CAMDEN COUNTY BOARD OF FREEHOLDERS

PROSECUTOR'S OFFICE

25 North 5th Street, Camden, NJ 08102

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

July 2014

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CHA PROJECT NO. 28470

TABLE OF CONTENTS

APPENDICES

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 Camden County Board of Freeholders, 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
Prosecutor's Office	25 North 5th Street, Camden, NJ 08102	30,000	1970

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

Building Name	Electric Savings (kWh)	NG Savings (therms)	Total Savings ($)	Payback (years)
Prosecutor's Office	159,055	1,031	211	21.2

Each individual measure's annual savings 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.

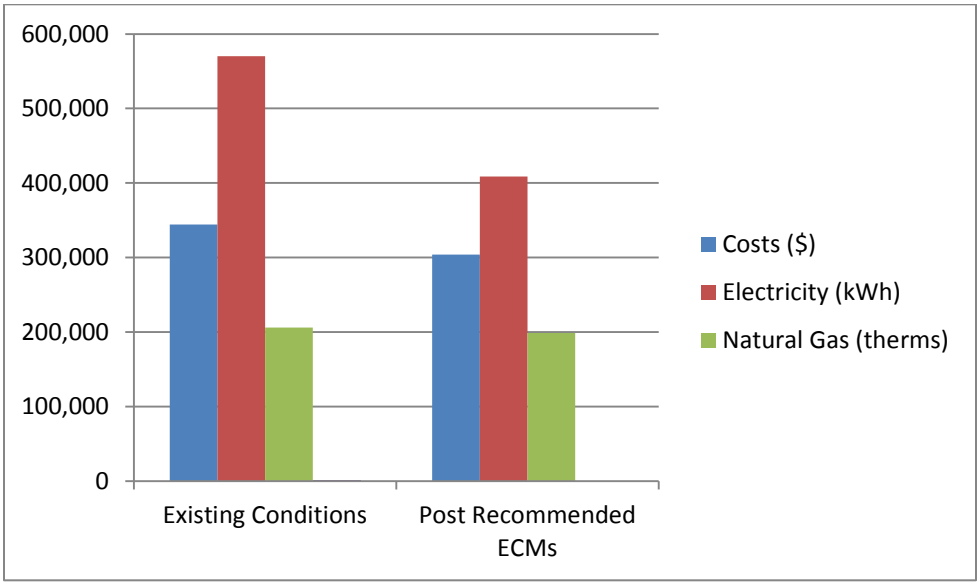
Summary of Energy Conservation Measures

ECM #	Energy Conservation Measure	Est. Costs ($)	Est. Savings ($/year)	Payback w/o Incentive	Potential Incentive ($)*	Payback w/ Incentive	Recommended
1	Replace Door Sweeps & Seals	1,383	340	4.1	0	4.1	Y
2	Window Replacements	246,399	2,268	108.7	0	108.7	Y
3	Replace DX Split Systems with High Efficiency DX Split Systems	48,000	866	55.5	864	54.5	Y
4	Replace Existing Rooftop HVAC units with higher EER Rooftop units	117,400	3,029	38.8	2,730	37.9	Y
5	Install Vending Machine Controls	280	530	0.5	0	0.5	Y
6	Replace Electric DHW Heater with High Efficiency Natural Gas Unit	18,187	1,408	12.9	400	12.6	Y
7	Install Low Flow Plumbing Fixtures	72,514	7,280	10.0	0	10.0	Y
L1**	Lighting Replacements / Upgrades	170,292	14,795	11.5	0	11.5	N
L2**	Install Lighting Controls (Add Occupancy Sensors)	40,230	5,922	6.8	5,215	5.9	N
L3	Lighting Replacements with Controls (Occupancy Sensors)	210,522	17,951	11.7	5,215	11.4	Y
	Total**	**714,685**	**33,672**	**21.2**	**9,209**	**20.9**	
	Total (Recommended)	**714,685**	**33,672**	**21.2**	**9,209**	**20.9**	

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

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

	Existing Conditions	Post Recommended ECMs	Percent Savings
Costs ($)	344,440	310,703	10%
Electricity (kWh)	570,000	410,945	28%
Natural Gas (therms)	2,960	1,929	35%
Site EUI (kbtu/SF/Yr)	74.7	53.2	



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.

Building Name: Prosecutor's Office
Address: 25 North 5th Street, Camden, NJ 08102
Gross Floor Area: 30,000 Square Feet
Number of Floors: 4
Year Built: 1970
Additions: N/A

Description of Spaces: Offices, storage rooms, toilet rooms and a mechanical room.
Description of Occupancy: There are 75 employees.
Number of Computers: The building has approximately 150 desktop and laptop computers.
Building Usage: Hours of operation for the public are 8:30 AM – 4:30 PM Monday through Friday, with various departments continuously occupying the building. In general the occupied hours are considered 168 hours per week, 12 months per year.
Construction Materials: The building is constructed of structural steel with concrete masonry block and stone veneer. Wall insulation is assumed to be minimal based on the age of the building. The interior walls are sheet rock.
Roof: The roof is steel frame and rigid insulation under an asphalt layer with stone ballast. The roof is in good condition. Therefore no ECM was evaluated.
Windows: The building has aluminum framed single pane windows. Seals are deteriorated and the windows are existing to the building. There is an ECM to evaluate replacing the windows.
Exterior Doors: Exterior doors throughout the building are metal with single pane safety glass. Sweeps on exterior doors are in poor condition. An ECM is included to replace the door seals for the exterior doors.

Heating Ventilation & Air Conditioning (HVAC) Systems

Heating: There are several heating systems employed to heat the air for the building. The first system consist of air handling units having electric duct heaters that heat the basement and 1st floor. These units are 48,000 BTUH units each and were installed in 1994. The second system consist of two (2) the packaged roof top units that serve the 3rd and portions of the second floor. These units are 4,800 CFM and 12,000 CFM units respectively and were also installed in 1994. These two units have gas fired furnace sections. They are past the useful life as recommended by ASHRAE and an ECM is included to replace these units with high efficiency units.

Cooling: The building is 100% cooled using direct expansion cooling systems that are incorporated into the units mentioned above. The two smaller split systems have condensing units located on the exterior of the building appear to be about 4 tons each. Some of the condensing units are newer than others but ALL are past there life expectancy according to ASHRAE. An ECM has been included to upgrade these split systems. The packaged heating/ cooling rooftop units also use direct expansion cooling that is incorporated into the units. The replacement of these units is included in the ECM as well.

Ventilation: The 3rd floor and portions of the second floor that are served by the packaged heating and cooling rooftop units are ventilated by these same units. The remaining floors receive there OA from the ducted systems that serve that serve those floors.

Exhaust: The building utilizes exhaust fans of various sizes located on the roof to exhaust air from restrooms and storage areas.

Controls Systems

This building is controlled by a Siemens Apogee direct digital control system (DDC) shared with City Hall. There is a fulltime operator present on first and second shift that has control over the system monitors their system through the web from a dedicated PC. In some cases the operator coordinates shutoff of equipment if people aren't occupying spaces for a period of time and has the ability to adjust temperature set points for occupant comfort.

Typical set points in the facility are 68°F heating and 72°F cooling during occupied times, and 65°F heating and 80°F cooling during unoccupied times. Each space has a sensor that is tied into the BAS. Employees have 24 hour access to the building and not all spaces are occupied continuously.

Domestic Hot Water Systems

Domestic hot water (DHW) is generated by an 80 gallon, Bradford White electric water heater with an input capacity of 18 kW. DHW is used in toilet rooms throughout the building.

An ECM is included to evaluate the replacement of this water heater with a similar size capacity condensing gas domestic water heater.

Kitchen Equipment

The building does not have a kitchen. Staff members have designated areas with refrigerators and microwaves for breaks and lunch.

Plumbing Systems

The building was built in 1970 and the plumbing fixtures (sinks, urinals, and toilets) are original to the building and have high-flow flush valves and faucets. These fixtures should be considered for replacement. There aren't any showers in this building.

An ECM is included to evaluate the water savings potential of installing low- flow water closet and urinals. Replacement toilets, faucets and urinals are valued at 1.28 GPF, 0.5 GPM and 0.125 GPF respectively. An engineering analysis is recommended to prior to performing any fixture upgrades.

Plug Load

This building has computers, copiers, residential appliances (microwave, refrigerator), and printers which contribute to the plug load in the building. The installation of vending machine occupancy sensors has been evaluated in an effort to reduce the plug load in the building.

Lighting Systems

The office, interview room, and corridor lighting consists of 2 X 4 recessed troffer fixtures having 32W T8 fluorescent lamps with prismatic lenses. Janitor closets, restrooms and storage rooms are illuminated by recessed can fixtures having 2 lamp 23 watt CFL lamps or in some cases 100W incandescent lamps. Restroom lighting consists of 2 X 2 recessed troffer fixtures having 17W T8 fluorescent lamps. All interior lighting is manually controlled by wall switches. Exterior 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

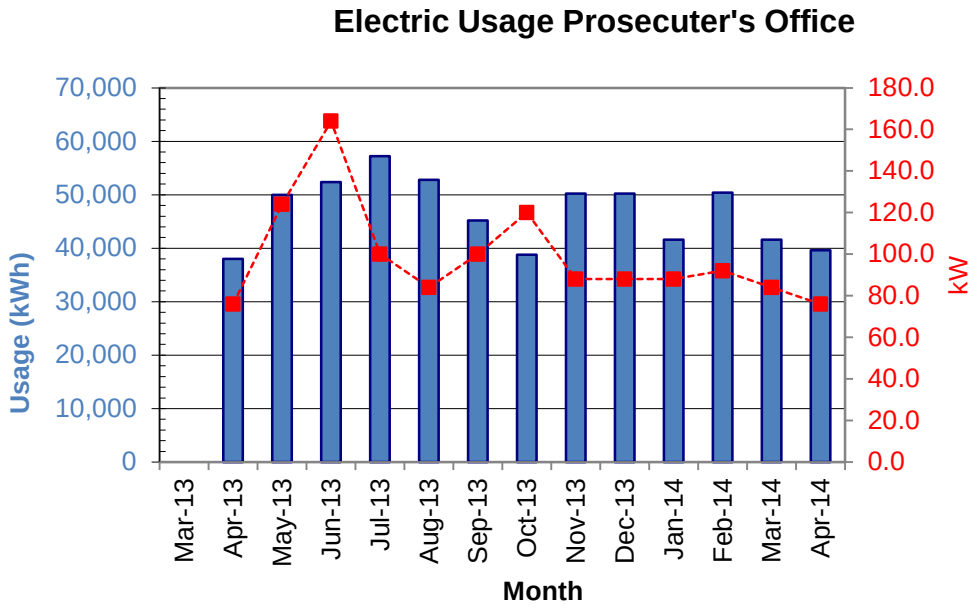
Utilities used by the building are delivered and supplied by the following utility companies:

	Electric	Natural Gas
Deliverer	PSEG	PSEG
Supplier	PSEG	HESS

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

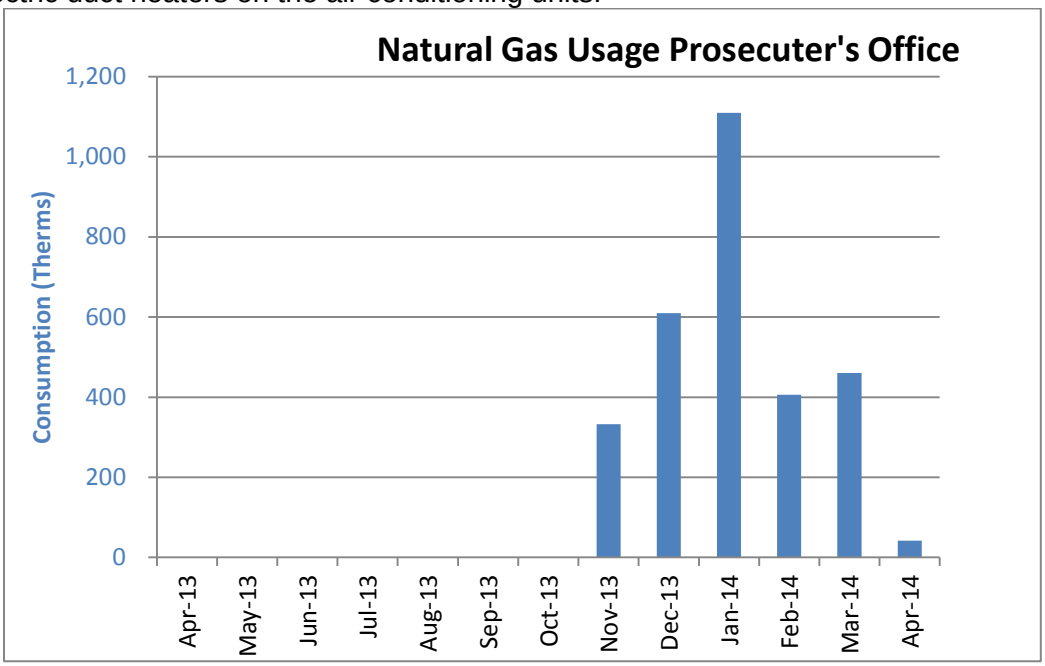
Electric		
Annual Consumption	570,000	kWh
Annual Cost	102,216	$
Blended Unit Rate	0.179	$/kWh
Supply Rate	0.172	$/kWh
Demand Rate	3.62	$/kW
Peak Demand	164.0	kW
Natural Gas		
Annual Consumption	206,007	Therms
Annual Cost	242,224	$
Unit Rate	1.176	$/therm

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)



Following this chart it can be seen that the electricity usage remains fairly constant all year round with a slight increase in the summer months of the electrical demand presumably

because of the air conditioning. There is also an increase in the winter months presumably due to the electric duct heaters on the air conditioning units.



Natural gas is used the most during the heating months. During non-heating months the natural gas usage is minimal due to the gas heating on the roof top units aren't being used.

In addition, domestic water and sewer services are provided by City of Newark Division of Water at $6.42/1000 gal.

See Appendix A for a 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	$0.172	$0.125	Y
Natural Gas	$/Therm	$1.50	$0.955	Y

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

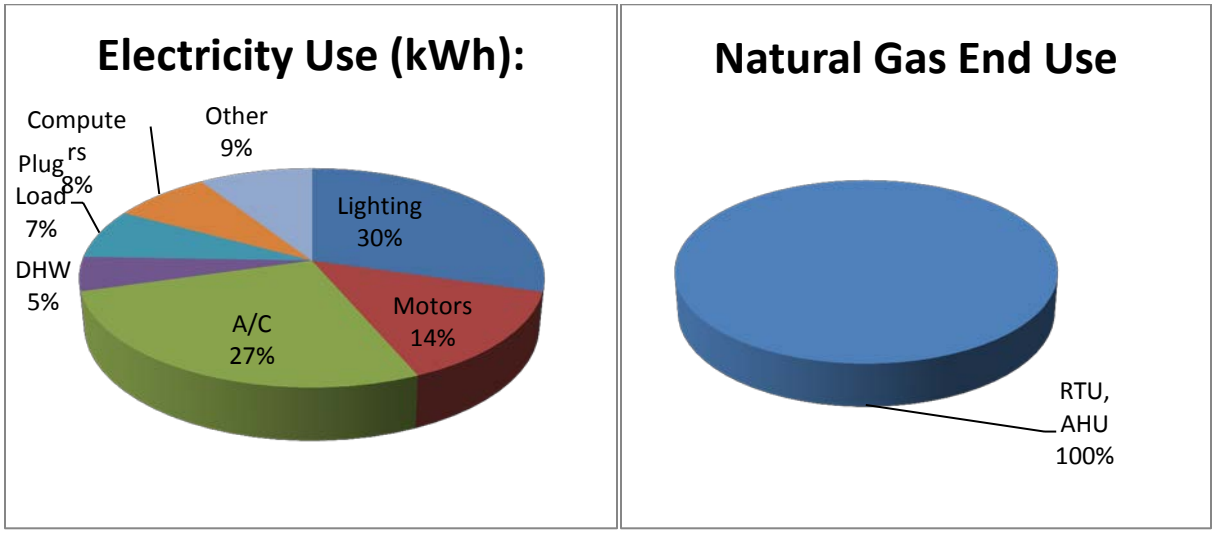
Additional information on selecting a third party energy supplier is available here:

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.

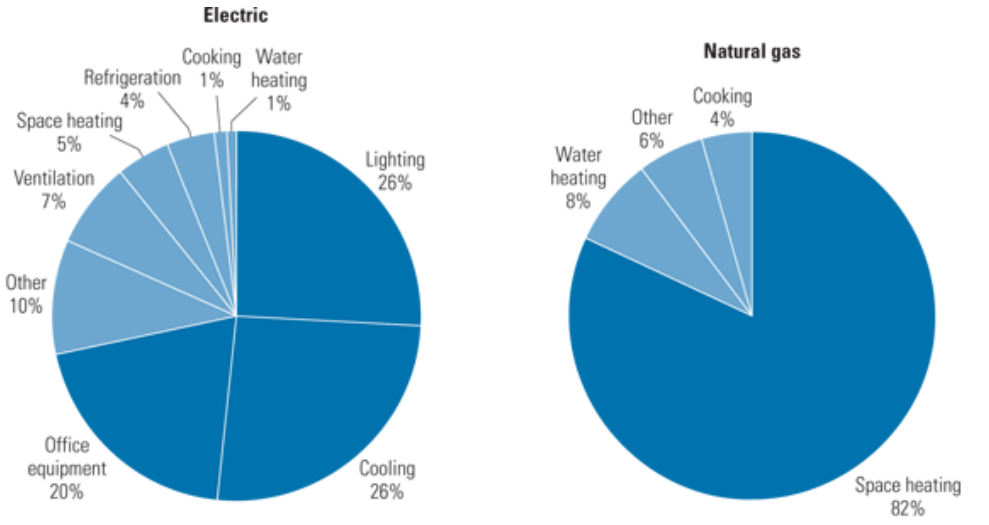
The charts below represent estimated utility end-use utility profiles for the building. The values used within the charts were estimated from a review of the utility analysis and the energy savings calculations.

Site End-Use Utility Profile



Most of the electricity consumed by educational facilities 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 K-12 buildings per U.S. Department of Energy.

Typical End-Use Utility Profile for Educational Facilities



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.

Site EUI kBtu/ft^2/yr	Energy Star Rating (1-100)
74.7	58

The building has an above average Energy Star Rating Score (50 being the median score), and as such by implementing the measures discussed in this report, it is expected that the EUI can be further reduced and the Energy Star Rating further 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 Replace Door Sweeps and Seals

Exterior doors have door sweeps and seals which have deteriorated over time. Presently, gaps exist which allow for infiltration of outdoor air or exfiltration of indoor air, wasting steam heat generated by the boiler system and therefore natural gas.

This measure calls for the replacement of all exterior door seals. Replacement of these seals will result in a reduction of the buildings heating and cooling loads, therefore providing natural gas and electricity savings. The linear footage of gap and wind speed is used to estimate the infiltration rate, which is then multiplied by the BIN weather data and the equipment efficiencies to determine the annual energy savings.

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

ECM-1 Replace Door Sweeps and Seals

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$	%	$	Years	Years
1,383	0.0	394	229	340	2.7	0	4.1	4.1

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

This measure is recommended.

5.2 ECM-2 Window Replacements

The facility has 2,464 square feet of window area. These windows are constructed with aluminum frames and single pane glazing. Due to age, construction type, and condition, the windows incur excess air infiltration and provide average thermal resistance to heat transfer. An assessment considered installing aluminum frame with triple pane glazing with internal blinds to decrease energy losses.

The calculation uses bin hours to estimate the occupied and unoccupied bin hours. This is converted to existing energy for the occupied and unoccupied cases using the existing window 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 windows resulted in annual heating.

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

ECM-2 Window Replacements

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$	%	$	Years	Years
246,399	0.0	640	970	2,268	(0.9)	0	108.7	108.7

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

This measure is recommended.

5.3 ECM-3 Replace DX Split Systems with High Efficiency DX Split Systems

The building has several DX split system air conditioning systems that provide cooling to offices and support spaces. These units also have varying efficiencies but an average of 11.0 EER can be assumed. The units use R-22 refrigerant, which is currently being phase out of production and costs are anticipated to increase significantly. The replacement units are the same capacity, use environmentally friendly 410A refrigerant and have higher efficiencies. It is recommended that the split systems or condensing units be replaced with higher energy efficiency ratio (EER) models. This ECM looks at replacing each size of split system and gives the energy savings opportunity.

The assumption of this calculation is that the operating hours and capacity remain the same. The energy savings is the result of operating a higher efficiency unit.

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

ECM-3 Replace DX Split Systems with High Efficiency DX Split Systems

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$	%	$	Years	Years
48,000	2.6	4,385	0	866	(0.6)	864	55.5	54.5

* 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 Replace Existing Rooftop HVAC units with higher EER Rooftop units

The HVAC roof top units (RTUs) contain DX cooling and natural gas heating. The roof tops were installed in 1994 and several are past their useful life. It is recommended that the RTUs be replaced with higher energy efficiency ratio (EER) models. This ECM assesses the replacement of each size of RTU and gives the resulting energy savings.

The assumption of this calculation is that the operating hours, number of units, and capacity stays the same. The energy savings result from operating higher efficiency units than the existing.

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

ECM-4 Replace Existing Rooftop HVAC units with higher EER Rooftop units

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$	%	$	Years	Years
117,400	9.1	15,347	0	3,029	(0.3)	2,730	38.8	37.9

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

This measure is recommended.

5.5 ECM-5 Install Vending Misers

The prosecutor's office has vending machines in the break room. These vending machines operate continuously 24 hours per day, seven (7) days a week. Installing controls such as timers or occupancy sensors allow the machines to turn on only when a customer is present or when the compressor must run to maintain the product at the desired temperature. By implementing this measure electrical energy savings could be realized.

The calculation uses electrical consumption and annual electrical cost as the baseline, vs. the reduced electrical consumption and cost for the proposed case. The difference between the two values is the energy savings.

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

ECM-5 Install Vending Misers

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$	%	$	Years	Years
280	0.0	2,953	0	530	27.4	0	0.5	0.5

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

This measure is recommended.

5.6 ECM-6 Replace Electric DHW Heater with High Efficiency Natural Gas Water Heater

Domestic hot water (DHW) is generated by an 80 gallon, Bradford White electric water heater with an input capacity of 18 kW. DHW is used in toilet rooms throughout the building. This ECM would install a gas-fired high efficiency heater to replace the electric heater currently installed.

Implementation of this ECM will entail replacing the existing DHW heater with high efficiency condensing natural gas fired water heaters. The tank size of the existing system will remain the same.

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

ECM-6 Replace Electric DHW Heater with High Efficiency Natural Gas Water Heater

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
$	kW	kWh	Therms	$		$	Years	Years
18,187	18.0	4,791	-167	1,408	0.2	400	12.9	12.6

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

This measure is recommended.

5.7 ECM-7 Install Low Flow Plumbing Fixtures

The plumbing fixtures in this building are older high flow fixtures. The water savings associated from replacing existing high flow fixtures with low-flow fixtures was calculated by taking the difference of the annual water usage for the proposed and base case. The basis of this calculation is the estimate usage of each fixture, gallons per use, and number of fixtures. Replacing the existing fixtures in the restrooms with 1.28 GPF toilets, 1.0 GPF urinals, and 0.5 GPM faucets will conserve water which will result in lower annual water and sewer charges.

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

ECM-7 Install Low Flow Plumbing Fixtures

Budgetary Cost	Annual Utility Savings					ROI	Potential Incentive*	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Water	Total				
$	kW	kWh	Therms	kGal	$	%	$	Years	Years
72,514	0.0	33,033	0	211	7,280	0.5	0	10.0	10.0

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

This measure is recommended.

5.8.1 ECM-L1 Lighting Replacement / Upgrades

The existing lighting system consists of mostly 32 watt T8 linear fluorescent fixtures which until recently represented the most efficient lighting technology available. Recent technological improvements in light emitting diode (LED) technologies have driven down the initial costs making it a viable option for installation.

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
170,292	27.9	79,127	0	14,795	0.4	0	11.5	11.5

* 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.

5.8.2 ECM-L2 Install Lighting Controls (Occupancy Sensors)

Presently, all interior lighting fixtures are controlled my wall mounted switches. 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 5.8.1, 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
40,230	0.0	34,498	0	5,922	1.3	5,215	6.8	5.9

* 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.

5.8.3 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
210,522	27.9	97,514	0	17,951	0.3	5,215	11.7	11.4

* 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.

5.9 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
- Look for the ENERGY STAR® label when purchasing Window AC units or Kitchen Appliances
- Disconnect unnecessary or unused small appliances and electronics when not in use to reduce phantom loads
- Train custodians to turn off lights and set when rooms are unoccupied
- Develop an Energy Master Plan to measure and track energy performance
- Educate staff about how their behavior affects energy use.
- During the winter, Custodians should ensure all windows are closed as part of cleaning routine

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 the Building District 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 more 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 buildings*. 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.

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.

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. Present technology incorporates the use of solar cell arrays that produce direct current (DC) electricity. This DC current is converted to alternating current (AC) with the use of an electrical device known as an inverter. The amount of available roof area determines how large of a solar array can be installed on any given roof. The table below summarizes the approximate roof area available on the building and the associated solar array size that can be installed.

Available Roof Area (Ft^2)	Potential PV Array Size (kW)
29	N/A

Note: The available roof area isn't sufficient to put a solar PV system. This measure is not recommended as a result.

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.

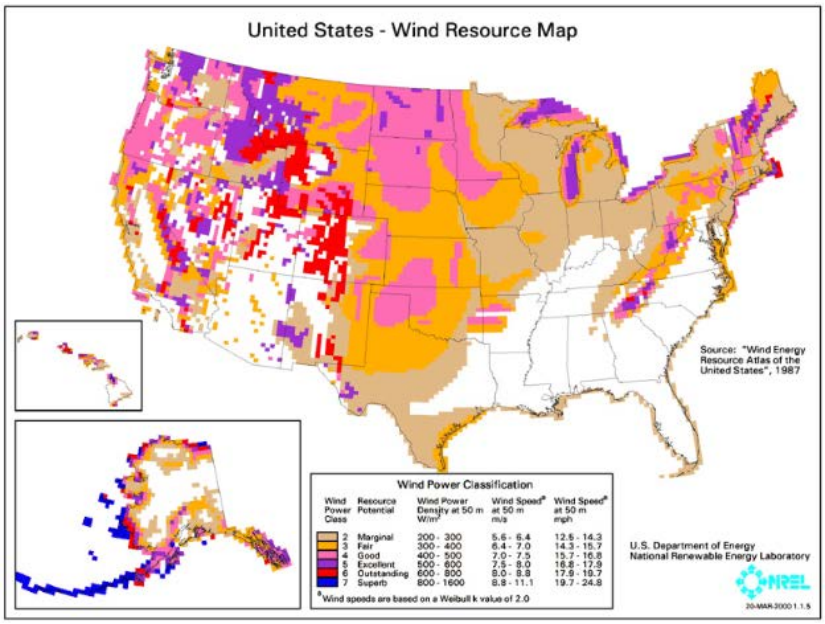
A standard solar hot water system is typically composed of solar collectors, heat storage vessel, piping, circulators, and controls. Systems are typically integrated to work alongside a conventional heating system that provides heat when solar resources are not sufficient. The solar collectors are usually 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
164.0	76.0	100.7	N	Y

This measure is not recommended because the building does not have enough onsite generation to cover the entire electrical load of the building.

8.0 CONCLUSIONS & RECOMMENDATIONS

The LGEA energy audit conducted by CHA for the building identified potential annual savings of $33,737/yr with an overall payback of 21.2 years, if the recommended ECMs are implemented.

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

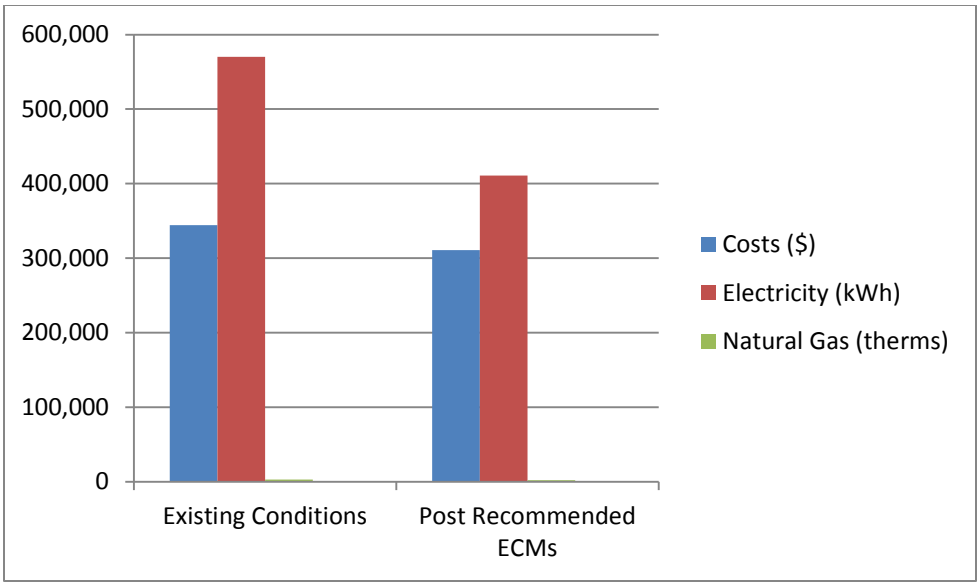
Electric Savings (kWh)	Natural Gas Savings (therms)	Total Savings ($)	Payback (years)
159,055	1,031	33,737	21.2

The following projects should be considered for implementation:

- Replace Door Sweeps & Seals
- Window Replacements
- Replace DX Split Systems with High Efficiency DX Split Systems
- Replace Existing Rooftop HVAC units with higher EER Rooftop units
- Install Vending Machine Controls
- Replace Electric DHW Heater with High Efficiency Natural Gas Unit
- Install Low Flow Plumbing Fixtures
- Lighting Replacements / Upgrades
- Install Lighting Controls (Add Occupancy Sensors)
- Lighting Replacements with Controls (Occupancy Sensors)

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

	Existing Conditions	Post Recommended ECMs	Percent Savings
Costs ($)	344,440	310,703	10%
Electricity (kWh)	570,000	410,945	28%
Natural Gas (therms)	2,960	1,929	35%
Site EUI (kbtu/SF/Yr)	74.7	53.2	


600,000
500,000
400,000
300,000
200,000
100,000
0
Existing Conditions
Post Recommended ECMs
Costs ($)
Electricity (kWh)
Natural Gas (therms)

APPENDIX A

Utility Usage Analysis and Alternate Utility Suppliers

Camden County Board of Freeholders LGEA
25 North 5th Street, Camden, NJ 08102

Annual Utilities

12-month Summary

Electric		
Annual Usage	570,000	kWh/yr
Annual Cost	102,216	$
Blended Rate	0.179	$/kWh
Consumption Rate	0.172	$/kWh
Demand Rate	3.62	$/kW
Peak Demand	164.0	kW
Min. Demand	76.0	kW
Avg. Demand	100.7	kW
Natural Gas		
Annual Usage	2,960	therms/yr
Annual Cost	6,573	$
Rate	2.221	$/therm

Camden County Board of Freeholders LGEA
25 North 5th Street, Camden, NJ 08102

Utility Bills: Account Numbers

Account Number	School Building	Location	Type	Notes
0008	Camden County Prosecuter's Office	25 North 5th Street, Camden, NJ 08102	Electricity	
4204559700	Correctional Facility	331 Federal Street, Camden, NJ 08103	Natural Gas	

Camden County Board of Freeholders LGEA
25 North 5th Street, Camden, NJ 08102

For Service at: **Prosecuter's Office**

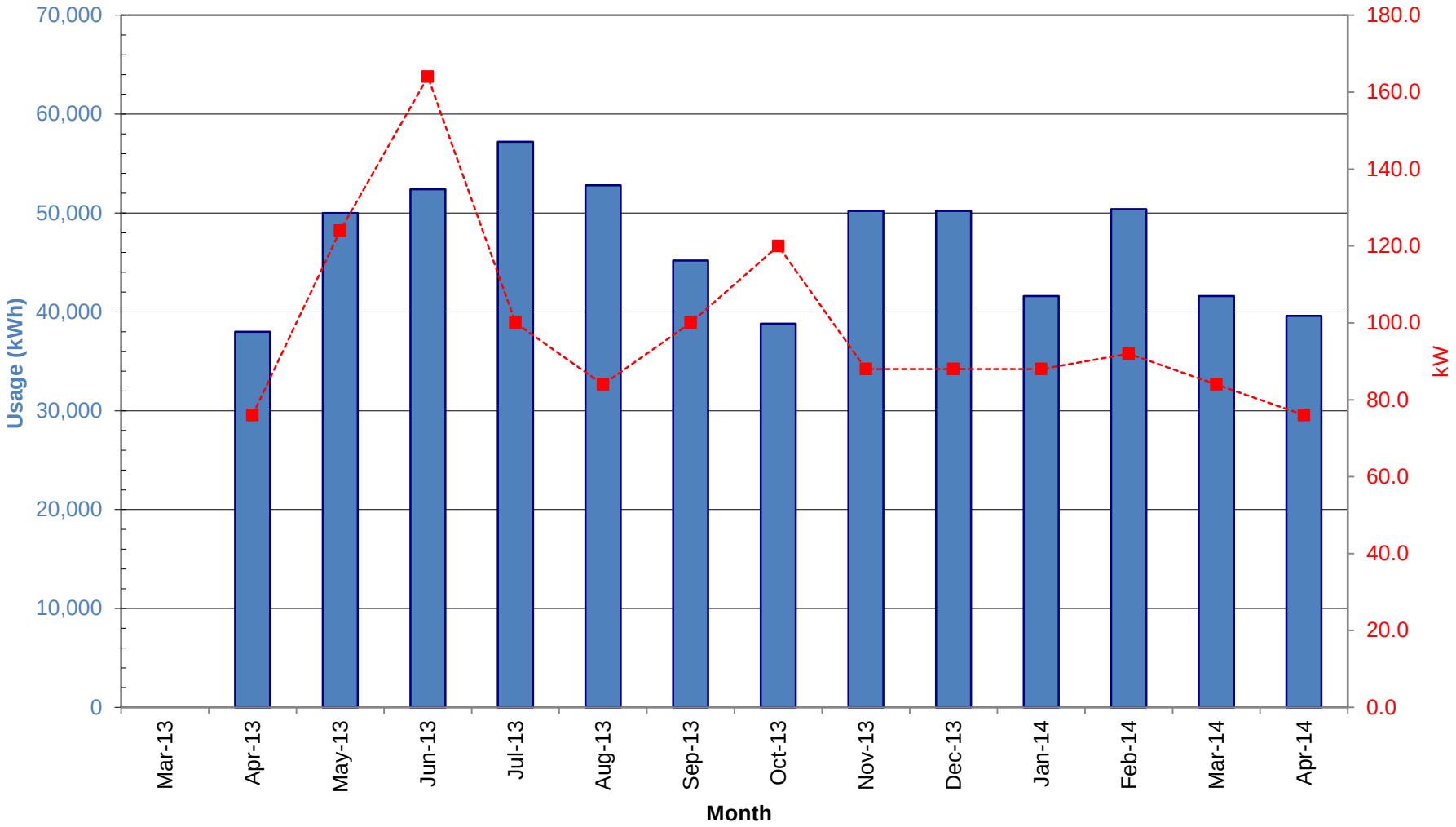
Account No.: **(4200465418)** 0008 **Delivery -** PSE&G
Meter No.: **778016532** **Supplier -** PSE&G
Electric Service

			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)**
April-13	38,000	76.0	5,984.42	3,492.20	$ 9,476.62	9,207.25	269.37	0.25	0.24	3.54
May-13	50,000	124.0	8,412.00	4,595.00	$ 13,007.00	12,567.49	439.51	0.26	0.25	3.54
June-13	52,400	164.0	8,919.77	4,815.56	$ 13,735.33	13,154.05	581.28	0.26	0.25	3.54
July-13	57,200	100.0	8,479.95	5,256.68	$ 13,736.63	13,382.19	354.44	0.24	0.23	3.54
August-13	52,800	84.0	7,645.73	4,852.32	$ 12,498.05	12,200.32	297.73	0.24	0.23	3.54
September-13	45,200	100.0	2,081.23	4,153.88	$ 6,235.11	5,880.67	354.44	0.14	0.13	3.54
October-13	38,800	120.0	1,986.64	3,565.72	$ 5,552.36	5,127.03	425.33	0.14	0.13	3.54
November-13	50,200	88.0	2,299.46	4,613.38	$ 6,912.84	6,554.15	358.69	0.14	0.13	4.08
December-13	50,200	88.0	2,299.46	4,613.38	$ 6,912.84	6,554.15	358.69	0.14	0.13	4.08
January-14	41,600	88.0	1,886.22	3,823.04	$ 5,709.26	5,397.35	311.91	0.14	0.13	3.54
February-14	50,400	92.0	2,154.02	4,631.76	$ 6,785.78	6,459.69	326.09	0.13	0.13	3.54
March-14	41,600	84.0	1,871.26	3,823.04	$ 5,694.30	5,396.57	297.73	0.14	0.13	3.54
April-14	39,600	76.0	1,796.78	3,639.24	$ 5,436.02	5,166.65	269.37	0.14	0.13	3.54
Total (All)	**608,000**	**164.00**	**$55,816.94**	**$55,875.20**	**$ 111,692.14**	**$107,047.56**	**$4,644.58**	**0.18**	**0.18**	**3.62**
Total (last 12-months)	**570,000**	**164.00**	**$49,832.52**	**$52,383.00**	**$ 102,215.52**	**$97,840.31**	**$4,375.21**	**0.18**	**0.17**	**3.62**
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
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)

No data provided, most recent rate used
No data provided, interpolated value

Electric Usage - Correctional Facility



Utility Data - Prosecuter's Office V2.xlsx
Electric Graph

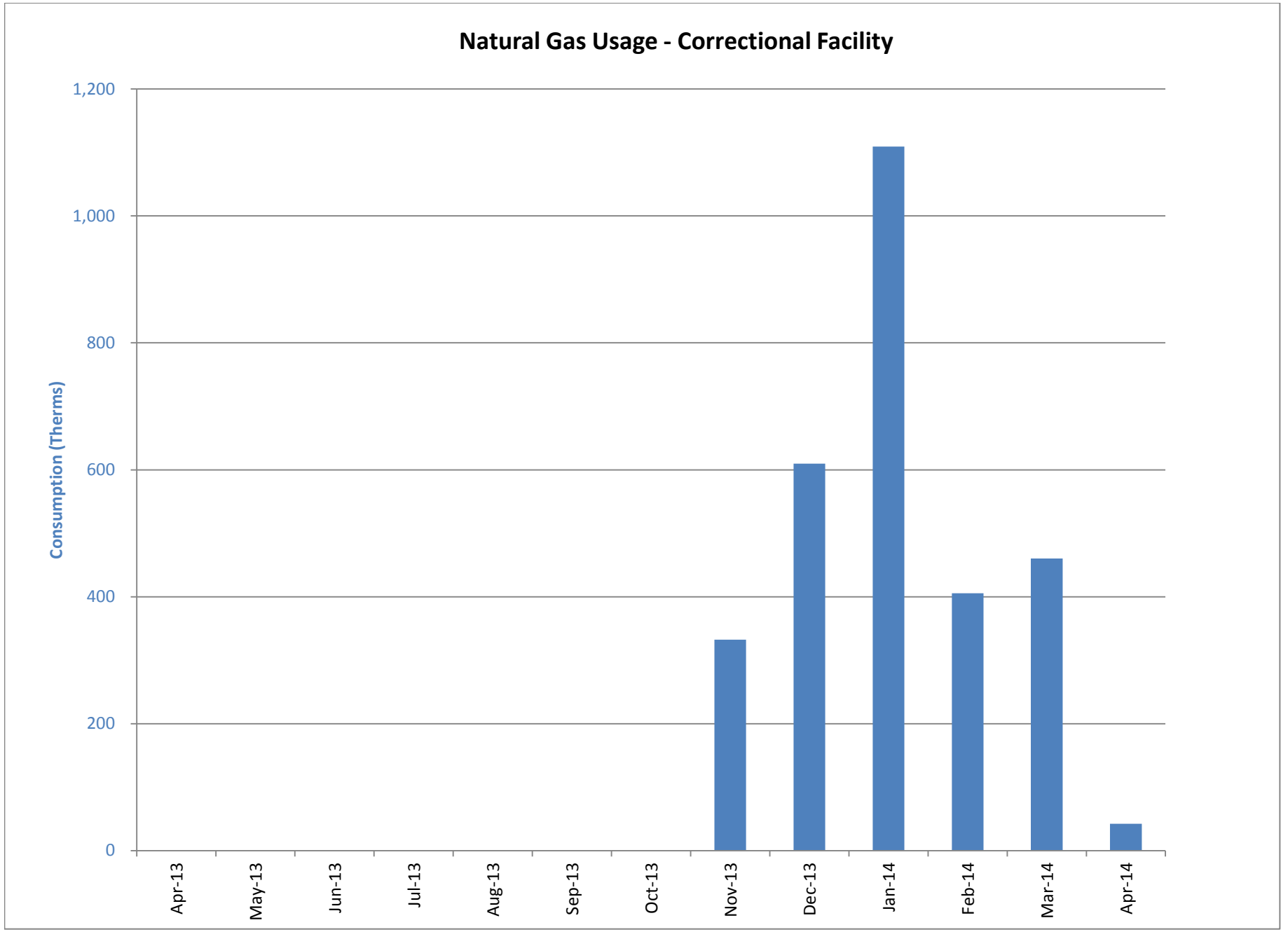
Camden County Board of Freeholders LGEA
25 North 5th Street, Camden, NJ 08102

For Service at: **Camden County Prosecuter's Office**
25 North 5th Street, Camden, NJ 08102
Account No.: **4200465418**
Meter No: **-**
Natural Gas Service

Delivery - **PSE&G**
Supplier - **Hess**

Used information provided by owner

Month	Consumption (Therms)	Charges			Unit Costs		
		Delivery ($)	Supply ($)	Total ($)	Delivery ($/Therm)	Supply ($/Therm)	Total ($/Therm)
April-13	0	$ 104.24	$ -	$ 104	#DIV/0!	#DIV/0!	#DIV/0!
May-13	0	$ 104.24	$ -	$ 104	#DIV/0!	#DIV/0!	#DIV/0!
June-13	0	$ 104.24	$ -	$ 104	#DIV/0!	#DIV/0!	#DIV/0!
July-13	0	$ 104.24	$ -	$ 104	#DIV/0!	#DIV/0!	#DIV/0!
August-13	0	$ 104.24	$ -	$ 104	#DIV/0!	#DIV/0!	#DIV/0!
September-13	0	$ 104.24	$ -	$ 104	#DIV/0!	#DIV/0!	#DIV/0!
October-13	0	$ 104.24	$ -	$ 104	#DIV/0!	#DIV/0!	#DIV/0!
November-13	332	$ 516.68	$ 238.39	$ 755	$ 1.554	$ 0.717	$ 2.27
December-13	610	$ 771.05	$ 437.31	$ 1,208	$ 1.265	$ 0.717	$ 1.98
January-14	1,109	$ 1,320.76	$ 795.66	$ 2,116	$ 1.191	$ 0.717	$ 1.91
February-14	406	$ 440.64	$ 290.98	$ 732	$ 1.086	$ 0.717	$ 1.80
March-14	460	$ 639.29	$ 330.26	$ 970	$ 1.388	$ 0.717	$ 2.11
April-14	42	$ 136.38	$ 30.28	$ 167	$ 3.230	$ 0.717	$ 3.95
Total (all)	**2,960**	**$ 4,554.48**	**$ 2,122.88**	**$ 6,677**	$ 1.54	$ 0.72	**$ 2.26**
Total (last 12-months)	**2,960**	**$ 4,450.24**	**$ 2,122.88**	**$ 6,573**	$ 1.50	$ 0.72	**$ 2.22**


Natural Gas Usage - Correctional Facility
Consumption (Therms)
1,200
1,000
800
600
400
200
0
Apr-13
May-13
Jun-13
Jul-13
Aug-13
Sep-13
Oct-13
Nov-13
Dec-13
Jan-14
Feb-14
Mar-14
Apr-14

PSE&G ELECTRIC SERVICE TERRITORY
Last Updated: 10/24/12

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

Supplier	Telephone & Web Site	*Customer Class
AEP Energy, Inc. 309 Fellowship Road, Fl. 2 Mount Laurel, NJ 08054	(866) 258-3782 www.aepenergy.com	**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 103 Carnegie Center Suite 300 Princeton, NJ 08540	(877)-30-AMBIT (877) 302-6248 www.ambitenergy.com	**R/C** **ACTIVE**
American Powernet Management, LP 437 North Grove St. Berlin, NJ 08009	(877) 977-2636 www.americanpowernet.com	**C** **ACTIVE**
Amerigreen Energy, Inc. 1463 Lamberton Road Trenton, NJ 08611	888-423-8357 www.amerigreen.com	**R/C** **ACTIVE**
AP Gas & Electric, LLC 10 North Park Place, Suite 420 Morristown, NJ 07960	(855) 544-4895 www.apge.com	**R/C/I** **ACTIVE**
Astral Energy LLC 16 Tyson Place Bergenfield, NJ 07621	(201) 384-5552 www.astralenergyllc.com	**R/C/I** **ACTIVE**
Barclays Capital Services, Inc. 70 Hudson Street Jersey City, NJ 07302-4585	(888) 978-9974 www.group.barclays.com	**C** **ACTIVE**
BBPC, LLC d/b/a Great Eastern Energy 116 Village Blvd. Suite 200 Princeton, NJ 08540	(888) 651-4121 www.greateasternenergy.com	**C/I** **ACTIVE**
Champion Energy Services, LLC 72 Avenue L Newark, NJ 07105	(877) 653-5090 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. 505 Park Drive Woodbury, NJ 08096	(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** **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**
Constellation NewEnergy, Inc. 900A Lake Street, Suite 2 Ramsey, NJ 07446	(866) 237-7693 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 www.directenergybusiness.com	**C/I** **ACTIVE**
Direct Energy Services, LLC 120 Wood Avenue, Suite 611 Iselin, NJ 08830	(866) 348-4193 www.directenergy.com	**R** **ACTIVE**
Discount Energy Group, LLC 811 Church Road, Suite 149 Cherry Hill, New Jersey 08002	(800) 282-3331 www.discountenergygroup.com	**R/C** **ACTIVE**
Dominion Retail, Inc. **d/b/a Dominion Energy Solutions** 395 Route #70 West Suite 125 Lakewood, NJ 08701	(866) 275-4240 www.dom.com/products	**R/C** **ACTIVE**

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**
FirstEnergy Solutions 300 Madison Avenue Morristown, NJ 07962	(800) 977-0500 www.fes.com	**C/I** **ACTIVE**
Gateway Energy Services Corp. 44 Whispering Pines Lane Lakewood, NJ 08701	(800) 805-8586 www.gesc.com	**R/C/I** **ACTIVE**
GDF SUEZ Energy Resources NA, Inc. 333 Thornall Street Sixth Floor Edison, NJ 08837	(866) 999-8374 www.gdfsuezenergyresources.com	**C/I** **ACTIVE**
Glacial Energy of New Jersey, Inc. 75 Route 15 Building E Lafayette, NJ 07848	(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	**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**

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** **ACTIVE**
HOP Energy, LLC d/b/a Metro Energy, HOP Fleet Fueling, HOP Energy Fleet Fueling 1011 Hudson Avenue Ridgefield, NJ 07657	(877) 390-7155 www.hopenergy.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 3711 Market Street, 10th Fl. Philadelphia, PA 19104	(877) 235-6708 www.chooseindependence.com	**R/C** **ACTIVE**
Integrys Energy Services, Inc. 99 Wood Ave, South, Suite 802 Iselin, NJ 08830	(877) 763-9977 www.integrysenergy.com	**C/I** **ACTIVE**
Keil & Sons, Inc. **d/b/a Systrum Energy** 1 Bergen Blvd. Fairview, NJ 07022	(877) 797-8786 www.systrumenergy.com	**R/C/I** **ACTIVE**
Liberty Power Delaware, LLC 1973 Highway 34, Suite 211 Wall, NJ 07719	(866) 769-3799 www.libertypowercorp.com	**C/I** **ACTIVE**
Liberty Power Holdings, LLC 1973 Highway 34, Suite 211 Wall, NJ 07719	(866) 769-3799 www.libertypowercorp.com	**C/I** **ACTIVE**

Linde Energy Services 575 Mountain Avenue Murray Hill, NJ 07974	(800) 247-2644 www.linde.com	**C/I** **ACTIVE**
Marathon Power LLC 302 Main Street Paterson, NJ 07505	(888) 779-7255 www.mecny.com	**R/C/I** **ACTIVE**
MXenergy Electric Inc. 900 Lake Street Ramsey, NJ 07446	(800) 785-4374 www.mxenergy.com	**R/C/I** **ACTIVE**
NATGASCO, Inc. 532 Freeman St. Orange, NJ 07050	(973) 678-1800 x. 251 www.supremeenergyinc.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**
New Jersey Gas & Electric 1 Bridge Plaza fl. 2 Fort Lee, NJ 07024	(866) 568-0290 www.NJGandE.com	**R/C** **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**
North American Power and Gas, LLC 222 Ridgedale Avenue Cedar Knolls, NJ 07927	(888) 313-9086 www.napower.com	**R/C/I** **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**
Pepco Energy Services, Inc. 112 Main St. Lebanon, NJ 08833	(800) ENERGY-9 (363-7499) www.pepco-services.com	**C/I** **ACTIVE**
Plymouth Rock Energy, LLC 338 Maitland Avenue Teaneck, NJ 07666	(855) 32-POWER (76937) www.plymouthenergy.com	**R/C/I** **ACTIVE**

PPL Energy Plus, LLC 811 Church Road Cherry Hill, NJ 08002	(800) 281-2000 www.pplenergyplus.com	**C/I** **ACTIVE**
Public Power & Utility of New Jersey, LLC 39 Old Ridgebury Rd. Suite 14 Danbury, CT 06810	(888) 354-4415 www.ppandu.com	**R/C/I** **ACTIVE**
Reliant Energy 211 Carnegie Center Princeton, NJ 08540	(877) 297-3795 (877) 297-3780 www.reliant.com/pjm	**R/C/I** **ACTIVE**
ResCom Energy LLC 18C Wave Crest Ave. Winfield Park, NJ 07036	(888) 238-4041 http://rescomenergy.com	**R/C/I** **ACTIVE**
Respond Power LLC 10 Regency CT Lakewood, NJ 08701	(877) 973-7763 www.respondpower.com	**R/C/I** **ACTIVE**
South Jersey Energy Company 1 South Jersey Plaza, Route 54 Folsom, NJ 08037	(800) 266-6020 www.southjerseyenergy.com	**C/I** **ACTIVE**
Sperian Energy Corp. 1200 Route 22 East, Suite 2000 Bridgewater, NJ 08807	(888) 682-8082	**R/C/I** **ACTIVE**
S.J. Energy Partners, Inc. 208 White Horse Pike, Suite 4 Barrington, N.J. 08007	(800) 695-0666 www.sjnaturalgas.com	**R/C** **ACTIVE**
Spark Energy, L.P. 2105 CityWest Blvd., Ste 100 Houston, Texas 77042	(800) 441-7514 www.sparkenergy.com	**R/C/I** **ACTIVE**
Sprague Energy Corp. 12 Ridge Road Chatham Township, NJ 07928	(800) 225-1560 www.spragueenergy.com	**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 309 Fellowship Rd., Suite 200 Mt. Laurel, NJ 08054	(877) 39-8150 www.streamenergy.net	**R** **ACTIVE**

UGI Energy Services, Inc. d/b/a GASMARK 224 Strawbridge Drive Suite 107 Moorestown, NJ 08057	(856) 273-9995 www.ugienergyservices.com	**C/I** **ACTIVE**
Verde Energy USA, Inc. 50 East Palisades Avenue Englewood, NJ 07631	(800) 388-3862 www.lowcostpower.com	**R/C/I** **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 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**

Back to the main supplier page

PSE&G GAS SERVICE TERRITORY
Last Updated: 10/24/12

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

Supplier	Telephone & Web Site	*Customer Class
Ambit Northeast, LLC 103 Carnegie Center Suite 300 Princeton, NJ 08540	(877)-30-AMBIT (877) 302-6248 www.ambitenergy.com	**R/C** **ACTIVE**
Astral Energy LLC 16 Tyson Place Bergenfield, NJ 07621	888-850-1872 www.astralenergyllc.com	**R/C/I** **ACTIVE**
BBPC, LLC Great Eastern Energy 116 Village Blvd. Suite 200 Princeton, NJ 08540	888-651-4121 www.greateasternenergy.com	**C/I** **ACTIVE**
Clearview Electric Inc. **d/b/a Clearview Gas** 1744 Lexington Ave. Pennsauken, NJ 08110	800-746-4720 www.clearviewenergy.com	**R/C** **ACTIVE**
Colonial Energy, Inc. 83 Harding Road Wyckoff, NJ 07481	845-429-3229 www.colonialgroupinc.com	**C/I** **ACTIVE**
Commerce Energy, Inc. 7 Cedar Terrace Ramsey, NJ 07746	(888) 817-8572 www.commerceenergy.com	**R** **ACTIVE**
Compass Energy Services, Inc. 1085 Morris Avenue, Suite 150 Union, NJ 07083	866-867-8328 908-638-6605 www.compassenergy.net	**C/I** **ACTIVE**
ConocoPhillips Company 224 Strawbridge Drive, Suite 107 Moorestown, NJ 08057	800-646-4427 www.conocophillips.com	**C/I** **ACTIVE**
Consolidated Edison Energy, Inc. **d/b/a Con Edison Solutions** 535 State Highway 38, Suite 140 Cherry Hill, NJ 08002	888-686-1383 x2130 www.conedenergy.com	

Consolidated Edison Solutions, Inc. Cherry Tree Corporate Center 535 State Highway 38, Suite 140 Cherry Hill, NJ 08002	888-665-0955 www.conedsolutions.com	**C/I** **ACTIVE**
Constellation NewEnergy-Gas Division, LLC 900A Lake Street, Suite 2 Ramsey, NJ 07466	(800) 900-1982 www.constellation.com	**C/I** **ACTIVE**
Direct Energy Business, LLC 120 Wood Avenue, Suite 611 Iselin, NJ 08830	888-925-9115 www.directenergy.com	**C/I** **ACTIVE**
Direct Energy Services, LLP 120 Wood Avenue, Suite 611 Iselin, NJ 08830	866-348-4193 www.directenergy.com	**R** **ACTIVE**
Gateway Energy Services Corp. 44 Whispering Pines Lane Lakewood, NJ 08701	800-805-8586 www.gesc.com	**R/C/I** **ACTIVE**
UGI Energy Services, Inc. **d/b/a GASMARK** 224 Strawbridge Drive, Suite 107 Moorestown, NJ 08057	856-273-9995 www.ugienergyservices.com	**C/I** **ACTIVE**
Global Energy Marketing, LLC 129 Wentz Avenue Springfield, NJ 07081	800-542-0778 www.globalp.com	**C/I** **ACTIVE**
Great Eastern Energy 116 Village Blvd., Suite 200 Princeton, NJ 08540	888-651-4121 www.greateastern.com	**C/I** **ACTIVE**
Greenlight Energy 330 Hudson Street, Suite 4 Hoboken, NJ 07030	718-204-7467 www.greenlightenergy.us	**C** **ACTIVE**
Hess Energy, Inc. One Hess Plaza Woodbridge, NJ 07095	800-437-7872 www.hess.com	**C/I** **ACTIVE**
Hess Small Business Services, LLC One Hess Plaza Woodbridge, NJ 07095	888-494-4377 www.hessenergy.com	**C/I** **ACTIVE**
HIKO Energy, LLC 655 Suffern Road Teaneck, NJ 07666	(888) 264-4908 www.hikoenergy.com	**R/C** **ACTIVE**

Hudson Energy Services, LLC 7 Cedar Street Ramsey, NJ 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**
Integrys Energy Services – Natural Gas, LLC 99 Wood Avenue South Suite #802 Iselin, NJ 08830	800-536-0151 www.integrysenergy.com	**C/I** **ACTIVE**
Intelligent Energy 2050 Center Avenue, Suite 500 Fort Lee, NJ 07024	800-927-9794 www.intelligentenergy.org	**R/C/I** **ACTIVE**
Keil & Sons, Inc. **d/b/a Systrum Energy** 1 Bergen Blvd. Fairview, NJ 07022	1-877-797-8786 www.systrumenergy.com	**R/C/I** **ACTIVE**
Major Energy Services, LLC 10 Regency CT Lakewood, NJ 08701	888-625-6760 www.majorenergy.com	**R/C/I** **ACTIVE**
Marathon Power LLC 302 Main Street Paterson, NJ 07505	888-779-7255 www.mecny.com	**R/C/I** **ACTIVE**
Metromedia Energy, Inc. 6 Industrial Way Eatontown, NJ 07724	800-828-9427 www.metromediaenergy.com	**C** **ACTIVE**
Metro Energy Group, LLC 14 Washington Place Hackensack, NJ 07601	888-53-Metro www.metroenergy.com	**R/C** **ACTIVE**
MxEnergy, Inc. 900 Lake Street Ramsey, NJ 07446	800-758-4374 www.mxenergy.com	**R/C/I** **ACTIVE**
NATGASCO (Mitchell Supreme) 532 Freeman Street Orange, NJ 07050	800-840-4GAS www.natgasco.com	**C** **ACTIVE**
New Energy Services LLC 101 Neptune Avenue Deal, New Jersey 07723	800-660-3643 www.newenergyservicesllc.com	**R/C/I** **ACTIVE**

New Jersey Gas & Electric 1 Bridge Plaza, Fl. 2 Fort Lee, NJ 07024	866-568-0290 www.NJGandE.com	**R/C** **ACTIVE**
Noble Americas Energy Solutions The Mac-Cali Building 581 Main Street, 8th fl. Woodbridge, NJ 07095	877-273-6772 www.noblesolutions.com	**C/I** **ACTIVE**
North American Power & Gas, LLC d/b/a North American Power 197 Route 18 South Ste. 3000 East Brunswick, NJ 08816	(888) 313-9086 www.napower.com	**R/C/I** **ACTIVE**
Palmco Energy 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**
Pepco Energy Services, Inc. 112 Main Street Lebanon, NJ 08833	800-363-7499 www.pepco-services.com	**C/I** **ACTIVE**
Plymouth Rock Energy, LLC 338 Maitland Avenue Teaneck, NJ 07666	855-32-POWER (76937) www.plymouthenergy.com	**R/C/I** **ACTIVE**
PPL EnergyPlus, LLC 811 Church Road - Office 105 Cherry Hill, NJ 08002	800-281-2000 www.pplenergyplus.com	**C/I** **ACTIVE**
Respond Power LLC 10 Regency CT Lakewood, NJ 08701	(877) 973-7763 www.respondpower.com	**R/C/I** **ACTIVE**
South Jersey Energy Company 1 South Jersey Plaza, Route 54 Folsom, NJ 08037	800-266-6020 www.southjerseyenergy.com	**C/I** **ACTIVE**
S.J. Energy Partners, Inc. 208 White Horse Pike, Suite 4 Barrington, NJ 08007	800-695-0666 www.sjnaturalgas.com	**R/C** **ACTIVE**
Spark Energy Gas, L.P. 2105 CityWest Blvd, Ste 100 Houston, Texas 77042	800-411-7514 www.sparkenergy.com	**R/C/I** **ACTIVE**
Sprague Energy Corp. 12 Ridge Road Chatham Township, NJ 07928	855-466-2842 www.spragueenergy.com	**C/I** **ACTIVE**

Stuyvesant Energy LLC 10 West Ivy Lane, Suite 4 Englewood, NJ 07631	800-640-6457 www.stuyfuel.com	**C** **ACTIVE**
Stream Energy New Jersey, LLC 309 Fellowship Road Suite 200 Mt. Laurel, NJ 08054	(973) 494-8097 www.streamenergy.net	**R/C** **ACTIVE**
Systrum Energy 1 Bergen Blvd. Fairview, NJ 07022	877-797-8786 www.systrumenergy.com	**R/C/I** **ACTIVE**
Woodruff Energy 73 Water Street Bridgeton, NJ 08302	800-557-1121 www.woodruffenergy.com	**R/C/I** **ACTIVE**
Woodruff Energy US LLC 73 Water Street, P.O. Box 777 Bridgeton, NJ 08302	856-455-1111 800-557-1121 www.woodruffenergy.com	**C/I** **ACTIVE**
Xoom Energy New Jersey, LLC 744 Broad Street Newark, NJ 07102	888-997-8979 www.xoomenergy.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**

Back to main supplier information page

APPENDIX B

Equipment Inventory

Camden County Board of Freeholders LGEA
CHA Project #28470
Prosecutor's Office

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.
AH-2	1	Environmental Tech Group	QB-R4BL-0000-03014-EMA10-FT1		AHU / Natural Gas	1.5 HP	MER	1st Floor	1994	0	
AH-1	1	Unitary Products	MA20DN41H	W1F1141645	AHU / Natural Gas		MER	Basement	1994	0	
AH-3	1	-	-	-	AHU / Natural Gas	5 HP	MER	Portion of Second Floor	1994	0	
DHW-1	1	Bradford White	MII-80-18-35F	OF-01-0786	Hot Water / Natural Gas	18 KW, 80 Gallons	MER	Building	2001	0	
AH-4	1	Environmental Tech Group	QB-R4BL-E015-01613-DMA17-FT1	-	AHU / Natural Gas	1.0 HP, 15.0 kW	Storage	Office	1994	0	
AH-5	1	Environmental Tech Group	QB-R4BL-E015-01613-DMA17-FT1	-	AHU / Natural Gas	1.0 HP, 15.0 kW	Storage	B28 Storage	1994	0	
CU	1	LG	LSU240HSV2	209KAHG00057	Cooling / DX Cooling	2-Ton	Elevator Machine Room	Elevator Machine Room	2009	15	
CU	1	York	YCJD48543353A	W1F1144685	Cooling / DX Cooling	4-Ton	Outside	AH-1	2011	17	
CU	1	EMI	SZCA990D001	1-08-G-5031-30	Cooling / DX Cooling	4-Ton	Outside	AH-2	2008	14	
CU	1	ICP	CHE048LCB	E044226091	Cooling / DX Cooling	4-Ton	Outside	AH-3	2004	10	
CU	1	Carrier	38AKS0120-601	1700G03114	Cooling / DX Cooling		Roof	Office	2000	6	
CU	1	Carrier	38AKS0120-601	1500G00059	Cooling / DX Cooling		Roof	Office	2000	6	
CU	1	Inter City Product	YE048F	L922054525	Cooling / DX Cooling	4-ton	Roof	Office	2005	11	
CU	1	-	-	-	Cooling / DX Cooling	-	Roof	Office	2005	11	
RTU	1	McQuay	RPS030BA	3ZB0075919	Heating / Natural Gas	4,800 CFM	Roof	3rd Floor, Portion of 2nd	1994	5	
RTU	1	McQuay	RPS050BA	3ZB0076701	Heating / Natural Gas	12,000 CFM	Roof	3rd Floor, Portion of 2nd	1994	5	

Energy Audit of Prosecutor's Office
CHA Project No. 28470
Existing Lighting & Audit Input

Cost of Electricity: **$0.172** **$/kWh**
$3.62 **$/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
34LED	Lobby	Hallways	5	1T 32 C F 4 (ELE)	F44ILL	112	0.56	SW	8760	4,906	NONE	
34LED	Booth	Booth	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	1820	408	NONE	
34LED	Corridor	Hallways	7	1T 32 C F 4 (ELE)	F44ILL	112	0.78	SW	8760	6,868	NONE	
34LED	Office	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	168 Interview Room	Interview Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	164 Interview Room	Interview Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	166 Storage	Storage Areas	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	1000	112	C-OCC	
34LED	167 Mailroom	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	Closet	Storage Areas	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	1000	112	C-OCC	
117	106 Janitor Closet	Storage Areas	1	CF 23	CFS23/1	23	0.02	SW	1000	23	C-OCC	
32LED	Men's TR	Restroom	5	1T 32 R F 2 (ELE)	F42LL	60	0.30	SW	2400	720	C-OCC	
34LED	Conference Room	Conference	4	1T 32 C F 4 (ELE)	F44ILL	112	0.45	SW	2400	1,075	C-OCC	
32LED	Women's TR	Restroom	5	1T 32 R F 2 (ELE)	F42LL	60	0.30	SW	2400	720	C-OCC	
105LED	Sub-Basement MER	Mechanical Room	26	W 32 F 1	F41LL	32	0.83	SW	2000	1,664	NONE	
32LED	Elev Machine Room	Mechanical Room	2	1T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2000	240	NONE	
105LED	Homicide	Offices	20	W 32 F 1	F41LL	32	0.64	SW	2400	1,536	C-OCC	
105LED	B28 Storage	Storage Areas	40	W 32 F 1	F41LL	32	1.28	SW	1000	1,280	C-OCC	
105LED	B32 Elect Room	Mechanical Room	8	W 32 F 1	F41LL	32	0.26	SW	2000	512	NONE	
34LED	Corridor	Hallways	11	1T 32 C F 4 (ELE)	F44ILL	112	1.23	SW	8760	10,792	NONE	
105LED	Stairs	Stairway	14	W 32 F 1	F41LL	32	0.45	SW	8760	3,924	NONE	
32LED	B31 Storage	Storage Areas	1	1T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	C-OCC	
105LED	B31 Storage	Storage Areas	2	W 32 F 1	F41LL	32	0.06	SW	1000	64	C-OCC	
105LED	B33 Storage	Storage Areas	8	W 32 F 1	F41LL	32	0.26	SW	1000	256	C-OCC	
105LED	B30 Evidence Office	Offices	10	W 32 F 1	F41LL	32	0.32	SW	2400	768	C-OCC	
263LED	B30 Evidence Office	Offices	1	W 34 W F 1 (MAG)	F41EE	43	0.04	SW	2400	103	C-OCC	
105LED	B25 Storage	Storage Areas	8	W 32 F 1	F41LL	32	0.26	SW	1000	256	C-OCC	
34LED	B34 Storage	Storage Areas	8	1T 32 C F 4 (ELE)	F44ILL	112	0.90	SW	1000	896	C-OCC	
105LED	Stairs	Stairway	14	W 32 F 1	F41LL	32	0.45	SW	8760	3,924	NONE	
34LED	B35 Storage	Storage Areas	4	1T 32 C F 4 (ELE)	F44ILL	112	0.45	SW	1000	448	C-OCC	
34LED	B23 Strorage (IT Room)	Storage Areas	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	1000	112	C-OCC	
34LED	B36 Storage	Storage Areas	4	1T 32 C F 4 (ELE)	F44ILL	112	0.45	SW	1000	448	C-OCC	
32LED	Maint Storage	Storage Areas	1	1T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	C-OCC	
34LED	B37 Storage	Storage Areas	4	1T 32 C F 4 (ELE)	F44ILL	112	0.45	SW	1000	448	C-OCC	
34LED	B07 Supplies	Storage Areas	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	1000	112	C-OCC	
32LED	Men's TR	Restroom	5	1T 32 R F 2 (ELE)	F42LL	60	0.30	SW	2400	720	C-OCC	
117	B06 Janitor Closet	Storage Areas	1	CF 23	CFS23/1	23	0.02	SW	1000	23	C-OCC	
32LED	Women's TR	Restroom	5	1T 32 R F 2 (ELE)	F42LL	60	0.30	SW	2400	720	C-OCC	
34LED	B39 Lunchroom	Break/Lunch Rooms	6	1T 32 C F 4 (ELE)	F44ILL	112	0.67	SW	3120	2,097	C-OCC	
34LED	Crime Scene Units	Offices	10	1T 32 C F 4 (ELE)	F44ILL	112	1.12	SW	2400	2,688	C-OCC	
34LED	B20 Office	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	B21 Storage	Storage Areas	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	1000	112	C-OCC	
34LED	B18 Lab	Offices	4	1T 32 C F 4 (ELE)	F44ILL	112	0.45	SW	2400	1,075	C-OCC	
34LED	B17 Photolab	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	Area Outside B17	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	B15 Office	Offices	4	1T 32 C F 4 (ELE)	F44ILL	112	0.45	SW	2400	1,075	C-OCC	
34LED	B13 Office	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	B12 Office	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	B11 Evidence Storage	Storage Areas	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	1000	112	C-OCC	
34LED	111 Shower Room	Shower	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	3120	349	C-OCC	
117	TR	Restroom	1	CF 23	CFS23/1	23	0.02	SW	2400	55	C-OCC	
117	TR	Restroom	1	CF 23	CFS23/1	23	0.02	SW	2400	55	C-OCC	
32LED	Office Corridor	Hallways	1	1T 32 R F 2 (ELE)	F42LL	60	0.06	SW	8760	526	C-OCC	
34LED	Office	Offices	6	1T 32 C F 4 (ELE)	F44ILL	112	0.67	SW	2400	1,613	C-OCC	
32LED	Elec Closet	Storage Areas	1	1T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	C-OCC	
34LED	IT Closet	Storage Areas	19	1T 32 C F 4 (ELE)	F44ILL	112	2.13	SW	1000	2,128	C-OCC	
34LED	126 Fileroom	Storage Areas	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	1000	224	C-OCC	
34LED	128 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	131 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	129 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	138 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
32LED	133 Line-up	Offices	2	1T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2400	288	C-OCC	
32LED	134 Interview Room	Interview Room	1	1T 32 R F 2 (ELE)	F42LL	60	0.06	SW	2400	144	C-OCC	
32LED	135 Interview Room	Interview Room	1	1T 32 R F 2 (ELE)	F42LL	60	0.06	SW	2400	144	C-OCC	
32LED	137 Holding	Offices	1	1T 32 R F 2 (ELE)	F42LL	60	0.06	SW	2400	144	C-OCC	
32LED	141 Storage	Storage Areas	1	1T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	C-OCC	
34LED	Corridor	Hallways	6	1T 32 C F 4 (ELE)	F44ILL	112	0.67	SW	8760	5,887	NONE	
117	TR	Restroom	1	CF 23	CFS23/1	23	0.02	SW	2400	55	C-OCC	
34LED	Juvenile Unit Corridor	Hallways	3	1T 32 C F 4 (ELE)	F44ILL	112	0.34	SW	8760	2,943	NONE	
34LED	Juvenile Unit	Offices	13	1T 32 C F 4 (ELE)	F44ILL	112	1.46	SW	2400	3,494	C-OCC	
34LED	143 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	145 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	

Energy Audit of Prosecutor's Office
CHA Project No. 28470
Existing Lighting & Audit Input

Cost of Electricity: **$0.172** **$/kWh**
$3.62 **$/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
34LED	Office	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	147 Office	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	Office	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	153 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	154 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	156 Victim Witness Room	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	Vest	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	155 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	255 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	Office	Offices	9	1T 32 C F 4 (ELE)	F44ILL	112	1.01	SW	2400	2,419	C-OCC	
32LED	Mens TR	Restroom	5	1T 32 R F 2 (ELE)	F42LL	60	0.30	SW	2400	720	C-OCC	
117	Janitor's Closet	Storage Areas	1	CF 23	CFS23/1	23	0.02	SW	1000	23	C-OCC	
32LED	Women's TR	Restroom	5	1T 32 R F 2 (ELE)	F42LL	60	0.30	SW	2400	720	C-OCC	
34LED	254 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	250 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	257 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	251 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	Corridor / Open Office	Offices	19	1T 32 C F 4 (ELE)	F44ILL	112	2.13	SW	2400	5,107	C-OCC	
34LED	248 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	246 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	249 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	229 Copy	Copy Room	3	1T 32 C F 4 (ELE)	F44ILL	112	0.34	SW	3120	1,048	C-OCC	
34LED	234 Conference Room	Conference	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	244 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	237 Office	Offices	4	1T 32 C F 4 (ELE)	F44ILL	112	0.45	SW	2400	1,075	C-OCC	
34LED	240 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	Open Office	Offices	8	1T 32 C F 4 (ELE)	F44ILL	112	0.90	SW	2400	2,150	C-OCC	
34LED	241 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	245 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	Trial Team Open Office	Offices	20	1T 32 C F 4 (ELE)	F44ILL	112	2.24	SW	2400	5,376	C-OCC	
34LED	209 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	210 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
32LED	211 Office	Offices	1	1T 32 R F 2 (ELE)	F42LL	60	0.06	SW	2400	144	C-OCC	
55	211 Office	Offices	1	2T 17 R F 3 (ELE)	F23ILL	47	0.05	SW	2400	113	C-OCC	
34LED	212 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	213 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	214 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	215 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	218 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	219 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	220	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	221	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	Records	Offices	22	1T 32 C F 4 (ELE)	F44ILL	112	2.46	SW	2400	5,914	C-OCC	
34LED	Corridor	Hallways	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	8760	1,962	NONE	
34LED	Storage	Storage Areas	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	1000	112	C-OCC	
34LED	Clerical Unit	Offices	11	1T 32 C F 4 (ELE)	F44ILL	112	1.23	SW	2400	2,957	C-OCC	
34LED	225 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	Insurance Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
32LED	Men's TR	Restroom	5	1T 32 R F 2 (ELE)	F42LL	60	0.30	SW	2400	720	C-OCC	
117	306 Janitor's Closet	Storage Areas	1	CF 23	CFS23/1	23	0.02	SW	1000	23	C-OCC	
32LED	Women's TR	Restroom	1	1T 32 R F 2 (ELE)	F42LL	60	0.06	SW	2400	144	C-OCC	
34LED	360	Offices	3	1T 32 C F 4 (ELE)	F44ILL	112	0.34	SW	2400	806	C-OCC	
34LED	Office	Offices	6	1T 32 C F 4 (ELE)	F44ILL	112	0.67	SW	2400	1,613	C-OCC	
34LED	Office	Offices	6	1T 32 C F 4 (ELE)	F44ILL	112	0.67	SW	2400	1,613	C-OCC	
34LED	Office	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	Corridor	Hallways	5	1T 32 C F 4 (ELE)	F44ILL	112	0.56	SW	8760	4,906	NONE	
34LED	355 Office	Offices	4	1T 32 C F 4 (ELE)	F44ILL	112	0.45	SW	2400	1,075	C-OCC	
34LED	Copy Room	Copy Room	3	1T 32 C F 4 (ELE)	F44ILL	112	0.34	SW	3120	1,048	C-OCC	
34LED	321 Conference	Conference	4	1T 32 C F 4 (ELE)	F44ILL	112	0.45	SW	2400	1,075	C-OCC	
34LED	342 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	Vest	Hallways	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	8760	981	NONE	
34LED	Open Office	Offices	8	1T 32 C F 4 (ELE)	F44ILL	112	0.90	SW	2400	2,150	C-OCC	
34LED	347 Office	Offices	4	1T 32 C F 4 (ELE)	F44ILL	112	0.45	SW	2400	1,075	C-OCC	
34LED	Open Office	Offices	16	1T 32 C F 4 (ELE)	F44ILL	112	1.79	SW	2400	4,301	C-OCC	
34LED	345 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	337 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	346 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	Corridor	Hallways	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	8760	1,962	NONE	
34LED	Pack Rat Unit	Offices	10	1T 32 C F 4 (ELE)	F44ILL	112	1.12	SW	2400	2,688	C-OCC	
34LED	Copy Room	Copy Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	3120	349	C-OCC	

Energy Audit of Prosecutor's Office
CHA Project No. 28470
Existing Lighting & Audit Input

Cost of Electricity: **$0.172** **$/kWh**
$3.62 **$/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
34LED	311 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	312 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	313 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	Office	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	314 Office	Offices	1	1T 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2400	269	C-OCC	
34LED	315 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	316 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	317 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	318 Library	Offices	10	1T 32 C F 4 (ELE)	F44ILL	112	1.12	SW	2400	2,688	C-OCC	
34LED	Office	Offices	4	1T 32 C F 4 (ELE)	F44ILL	112	0.45	SW	2400	1,075	C-OCC	
34LED	340 Office	Offices	4	1T 32 C F 4 (ELE)	F44ILL	112	0.45	SW	2400	1,075	C-OCC	
34LED	Open Office	Offices	13	1T 32 C F 4 (ELE)	F44ILL	112	1.46	SW	2400	3,494	C-OCC	
34LED	320 Ofice	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	324 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	325 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	330 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	331 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	326 Office	Offices	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2400	538	C-OCC	
34LED	327 Computer	Offices	3	1T 32 C F 4 (ELE)	F44ILL	112	0.34	SW	2400	806	C-OCC	
34LED	328 Computer	Offices	3	1T 32 C F 4 (ELE)	F44ILL	112	0.34	SW	2400	806	C-OCC	
34LED	328 File Room	Storage Areas	2	1T 32 C F 4 (ELE)	F44ILL	112	0.22	SW	1000	224	C-OCC	
117	TR	Restroom	1	CF 23	CFS23/1	23	0.02	SW	2400	55	C-OCC	
	Total		**668**				**59.42**			**168,223**		

APPENDIX C

ECM Calculations

Camden County Board of Freeholders LGEA
CHA Project Number: 28470

Rate of Discount (used for NPV) 3.0%

Utility Costs		Yearly Usage	Metric Ton Carbon Dioxide Equivalent	Building Area	Annual Utility Cost		
					Electric	Natural Gas	Fuel Oil
$ 0.179	$/kWh blended		0.000420205	30,000	$ 102,216	$ 242,224	$ -
$ 0.172	$/kWh supply	570,000	0.000420205				
$ 3.62	$/kW	164.0	0				
$ 2.22	$/Therm	2,960	0.00533471				
$ 6.42	$/kgals		0				
$ -	$/Gal	-					

Prosecutor's Office

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	Replace Door Sweeps & Seals	0.0	394	229	0	0	579	$ 1,383	2.4	15	1.4	$ -	N	2.4	0.0	5,908	3,432	0	$ 8,681	5.3	$5,526	41.6%
Y	ECM-2	Window Replacements	0.0	640	970	0	0	2,268	$ 246,399	108.7	15	5.4	$ -	N	108.7	0.0	9,594	14,543	0	$ 34,017	(0.9)	($219,326)	-18.4%
Y	ECM-3	Replace DX Split Systems with High Efficiency DX Split Systems	2.6	4,385	0	0	0	866	$ 48,000	55.5	20	1.8	$ 864	N	54.5	52.0	87,696	0	0	$ 17,984	(0.6)	($34,259)	-8.1%
Y	ECM-4	Replace Existing Rooftop HVAC units with higher EER Rooftop units	9.1	15,347	0	0	0	3,029	$ 117,400	38.8	25.0	6.4	$ 2,730	N	37.9	227.3	383,670	0	0	$ 78,680	(0.3)	($61,919)	-3.0%
Y	ECM-5	Install Vending Machine Controls	0.0	2,953	0	0	0	530	$ 280	0.5	15.0	1.2	$ -	N	0.5	0.0	44,291	0	0	$ 7,943	27.4	$6,041	189.0%
Y	ECM-6	Replace Electric DHW Heater with High Efficiency Natural Gas Unit	18.0	4,791	(167)	0	0	1,234	$ 18,187	14.7	15.0	1.1	$ 400	N	14.4	270.0	71,858	(2,504)	0	$ 19,061	0.0	($3,056)	0.5%
Y	ECM-7	Install Low Flow Plumbing Fixtures	0.0	33,033	0	0	211	7,280	$ 72,514	10.0	15.0	13.9	$ -	N	10.0	0.0	495,501	0	3,169	$ 109,204	0.5	$14,397	5.6%
N	ECM-L1	Lighting Replacements / Upgrades	27.9	79,127	0	0	0	14,795	$ 170,292	11.5	15.0	33.2	$ -	N	11.5	418.7	1,186,906	0	0	$ 231,042	0.4	$6,334	3.5%
N	ECM-L2	Install Lighting Controls (Add Occupancy Sensors)	0.0	34,498	0	0	0	5,922	$ 40,230	6.8	15.0	14.5	$ 5,215	N	5.9	0.0	517,465	0	0	$ 92,795	1.3	$35,676	14.8%
Y	ECM-L3	Lighting Replacements with Controls (Occupancy Sensors)	27.9	97,514	0	0	0	17,951	$ 210,522	11.7	15.0	41.0	$ 5,215	N	11.4	418.7	1,462,703	0	0	$ 280,499	0.3	$8,996	3.6%
		Total (Not Including [B] Option ECMs or L1, L2)	**57.6**	**159,055**	**1,031**	**0**	**211**	**$ 33,737**	**$ 714,685**	**21.2**	**16.7**	**72**	**$ 9,209**		**20.9**	**968**	**2,561,222**	**15,472**	**3,169**	**$ 556,069**	**(0.2)**	**($281,706)**	**-3.0%**
		Recommended Measures (highlighted green above)	**57.6**	**159,055**	**1,031**	**0**	**211**	**$ 33,737**	**$ 714,685**	**21.2**	**16.7**	**72**	**$ 9,209**	**0**	**20.9**	**968**	**2,561,222**	**15,472**	**3,169**	**$ 556,069**	**(0.2)**	**($281,706)**	**-3.0%**
		% of Existing	**35%**	**28%**	**35%**																		

	City:	Philadelphia, PA				
Occupied Hours/Week		70	70	70	70	50
		Building Operating	Auditorium Occupied	Gymnasium Occupied	Library Occupied	Classrooms Occupied
Temp	Enthalpy h (Btu/lb)	Bin Hours	Hours	Hours	Hours	Hours	Hours
102.5							
97.5	33.1	3	1	1	1	1	1
92.5	38.0	33	14	14	14	14	10
87.5	36.2	123	51	51	51	51	37
82.5	33.8	477	199	199	199	199	142
77.5	32.7	656	273	273	273	273	195
72.5	31.0	742	309	309	309	309	221
67.5	28.1	784	327	327	327	327	233
62.5	24.6	983	410	410	410	410	293
57.5	21.2	625	260	260	260	260	186
52.5	18.3	540	225	225	225	225	161
47.5	16.0	457	190	190	190	190	136
42.5	14.4	671	280	280	280	280	200
37.5	12.5	1,067	445	445	445	445	318
32.5	10.5	685	285	285	285	285	204
27.5	8.5	369	154	154	154	154	110
22.5	7.0	321	134	134	134	134	96
17.5	5.3	184	77	77	77	77	55
12.5	3.8	40	17	17	17	17	12
7.5	0.0	0	0	0	0	0	0
2.5	0.0	0	0	0	0	0	0
-2.5							
-7.5							

Multipliers	
Material:	1.027
Labor:	1.246
Equipment:	1.124

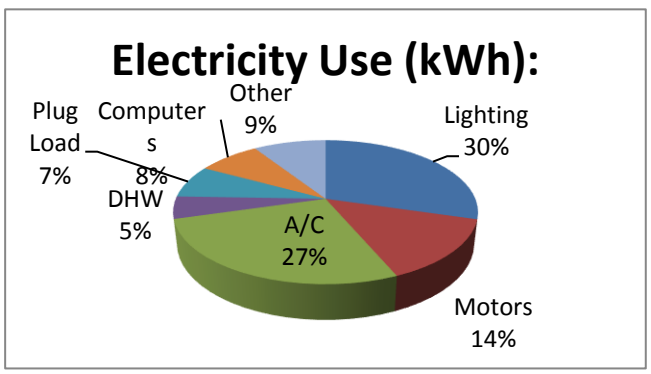
Heating System Efficiency	80%
Cooling Eff (kW/ton)	1.2

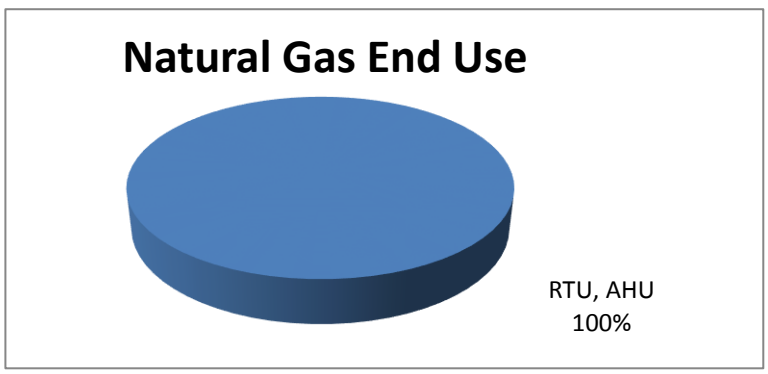
Heating		
Hours	4,427	Hrs
Weighted Avg	40	F
Avg	28	F

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

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

Utility End Use Analysis			
Electricity Use (kWh):		**Notes/Comments:**	
570,000	Total	Based on utility analysis	
168,223	Lighting	From Lighting Calculations	0.29512807
80,000	Motors	Estimated	0.140350877
153,900	A/C	See Window AC Calculation	0.27
28,500	DHW	Estimated	
42,000	Plug Load	Estimated	0.073684211
45,000	Computers	Estimated	0.078947368
52,377	Other	Remaining	0.091889474
Natural Gas Use (Therms):		**Notes/Comments:**	
2,960	Total	Based on utility analysis	
2,960	RTU, AHU	Based on utility analysis	1





Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

ECM-1: Replace Door Sweeps & Seals

Description: This ECM evaluates the thermal and electrical savings associate with adding door seals and sweeps to prevent infiltration of cold (hot) outdoor air.

Heating System Efficiency	80%		Ex Occupied Clng Temp.	72	*F	Ex Occupied Htg Temp.	68	*F
Cooling System Efficiency	1.20	kW/ton	Ex Unoccupied Clng Temp.	80	*F	Ex Unoccupied Htg Temp.	65	*F
Linear Feet of Door Edge	120	LF	Cooling Occ Enthalpy Setpoint	27.5	Btu/lb	Electricity	$ 0.18	$/kWh
Existing Infiltration Factor*	1.5	cfm/LF	Cooling Unocc Enthalpy Setpoint	27.5	Btu/lb	Natural Gas	$ 2.22	$/therm
Proposed Infiltration Factor*	0.45	cfm/LF						

*Infiltration Factor per Carrier Handbook of Air Conditioning System Design based on average door seal gap calculated below.

					EXISTING LOADS		PROPOSED LOADS		COOLING ENERGY		HEATING ENERGY	
					Occupied	Unoccupied	Occupied	Unoccupied				
Avg Outdoor Air Temp. Bins °F	Avg Outdoor Air Enthalpy	Existing Equipment Bin Hours	Occupied Equipment Bin Hours	Unoccupied Equipment Bin Hours	Door Infiltration Load BTUH	Door Infiltration Load BTUH	Door Infiltration Load BTUH	Door Infiltration 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
102.5	0.0	0	0	0	22,275	22,275	6,683	6,683	0	0	0	0
97.5	33.1	3	1	2	-4,567	-4,567	-1,370	-1,370	1	0	0	0
92.5	38.0	33	14	19	-8,485	-8,485	-2,546	-2,546	28	8	0	0
87.5	36.2	123	51	72	-7,087	-7,087	-2,126	-2,126	87	26	0	0
82.5	33.8	477	199	278	-5,129	-5,129	-1,539	-1,539	245	73	0	0
77.5	32.7	656	273	383	-4,175	0	-1,253	0	114	34	0	0
72.5	31.0	742	309	433	-2,824	0	-847	0	87	26	0	0
67.5	28.1	784	327	457	97	0	29	0	0	0	0	0
62.5	24.6	983	410	573	1,069	486	321	146	0	0	9	3
57.5	21.2	625	260	365	2,041	1,458	612	437	0	0	13	4
52.5	18.3	540	225	315	3,013	2,430	904	729	0	0	18	5
47.5	16.0	457	190	267	3,985	3,402	1,196	1,021	0	0	21	6
42.5	14.4	671	280	391	4,957	4,374	1,487	1,312	0	0	39	12
37.5	12.5	1,067	445	622	5,929	5,346	1,779	1,604	0	0	75	22
32.5	10.5	685	285	400	6,901	6,318	2,070	1,895	0	0	56	17
27.5	8.5	369	154	215	7,873	7,290	2,362	2,187	0	0	35	10
22.5	7.0	321	134	187	8,845	8,262	2,654	2,479	0	0	34	10
17.5	5.3	184	77	107	9,817	9,234	2,945	2,770	0	0	22	7
12.5	3.8	40	17	23	10,789	10,206	3,237	3,062	0	0	5	2
7.5	0.0	0	0	0	11,761	11,178	3,528	3,353	0	0	0	0
2.5	0.0	0	0	0	12,733	12,150	3,820	3,645	0	0	0	0
-2.5	0.0	0	0	0	13,705	13,122	4,112	3,937	0	0	0	0
-7.5	0.0	0	0	0	14,677	14,094	4,403	4,228	0	0	0	0
TOTALS		**8,760**	**3,650**	**5,110**					**563**	**169**	**327**	**98**

Existing Door Infiltration	**180**	**cfm**	**Savings**	**229**	**therms**	**$ 508**
Existing Unoccupied Door Infiltration	**180**	**cfm**		**394**	**kWh**	**$ 71**
Proposed Door Infiltration	**54**	**cfm**				**$ 579**
Proposed Unoccupied Door Infiltration	**54**	**cfm**				

Door	Width (ft)	Height (ft)	Linear Feet (LF)	gap (in)	gap location	LF of gap	% door w/ gap	Average gap for door (in)
1a	3	7	20	0.25	all sides	20	100%	0.25
1b	3	7	20	0.25	all sides	20	100%	0.25
2a	3	7	20	0.25	all sides	20	100%	0.25
2b	3	7	20	0.25	all sides	20	100%	0.25
3a	3	7	20	0.125	all sides	20	100%	0.125
3b	3	7	20	0.125	all sides	20	100%	0.125
Total	**18**	**42**	**120**	**0.208**		**120**	**100%**	**0.208**

Note: Doors labeled 'a', 'b', etc. are a part of the same door assembly.

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

ECM-1: Replace Door Sweeps & Seals - Cost

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
									$ -	
Door Weatherization Seals & Sweeps	6	EA	$ 40	$ 115	$ -	$ 246	$ 860	$ -	$ 1,106	RS Means 2012
						$ -	$ -	$ -	$ -	

$ 1,106	Subtotal
$ 277	25% Contingency
$ 1,383	**Total**

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

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

Note: pricing is for energy calculations only -do not use for procurement

ECM-2: Window Replacements

Existing: Windows are single pane and not properly sealed, resulting in poor heat transfer and infiltration. Additonal heating and cooling is therefore required.
Proposed: Install new aluminum pane double pane windows

Linear Feet of window Edge	1,848.0	LF	Cooling System Efficiency	1.2	kW/ton	Heating System Efficiency	80%	
Area of window glass	2,464.0	SF	Ex Occupied Clng Temp.	72	*F	Heating On Temp.	55	*F
Existing Infiltration Factor	0.50	**cfm/LF**	Ex Unoccupied Clng Temp.	80	*F	Ex Occupied Htg Temp.	68	*F
Proposed Infiltration Factor	0.25	**cfm/LF**	Cooling Occ Enthalpy Setpoint	27.5	Btu/lb	Ex Unoccupied Htg Temp.	65	*F
Existing U Value	**0.65**	**Btuh/SF/°F**	Cooling Unocc Enthalpy Setpoint	27.5	Btu/lb	Electricity	$ 0.179	$/kWh
Proposed U Value	**0.65**	**Btuh/SF/°F**				Natural Gas	$ 2.22	$/therm

					EXISTING LOADS		PROPOSED LOADS		COOLING ENERGY		HEATING ENERGY	
					Occupied	Unoccupied	Occupied	Unoccupied				
Avg Outdoor Air Temp. Bins °F	Avg Outdoor Air Enthalpy	Existing Equipment Bin Hours	Occupied Equipment Bin Hours	Unoccupied Equipment Bin Hours	Window Infiltration & Heat Load BTUH	Window Infiltration & Heat Load BTUH	Window Infiltration & Heat Load BTUH	Window 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
97.5	33.1	0	0	0	-64,282	-51,470	-52,562	-39,749	0	0	0	0
92.5	38.0	3	1	2	-76,389	-63,576	-54,611	-41,798	21	14	0	0
87.5	36.2	33	14	19	-61,205	-48,393	-43,015	-30,202	177	117	0	0
82.5	33.8	123	51	72	-43,146	-30,333	-29,982	-17,169	439	277	0	0
77.5	32.7	477	199	278	-30,241	0	-19,525	0	601	388	0	0
72.5	31.0	656	273	383	-15,298	0	-8,050	0	418	220	0	0
67.5	28.1	742	309	433	0	0	0	0	0	0	0	0
62.5	24.6	784	327	457	0	0	0	0	0	0	0	0
57.5	21.2	983	410	573	0	0	0	0	0	0	0	0
52.5	18.3	625	260	365	40,293	32,494	32,559	26,257	0	0	279	226
47.5	16.0	540	225	315	53,290	45,492	43,061	36,760	0	0	329	266
42.5	14.4	457	190	267	66,288	58,489	53,564	47,263	0	0	353	285
37.5	12.5	671	280	391	79,285	71,487	64,067	57,765	0	0	627	507
32.5	10.5	1,067	445	622	92,283	84,484	74,570	68,268	0	0	1,170	946
27.5	8.5	685	285	400	105,281	97,482	85,073	78,771	0	0	863	697
22.5	7.0	369	154	215	118,278	110,480	95,575	89,274	0	0	525	424
17.5	5.3	321	134	187	131,276	123,477	106,078	99,777	0	0	508	411
12.5	3.8	184	77	107	144,273	136,475	116,581	110,279	0	0	321	260
7.5	0.0	40	17	23	157,271	149,472	127,084	120,782	0	0	76	62
2.5	0.0	0	0	0	170,269	162,470	137,587	131,285	0	0	0	0
-2.5	1.0	0	0	0	183,266	175,468	148,089	141,788	0	0	0	0
-7.5	0.0	0	0	0	196,264	188,465	158,592	152,291	0	0	0	0
0.0	0	0	0	0	176,767	168,969	142,838	136,536	0	0	0	0
TOTALS		**8,760**	**3,650**	**5,110**					1656	1016	**5,051**	**4,082**

Existing Window Infiltration	**924**	**cfm**
Existing Window Heat Transfer	**1,602**	**Btuh/°F**
Proposed Window Infiltration	**462**	**cfm**
Proposed Window Heat Transfer	**1,602**	**Btuh/°F**

Savings	**970**	**Therms**	**$**	**2,153**
	640	**kWh**	**$**	**115**
			$	**2,268**

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	Exterior Wall	77	8.0	4.0	1848.0	2464.0	0.50	0.65	924.0	1601.6
Total		**77**	**8.0**	**4.0**	**1,848.0**	**2,464.0**	**0.50**	**0.65**	**924.0**	**1601.6**

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

ECM-2: Window Replacements - Cost

Multipliers	
Material:	1.10
Labor:	1.35
Equipment:	1.10

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
Windows	2464.0	$ / SF	$ 45.45	$ 37.04		$ 123,199	$ 123,199	$ -	$ 246,399	Vendor Quote Per SF
					$ -	$ -	$ -	$ -	$ -	
						$ -	$ -	$ -	$ -	
						$ -	$ -	$ -	$ -	
						$ -	$ -	$ -	$ -	
						$ -	$ -	$ -	$ -	
						$ -	$ -	$ -	$ -	
						$ -	$ -	$ -	$ -	
						$ -	$ -	$ -	$ -	

Note: Costs shown are for enrgy savings calculations only. Do not use for procurement

$ 246,399	Subtotal
$ -	
$ -	
$ -	
$ 246,399	**Total**

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

ECM-3: Replace Existing DX Split Systems

Description: This ECM evaluates the energy savings associated with replacing older less efficient heating and cooling equipment with modern high efficiency unitary equipment havings the same capacity

Equipment Tag	Equipment Description	General Type	Cooling Capacity (Btu/h)	Heating Capacity (Btu/h)
	Split System	HVAC	144,000	133,068

Item	Value	Units	Formula/Comments	
Demand Rate	$ 3.62	/ kW		
Electricity Rate	$ 0.17	/kWh		
FORMULA CONSTANTS				
Coincidence Factor	0.67		NJ Protocols	
Conversion	3.412	btu/kW		
COOLING - HVAC				
Cooling Capacity	144,000	btu/hr		btuh
Baseline EER	13.0		See Table Below	EERb
Proposed EER	20.0		Equipment	EERq
Equivalent Full Load Hours	1,131	hrs	NJ Protocols	
Demand Savings	2.60	kW		
Energy Savings	4,385	kWh		
HEATING - Heat Pump				
Heating Capacity	-	btu/h		
Baseline Heating EER	10.8		See Table Below	
Proposed Heating EER	13.1		Equipment	
Equivalent Full Load Hours	800	hrs	NJ Protocols	
Heating Savings	-	kWh		
COOLING - Heat Pump				
Cooling Capacity	-	btu/h		
Baseline Cooling EER	13.0		See Table Below	
Proposed Cooling EER	18.0		Equipment	
Equivalent Full Load Hours	381	hrs	NJ Protocols	
Cooling Savings	-	kWh		
SAVINGS				
Demand Savings	2.60	kW		
Energy Savings	4,385	kWh		
Cost Savings	$ 866			

Savings calculation formulas are taken from NJ Protocols document for Electric HVAC Equipment

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

ECM-3 DX Split system replacement

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
						$ -	$ -	$ -	$ -	
Existing CUs demolition	4	EA		$ 150		$ -	$ 748	$ -	$ 748	RS Means 2012
3.0 ton air conditioner condensing units	4	EA	$ 3,500	$ 2,500		$ 14,378	$ 12,460	$ -	$ 26,838	RS Means 2012
- Reprogram DDC system	4	EA	$ 250	$ 500		$ 1,027	$ 2,492	$ -	$ 3,519	RS Means 2012
Electrical - misc.	1	LS	$ 1,000	$ 5,000		$ 1,027	$ 6,230	$ -	$ 7,257	RS Means 2012

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

$ 38,362	Subtotal
$ 9,590	25% Contingency
$ 48,000	**Total**

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

ECM-4: Replace Existing Rooftop HVAC units with higher EER Rooftop units

Description: This ECM evaluates the energy savings associated with replacing older less efficient packaged rooftop units with modern high efficiency unitary equipment havings the same capacity

Equipment Tag	Equipment Description	General Type	Cooling Capacity (Btu/h)	Heating Capacity (Btu/h)
	RTU	HVAC	504,000	1,088,640

Item	Value	Units	Formula/Comments	
Demand Rate	$ 3.62	/ kW		
Electricity Rate	$ 0.17	/kWh		
FORMULA CONSTANTS				
Coincidence Factor	0.67		NJ Protocols	
Conversion	3.412	btu/kW		
COOLING - HVAC				
Cooling Capacity	504,000	btu/hr		btuh
Baseline EER	13.0		See Table Below	EERb
Proposed EER	20.0		Equipment	EERq
Equivalent Full Load Hours	1,131	hrs	NJ Protocols	
Demand Savings	9.09	kW		
Energy Savings	15,347	kWh		
HEATING - Heat Pump				
Heating Capacity	-	btu/h		
Baseline Heating EER	10.8		See Table Below	
Proposed Heating EER	13.1		Equipment	
Equivalent Full Load Hours	800	hrs	NJ Protocols	
Heating Savings	-	kWh		
COOLING - Heat Pump				
Cooling Capacity	-	btu/h		
Baseline Cooling EER	13.0		See Table Below	
Proposed Cooling EER	18.0		Equipment	
Equivalent Full Load Hours	381	hrs	NJ Protocols	
Cooling Savings	-	kWh		
SAVINGS				
Demand Savings	9.09	kW		
Energy Savings	15,347	kWh		
Cost Savings	$ 3,029			

Savings calculation formulas are taken from NJ Protocols document for Electric HVAC Equipment

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

ECM-4: Replace Existing Rooftop HVAC units with higher EER Rooftop units - Cost

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
						$ -	$ -	$ -	$ -	
Existing RTUs demolition	2	EA		$ 1,250		$ -	$ 3,115	$ -	$ 3,115	RS Means 2012
30.0 ton Rooftop air conditioner units	1	EA	$ 39,900	$ 11,000		$ 40,977	$ 13,706	$ -	$ 54,683	RS Means 2012
12.0 ton Rooftop air conditioner units	1	EA	$ 17,900	$ 6,575		$ 18,383	$ 8,192	$ -	$ 26,576	RS Means 2012
- Reprogram DDC system	1	LS	$ 1,000	$ 1,000		$ 1,027	$ 1,246	$ -	$ 2,273	RS Means 2012
Electrical - misc.	1	LS	$ 1,000	$ 5,000		$ 1,027	$ 6,230	$ -	$ 7,257	RS Means 2012

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

$ 93,904	Subtotal
$ 23,476	25% Contingency
$ 117,400	**Total**

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

ECM-5: Install Vending Machine Controls

Description : Vending machines generally operate 24/7 regardless of the actual usage. This measure proposes installing vending machine controls to reduce the total run time of these units. Cold beverage machines will cycle on for 15 minutes every two hours in order to keep beverages at a desired temperature. The result is a reduction in total electrical energy usage.

Unit Cost: $0.179 $/kWh blended

Energy Savings Calculations:

	Existing	
Cold Beverage Vending Machine Electric usage	3,504	kWh[1,4,7]
Snack Vending Machine Electric usage	-	kWh[2,5,7]
Dual Vending Machine Electric Usage	-	kWh[3,6,7]
Total Vending Machine Electric Usage	3,504	kWh

	Proposed	
Cold Beverage Vending Machine Electric usage	551	kWh[8]
Snack Vending Machine Electric usage	0	kWh
Dual Vending Machine Electric Usage	0	kWh
Total Vending Machine Electric Usage	551	kWh

Vending Machine Controls Usage Savings	**2,953**	**kWh**
Total cost savings	**$ 530**	
Estimated Total Project Cost	**$ 280**	[9]
Simple Payback	**1**	**years**

Assumptions

1	1	Number of cold beverage vending machines
2	0	Number of snack vending machines
3	0	Number of dual snack/beverage vending machines
4	400	Average wattage, typical of cold beverage machines based on prior project experience
5	200	Average wattage, typical of snack machines based on prior project experience
6	300	Average wattage, typical of dual snack/beverage machines based on prior project experience
7	8760	Hours per year vending machine plugged in
8	3150	Building Occupied Hours
9	0.50	Vending Machine Traffic Factor (0.75 for High Traffic, 0.5 for Medium, 0.25 for low)

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

ECM-5: Install Vending Machine Controls - 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.		
									$ -	
Vending Miser	1	EA	$ 200	$ 15	$ -	$ 205	$ 19	$ -	$ 224	Vendor Estimation
						$ -	$ -	$ -	$ -	

$ 224	Subtotal
$ 56	25% Contingency
$ 280	**Total**

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

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

ECM-6: Replace Electric DHW Heater Condensing Gas-Fired DHW Heater

Description: This ECM evaluates the energy savings associated with replacing an electric tank type water heater with a high efficiency natural gas fired water heater.

Item	Value	Units	Formula/Comments
Occupied days per week	5	days/wk	
Occupied weeks per year	52	week/yr	
Water supply Temperature	60	˚F	Termperature of water coming into building
Hot Water Temperature	120	˚F	
Hot Water Usage per day	69	gal/day	Calculated from usage below
Annual Hot Water Energy Demand	9,015	MBTU/yr	Energy required to heat annual quantity of hot water to setpoint
Existing Tank Size	80	Gallons	Per manufacturer nameplate
Hot Water Temperature	120	˚F	Per building personnel
Average Room Temperature	72	˚F	
Standby Losses (% by Volume)	2.5%		(2.5% of stored capacity per hour, per U.S. Department of Energy)
Standby Losses (Heat Loss)	0.8	MBH	
Annual Standby Hot Water Load	7,008	MBTU/yr	
Total Annual Hot Water Demand (w/ standby losses)	16,023	Mbtu/yr	Building demand plus standby losses
Existing Water Heater Efficiency	98%		Per Manufacturer
Total Annual Energy Required	16,350	Mbtu/yr	
Total Annual Electric Required	**4,791**	**kWh/yr**	**Electrical Savings**
Average Annual Electric Demand	0.55	kW	
Peak Electric Demand	**18.00**	**kW**	**Per Manufacturer's Nameplate (Demand Savings)**
New Tank Size	80	Gallons	tankless
Hot Water Temperature	120	˚F	
Average Room Temperature	72	˚F	
Standby Losses (% by Volume)	2.5%		(2.5% of stored capacity per hour, per U.S. Department of Energy)
Standby Losses (Heat Loss)	0.8	MBH	
Annual Standby Hot Water Load	7,008	MBTU/yr	
Prop Annual Hot Water Demand (w/ standby losses)	16,023	MBTU/yr	
Proposed Avg. Hot water heater efficiency	96%		Based on A.O. Smith Cyclone, condensing DHW Heater
Proposed Total Annual Energy Required	16,691	MBTU/yr	
Proposed Fuel Use	167	Therms/yr	Standby Losses and inefficient DHW heater eliminated
Elec Utility Demand Unit Cost	$3.62	$/kW	
Elec Utility Supply Unit Cost	$0.17	$/kWh	
NG Utility Unit Cost	$2.22	$/Therm	
Existing Operating Cost of DHW	$1,605	$/yr	
Proposed Operating Cost of DHW	$371	$/yr	
Annual Utility Cost Savings	**$1,234**	**$/yr**	

Daily Hot Water Demand

			#USES PER DAY		FULL TIME OCCUPANTS**				
FIXTURE	*BASE WATER USE GPM	DURATION OF USE (MIN)	MALE	FEMALE	MALE	FEMALE	TOTAL GAL/DAY	% HOT WATER	TOTAL HW GAL/DAY
LAVATORY (Low-Flow Lavs use 0.5 GPM)	2.5	0.25	3	3	38	36	139	50%	69
SHOWER	2.5	5	1	1	0	0	0	75%	0
KITCHEN SINK	2.5	0.5	1	1	0	0	0	75%	0
MOP SINK	2.5	2	1	1	0	0	0	75%	0
Dishwasher (gal per use)	10	1	1	0	0	0	0	100%	0
						TOTAL	139		**69**

*GPM is per standard fixtures, adjust as necessary if actual GPM is known.
**These are the occupanct that use the fixtures. If fixture does not exist change to (0).

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

ECM-6: Replace Electric DHW Heater Condensing Gas-Fired DHW Heater - 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.		
Gas-Fired DHW Heater Removal	1	LS		$ 150		$ -	$ 187	$ -	$ 187	RS Means 2012
High Efficiency Gas-Fired DHW Heater	1	EA	$ 7,500	$ 2,500		$ 7,703	$ 3,115	$ -	$ 10,818	RS Means 2012
Miscellaneous Electrical	1	LS	$ 500	$ 500		$ 514	$ 623	$ -	$ 1,137	RS Means 2012
Venting Kit	1	EA	$ 450	$ 650		$ 462	$ 810	$ -	$ 1,272	RS Means 2012
Miscellaneous Piping and Valves	1	LS	$ 500	$ 500		$ 514	$ 623	$ -	$ 1,137	RS Means 2012

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

$ 14,549	Subtotal
$ 3,637	25% Contingency
$ 18,187	**Total**

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

ECM-7: Replace urinals and flush valves with low flow

Description: This ECM evaluates the water savings associated with replacing/ upgrading urinals with 0.125 GPF urinals and or flush valves.

EXISTING CONDITIONS		
Cost of Water / 1000 Gallons	$6.42	$ / kGal
Urinals in Building to be replaced	4	
Average Flushes / Urinal (per Day)	19	
Average Gallons / Flush	2.5	Gal

PROPOSED CONDITIONS		
Proposed Urinals to be Replaced	4	
Proposed Gallons / Flush	0.125	Gal
Proposed Material Cost of new urinal & valve	$1,200	RS Means 2012
Proposed Installation Cost of new urinal & valve	$1,000	RS Means 2012
Total cost of new urinals & valves		

SAVINGS		
Current Urinal Water Use	69.35	kGal / year
Proposed Urinal Water Use	3.47	kGal / year
Water Savings	65.88	kGal / year
Cost Savings	$423	/ year

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Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

ECM-7: Replace toilets and flush valves with low flow

Description: This ECM evaluates the water savings associated with repalcing/ upgrading toilets to 1.28 GPF fixtures and/or flush valves.

EXISTING CONDITIONS		
Cost of Water / 1000 Gallons	$6.42	$ / kGal
Toilets in Building	11	
Average Flushes / Toilet (per Day)	14	
Average Gallons / Flush	3.5	Gal

PROPOSED CONDITIONS		
Proposed Toilets to be Replaced	11	
Proposed Gallons / Flush	1.28	Gal

SAVINGS		
Current Toilet Water Use	196.74	kGal / year
Proposed Toilet Water Use	71.95	kGal / year
Water Savings	124.79	kGal / year
Cost Savings	$801	/ year

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

ECM-7: Replace faucets with low flow

Description; This ECM evaluates the water savings resulting from replacing/ upgrading faucets to 0.5 gallon per minute flow

EXISTING CONDITIONS		
Cost of Water / 1000 Gallons	$6.42	$ / kGal
Faucets in Building	17	
Average Uses / Faucet (per day)	14	# Uses
Average Time of Use	10.0	seconds
Average Flowrate	2.5	gpm

PROPOSED CONDITIONS		
Proposed Faucets to be Replaced	17	
Proposed Flowrate	0.5	gpm

HEATING SAVINGS		
Fuel Cost	$ 0.18	/kWh
Number of Faucets	17	
Hours per Day of Usage	0.5	hrs
Days per Year of Facility Usage	260	days
Average Flowrate	2.5	gpm
Proposed Flowrate	0.5	gpm
Heat Content of Water	8.33	Btu/gal/F
Temperature Difference (Intake and Output)	50	F
Water Heating Equipment Efficiency	98%	
Conversion Factor	3,412	Btu/kWh
SAVINGS		
Current Faucet Water Use	25.78	kGal / year
Proposed Faucet Water Use	5.16	kGal / year
Water Savings	20.63	kGal / year
Heating Savings	33,033	kWh
Cost Savings	$6,056	/ year

Savings calculation formulas are taken from NJ Protocols document for Faucet

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

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

Replace Plumbing Fixtures with Low-Flow Equivalents - Cost

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
									$ -	
Low-Flow Urinal	4	EA	$ 1,200	$ 1,000	$ -	$ 4,930	$ 4,984	$ -	$ 9,914	Vendor Estimate
Low-Flow Toilet	11	EA	$ 1,400	$ 1,000	$ -	$ 15,816	$ 13,706	$ -	$ 29,522	Vendor Estimate
Low-Flow Faucet	17	EA	$ 700	$ 300	$ -	$ 12,221	$ 6,355	$ -	$ 18,576	Vendor Estimate
						$ -	$ -	$ -	$ -	

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

$ 58,011	Subtotal
$ 14,503	25% Contingency
$ 72,514	**Total**

Camden County Board of Freeholders LGEA
CHA Project Number: 28470
Prosecutor's Office

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)	30,000
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)	$102,216	$242,224
Existing Usage (from utility)	570,000	2,960
Proposed Savings	159,055	1,031
Existing Total MMBtus	2,241	
Proposed Savings MMBtus	646	
% Energy Reduction	**28.8%**	
Proposed Annual Savings	$33,737	

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

	Incentives $		
	Elec	Gas	Total
Incentive #1	$0	$0	$1,500
Incentive #2	$17,496	$1,289	$18,785
Incentive #3	$17,496	$1,289	$18,785
Total All Incentives	**$34,992**	**$2,579**	**$39,071**

Total Project Cost	$714,685

		Allowable Incentive
% Incentives #1 of Utility Cost*	0.4%	$1,500
% Incentives #2 of Project Cost**	2.6%	$18,785
% Incentives #3 of Project Cost**	2.6%	$18,785
Total Eligible Incentives***	**$39,071**	
Project Cost w/ Incentives	$675,614	

Project Payback (years)	
w/o Incentives	w/ Incentives
21.2	20.0

* 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

Energy Audit of Prosecutor's Office
CHA Project No. 28470
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
34LED	Lobby	5	1T 32 C F 4 (ELE)	F44ILL	112	0.6	SW	8760	4,906	5	4 ft LED Tube	200732x4	60	0.3	SW	8,760	2,628	2,278	0.3	$ 402.25	$ 1,633.50	$0	4.1	4.1
34LED	Booth	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	1820	408	2	4 ft LED Tube	200732x4	60	0.1	SW	1,820	218	189	0.1	$ 37.01	$ 653.40	$0	17.7	17.7
34LED	Corridor	7	1T 32 C F 4 (ELE)	F44ILL	112	0.8	SW	8760	6,868	7	4 ft LED Tube	200732x4	60	0.4	SW	8,760	3,679	3,189	0.4	$ 563.15	$ 2,286.90	$0	4.1	4.1
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	168 Interview Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	164 Interview Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	166 Storage	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	SW	1,000	60	52	0.1	$ 11.19	$ 326.70	$0	29.2	29.2
34LED	167 Mailroom	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	Closet	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	SW	1,000	60	52	0.1	$ 11.19	$ 326.70	$0	29.2	29.2
117	106 Janitor Closet	1	CF 23	CFS23/1	23	0.0	SW	1000	23	1	CF 23	CFS23/1	23	0.0	SW	1,000	23	-	0.0	$ -	$ -	$0		#DIV/0!
32LED	Men's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	SW	2,400	360	360	0.2	$ 68.31	$ 816.75	$0	12.0	12.0
34LED	Conference Room	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	SW	2,400	576	499	0.2	$ 94.73	$ 1,306.80	$0	13.8	13.8
32LED	Women's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	SW	2,400	360	360	0.2	$ 68.31	$ 816.75	$0	12.0	12.0
105LED	Sub-Basement MER	26	W 32 F 1	F41LL	32	0.8	SW	2000	1,664	26	4 ft LED Tube	200732x1	15	0.4	SW	2,000	780	884	0.4	$ 170.95	$ 2,123.55	$0	12.4	12.4
32LED	Elev Machine Room	2	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2000	240	2	4 ft LED Tube	200732x2	30	0.1	SW	2,000	120	120	0.1	$ 23.21	$ 326.70	$0	14.1	14.1
105LED	Homicide	20	W 32 F 1	F41LL	32	0.6	SW	2400	1,536	20	4 ft LED Tube	200732x1	15	0.3	SW	2,400	720	816	0.3	$ 154.84	$ 1,633.50	$0	10.5	10.5
105LED	B28 Storage	40	W 32 F 1	F41LL	32	1.3	SW	1000	1,280	40	4 ft LED Tube	200732x1	15	0.6	SW	1,000	600	680	0.7	$ 146.28	$ 3,267.00	$0	22.3	22.3
105LED	B32 Elect Room	8	W 32 F 1	F41LL	32	0.3	SW	2000	512	8	4 ft LED Tube	200732x1	15	0.1	SW	2,000	240	272	0.1	$ 52.60	$ 653.40	$0	12.4	12.4
34LED	Corridor	11	1T 32 C F 4 (ELE)	F44ILL	112	1.2	SW	8760	10,792	11	4 ft LED Tube	200732x4	60	0.7	SW	8,760	5,782	5,011	0.6	$ 884.95	$ 3,593.70	$0	4.1	4.1
105LED	Stairs	14	W 32 F 1	F41LL	32	0.4	SW	8760	3,924	14	4 ft LED Tube	200732x1	15	0.2	SW	8,760	1,840	2,085	0.2	$ 368.21	$ 1,143.45	$0	3.1	3.1
32LED	B31 Storage	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	4 ft LED Tube	200732x2	30	0.0	SW	1,000	30	30	0.0	$ 6.45	$ 163.35	$0	25.3	25.3
105LED	B31 Storage	2	W 32 F 1	F41LL	32	0.1	SW	1000	64	2	4 ft LED Tube	200732x1	15	0.0	SW	1,000	30	34	0.0	$ 7.31	$ 163.35	$0	22.3	22.3
105LED	B33 Storage	8	W 32 F 1	F41LL	32	0.3	SW	1000	256	8	4 ft LED Tube	200732x1	15	0.1	SW	1,000	120	136	0.1	$ 29.26	$ 653.40	$0	22.3	22.3
105LED	B30 Evidence Office	10	W 32 F 1	F41LL	32	0.3	SW	2400	768	10	4 ft LED Tube	200732x1	15	0.2	SW	2,400	360	408	0.2	$ 77.42	$ 816.75	$0	10.5	10.5
263LED	B30 Evidence Office	1	W 34 W F 1 (MAG)	F41EE	43	0.0	SW	2400	103	1	4 ft LED Tube	200732x1	15	0.0	SW	2,400	36	67	0.0	$ 12.75	$ 81.68	$0	6.4	6.4
105LED	B25 Storage	8	W 32 F 1	F41LL	32	0.3	SW	1000	256	8	4 ft LED Tube	200732x1	15	0.1	SW	1,000	120	136	0.1	$ 29.26	$ 653.40	$0	22.3	22.3
34LED	B34 Storage	8	1T 32 C F 4 (ELE)	F44ILL	112	0.9	SW	1000	896	8	4 ft LED Tube	200732x4	60	0.5	SW	1,000	480	416	0.4	$ 89.49	$ 2,613.60	$0	29.2	29.2
105LED	Stairs	14	W 32 F 1	F41LL	32	0.4	SW	8760	3,924	14	4 ft LED Tube	200732x1	15	0.2	SW	8,760	1,840	2,085	0.2	$ 368.21	$ 1,143.45	$0	3.1	3.1
34LED	B35 Storage	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	1000	448	4	4 ft LED Tube	200732x4	60	0.2	SW	1,000	240	208	0.2	$ 44.74	$ 1,306.80	$0	29.2	29.2
34LED	B23 Strorage (IT Room)	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	SW	1,000	60	52	0.1	$ 11.19	$ 326.70	$0	29.2	29.2
34LED	B36 Storage	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	1000	448	4	4 ft LED Tube	200732x4	60	0.2	SW	1,000	240	208	0.2	$ 44.74	$ 1,306.80	$0	29.2	29.2
32LED	Maint Storage	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	4 ft LED Tube	200732x2	30	0.0	SW	1,000	30	30	0.0	$ 6.45	$ 163.35	$0	25.3	25.3
34LED	B37 Storage	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	1000	448	4	4 ft LED Tube	200732x4	60	0.2	SW	1,000	240	208	0.2	$ 44.74	$ 1,306.80	$0	29.2	29.2
34LED	B07 Supplies	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	SW	1,000	60	52	0.1	$ 11.19	$ 326.70	$0	29.2	29.2
32LED	Men's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	SW	2,400	360	360	0.2	$ 68.31	$ 816.75	$0	12.0	12.0
117	B06 Janitor Closet	1	CF 23	CFS23/1	23	0.0	SW	1000	23	1	CF 23	CFS23/1	23	0.0	SW	1,000	23	-	0.0	$ -	$ -	$0		#DIV/0!
32LED	Women's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	SW	2,400	360	360	0.2	$ 68.31	$ 816.75	$0	12.0	12.0
34LED	B39 Lunchroom	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	3120	2,097	6	4 ft LED Tube	200732x4	60	0.4	SW	3,120	1,123	973	0.3	$ 180.65	$ 1,960.20	$0	10.9	10.9
34LED	Crime Scene Units	10	1T 32 C F 4 (ELE)	F44ILL	112	1.1	SW	2400	2,688	10	4 ft LED Tube	200732x4	60	0.6	SW	2,400	1,440	1,248	0.5	$ 236.82	$ 3,267.00	$0	13.8	13.8
34LED	B20 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	B21 Storage	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	SW	1,000	60	52	0.1	$ 11.19	$ 326.70	$0	29.2	29.2
34LED	B18 Lab	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	SW	2,400	576	499	0.2	$ 94.73	$ 1,306.80	$0	13.8	13.8
34LED	B17 Photolab	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	Area Outside B17	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	B15 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	SW	2,400	576	499	0.2	$ 94.73	$ 1,306.80	$0	13.8	13.8
34LED	B13 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	B12 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	B11 Evidence Storage	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	SW	1,000	60	52	0.1	$ 11.19	$ 326.70	$0	29.2	29.2
34LED	111 Shower Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	3120	349	1	4 ft LED Tube	200732x4	60	0.1	SW	3,120	187	162	0.1	$ 30.11	$ 326.70	$0	10.9	10.9
117	TR	1	CF 23	CFS23/1	23	0.0	SW	2400	55	1	CF 23	CFS23/1	23	0.0	SW	2,400	55	-	0.0	$ -	$ -	$0		#DIV/0!
117	TR	1	CF 23	CFS23/1	23	0.0	SW	2400	55	1	CF 23	CFS23/1	23	0.0	SW	2,400	55	-	0.0	$ -	$ -	$0		#DIV/0!
32LED	Office Corridor	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	8760	526	1	4 ft LED Tube	200732x2	30	0.0	SW	8,760	263	263	0.0	$ 46.41	$ 163.35	$0	3.5	3.5
34LED	Office	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	2400	1,613	6	4 ft LED Tube	200732x4	60	0.4	SW	2,400	864	749	0.3	$ 142.09	$ 1,960.20	$0	13.8	13.8
32LED	Elec Closet	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	4 ft LED Tube	200732x2	30	0.0	SW	1,000	30	30	0.0	$ 6.45	$ 163.35	$0	25.3	25.3
34LED	IT Closet	19	1T 32 C F 4 (ELE)	F44ILL	112	2.1	SW	1000	2,128	19	4 ft LED Tube	200732x4	60	1.1	SW	1,000	1,140	988	1.0	$ 212.53	$ 6,207.30	$0	29.2	29.2
34LED	126 Fileroom	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	1000	224	2	4 ft LED Tube	200732x4	60	0.1	SW	1,000	120	104	0.1	$ 22.37	$ 653.40	$0	29.2	29.2
34LED	128 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	131 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	129 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	138 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
32LED	133 Line-up	2	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	288	2	4 ft LED Tube	200732x2	30	0.1	SW	2,400	144	144	0.1	$ 27.33	$ 326.70	$0	12.0	12.0
32LED	134 Interview Room	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144	1	4 ft LED Tube	200732x2	30	0.0	SW	2,400	72	72	0.0	$ 13.66	$ 163.35	$0	12.0	12.0
32LED	135 Interview Room	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144	1	4 ft LED Tube	200732x2	30	0.0	SW	2,400	72	72	0.0	$ 13.66	$ 163.35	$0	12.0	12.0
32LED	137 Holding	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144	1	4 ft LED Tube	200732x2	30	0.0	SW	2,400	72	72	0.0	$ 13.66	$ 163.35	$0	12.0	12.0
32LED	141 Storage	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	4 ft LED Tube	200732x2	30	0.0	SW	1,000	30	30	0.0	$ 6.45	$ 163.35	$0	25.3	25.3
34LED	Corridor	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	8760	5,887	6	4 ft LED Tube	200732x4	60	0.4	SW	8,760	3,154	2,733	0.3	$ 482.70	$ 1,960.20	$0	4.1	4.1
117	TR	1	CF 23	CFS23/1	23	0.0	SW	2400	55	1	CF 23	CFS23/1	23	0.0	SW	2,400	55	-	0.0	$ -	$ -	$0		#DIV/0!
34LED	Juvenile Unit Corridor	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	8760	2,943	3	4 ft LED Tube	200732x4	60	0.2	SW	8,760	1,577	1,367	0.2	$ 241.35	$ 980.10	$0	4.1	4.1
34LED	Juvenile Unit	13	1T 32 C F 4 (ELE)	F44ILL	112	1.5	SW	2400	3,494	13	4 ft LED Tube	200732x4	60	0.8	SW	2,400	1,872	1,622	0.7	$ 307.86	$ 4,247.10	$0	13.8	13.8
34LED	143 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	145 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	147 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	153 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	154 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	156 Victim Witness Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	Vest	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	155 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	255 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	Office	9	1T 32 C F 4 (ELE)	F44ILL	112	1.0	SW	2400	2,419	9	4 ft LED Tube	200732x4	60	0.5	SW	2,400	1,296	1,123	0.5	$ 213.14	$ 2,940.30	$0	13.8	13.8
32LED	Mens TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	SW	2,400	360	360	0.2	$ 68.31	$ 816.75	$0	12.0	12.0
117	Janitor's Closet	1	CF 23	CFS23/1	23	0.0	SW	1000	23	1	CF 23	CFS23/1	23	0.0	SW	1,000	23	-	0.0	$ -	$ -	$0		#DIV/0!
32LED	Women's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	SW	2,400	360	360	0.2	$ 68.31	$ 816.75	$0	12.0	12.0
34LED	254 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	250 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	257 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	251 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	Corridor / Open Office	19	1T 32 C F 4 (ELE)	F44ILL	112	2.1	SW	2400	5,107	19	4 ft LED Tube	200732x4	60	1.1	SW	2,400	2,736	2,371	1.0	$ 449.96	$ 6,207.30	$0	13.8	13.8
34LED	248 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	246 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	249 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	229 Copy	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	3120	1,048	3	4 ft LED Tube	200732x4	60	0.2	SW	3,120	562	487	0.2	$ 90.33	$ 980.10	$0	10.9	10.9
34LED	234 Conference Room	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	244 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	237 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	SW	2,400	576	499	0.2	$ 94.73	$ 1,306.80	$0	13.8	13.8
34LED	240 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	Open Office	8	1T 32 C F 4 (ELE)	F44ILL	112	0.9	SW	2400	2,150	8	4 ft LED Tube	200732x4	60	0.5	SW	2,400	1,152	998	0.4	$ 189.46	$ 2,613.60	$0	13.8	13.8
34LED	241 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	245 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	Trial Team Open Office	20	1T 32 C F 4 (ELE)	F44ILL	112	2.2	SW	2400	5,376	20	4 ft LED Tube	200732x4	60	1.2	SW	2,400	2,880	2,496	1.0	$ 473.64	$ 6,534.00	$0	13.8	13.8
34LED	209 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	210 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
32LED	211 Office	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144	1	4 ft LED Tube	200732x2	30	0.0	SW	2,400	72	72	0.0	$ 13.66	$ 163.35	$0	12.0	12.0
55	211 Office	1	2T 17 R F 3 (ELE)	F23ILL	47	0.0	SW	2400	113	1	2T 17 R F 3 (ELE)	F23ILL	47	0.0	SW	2,400	113	-	0.0	$ -	$ -	$0		#DIV/0!
34LED	212 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	213 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	214 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	215 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	218 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	219 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	220	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	221	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	Records	22	1T 32 C F 4 (ELE)	F44ILL	112	2.5	SW	2400	5,914	22	4 ft LED Tube	200732x4	60	1.3	SW	2,400	3,168	2,746	1.1	$ 521.00	$ 7,187.40	$0	13.8	13.8
34LED	Corridor	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	8760	1,962	2	4 ft LED Tube	200732x4	60	0.1	SW	8,760	1,051	911	0.1	$ 160.90	$ 653.40	$0	4.1	4.1
34LED	Storage	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	SW	1,000	60	52	0.1	$ 11.19	$ 326.70	$0	29.2	29.2
34LED	Clerical Unit	11	1T 32 C F 4 (ELE)	F44ILL	112	1.2	SW	2400	2,957	11	4 ft LED Tube	200732x4	60	0.7	SW	2,400	1,584	1,373	0.6	$ 260.50	$ 3,593.70	$0	13.8	13.8
34LED	225 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	Insurance Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
32LED	Men's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	SW	2,400	360	360	0.2	$ 68.31	$ 816.75	$0	12.0	12.0
117	306 Janitor's Closet	1	CF 23	CFS23/1	23	0.0	SW	1000	23	1	CF 23	CFS23/1	23	0.0	SW	1,000	23	-	0.0	$ -	$ -	$0		#DIV/0!

Energy Audit of Prosecutor's Office
CHA Project No. 28470
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
32LED	Women's TR	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144	1	4 ft LED Tube	200732x2	30	0.0	SW	2,400	72	72	0.0	$ 13.66	$ 163.35	$0	12.0	12.0
34LED	360	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	2400	806	3	4 ft LED Tube	200732x4	60	0.2	SW	2,400	432	374	0.2	$ 71.05	$ 980.10	$0	13.8	13.8
34LED	Office	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	2400	1,613	6	4 ft LED Tube	200732x4	60	0.4	SW	2,400	864	749	0.3	$ 142.09	$ 1,960.20	$0	13.8	13.8
34LED	Office	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	2400	1,613	6	4 ft LED Tube	200732x4	60	0.4	SW	2,400	864	749	0.3	$ 142.09	$ 1,960.20	$0	13.8	13.8
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	Corridor	5	1T 32 C F 4 (ELE)	F44ILL	112	0.6	SW	8760	4,906	5	4 ft LED Tube	200732x4	60	0.3	SW	8,760	2,628	2,278	0.3	$ 402.25	$ 1,633.50	$0	4.1	4.1
34LED	355 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	SW	2,400	576	499	0.2	$ 94.73	$ 1,306.80	$0	13.8	13.8
34LED	Copy Room	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	3120	1,048	3	4 ft LED Tube	200732x4	60	0.2	SW	3,120	562	487	0.2	$ 90.33	$ 980.10	$0	10.9	10.9
34LED	321 Conference	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	SW	2,400	576	499	0.2	$ 94.73	$ 1,306.80	$0	13.8	13.8
34LED	342 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	Vest	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	8760	981	1	4 ft LED Tube	200732x4	60	0.1	SW	8,760	526	456	0.1	$ 80.45	$ 326.70	$0	4.1	4.1
34LED	Open Office	8	1T 32 C F 4 (ELE)	F44ILL	112	0.9	SW	2400	2,150	8	4 ft LED Tube	200732x4	60	0.5	SW	2,400	1,152	998	0.4	$ 189.46	$ 2,613.60	$0	13.8	13.8
34LED	347 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	SW	2,400	576	499	0.2	$ 94.73	$ 1,306.80	$0	13.8	13.8
34LED	Open Office	16	1T 32 C F 4 (ELE)	F44ILL	112	1.8	SW	2400	4,301	16	4 ft LED Tube	200732x4	60	1.0	SW	2,400	2,304	1,997	0.8	$ 378.91	$ 5,227.20	$0	13.8	13.8
34LED	345 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	337 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	346 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	Corridor	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	8760	1,962	2	4 ft LED Tube	200732x4	60	0.1	SW	8,760	1,051	911	0.1	$ 160.90	$ 653.40	$0	4.1	4.1
34LED	Pack Rat Unit	10	1T 32 C F 4 (ELE)	F44ILL	112	1.1	SW	2400	2,688	10	4 ft LED Tube	200732x4	60	0.6	SW	2,400	1,440	1,248	0.5	$ 236.82	$ 3,267.00	$0	13.8	13.8
34LED	Copy Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	3120	349	1	4 ft LED Tube	200732x4	60	0.1	SW	3,120	187	162	0.1	$ 30.11	$ 326.70	$0	10.9	10.9
34LED	311 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	312 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	313 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	314 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	SW	2,400	144	125	0.1	$ 23.68	$ 326.70	$0	13.8	13.8
34LED	315 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	316 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	317 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	318 Library	10	1T 32 C F 4 (ELE)	F44ILL	112	1.1	SW	2400	2,688	10	4 ft LED Tube	200732x4	60	0.6	SW	2,400	1,440	1,248	0.5	$ 236.82	$ 3,267.00	$0	13.8	13.8
34LED	Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	SW	2,400	576	499	0.2	$ 94.73	$ 1,306.80	$0	13.8	13.8
34LED	340 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	SW	2,400	576	499	0.2	$ 94.73	$ 1,306.80	$0	13.8	13.8
34LED	Open Office	13	1T 32 C F 4 (ELE)	F44ILL	112	1.5	SW	2400	3,494	13	4 ft LED Tube	200732x4	60	0.8	SW	2,400	1,872	1,622	0.7	$ 307.86	$ 4,247.10	$0	13.8	13.8
34LED	320 Ofice	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	324 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	325 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	330 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	331 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	326 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	SW	2,400	288	250	0.1	$ 47.36	$ 653.40	$0	13.8	13.8
34LED	327 Computer	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	2400	806	3	4 ft LED Tube	200732x4	60	0.2	SW	2,400	432	374	0.2	$ 71.05	$ 980.10	$0	13.8	13.8
34LED	328 Computer	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	2400	806	3	4 ft LED Tube	200732x4	60	0.2	SW	2,400	432	374	0.2	$ 71.05	$ 980.10	$0	13.8	13.8
34LED	328 File Room	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	1000	224	2	4 ft LED Tube	200732x4	60	0.1	SW	1,000	120	104	0.1	$ 22.37	$ 653.40	$0	29.2	29.2
117	TR	1	CF 23	CFS23/1	23	0.0	SW	2400	55	1	CF 23	CFS23/1	23	0.0	SW	2,400	55	-	0.0	$ -	$ -	$0		#DIV/0!
	Total	668				59.4			168,223	668			8,466	31.5			89,096	79,127	27.9	$14,795	$170,292	$0		
																	Demand Savings			27.9	$1,213			
																	kWh Savings			79,127	$13,582			
																	Total savings				$14,795		11.5	11.5

Energy Audit of Prosecutor's Office
CHA Project No. 28470
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
34LED	Lobby	5	1T 32 C F 4 (ELE)	F44ILL	112	0.6	SW	8760	4,905.6	5	1T 32 C F 4 (ELE)	F44ILL	112	0.6	NONE	8760	4,905.6	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
34LED	Booth	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	1820	407.7	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	NONE	1820	407.7	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
34LED	Corridor	7	1T 32 C F 4 (ELE)	F44ILL	112	0.8	SW	8760	6,867.8	7	1T 32 C F 4 (ELE)	F44ILL	112	0.8	NONE	8760	6,867.8	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	168 Interview Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	2400	268.8	0.0	0.0	$0.00	$270.00	$35.00		#DIV/0!
34LED	164 Interview Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	2400	268.8	0.0	0.0	$0.00	$270.00	$35.00		#DIV/0!
34LED	166 Storage	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112.0	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	700	78.4	33.6	0.0	$5.77	$270.00	$35.00	46.8	40.7
34LED	167 Mailroom	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	Closet	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112.0	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	700	78.4	33.6	0.0	$5.77	$270.00	$35.00	46.8	40.7
117	106 Janitor Closet	1	CF 23	CFS23/1	23	0.0	SW	1000	23.0	1	CF 23	CFS23/1	23	0.0	C-OCC	700	16.1	6.9	0.0	$1.18	$270.00	$35.00	228.0	198.4
32LED	Men's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720.0	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	C-OCC	1680	504.0	216.0	0.0	$37.08	$270.00	$35.00	7.3	6.3
34LED	Conference Room	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075.2	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	C-OCC	1680	752.6	322.6	0.0	$55.37	$270.00	$35.00	4.9	4.2
32LED	Women's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720.0	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	C-OCC	1680	504.0	216.0	0.0	$37.08	$270.00	$35.00	7.3	6.3
105LED	Sub-Basement MER	26	W 32 F 1	F41LL	32	0.8	SW	2000	1,664.0	26	W 32 F 1	F41LL	32	0.8	NONE	2000	1,664.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
32LED	Elev Machine Room	2	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2000	240.0	2	1T 32 R F 2 (ELE)	F42LL	60	0.1	NONE	2000	240.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
105LED	Homicide	20	W 32 F 1	F41LL	32	0.6	SW	2400	1,536.0	20	W 32 F 1	F41LL	32	0.6	C-OCC	1680	1,075.2	460.8	0.0	$79.10	$270.00	$35.00	3.4	3.0
105LED	B28 Storage	40	W 32 F 1	F41LL	32	1.3	SW	1000	1,280.0	40	W 32 F 1	F41LL	32	1.3	C-OCC	700	896.0	384.0	0.0	$65.91	$270.00	$35.00	4.1	3.6
105LED	B32 Elect Room	8	W 32 F 1	F41LL	32	0.3	SW	2000	512.0	8	W 32 F 1	F41LL	32	0.3	NONE	2000	512.0	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
34LED	Corridor	11	1T 32 C F 4 (ELE)	F44ILL	112	1.2	SW	8760	10,792.3	11	1T 32 C F 4 (ELE)	F44ILL	112	1.2	NONE	8760	10,792.3	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
105LED	Stairs	14	W 32 F 1	F41LL	32	0.4	SW	8760	3,924.5	14	W 32 F 1	F41LL	32	0.4	NONE	8760	3,924.5	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
32LED	B31 Storage	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	700	42.0	18.0	0.0	$3.09	$270.00	$35.00	87.4	76.1
105LED	B31 Storage	2	W 32 F 1	F41LL	32	0.1	SW	1000	64.0	2	W 32 F 1	F41LL	32	0.1	C-OCC	700	44.8	19.2	0.0	$3.30	$270.00	$35.00	81.9	71.3
105LED	B33 Storage	8	W 32 F 1	F41LL	32	0.3	SW	1000	256.0	8	W 32 F 1	F41LL	32	0.3	C-OCC	700	179.2	76.8	0.0	$13.18	$270.00	$35.00	20.5	17.8
105LED	B30 Evidence Office	10	W 32 F 1	F41LL	32	0.3	SW	2400	768.0	10	W 32 F 1	F41LL	32	0.3	C-OCC	1680	537.6	230.4	0.0	$39.55	$270.00	$35.00	6.8	5.9
263LED	B30 Evidence Office	1	W 34 W F 1 (MAG)	F41EE	43	0.0	SW	2400	103.2	1	W 34 W F 1 (MAG)	F41EE	43	0.0	C-OCC	1680	72.2	31.0	0.0	$5.31	$270.00	$35.00	50.8	44.2
105LED	B25 Storage	8	W 32 F 1	F41LL	32	0.3	SW	1000	256.0	8	W 32 F 1	F41LL	32	0.3	C-OCC	700	179.2	76.8	0.0	$13.18	$270.00	$35.00	20.5	17.8
34LED	B34 Storage	8	1T 32 C F 4 (ELE)	F44ILL	112	0.9	SW	1000	896.0	8	1T 32 C F 4 (ELE)	F44ILL	112	0.9	C-OCC	700	627.2	268.8	0.0	$46.14	$270.00	$35.00	5.9	5.1
105LED	Stairs	14	W 32 F 1	F41LL	32	0.4	SW	8760	3,924.5	14	W 32 F 1	F41LL	32	0.4	NONE	8760	3,924.5	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
34LED	B35 Storage	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	1000	448.0	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	C-OCC	700	313.6	134.4	0.0	$23.07	$270.00	$35.00	11.7	10.2
34LED	B23 Strorage (IT Room)	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112.0	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	700	78.4	33.6	0.0	$5.77	$270.00	$35.00	46.8	40.7
34LED	B36 Storage	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	1000	448.0	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	C-OCC	700	313.6	134.4	0.0	$23.07	$270.00	$35.00	11.7	10.2
32LED	Maint Storage	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	700	42.0	18.0	0.0	$3.09	$270.00	$35.00	87.4	76.1
34LED	B37 Storage	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	1000	448.0	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	C-OCC	700	313.6	134.4	0.0	$23.07	$270.00	$35.00	11.7	10.2
34LED	B07 Supplies	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112.0	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	700	78.4	33.6	0.0	$5.77	$270.00	$35.00	46.8	40.7
32LED	Men's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720.0	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	C-OCC	1680	504.0	216.0	0.0	$37.08	$270.00	$35.00	7.3	6.3
117	B06 Janitor Closet	1	CF 23	CFS23/1	23	0.0	SW	1000	23.0	1	CF 23	CFS23/1	23	0.0	C-OCC	700	16.1	6.9	0.0	$1.18	$270.00	$35.00	228.0	198.4
32LED	Women's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720.0	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	C-OCC	1680	504.0	216.0	0.0	$37.08	$270.00	$35.00	7.3	6.3
34LED	B39 Lunchroom	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	3120	2,096.6	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	C-OCC	2184	1,467.6	629.0	0.0	$107.97	$270.00	$35.00	2.5	2.2
34LED	Crime Scene Units	10	1T 32 C F 4 (ELE)	F44ILL	112	1.1	SW	2400	2,688.0	10	1T 32 C F 4 (ELE)	F44ILL	112	1.1	C-OCC	1680	1,881.6	806.4	0.0	$138.42	$270.00	$35.00	2.0	1.7
34LED	B20 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	B21 Storage	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112.0	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	700	78.4	33.6	0.0	$5.77	$270.00	$35.00	46.8	40.7
34LED	B18 Lab	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075.2	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	C-OCC	1680	752.6	322.6	0.0	$55.37	$270.00	$35.00	4.9	4.2
34LED	B17 Photolab	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	Area Outside B17	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	B15 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075.2	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	C-OCC	1680	752.6	322.6	0.0	$55.37	$270.00	$35.00	4.9	4.2
34LED	B13 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	B12 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	B11 Evidence Storage	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112.0	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	700	78.4	33.6	0.0	$5.77	$270.00	$35.00	46.8	40.7
34LED	111 Shower Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	3120	349.4	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	2184	244.6	104.8	0.0	$17.99	$270.00	$35.00	15.0	13.1
117	TR	1	CF 23	CFS23/1	23	0.0	SW	2400	55.2	1	CF 23	CFS23/1	23	0.0	C-OCC	1680	38.6	16.6	0.0	$2.84	$270.00	$35.00	95.0	82.7
117	TR	1	CF 23	CFS23/1	23	0.0	SW	2400	55.2	1	CF 23	CFS23/1	23	0.0	C-OCC	1680	38.6	16.6	0.0	$2.84	$270.00	$35.00	95.0	82.7
32LED	Office Corridor	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	8760	525.6	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	8760	525.6	0.0	0.0	$0.00	$270.00	$35.00		#DIV/0!
34LED	Office	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	2400	1,612.8	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	C-OCC	1680	1,129.0	483.8	0.0	$83.05	$270.00	$35.00	3.3	2.8
32LED	Elec Closet	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	700	42.0	18.0	0.0	$3.09	$270.00	$35.00	87.4	76.1
34LED	IT Closet	19	1T 32 C F 4 (ELE)	F44ILL	112	2.1	SW	1000	2,128.0	19	1T 32 C F 4 (ELE)	F44ILL	112	2.1	C-OCC	700	1,489.6	638.4	0.0	$109.58	$270.00	$35.00	2.5	2.1
34LED	126 Fileroom	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	1000	224.0	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	700	156.8	67.2	0.0	$11.53	$270.00	$35.00	23.4	20.4
34LED	128 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	131 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	129 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	138 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
32LED	133 Line-up	2	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	288.0	2	1T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	1680	201.6	86.4	0.0	$14.83	$270.00	$35.00	18.2	15.8
32LED	134 Interview Room	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144.0	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	2400	144.0	0.0	0.0	$0.00	$270.00	$35.00		#DIV/0!
32LED	135 Interview Room	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144.0	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	2400	144.0	0.0	0.0	$0.00	$270.00	$35.00		#DIV/0!
32LED	137 Holding	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144.0	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	1680	100.8	43.2	0.0	$7.42	$270.00	$35.00	36.4	31.7
32LED	141 Storage	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	700	42.0	18.0	0.0	$3.09	$270.00	$35.00	87.4	76.1
34LED	Corridor	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	8760	5,886.7	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	NONE	8760	5,886.7	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
117	TR	1	CF 23	CFS23/1	23	0.0	SW	2400	55.2	1	CF 23	CFS23/1	23	0.0	C-OCC	1680	38.6	16.6	0.0	$2.84	$270.00	$35.00	95.0	82.7
34LED	Juvenile Unit Corridor	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	8760	2,943.4	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	NONE	8760	2,943.4	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
34LED	Juvenile Unit	13	1T 32 C F 4 (ELE)	F44ILL	112	1.5	SW	2400	3,494.4	13	1T 32 C F 4 (ELE)	F44ILL	112	1.5	C-OCC	1680	2,446.1	1,048.3	0.0	$179.94	$270.00	$35.00	1.5	1.3
34LED	143 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	145 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	147 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	153 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	154 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	156 Victim Witness Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	Vest	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	155 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	255 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	Office	9	1T 32 C F 4 (ELE)	F44ILL	112	1.0	SW	2400	2,419.2	9	1T 32 C F 4 (ELE)	F44ILL	112	1.0	C-OCC	1680	1,693.4	725.8	0.0	$124.58	$270.00	$35.00	2.2	1.9
32LED	Mens TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720.0	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	C-OCC	1680	504.0	216.0	0.0	$37.08	$270.00	$35.00	7.3	6.3
117	Janitor's Closet	1	CF 23	CFS23/1	23	0.0	SW	1000	23.0	1	CF 23	CFS23/1	23	0.0	C-OCC	700	16.1	6.9	0.0	$1.18	$270.00	$35.00	228.0	198.4
32LED	Women's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720.0	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	C-OCC	1680	504.0	216.0	0.0	$37.08	$270.00	$35.00	7.3	6.3
34LED	254 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	250 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	257 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	251 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	Corridor / Open Office	19	1T 32 C F 4 (ELE)	F44ILL	112	2.1	SW	2400	5,107.2	19	1T 32 C F 4 (ELE)	F44ILL	112	2.1	C-OCC	1680	3,575.0	1,532.2	0.0	$262.99	$270.00	$35.00	1.0	0.9
34LED	248 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	246 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	249 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	229 Copy	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	3120	1,048.3	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	C-OCC	2184	733.8	314.5	0.0	$53.98	$270.00	$35.00	5.0	4.4
34LED	234 Conference Room	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	244 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	237 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075.2	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	C-OCC	1680	752.6	322.6	0.0	$55.37	$270.00	$35.00	4.9	4.2
34LED	240 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	Open Office	8	1T 32 C F 4 (ELE)	F44ILL	112	0.9	SW	2400	2,150.4	8	1T 32 C F 4 (ELE)	F44ILL	112	0.9	C-OCC	1680	1,505.3	645.1	0.0	$110.73	$270.00	$35.00	2.4	2.1
34LED	241 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	245 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	Trial Team Open Office	20	1T 32 C F 4 (ELE)	F44ILL	112	2.2	SW	2400	5,376.0	20	1T 32 C F 4 (ELE)	F44ILL	112	2.2	C-OCC	1680	3,763.2	1,612.8	0.0	$276.84	$270.00	$35.00	1.0	0.8
34LED	209 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	210 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
32LED	211 Office	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144.0	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	1680	100.8	43.2	0.0	$7.42	$270.00	$35.00	36.4	31.7
55	211 Office	1	2T 17 R F 3 (ELE)	F23ILL	47	0.0	SW	2400	112.8	1	2T 17 R F 3 (ELE)	F23ILL	47	0.0	C-OCC	1680	79.0	33.8	0.0	$5.81	$270.00	$35.00	46.5	40.5
34LED	212 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	213 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	214 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	215 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	218 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	219 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	220	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	221	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	Records	22	1T 32 C F 4 (ELE)	F44ILL	112	2.5	SW	2400	5,913.6	22	1T 32 C F 4 (ELE)	F44ILL	112	2.5	C-OCC	1680	4,139.5	1,774.1	0.0	$304.52	$270.00	$35.00	0.9	0.8
34LED	Corridor	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	8760	1,962.2	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	NONE	8760	1,962.2	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
34LED	Storage	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112.0	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	700	78.4	33.6	0.0	$5.77	$270.00	$35.00	46.8	40.7
34LED	Clerical Unit	11	1T 32 C F 4 (ELE)	F44ILL	112	1.2	SW	2400	2,956.8	11	1T 32 C F 4 (ELE)	F44ILL	112	1.2	C-OCC	1680	2,069.8	887.0	0.0	$152.26	$270.00	$35.00	1.8	1.5
34LED	225 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	Insurance Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
32LED	Men's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720.0	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	C-OCC	1680	504.0	216.0	0.0	$37.08	$270.00	$35.00	7.3	6.3
117	306 Janitor's Closet	1	CF 23	CFS23/1	23	0.0	SW	1000	23.0	1	CF 23	CFS23/1	23	0.0	C-OCC	700	16.1	6.9	0.0	$1.18	$270.00	$35.00	228.0	198.4

Energy Audit of Prosecutor's Office
CHA Project No. 28470
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
32LED	Women's TR	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144.0	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	1680	100.8	43.2	0.0	$7.42	$270.00	$35.00	36.4	31.7
34LED	360	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	2400	806.4	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	C-OCC	1680	564.5	241.9	0.0	$41.53	$270.00	$35.00	6.5	5.7
34LED	Office	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	2400	1,612.8	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	C-OCC	1680	1,129.0	483.8	0.0	$83.05	$270.00	$35.00	3.3	2.8
34LED	Office	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	2400	1,612.8	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	C-OCC	1680	1,129.0	483.8	0.0	$83.05	$270.00	$35.00	3.3	2.8
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	Corridor	5	1T 32 C F 4 (ELE)	F44ILL	112	0.6	SW	8760	4,905.6	5	1T 32 C F 4 (ELE)	F44ILL	112	0.6	NONE	8760	4,905.6	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
34LED	355 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075.2	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	C-OCC	1680	752.6	322.6	0.0	$55.37	$270.00	$35.00	4.9	4.2
34LED	Copy Room	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	3120	1,048.3	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	C-OCC	2184	733.8	314.5	0.0	$53.98	$270.00	$35.00	5.0	4.4
34LED	321 Conference	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075.2	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	C-OCC	1680	752.6	322.6	0.0	$55.37	$270.00	$35.00	4.9	4.2
34LED	342 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	Vest	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	8760	981.1	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	NONE	8760	981.1	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
34LED	Open Office	8	1T 32 C F 4 (ELE)	F44ILL	112	0.9	SW	2400	2,150.4	8	1T 32 C F 4 (ELE)	F44ILL	112	0.9	C-OCC	1680	1,505.3	645.1	0.0	$110.73	$270.00	$35.00	2.4	2.1
34LED	347 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075.2	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	C-OCC	1680	752.6	322.6	0.0	$55.37	$270.00	$35.00	4.9	4.2
34LED	Open Office	16	1T 32 C F 4 (ELE)	F44ILL	112	1.8	SW	2400	4,300.8	16	1T 32 C F 4 (ELE)	F44ILL	112	1.8	C-OCC	1680	3,010.6	1,290.2	0.0	$221.47	$270.00	$35.00	1.2	1.1
34LED	345 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	337 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	346 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	Corridor	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	8760	1,962.2	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	NONE	8760	1,962.2	0.0	0.0	$0.00	$0.00	$0.00		#DIV/0!
34LED	Pack Rat Unit	10	1T 32 C F 4 (ELE)	F44ILL	112	1.1	SW	2400	2,688.0	10	1T 32 C F 4 (ELE)	F44ILL	112	1.1	C-OCC	1680	1,881.6	806.4	0.0	$138.42	$270.00	$35.00	2.0	1.7
34LED	Copy Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	3120	349.4	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	2184	244.6	104.8	0.0	$17.99	$270.00	$35.00	15.0	13.1
34LED	311 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	312 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	313 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	314 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	268.8	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	C-OCC	1680	188.2	80.6	0.0	$13.84	$270.00	$35.00	19.5	17.0
34LED	315 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	316 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	317 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	318 Library	10	1T 32 C F 4 (ELE)	F44ILL	112	1.1	SW	2400	2,688.0	10	1T 32 C F 4 (ELE)	F44ILL	112	1.1	C-OCC	1680	1,881.6	806.4	0.0	$138.42	$270.00	$35.00	2.0	1.7
34LED	Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075.2	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	C-OCC	1680	752.6	322.6	0.0	$55.37	$270.00	$35.00	4.9	4.2
34LED	340 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075.2	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	C-OCC	1680	752.6	322.6	0.0	$55.37	$270.00	$35.00	4.9	4.2
34LED	Open Office	13	1T 32 C F 4 (ELE)	F44ILL	112	1.5	SW	2400	3,494.4	13	1T 32 C F 4 (ELE)	F44ILL	112	1.5	C-OCC	1680	2,446.1	1,048.3	0.0	$179.94	$270.00	$35.00	1.5	1.3
34LED	320 Ofice	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	324 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	325 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	330 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	331 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	326 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	537.6	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	1680	376.3	161.3	0.0	$27.68	$270.00	$35.00	9.8	8.5
34LED	327 Computer	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	2400	806.4	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	C-OCC	1680	564.5	241.9	0.0	$41.53	$270.00	$35.00	6.5	5.7
34LED	328 Computer	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	2400	806.4	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	C-OCC	1680	564.5	241.9	0.0	$41.53	$270.00	$35.00	6.5	5.7
34LED	328 File Room	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	1000	224.0	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	C-OCC	700	156.8	67.2	0.0	$11.53	$270.00	$35.00	23.4	20.4
117	TR	1	CF 23	CFS23/1	23	0.0	SW	2400	55.2	1	CF 23	CFS23/1	23	0.0	C-OCC	1680	38.6	16.6	0.0	$2.84	$270.00	$35.00	95.0	82.7
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	Total	**668**				**59.4**			**168223.0**	**668.0**				**59.4**			**133725.4**	**34497.6**	**0.0**	**5921.5**	**40230.0**	**5215.0**		
																	Demand Savings			0.0	$0			
																	kWh Savings			34,498	$5,922			
																	Total Savings				$5,922		**6.8**	**5.9**

Energy Audit of Prosecutor's Office
CHA Project No. 28470
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**
34LED	Lobby	5	1T 32 C F 4 (ELE)	F44ILL	112	0.6	SW	8760	4,906	5	4 ft LED Tube	200732x4	60	0.3	NONE	8,760	2,628	2,278	0.3	$ 402.25	$ 1,633.50	$ -	4.1	4.1
34LED	Booth	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	1820	408	2	4 ft LED Tube	200732x4	60	0.1	NONE	1,820	218	189	0.1	$ 37.01	$ 653.40	$ -	17.7	17.7
34LED	Corridor	7	1T 32 C F 4 (ELE)	F44ILL	112	0.8	SW	8760	6,868	7	4 ft LED Tube	200732x4	60	0.4	NONE	8,760	3,679	3,189	0.4	$ 563.15	$ 2,286.90	$ -	4.1	4.1
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	168 Interview Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	2,400	144	125	0.1	$ 23.68	$ 596.70	$ 35	25.2	23.7
34LED	164 Interview Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	2,400	144	125	0.1	$ 23.68	$ 596.70	$ 35	25.2	23.7
34LED	166 Storage	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	700	42	70	0.1	$ 14.28	$ 596.70	$ 35	41.8	39.3
34LED	167 Mailroom	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	Closet	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	700	42	70	0.1	$ 14.28	$ 596.70	$ 35	41.8	39.3
117	106 Janitor Closet	1	CF 23	CFS23/1	23	0.0	SW	1000	23	1	CF 23	CFS23/1	23	0.0	C-OCC	700	16	7	0.0	$ 1.18	$ 270.00	$ 35	228.0	198.4
32LED	Men's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	C-OCC	1,680	252	468	0.2	$ 86.85	$ 1,086.75	$ 35	12.5	12.1
34LED	Conference Room	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	C-OCC	1,680	403	672	0.2	$ 124.39	$ 1,576.80	$ 35	12.7	12.4
32LED	Women's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	C-OCC	1,680	252	468	0.2	$ 86.85	$ 1,086.75	$ 35	12.5	12.1
105LED	Sub-Basement MER	26	W 32 F 1	F41LL	32	0.8	SW	2000	1,664	26	4 ft LED Tube	200732x1	15	0.4	NONE	2,000	780	884	0.4	$ 170.95	$ 2,123.55	$ -	12.4	12.4
32LED	Elev Machine Room	2	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2000	240	2	4 ft LED Tube	200732x2	30	0.1	NONE	2,000	120	120	0.1	$ 23.21	$ 326.70	$ -	14.1	14.1
105LED	Homicide	20	W 32 F 1	F41LL	32	0.6	SW	2400	1,536	20	4 ft LED Tube	200732x1	15	0.3	C-OCC	1,680	504	1,032	0.3	$ 191.92	$ 1,903.50	$ 35	9.9	9.7
105LED	B28 Storage	40	W 32 F 1	F41LL	32	1.3	SW	1000	1,280	40	4 ft LED Tube	200732x1	15	0.6	C-OCC	700	420	860	0.7	$ 177.17	$ 3,537.00	$ 35	20.0	19.8
105LED	B32 Elect Room	8	W 32 F 1	F41LL	32	0.3	SW	2000	512	8	4 ft LED Tube	200732x1	15	0.1	NONE	2,000	240	272	0.1	$ 52.60	$ 653.40	$ -	12.4	12.4
34LED	Corridor	11	1T 32 C F 4 (ELE)	F44ILL	112	1.2	SW	8760	10,792	11	4 ft LED Tube	200732x4	60	0.7	NONE	8,760	5,782	5,011	0.6	$ 884.95	$ 3,593.70	$ -	4.1	4.1
105LED	Stairs	14	W 32 F 1	F41LL	32	0.4	SW	8760	3,924	14	4 ft LED Tube	200732x1	15	0.2	NONE	8,760	1,840	2,085	0.2	$ 368.21	$ 1,143.45	$ -	3.1	3.1
32LED	B31 Storage	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	4 ft LED Tube	200732x2	30	0.0	C-OCC	700	21	39	0.0	$ 8.00	$ 433.35	$ 35	54.2	49.8
105LED	B31 Storage	2	W 32 F 1	F41LL	32	0.1	SW	1000	64	2	4 ft LED Tube	200732x1	15	0.0	C-OCC	700	21	43	0.0	$ 8.86	$ 433.35	$ 35	48.9	45.0
105LED	B33 Storage	8	W 32 F 1	F41LL	32	0.3	SW	1000	256	8	4 ft LED Tube	200732x1	15	0.1	C-OCC	700	84	172	0.1	$ 35.43	$ 923.40	$ 35	26.1	25.1
105LED	B30 Evidence Office	10	W 32 F 1	F41LL	32	0.3	SW	2400	768	10	4 ft LED Tube	200732x1	15	0.2	C-OCC	1,680	252	516	0.2	$ 95.96	$ 1,086.75	$ 35	11.3	11.0
263LED	B30 Evidence Office	1	W 34 W F 1 (MAG)	F41EE	43	0.0	SW	2400	103	1	4 ft LED Tube	200732x1	15	0.0	C-OCC	1,680	25	78	0.0	$ 14.61	$ 351.68	$ 35	24.1	21.7
105LED	B25 Storage	8	W 32 F 1	F41LL	32	0.3	SW	1000	256	8	4 ft LED Tube	200732x1	15	0.1	C-OCC	700	84	172	0.1	$ 35.43	$ 923.40	$ 35	26.1	25.1
34LED	B34 Storage	8	1T 32 C F 4 (ELE)	F44ILL	112	0.9	SW	1000	896	8	4 ft LED Tube	200732x4	60	0.5	C-OCC	700	336	560	0.4	$ 114.20	$ 2,883.60	$ 35	25.2	24.9
105LED	Stairs	14	W 32 F 1	F41LL	32	0.4	SW	8760	3,924	14	4 ft LED Tube	200732x1	15	0.2	NONE	8,760	1,840	2,085	0.2	$ 368.21	$ 1,143.45	$ -	3.1	3.1
34LED	B35 Storage	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	1000	448	4	4 ft LED Tube	200732x4	60	0.2	C-OCC	700	168	280	0.2	$ 57.10	$ 1,576.80	$ 35	27.6	27.0
34LED	B23 Strorage (IT Room)	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	700	42	70	0.1	$ 14.28	$ 596.70	$ 35	41.8	39.3
34LED	B36 Storage	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	1000	448	4	4 ft LED Tube	200732x4	60	0.2	C-OCC	700	168	280	0.2	$ 57.10	$ 1,576.80	$ 35	27.6	27.0
32LED	Maint Storage	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	4 ft LED Tube	200732x2	30	0.0	C-OCC	700	21	39	0.0	$ 8.00	$ 433.35	$ 35	54.2	49.8
34LED	B37 Storage	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	1000	448	4	4 ft LED Tube	200732x4	60	0.2	C-OCC	700	168	280	0.2	$ 57.10	$ 1,576.80	$ 35	27.6	27.0
34LED	B07 Supplies	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	700	42	70	0.1	$ 14.28	$ 596.70	$ 35	41.8	39.3
32LED	Men's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	C-OCC	1,680	252	468	0.2	$ 86.85	$ 1,086.75	$ 35	12.5	12.1
117	B06 Janitor Closet	1	CF 23	CFS23/1	23	0.0	SW	1000	23	1	CF 23	CFS23/1	23	0.0	C-OCC	700	16	7	0.0	$ 1.18	$ 270.00	$ 35	228.0	198.4
32LED	Women's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	C-OCC	1,680	252	468	0.2	$ 86.85	$ 1,086.75	$ 35	12.5	12.1
34LED	B39 Lunchroom	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	3120	2,097	6	4 ft LED Tube	200732x4	60	0.4	C-OCC	2,184	786	1,310	0.3	$ 238.49	$ 2,230.20	$ 35	9.4	9.2
34LED	Crime Scene Units	10	1T 32 C F 4 (ELE)	F44ILL	112	1.1	SW	2400	2,688	10	4 ft LED Tube	200732x4	60	0.6	C-OCC	1,680	1,008	1,680	0.5	$ 310.97	$ 3,537.00	$ 35	11.4	11.3
34LED	B20 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	B21 Storage	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	700	42	70	0.1	$ 14.28	$ 596.70	$ 35	41.8	39.3
34LED	B18 Lab	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	C-OCC	1,680	403	672	0.2	$ 124.39	$ 1,576.80	$ 35	12.7	12.4
34LED	B17 Photolab	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	Area Outside B17	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	B15 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	C-OCC	1,680	403	672	0.2	$ 124.39	$ 1,576.80	$ 35	12.7	12.4
34LED	B13 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	B12 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	B11 Evidence Storage	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	700	42	70	0.1	$ 14.28	$ 596.70	$ 35	41.8	39.3
34LED	111 Shower Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	3120	349	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	2,184	131	218	0.1	$ 39.75	$ 596.70	$ 35	15.0	14.1
117	TR	1	CF 23	CFS23/1	23	0.0	SW	2400	55	1	CF 23	CFS23/1	23	0.0	C-OCC	1,680	39	17	0.0	$ 2.84	$ 270.00	$ 35	95.0	82.7
117	TR	1	CF 23	CFS23/1	23	0.0	SW	2400	55	1	CF 23	CFS23/1	23	0.0	C-OCC	1,680	39	17	0.0	$ 2.84	$ 270.00	$ 35	95.0	82.7
32LED	Office Corridor	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	8760	526	1	4 ft LED Tube	200732x2	30	0.0	C-OCC	8,760	263	263	0.0	$ 46.41	$ 433.35	$ 35	9.3	8.6
34LED	Office	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	2400	1,613	6	4 ft LED Tube	200732x4	60	0.4	C-OCC	1,680	605	1,008	0.3	$ 186.58	$ 2,230.20	$ 35	12.0	11.8
32LED	Elec Closet	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	4 ft LED Tube	200732x2	30	0.0	C-OCC	700	21	39	0.0	$ 8.00	$ 433.35	$ 35	54.2	49.8
34LED	IT Closet	19	1T 32 C F 4 (ELE)	F44ILL	112	2.1	SW	1000	2,128	19	4 ft LED Tube	200732x4	60	1.1	C-OCC	700	798	1,330	1.0	$ 271.23	$ 6,477.30	$ 35	23.9	23.8
34LED	126 Fileroom	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	1000	224	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	700	84	140	0.1	$ 28.55	$ 923.40	$ 35	32.3	31.1
34LED	128 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	131 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	129 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	138 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
32LED	133 Line-up	2	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	288	2	4 ft LED Tube	200732x2	30	0.1	C-OCC	1,680	101	187	0.1	$ 34.74	$ 596.70	$ 35	17.2	16.2
32LED	134 Interview Room	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144	1	4 ft LED Tube	200732x2	30	0.0	C-OCC	2,400	72	72	0.0	$ 13.66	$ 433.35	$ 35	31.7	29.2
32LED	135 Interview Room	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144	1	4 ft LED Tube	200732x2	30	0.0	C-OCC	2,400	72	72	0.0	$ 13.66	$ 433.35	$ 35	31.7	29.2
32LED	137 Holding	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144	1	4 ft LED Tube	200732x2	30	0.0	C-OCC	1,680	50	94	0.0	$ 17.37	$ 433.35	$ 35	24.9	22.9
32LED	141 Storage	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	4 ft LED Tube	200732x2	30	0.0	C-OCC	700	21	39	0.0	$ 8.00	$ 433.35	$ 35	54.2	49.8
34LED	Corridor	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	8760	5,887	6	4 ft LED Tube	200732x4	60	0.4	NONE	8,760	3,154	2,733	0.3	$ 482.70	$ 1,960.20	$ -	4.1	4.1
117	TR	1	CF 23	CFS23/1	23	0.0	SW	2400	55	1	CF 23	CFS23/1	23	0.0	C-OCC	1,680	39	17	0.0	$ 2.84	$ 270.00	$ 35	95.0	82.7
34LED	Juvenile Unit Corridor	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	8760	2,943	3	4 ft LED Tube	200732x4	60	0.2	NONE	8,760	1,577	1,367	0.2	$ 241.35	$ 980.10	$ -	4.1	4.1
34LED	Juvenile Unit	13	1T 32 C F 4 (ELE)	F44ILL	112	1.5	SW	2400	3,494	13	4 ft LED Tube	200732x4	60	0.8	C-OCC	1,680	1,310	2,184	0.7	$ 404.26	$ 4,517.10	$ 35	11.2	11.1
34LED	143 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	145 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	147 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	153 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	154 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	156 Victim Witness Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	Vest	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	155 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	255 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	Office	9	1T 32 C F 4 (ELE)	F44ILL	112	1.0	SW	2400	2,419	9	4 ft LED Tube	200732x4	60	0.5	C-OCC	1,680	907	1,512	0.5	$ 279.87	$ 3,210.30	$ 35	11.5	11.3
32LED	Mens TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	C-OCC	1,680	252	468	0.2	$ 86.85	$ 1,086.75	$ 35	12.5	12.1
117	Janitor's Closet	1	CF 23	CFS23/1	23	0.0	SW	1000	23	1	CF 23	CFS23/1	23	0.0	C-OCC	700	16	7	0.0	$ 1.18	$ 270.00	$ 35	228.0	198.4
32LED	Women's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	C-OCC	1,680	252	468	0.2	$ 86.85	$ 1,086.75	$ 35	12.5	12.1
34LED	254 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	250 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	257 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	251 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	Corridor / Open Office	19	1T 32 C F 4 (ELE)	F44ILL	112	2.1	SW	2400	5,107	19	4 ft LED Tube	200732x4	60	1.1	C-OCC	1,680	1,915	3,192	1.0	$ 590.85	$ 6,477.30	$ 35	11.0	10.9
34LED	248 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	246 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	249 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	229 Copy	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	3120	1,048	3	4 ft LED Tube	200732x4	60	0.2	C-OCC	2,184	393	655	0.2	$ 119.24	$ 1,250.10	$ 35	10.5	10.2
34LED	234 Conference Room	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	244 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	237 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	C-OCC	1,680	403	672	0.2	$ 124.39	$ 1,576.80	$ 35	12.7	12.4
34LED	240 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	Open Office	8	1T 32 C F 4 (ELE)	F44ILL	112	0.9	SW	2400	2,150	8	4 ft LED Tube	200732x4	60	0.5	C-OCC	1,680	806	1,344	0.4	$ 248.78	$ 2,883.60	$ 35	11.6	11.5
34LED	241 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	245 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	Trial Team Open Office	20	1T 32 C F 4 (ELE)	F44ILL	112	2.2	SW	2400	5,376	20	4 ft LED Tube	200732x4	60	1.2	C-OCC	1,680	2,016	3,360	1.0	$ 621.94	$ 6,804.00	$ 35	10.9	10.9
34LED	209 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	210 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
32LED	211 Office	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144	1	4 ft LED Tube	200732x2	30	0.0	C-OCC	1,680	50	94	0.0	$ 17.37	$ 433.35	$ 35	24.9	22.9
55	211 Office	1	2T 17 R F 3 (ELE)	F23ILL	47	0.0	SW	2400	113	1	2T 17 R F 3 (ELE)	F23ILL	47	0.0	C-OCC	1,680	79	34	0.0	$ 5.81	$ 270.00	$ 35	46.5	40.5
34LED	212 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	213 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	214 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	215 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	218 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	219 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	220	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	221	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	Records	22	1T 32 C F 4 (ELE)	F44ILL	112	2.5	SW	2400	5,914	22	4 ft LED Tube	200732x4	60	1.3	C-OCC	1,680	2,218	3,696	1.1	$ 684.14	$ 7,457.40	$ 35	10.9	10.8
34LED	Corridor	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	8760	1,962	2	4 ft LED Tube	200732x4	60	0.1	NONE	8,760	1,051	911	0.1	$ 160.90	$ 653.40	$ -	4.1	4.1
34LED	Storage	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	1000	112	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	700	42	70	0.1	$ 14.28	$ 596.70	$ 35	41.8	39.3
34LED	Clerical Unit	11	1T 32 C F 4 (ELE)	F44ILL	112	1.2	SW	2400	2,957	11	4 ft LED Tube	200732x4	60	0.7	C-OCC	1,680	1,109	1,848	0.6	$ 342.07	$ 3,863.70	$ 35	11.3	11.2
34LED	225 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	Insurance Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
32LED	Men's TR	5	1T 32 R F 2 (ELE)	F42LL	60	0.3	SW	2400	720	5	4 ft LED Tube	200732x2	30	0.2	C-OCC	1,680	252	468	0.2	$ 86.85	$ 1,086.75	$ 35	12.5	12.1
117	306 Janitor's Closet	1	CF 23	CFS23/1	23	0.0	SW	1000	23	1	CF 23	CFS23/1	23	0.0	C-OCC	700	16	7	0.0	$ 1.18	$ 270.00	$ 35	228.0	198.4

Energy Audit of Prosecutor's Office

CHA Project No. 28470

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
32LED	Women's TR	1	1T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2400	144	1	4 ft LED Tube	200732x2	30	0.0	C-OCC	1,680	50	94	0.0	$ 17.37	$ 433.35	$ 35	24.9	22.9
34LED	360	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	2400	806	3	4 ft LED Tube	200732x4	60	0.2	C-OCC	1,680	302	504	0.2	$ 93.29	$ 1,250.10	$ 35	13.4	13.0
34LED	Office	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	2400	1,613	6	4 ft LED Tube	200732x4	60	0.4	C-OCC	1,680	605	1,008	0.3	$ 186.58	$ 2,230.20	$ 35	12.0	11.8
34LED	Office	6	1T 32 C F 4 (ELE)	F44ILL	112	0.7	SW	2400	1,613	6	4 ft LED Tube	200732x4	60	0.4	C-OCC	1,680	605	1,008	0.3	$ 186.58	$ 2,230.20	$ 35	12.0	11.8
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	Corridor	5	1T 32 C F 4 (ELE)	F44ILL	112	0.6	SW	8760	4,906	5	4 ft LED Tube	200732x4	60	0.3	NONE	8,760	2,628	2,278	0.3	$ 402.25	$ 1,633.50	$ -	4.1	4.1
34LED	355 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	C-OCC	1,680	403	672	0.2	$ 124.39	$ 1,576.80	$ 35	12.7	12.4
34LED	Copy Room	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	3120	1,048	3	4 ft LED Tube	200732x4	60	0.2	C-OCC	2,184	393	655	0.2	$ 119.24	$ 1,250.10	$ 35	10.5	10.2
34LED	321 Conference	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	C-OCC	1,680	403	672	0.2	$ 124.39	$ 1,576.80	$ 35	12.7	12.4
34LED	342 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	Vest	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	8760	981	1	4 ft LED Tube	200732x4	60	0.1	NONE	8,760	526	456	0.1	$ 80.45	$ 326.70	$ -	4.1	4.1
34LED	Open Office	8	1T 32 C F 4 (ELE)	F44ILL	112	0.9	SW	2400	2,150	8	4 ft LED Tube	200732x4	60	0.5	C-OCC	1,680	806	1,344	0.4	$ 248.78	$ 2,883.60	$ 35	11.6	11.5
34LED	347 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	C-OCC	1,680	403	672	0.2	$ 124.39	$ 1,576.80	$ 35	12.7	12.4
34LED	Open Office	16	1T 32 C F 4 (ELE)	F44ILL	112	1.8	SW	2400	4,301	16	4 ft LED Tube	200732x4	60	1.0	C-OCC	1,680	1,613	2,688	0.8	$ 497.55	$ 5,497.20	$ 35	11.0	11.0
34LED	345 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	337 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	346 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	Corridor	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	8760	1,962	2	4 ft LED Tube	200732x4	60	0.1	NONE	8,760	1,051	911	0.1	$ 160.90	$ 653.40	$ -	4.1	4.1
34LED	Pack Rat Unit	10	1T 32 C F 4 (ELE)	F44ILL	112	1.1	SW	2400	2,688	10	4 ft LED Tube	200732x4	60	0.6	C-OCC	1,680	1,008	1,680	0.5	$ 310.97	$ 3,537.00	$ 35	11.4	11.3
34LED	Copy Room	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	3120	349	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	2,184	131	218	0.1	$ 39.75	$ 596.70	$ 35	15.0	14.1
34LED	311 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	312 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	313 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	314 Office	1	1T 32 C F 4 (ELE)	F44ILL	112	0.1	SW	2400	269	1	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	101	168	0.1	$ 31.10	$ 596.70	$ 35	19.2	18.1
34LED	315 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	316 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	317 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	318 Library	10	1T 32 C F 4 (ELE)	F44ILL	112	1.1	SW	2400	2,688	10	4 ft LED Tube	200732x4	60	0.6	C-OCC	1,680	1,008	1,680	0.5	$ 310.97	$ 3,537.00	$ 35	11.4	11.3
34LED	Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	C-OCC	1,680	403	672	0.2	$ 124.39	$ 1,576.80	$ 35	12.7	12.4
34LED	340 Office	4	1T 32 C F 4 (ELE)	F44ILL	112	0.4	SW	2400	1,075	4	4 ft LED Tube	200732x4	60	0.2	C-OCC	1,680	403	672	0.2	$ 124.39	$ 1,576.80	$ 35	12.7	12.4
34LED	Open Office	13	1T 32 C F 4 (ELE)	F44ILL	112	1.5	SW	2400	3,494	13	4 ft LED Tube	200732x4	60	0.8	C-OCC	1,680	1,310	2,184	0.7	$ 404.26	$ 4,517.10	$ 35	11.2	11.1
34LED	320 Ofice	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	324 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	325 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	330 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	331 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	326 Office	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	2400	538	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	1,680	202	336	0.1	$ 62.19	$ 923.40	$ 35	14.8	14.3
34LED	327 Computer	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	2400	806	3	4 ft LED Tube	200732x4	60	0.2	C-OCC	1,680	302	504	0.2	$ 93.29	$ 1,250.10	$ 35	13.4	13.0
34LED	328 Computer	3	1T 32 C F 4 (ELE)	F44ILL	112	0.3	SW	2400	806	3	4 ft LED Tube	200732x4	60	0.2	C-OCC	1,680	302	504	0.2	$ 93.29	$ 1,250.10	$ 35	13.4	13.0
34LED	328 File Room	2	1T 32 C F 4 (ELE)	F44ILL	112	0.2	SW	1000	224	2	4 ft LED Tube	200732x4	60	0.1	C-OCC	700	84	140	0.1	$ 28.55	$ 923.40	$ 35	32.3	31.1
117	TR	1	CF 23	CFS23/1	23	0.0	SW	2400	55	1	CF 23	CFS23/1	23	0.0	C-OCC	1,680	39	17	0.0	$ 2.84	$ 270.00	$ 35	95.0	82.7
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S	**Total**	**668**				**59.4**			**168,223**	**668**				**31.5**			**70,709**		**27.9**	**17,951**	**210,522**	**$5,215**		
S																	**Demand Savings**			**27.9**	**$1,213**			
S																	**kWh Savings**			**97,514**	**$16,738**			
S																	**Total Savings**				**$17,951**		**11.7**	**11.4**

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.

Home | Residential | Commercial & Industrial | Renewable Energy
About Us | Press Room | Library | FAQs | Calendar | Newsletters | Contact Us | Site

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,

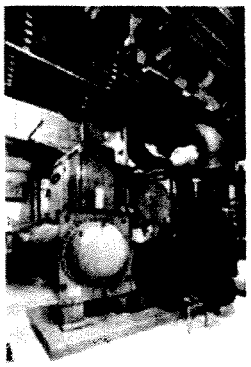
III. PAY FOR PERFORMANCE (P4P)

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

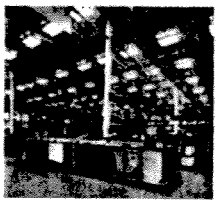
TOOLS AND RESOURCES

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

PAY FOR PERFORMANCE APPLICATION FORM

July 1, 2013 - June 30, 2014

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.
6. Provide brief description of facility.
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

*Incentives/Requirements subject to change.

Pay For Performance-Existing Buildings

Participation Agreement

Definitions:

Design Incentives – Incentives that may be offered to design professionals by the Program.

Design Services – Services that may be offered to design professionals under the Program.

Energy-Efficient Measures – Any device eligible to receive a Program Incentive payment through the NJ Clean Energy Commercial and Industrial Program (New Jersey SmartStart Buildings).

New Jersey Utilities – The regulated 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.

Administrator – New Jersey Board of Public Utilities, Office of Clean Energy

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

Product Installation or Equipment Installation – Installation of the Energy-Efficient Measures.

Projects with a contract threshold of $14,187 (increasing to $15,444 effective July 1, 2014) 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 – The Commercial and Industrial Energy-Efficient Construction Program (New Jersey SmartStart Buildings) offered herein by the New Jersey Board of Public Utilities, Office of Clean Energy pursuant to state regulatory approval under the New Jersey Electric Discount and Energy Competition Act, NJSA 48:3-49, et seq.

Program Incentives – Refers to the amount or level of incentive that the Program provides to Participating Customers pursuant to the Program offered herein (see description under "Incentive Amount" heading).

Program Offer – Program Incentives are available to non-residential retail electric and/or gas service customers of the New Jersey Utilities identified above.

Program Manager – TRC Energy Services.

Application and Eligibility Process – The Program pays incentives after the installation of qualified energy-efficient measures that were pre-approved (for exceptions to this condition, please refer to "Exceptions for Approval".) In order to be eligible for Program Incentives, a Customer, or an agent (contractor/vendor) authorized by a Customer, must submit a properly completed application package. The package must include an application signed by the customer; a complete (current) utility bill; and technology worksheet and manufacturer's cut sheets (where appropriate). This information must be submitted to the Program Manager before equipment is installed. Applications for measures that are self installed by customers must be submitted by the customer and not the sales vendor of the measure, however, the customer may elect to assign payment of the incentive to the sales vendor. This application package must be received by the Program Manager on or before June 30, 2014 in order to be eligible for the fiscal year July 1, 2013-June 30, 2014 incentives. The Program Manager will review the application package to determine if the project is eligible for a Program Incentive. If eligible, the Customer will receive an approval letter with the estimated authorized incentive amount and the date by which the equipment must be installed in order for the approval to remain in effect. Upon receipt of an approval letter, the Customer may then proceed to install the equipment listed on the approved application. Equipment installed prior to the date of the Program Manager's approval letter is not eligible for an incentive. The Program Manager 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 approval letter. All equipment must be purchased within 12 months of date of application. **Any Customer and/ or agent who purchases equipment prior to the receipt of an incentive approval letter does so at his/her own risk.**

Exceptions for Approval – The Application and Eligibility Process pertains to all projects except for those involving either Gas Heating, Unitary HVAC or Motors having an incentive amount less than $5,000 that were installed within 12 months of receipt of the application. These measures, at this incentive level, may be installed without prior approval. In addition, but at the sole discretion of the Program Manager, emergency replacement of equipment may not require a prior approval determination and letter. **In such cases, please notify the Program Manager of such emergencies as early as possible, that an application will soon be sent in that was not pre-approved.**

Post-Installation Approval – After installation is completed, the Customer, or an agent authorized by the Customer, must finalize and submit an invoice for the purchase of the equipment (material cost must be broken out from labor costs), and any other required documentation as specified on the equipment application or in the Program Manager's initial approval letter.

Please refer to the program guide on the NJCleanEnergy.com/ssb website for the complete Application and Eligibility Process.

The Program Manager reserves the right to verify sales transactions and to have reasonable access to Participating Customer's facility to inspect both pre-existing product 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 a New Jersey Utilities' service territory and designated on the Participating Customer's incentive application. Program Incentives are available for qualified Energy-Efficient Measures as listed and described in the Program materials and incentive applications. The Participating Customer must ultimately own the equipment, either through an up-front purchase or at the end of a short-term lease. Design Incentives are available to design professionals as described in the Program materials and applications. A different and separate agreement must be executed by participating design professionals to be eligible for this type of incentive. The design professional does not need to be based in New Jersey.

Equipment procured by Participating Customers through another program offered by New Jersey's Clean Energy Program or the New Jersey Utilities, as applicable, is not eligible for incentives through this program. Customers who have not contributed to the Societal Benefits Charge of the applicable New Jersey Utility are not be eligible for incentives offered through this program.

Incentive Amount – Program Incentives will equal either: a) the approved Program Incentive amount, or b) the actual equipment cost of the Energy-Efficient Measure, whichever is less, as determined by the Program Manager. Products offered at no direct cost to the customer are ineligible. Incomplete application submissions, applications requiring inspections and unanticipated high volume of activities may cause processing delays. Program Incentives are limited to $500,000 per utility account in a calendar year. Contact the Program Manager regarding any questions.

Tax Liability – The Program 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 to the Program Manager on the application form in order to receive a Program Incentive. In addition, Participating Customers must also provide a Tax Clearance Form (entitled "Business Assistance or Incentive Clearance Certificate") that is dated within 90 days of equipment installation.

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

Warranties – THE PROGRAM MANAGER AND ADMINISTRATOR DO NOT WARRANT THE PERFORMANCE OF INSTALLED EQUIPMENT, AND/OR SERVICES RENDERED AS PART OF THIS PROGRAM, EITHER EXPRESSLY OR IMPLICITLY. 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.

Limitation of Liability – By virtue of participating in this Program, Participating Customers agree to waive any and all claims or damages against the Program Manager or the Administrator, except the receipt of the Program Incentive. Participating Customers agree that the Program Manager's and Administrator's liability, in connection with this Program, is limited to paying the Program Incentive specified. Under no circumstances shall the Program 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 Program Manager under this Program shall be individual, and not joint and/or several.

Assignment – The Participating Customer may assign Program Incentive payments to a specified vendor.

Participating Customer's Certification – Participating Customer certifies that he/she purchased and installed the equipment listed in their application at their defined New Jersey location. Participating Customer agrees that all information is true and that he/she has conformed to all of the Program and equipment requirements listed in the application.

Termination – The New Jersey Board of Public Utilities reserves the right to extend, modify (this includes modification of Program Incentive levels) or terminate this Program without prior or further notice.

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 Program Manager permission to share my records with the New Jersey Board of Public Utilities, and contractors it selects to manage, coordinate or evaluate the NJ SmartStart Buildings Program. Additionally, 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.

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

Home » Commercial & Industrial » Programs

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 E

Photovoltaic Analysis

Camden County, NJ
Prosecuter's Office

Cost of Electricity	$0.172	/kWh
Electricity Usage	570,000	kWh/yr
System Unit Cost	$4,000	/kW

Photovoltaic (PV) Solar Power Generation - Screening Assessment

Budgetary Cost	Annual Utility Savings				Estimated Maintenance Savings	Total Savings	Federal Tax Credit	New Jersey Renewable ** SREC	Payback (without incentive)	Payback (with incentive)
$	kW	kWh	therms	$	$	$	$	$	Years	Years
$0	**0.0**	**5,255**	**0**	**$902**	**0**	**$902**	**$0**	**$946**	**0.0**	**0.0**

** Estimated Solar Renewable Energy Certificate Program (SREC) SREC for 15 Years= $180 /1000kwh

Area Output*

580 m2
6,239 ft2

Perimeter Output*

189 m
620 ft

Available Roof Space for PV:
(Area Output - 10 ft x Perimeter) x 85%
29 ft2

Approximate System Size: Is the roof flat? (Yes/No) Yes

8	watt/ft2	
233	DC watts	
0	kW	Enter into PV Watts

PV Watts Inputs***

Array Tilt Angle	20	Enter into PV Watts (always 20 if flat, if pitched - enter estimated roof angle)
Array Azimuth	180	Enter into PV Watts (default)
Zip Code	08102	Enter into PV Watts
DC/AC Derate Factor	0.83	Enter info PV Watts

PV Watts Output

5,255 annual kWh calculated in PV Watts program

% Offset Calc

Usage	570,000	(from utilities)
PV Generation	5,255	(generated using PV Watts)
% offset	1%	

* http://www.freemaptools.com/area-calculator.htm
** http://www.flettexchange.com
*** http://gisatnrel.nrel.gov/PVWatts_Viewer/index.html

AC Energy & Cost Savings

Cautions for Interpreting the Results

(Type comments here to appear on printout; maximum 1 row of 90 characters.)

Station Identification

Cell ID:	0266373
State:	New Jersey
Latitude:	39.8 ° N
Longitude:	75.3 ° W

PV System Specifications

DC Rating:	4.00 kW *
DC to AC Derate Factor:	0.830
AC Rating:	3.32 kW
Array Type:	Fixed Tilt
Array Tilt:	20.0 °
Array Azimuth:	180.0 °

Energy Specifications

Cost of Electricity:	8.7 ¢/kWh

Results

Month	Solar Radiation (kWh/m²/day)	AC Energy (kWh)	Energy Value ($)
1	2.80	290	25.23
2	3.53	334	29.06
3	4.96	500	43.50
4	5.39	512	44.54
5	5.96	569	49.50
6	6.25	560	48.72
7	5.95	546	47.50
8	5.75	526	45.76
9	5.17	468	40.72
10	4.19	407	35.41
11	2.96	286	24.88
12	2.55	256	22.27
Year	4.63	5255	457.18

Output Hourly Performance Data

(Gridded data is monthly, hourly output not available.)

Output Results as Text

Saving Text from a Browser

Run PVWATTS v.2 for another location

Run PVWATTS v.1

Please send questions and comments to Webmaster

Disclaimer and copyright notice.

RReDC home page (*http://rredc.nrel.gov*)

APPENDIX F

EPA Benchmarking Report

ENERGY STAR® Statement of Energy Performance

58

ENERGY STAR® Score[1]

Prosecuter's Office

Primary Property Function: Office
Gross Floor Area (ft²): 30,000
Built: 1970

For Year Ending: April 30, 2014
Date Generated: July 17, 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
Prosecuter's Office 25 North 5th Street Camden, New Jersey 08102	Camden County, NJ 2220 Voorhees Town Center Voorhees, NJ 08043 (____)____-_____	Harry Collins 2220 Voorhees Town Center Voorhees, NJ 08043 856-751-2242 acassier@chacompanies.com

Property ID: 4059770

Energy Consumption and Energy Use Intensity (EUI)

Site EUI
74.7 kBtu/ft²

Source EUI
213.9 kBtu/ft²

Annual Energy by Fuel	
Electric - Grid (kBtu)	1,944,840 (87%)
Natural Gas (kBtu)	295,900 (13%)

National Median Comparison	
National Median Site EUI (kBtu/ft²)	81.6
National Median Source EUI (kBtu/ft²)	233.8
% Diff from National Median Source EUI	-9%
Annual Emissions	
Greenhouse Gas Emissions (Metric Tons CO2e/year)	262

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

CHA Consulting, Inc .
3 Winners Circle
Albany, NY 12205
518-453-3929
mdewein@chacompanies.com

Professional Engineer Stamp (if applicable)