source energy savings may be derived from lighting measures. The total energy savings may not come from a single measure. A 4% performance target may be offered to customers whose annual energy consumption is heavily weighted to manufacturing and process loads. This approach will be reviewed on a case-by-case basis and must be pre-approved by the Market Manager. In order to be considered, the project must involve: A manufacturing facility, including such industries as plastics and packaging, chemicals, petrochemicals, metals, paper and pulp, transportation, biotechnology, pharmaceutical, food and beverage, mining and mineral processing, general manufacturing, equipment manufacturers and data centers; and manufacturing and/or process-related loads, including data center consumption, consume 50% or more of total facility energy consumption. No more than 50% of the total source energy savings may be derived from non-investor owned utilities or fuels.

POST-INSTALLATION APPROVAL – After the complete installation of all measures in the Energy Reduction Plan, the Customer and their Partner must finalize and submit the Incentive #2 Payment Submittal, consisting of the Installation Report, invoices, and Request for Incentive #2 Payment form. All components of the submittal package must be filled out completely, truthfully and accurately. Upon review of the submittal package and verification of the complete installation of all measures in the Energy Reduction Plan (via inspection by the Market Manager or agent thereof), 50% of the total performancebased incentive (Incentives #2 & #3) will be released to the Participating Customer. Upon approval of the submittal package, the Customer will receive an Incentive #2 approval letter indicating the date by which the post-installation Measurement & Verification phase began and will end (twelve months in length).

The Market Manager reserves the right to verify sales transactions and to have reasonable access to Participating Customer's facility to inspect both pre-existing products or equipment (if applicable) and the Energy-Efficient Measures installed under this Program, either prior to issuing incentives or at a later time. Energy-Efficient Measures must be installed in buildings located within the service territory of one of the New Jersey Utilities (as defined by the Program) as designated on the Participating Customer's Pay for Performance application. Program Incentives are available for qualified Energy-Efficient Measures as listed and described in the Program Guidelines. The Participating Customer must ultimately own the equipment, either through an up-front purchase or at the end of a short-term lease.

PRE-INSTALLED MEASURES - An Energy Reduction Plan must be approved by the program and an approval letter sent to the customer in order for incentives to be committed. Upon receipt of an Energy Reduction Plan, all project facilities must be preinspected. Measures installed prior to pre-inspection of the facility shall not be included as part of the ERP scope of work and will not be eligible for incentives. Measure installation undertaken prior to ERP approval, but after pre-inspection, is done at the customer's own risk. In the event that an Energy Reduction Plan is rejected by the program, the customer will not receive any incentives.

PRODUCT INSTALLATION OR EQUIPMENT INSTALLATION – Installation of the Energy-Efficient Measures.

Projects with a contract threshold of $15,444 are required to pay no less than prevailing wage rate to workers employed in the performance of any construction undertaken in connection with Board of Public Utilities financial assistance, or undertaken to fulfill any condition of receiving Board of Public Utilities financial assistance, including the performance of any contract to construct, renovate or otherwise prepare a facility, the operations of which are necessary for the receipt of Board of Public Utilities financial assistance. By submitting an application, or accepting program incentives, applicant agrees to adhere to New Jersey Prevailing Wage requirements, as applicable.

PROGRAM – New Jersey's Clean Energy Pay for Performance Program offered herein by the New Jersey Board of Public Utilities pursuant to state regulatory approval under the New Jersey Electric Discount and Energy Competition Act, NJSA 48:3-49, et seq.

PROGRAM GUIDELINES – See Pay for Performance Program Guidelines available from your Partner.

PROGRAM INCENTIVES – Refers to the amount or level of incentive that the Program provides to participating customers pursuant to the Program offered herein (see the description under "Incentive Amount" heading).

PROGRAM OFFER – The Program covers products purchased and/or services rendered on or after July 1, 2014. Program Incentives are available to non-residential retail electric and/or gas service customers of the New Jersey Utilities.

PROJECT – A commercial, industrial or multifamily existing building with peak demand in excess of 100 kW in any of the most recent preceding twelve months of electric usage. Multifamily building(s) must be four (4) stories or greater or three (3) stories and under having central heating, cooling, or metering serving more than one building. The 100 kW requirement is waived for the following customer classes: hospitals, non-profits (as defined by section 501(c)(3) of the Internal Revenue Code), public colleges and universities, local government entities, including K-12 schools, and affordable multifamily customers (defined as low income, subsidized, HUD, etc.)

TAX CLEARANCE CERTIFICATION – Businesses must apply for and receive a Tax Clearance Certificate from the New Jersey Division of Taxation before they can receive any incentive, grant or other financial assistance from the Program.

TAX LIABILITY – The Market Manager will not be responsible for any tax liability that may be imposed on any Participating Customer as a result of the payment of Program Incentives. All Participating Customers must supply their federal tax identification number or social security number on the application form in addition to providing a copy of their W-9 form as part of the application package in order to receive a Program Incentive.

TERMINATION – New Jersey's Clean Energy Program reserves the right to extend, modify (this includes modification of Program Incentive levels) or terminate this Program without prior or further notice.

WARRANTIES – THE MARKET MANAGER AND ADMINISTRATOR DO NOT WARRANT THE PERFORMANCE OF INSTALLED EQUIPMENT, AND/OR SERVICES RENDERED AS PART OF THIS PROGRAM, EITHER EXPRESSLY OR IMPLICITY. NO WARRANTIES OR REPRESENTATIONS OF ANY KIND, WHETHER STATUTORY, EXPRESSED, OR IMPLIED, INCLUDING, WITHOUT LIMITATIONS, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE REGARDING EQUIPMENT OR SERVICES PROVIDED BY A MANUFACTURER OR VENDOR. CONTACT YOUR VENDOR/ SERVICES PROVIDER FOR DETAILS REGARDING PERFORMANCE AND WARRANTIES.

ACKNOWLEDGEMENT – I have read, understood and am in compliance with all rules and regulations concerning this incentive program. I certify that all information provided is correct to the best of my knowledge, and I give the Market Manager permission to share my records with the New Jersey Board of Public Utilities, and contractors it selects to manage, coordinate or evaluate the Pay For Performance Program, including the release of electric and natural gas utility billing information, as well as make available to the public non-sensitive information. I allow reasonable access to my property to inspect the installation and performance of the technologies and installations that are eligible for incentives under the guidelines of New Jersey's Clean Energy Program. This arrangement supersedes all other communications and representations.

CUSTOMER'S SIGNATURE
PARTNER SIGNATURE
By signing, I certify that I have read, understand and agree to the Participation Agreement listed above.

IV. ENERGY SAVINGS IMPROVEMENT PLAN (ESIP)

COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT

HURRICANE SANDY

PROGRAMS

NJ SMARTSTART BUILDINGS

PAY FOR PERFORMANCE

COMBINED HEAT & POWER AND FUEL CELLS

LOCAL GOVERNMENT ENERGY AUDIT

LARGE ENERGY USERS PROGRAM

ENERGY SAVINGS IMPROVEMENT PROGRAM

DIRECT INSTALL

ENERGY BENCHMARKING

OIL, PROPANE & MUNICIPAL ELECTRIC CUSTOMERS

EDA PROGRAMS

SBC CREDIT PROGRAM

PAST PROGRAMS

TOOLS AND RESOURCES

PROGRAM UPDATES

CONTACT US

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Energy Savings Improvement Program

A new State law allows government agencies to make energy related improvements to t facilities and pay for the costs using the value of energy savings that result from the imp Under Chapter 4 of the Laws of 2009 (the law), the "Energy Savings Improvement Program" (ESIP), provides all government agencies in New Jersey with a flexible tool to and reduce energy usage with minimal expenditure of new financial resources.

This Local Finance Notice outlines how local governments can develop and implement a their facilities. Below are two sample RFPs:

Local Government
School Districts (K-12)

All RFPs must be submitted to the Board for approval at ESIP@bpu.state.nj.us.

The Board also adopted protocols to measure energy savings:

Measuring Energy Savings
Procedures for Implementation

The ESIP approach may not be appropriate for all energy conservation and energy effic improvements. Local units should carefully consider all alternatives to develop an appro best meets their needs. Local units considering an ESIP should carefully review the Loc Notice, the law, and consult with qualified professionals to determine how they should a task.

The NJ Board of Public Utilities sponsored Sustainable Jersey in the creation of an ESIF Guidebook that explains how to implement the program. The guidebook also includes ca of successful projects and a list of helpful resources.

FIRST STEP – ENERGY AUDIT

For local governments interested in pursuing an ESIP, the first step is to perform an ene as prescribed in P.L.2012 c.55.

ENERGY REDUCTION PLANS

If you have an ESIP plan that needs to be submitted to the Board of Public Utilities, plea to ESIP@bpu.state.nj.us. Please limit the file size to 3MB (or break it into smaller files).

Frankford Township School District
Northern Hunterdon-Voorhees Regional High School
Manalapan Township *(**180 MB** - Right Click, Save As)*

ESIP PROGRAM

Final version 42413

BPU RULES

1. Public Entity must decide if they will use an ESCO or DIY method or Hybrid thereof prior to issuing the RFP and the RFP must state the intended method. A change in the project procurement model after the RFP closing date will be cause for immediate rejection and disqualification of potential Clean Energy program incentives.

2. RFP procedures shall be adhered to as per the legislation, including the use of BPU approved forms. Any alteration of the forms, without prior approval from the BPU shall be grounds for rejection.

3. RFP must include copy of an audit (ASHRAE Level II w/Level III for lighting) and audit must be prepared by a firm classified by DPMC in the 036 discipline.

4. All firms, including professional services, whether using ESCO or DIY model, must be DPMC classified.

5. If an Architect is engaged by the public entity, the architectural fees are the responsibility of the public entity and must be paid directly to the firm. These fees may be included in the energy cost savings analysis and payback.

   ESCO's may contract directly with an architectural firm, in which case the architectural firm serves as a subcontractor to the ESCO and the project related service costs may be included within the project's economic model.

6. Public entity shall conduct pre-bid meetings and site visits per existing statutes.

   In the interest of open public bidding transparency, it is a requirement of the BPU that all proposers must attend the pre-proposal bid meeting.

7. There shall be no negative cash flow in any year of the program.
   section 7 (1)(a)
   > "the energy savings resulting from the program will be sufficient to cover the cost of the program's energy conservation measures."

8. SREC values are not permitted to be used in the energy cost savings calculations.

9. Capital cost avoidance values are not to be used in the energy savings calculations.

10. Operational and Maintenance (O&M) cost savings may be permitted in the cost savings calculations, but only with supporting documentation.

11. Blended utility rates shall not be permitted. Use the actual utility tariff or local contracted rates if there is a third party supplier.

    For the RFP proposals, the public entity shall define the utility rates in the RFP

12. Contracted third party utility rates may only be used for the term of the contract (5 yr. maximum) Subsequent years are to be projected at the utility tariff rates plus the annual BPU escalation rates.

13. Public entity shall conduct M&V (measurement and verification) at the one (1) year operational date and shall provide a copy of the M&V report to the Board of Public Utilities.

    For the RFP proposals, the ESCO shall provide the cost for the one (1) year M&V only. For comparative purposes, the one year M&V pricing shall be indicated on the proposal Form VI, under the "Annual Service Costs" column. Additional M&V costs are at the discretion of the local unit and are not to be included in the proposal.

14. The decisions made by BPU staff regarding compliance or other issues that arise in connection with the RFP procurement process shall be considered a final decision of the BPU. Any appeal will need to be through the New Jersey Superior Court, Appellate Division.

15. For the RFP proposals only, Demand Response (DR) revenues claimed by ESCO's can only be projected for a maximum period of three (3) years. DR revenue projections beyond three years will not be permitted. DR revenues must be included and presented under the "Energy Rebates/Incentives" column of FORM VI.

16. ESCO "fees" proposed during the RFP phase of the project cannot increase post-award. ESCO's are required to maintain the fee percentages through final contract negotiations and construction of the Board approved Energy Savings Plan

17. Public Bid openings shall be held on the due date of the proposal submissions. The public entity shall announce the name of the bidder and the total dollar amount. After award of a contract, all proposals received will be made available by the owner for public inspection

18. Rejection of bids by the public entity shall be conducted in accordance with the appropriate sections of the applicable legislation, as stated in Title 40A:11-13.2. Additionally all proposals must be returned to the respective ESCO's upon rejection.

19. Field changes that exceed 5% of the project cost require BPU approval.

20. Energy Savings Plans (ESP) that is dependent upon incentives from the Clean Energy Program must review the current program requirements, at the time of application, for each incentive to insure eligibility. If any program incentive is denied, resubmission of all ESIP related forms will be necessary to remain ESIP qualified.

APPENDIX F

Photos

1: Economic Development Center from South Clinton Street

2: Hot Water Boiler

3: Outdoor condensing units

4: Aerial view of rooftop equipment

APPENDIX G

EPA Benchmarking Report

ENERGY STAR® Statement of Energy Performance

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ENERGY STAR® Score[1]

Economic Development Center

Primary Property Function: Office
Gross Floor Area (ft²): 113,750
Built: 1962

For Year Ending: December 31, 2013
Date Generated: October 29, 2014

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

Property & Contact Information

Property Address	Property Owner	Primary Contact
Economic Development Center 50 South Clinton Street East Orange, New Jersey 07018	_____ , (____)____-_____	____ _____ , (____)____-_____ _____

Property ID: 4198773

Energy Consumption and Energy Use Intensity (EUI)

Site EUI
126.6 kBtu/ft²

Source EUI
285.1 kBtu/ft²

Annual Energy by Fuel	
Electric - Grid (kBtu)	8,281,644 (58%)
Natural Gas (kBtu)	6,122,686 (42%)

National Median Comparison	
National Median Site EUI (kBtu/ft²)	99.1
National Median Source EUI (kBtu/ft²)	223.1
% Diff from National Median Source EUI	28%
Annual Emissions	
Greenhouse Gas Emissions (Metric Tons CO2e/year)	1,434

Signature & Stamp of Verifying Professional

I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: _____Date: _____

Licensed Professional

____ _____
,
(____)____-_____
_____

Professional Engineer Stamp (if applicable)