

Inspira Health Network

Elmer Hospital

501 Front Street, Elmer, NJ 08318

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

June 2015
Revised: September 2015

Prepared by:



6 Campus Drive
Parsippany, NJ 07054
(973) 538-2120

CHA PROJECT NO. 30212

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY	1
2.0 BUILDING INFORMATION AND EXISTING CONDITIONS	4
3.0 UTILITIES	8
4.0 BENCHMARKING.....	13
5.0 ENERGY CONSERVATION MEASURES.....	14
5.1 ECM-1 Replace the remaining 1966 single pane windows at the rear of the second floor	15
5.2 ECM-2 Retro-commission the current controls	15
5.3 ECM-3 Install a condensing boiler for summer re-heat and domestic hot water production....	16
5.4 ECM-4 Convert DX/Electric Packaged Rooftop Units to DX/Gas	16
5.5 ECM-5 Install an energy recovery unit on AHU-4	16
5.6 ECM-6 Install a kitchen hood control system	17
5.7 ECM-7 Install a walk-in cooler/freezer control system.....	18
5.8 ECM-8 Replace gas fired absorption chiller with natural gas engine driven absorption chiller .	18
5.9.1 ECM-L1 Lighting Replacement / Upgrades	19
5.9.2 ECM-L2 Install Lighting Controls (Occupancy Sensors)	19
5.9.3 ECM-L3 Lighting Replacements with Controls (Occupancy Sensors)	20
5.10 Additional O&M Opportunities.....	20
6.0 PROJECT INCENTIVES	22
6.1 Incentives Overview.....	22
6.1.1 New Jersey Smart Start Program.....	22
6.1.2 Direct Install Program	22
6.1.3 New Jersey Pay For Performance Program (P4P)	23
6.1.4 Energy Savings Improvement Plan	24
6.1.5 Renewable Energy Incentive Program.....	25
7.0 ALTERNATIVE ENERGY SCREENING EVALUATION	26
7.1 Solar	26
7.1.1 Photovoltaic Rooftop Solar Power Generation	26
7.1.2 Solar Thermal Hot Water Generation.....	27
7.2 Wind Powered Turbines	27
7.3 Combined Heat and Power Plant.....	28

7.4	Demand Response Curtailment	29
8.0	CONCLUSIONS & RECOMMENDATIONS.....	30

APPENDICES

A	Utility Usage Analysis and List of Third Party Energy Suppliers
B	Equipment Inventory
C	ECM Calculations and Cost Estimates
D	New Jersey BPU Incentive Programs
	i. Smart Start
	ii. Direct Install
	iii. Pay For Performance Incentive Program (P4P)
	iv. Energy Savings Improvement Plan (ESIP)
E	Photovoltaic (PV) Solar Power Generation Analysis
F	Photos
G	EPA Benchmarking Report

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 $\pm 20\%$, and are based on data obtained from the owner, data obtained during site observations, professional experience, historical data, and standard engineering practice. Cost data does not include soft costs such as engineering fees, legal fees, project management fees, financing, etc.

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

List of Common Energy Audit Abbreviations

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

1.0 EXECUTIVE SUMMARY

This report summarizes the energy audit performed by CHA for the Inspira Health Network 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
Elmer Hospital	501 East Front Street Elmer, NJ 08318	135,000	1950 (additions: 1962, 1995, 2008, 2009)

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
ECM-1	Replace the remaining 1966 single pane windows at the rear of the second floor	47,600	808	58.9		58.9	Y
ECM-2	Retro-commission the current controls	50,536	28,582	1.8		1.8	Y
ECM-3	Install a condensing boiler for summer re-heat and domestic hot water production	184,041	8,534	21.6	4,400	21.1	Y
ECM-4	Convert DX/Electric Packaged Rooftop Units to DX/Gas	146,102	18,352	8.0		8.0	Y
ECM-5	Install an energy recovery unit on AHU-4	163,600	10,744	15.2		15.2	Y
ECM-6	Install a kitchen hood control system	41,453	7,428	5.6	900	5.5	Y
ECM-7	Install a walk-in cooler/freezer control system	22,275	661	33.7	175	33.4	Y

ECM #	Energy Conservation Measure	Est. Costs (\$)	Est. Savings (\$/year)	Payback w/o Incentive	Potential Incentive (\$)*	Payback w/ Incentive	Recommended
ECM-8	Replace gas fired absorption chiller with a natural gas engine driven absorption chiller	661,260	77,319	8.6	50,600	7.9	Y
ECM-L1**	Lighting Replacements / Upgrades	383,042	46,633	8.2	12,165	8.0	N
ECM-L2**	Install Lighting Controls (Add Occupancy Sensors)	8,640	957	9.0	1,120	7.9	N
ECM-L3	Lighting Replacements with Controls (Occupancy Sensors)	391,682	47,009	8.3	13,285	8.0	Y
Total(Recommended)		1,708,551	199,438	8.6	69,360	8.2	

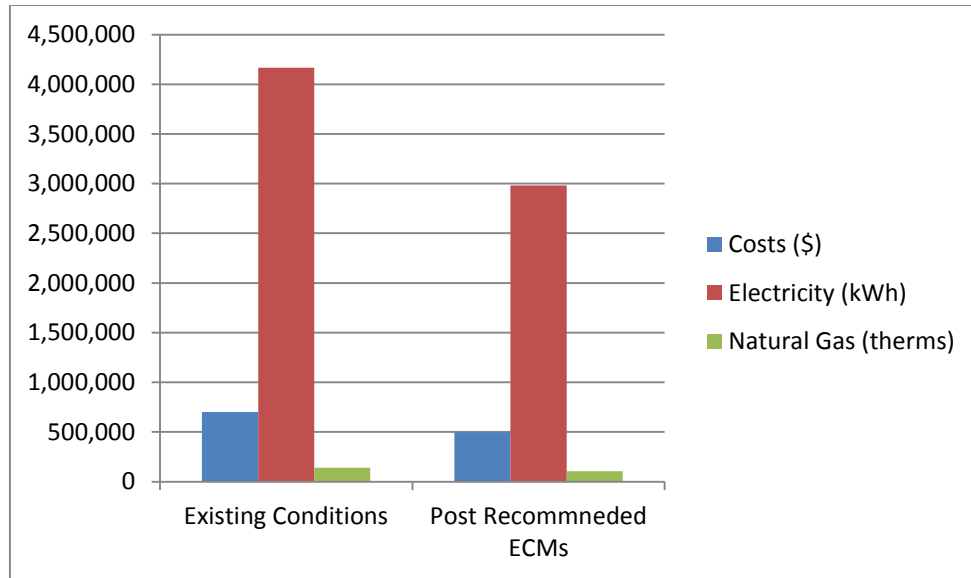
* Incentive shown is per the New Jersey SmartStart Program.

** These ECMs are not included in the Total, as they are alternate measures not recommended.

The solar PV ECM assessed under the Alternative Energy Measures section is a standalone measure that requires further study by a certified solar PV contractor, and was not included as part of the ECM Summary Table.

If Inspira Health Network implements the recommended ECMs, energy savings would be as follows:

	Existing Conditions	Post Recommended ECMs	Percent Savings
Costs (\$)	699,796	500,358	29%
Electricity (kWh)	4,167,528	2,982,768	28%
Natural Gas (therms)	138,747	103,967	25%
Site EUI (kbtu/SF/Yr)	208.1	152.4	



2.0 BUILDING INFORMATION AND EXISTING CONDITIONS

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

Building Name: Elmer Hospital

Address: 501 Front Street, Elmer, NJ 08318

Gross Floor Area: 135,000 sq. ft.

Number of Floors: 2

Year Built: 1950

Additions: 1962, 1995, 2008, 2009

The SJH Elmer Hospital, located in Elmer, NJ was built in 1950. It has undergone the following renovations: the 2nd floor was added in 1962; the front of 2nd floor, the south side and the Utility Plant were renovated in 1982; Cardiac Rehabilitation - 1st floor bump-out was added in 1995; also, in 1995 Elmer Community Hospital joined South Jersey Healthcare; OR and ICU - 1st floor front north side were renovated in 2000; Maternity - far north side was renovated in 2003; ER was updated plus 6,000 sq ft added in 2008; and MRI 1,000 sq ft were added behind the X-Ray Department in 2009. Today, there is a total of 135,000 sq ft of conditioned space for the Hospital building (123,000 sq ft) and the Utility Plant building (12,000 sq ft) in back of it.



Building Envelope

Description of Spaces: The two-story SJH Elmer Hospital (with a basement) and the single-story Utility Plant buildings house approximately 667 rooms, including 47 patient rooms (with 84 beds), examination rooms, lounges, lobbies, restrooms, nursing stations, classrooms, a chapel, administrative offices, storage and mechanical rooms, conference rooms, an Emergency area, a cafeteria, elevators, operating rooms, and many more specialized healthcare spaces.

Description of Occupancy: The facility has full time occupancy of 100 staff members. Patient occupancy varies during the daytime hours.

Number of Computers: There are 150 computers in the building.

Building Usage: The hospital and central plant are occupied 24 hours per day, 7 days per week. The Emergency Room operates 24 hours per day, 7 days per week. The MRI Suite and Hyperbaric Suite operate from 9:00AM-5:00PM, 5 days per week. The Cat Scan Suite operates from 7:00AM to 12:00AM on weekdays and 7:00AM-8:30AM on weekends. The Cardio Rehab Suite is occupied from 9:00AM-5:00PM, three days per week.

Construction Materials: The hospital's exterior wall envelope is constructed of structural steel with block, stucco and EIFS veneer on the latest renovations. Generally, the exterior walls consist of EIFS over 2" (to 4") rigid insulation with ¾" sheathing, 6" metal studs with 6" batt insulation. The hospitals rear facades are stucco. The exterior walls appear to be in very good condition.

Roof: The roofs are 1997-2000 vintage, light gray 3-ply asphalt roll roofing over 1-1/2" isocyanurate insulation board anchored to a 1-1/2" corrugated fire proofed metal deck. The Hospital is presently replacing the last 1970s roofing with the same. The roofs appear to be in good overall condition, with some ponding. No leaks were reported.

Windows: The buildings basically contain several types of aluminum framed windows. The windows are double pane and non-opening, with some newer units having tinted glass, and a few older ones reported to be somewhat drafty. The rear of the second floor has the original 1966 single panel curtain walls that appear to be in poor condition and have little to no insulation. *We have included an ECM that evaluated replacing these windows with double glass having thermally broken aluminum frames*

Exterior Doors: The buildings contain several different types of exterior doors. Generally, doors are aluminum store fronts and insulated hollow metal doors in steel frames. The front and emergency department entrance doors are automatic sliding type. There are a number of overhead doors used for moving large equipment, packaging or objects. All of the doors and their associated seals and sweeps all appear to be in good condition.

Heating, Ventilation & Air Conditioning (HVAC) Systems

Heating for the majority of the hospital is provided by a single 300 HP Cleaver Brooks fire tube boiler that generates heating hot water which is pumped to perimeter terminal units (fan coils, and fin tube) as well as duct mounted re-heat coils. This boiler was installed in 1983 and appears to be in very good condition. The emergency department is heated independently using two roof mounted gas fired air handling units, which were installed in 2012. Additionally, there are several small specialty care areas at the rear of the hospital (Cardio, X-Ray, Hyperbolic chamber) that have separate packaged rooftop units that use electric heating elements. *We have included an ECM that evaluates the savings for replacing these electrically heated units with natural gas packaged units.* During the summer months, reheat coils are provided with hot water from one smaller 125 HP Cleaver Brooks fire tube boiler. This boiler was installed in 2000 and is in excellent condition. Heating hot water is distributed by a primary/ secondary pumping system having variable speed driven pumps. Entrance vestibules, corridors and patient toilet rooms are heated using electric cabinet heaters. *We have included an ECM that evaluates the savings for adding a*

high efficiency summer use boiler that could produce both re-heat hot water and domestic hot water.

Cooling is provided by a variety of cooling systems. The main building air side systems are provided with chilled water that is generated by one of four chillers. One 220 ton York centrifugal chiller is used as the primary chiller. A 75 ton natural gas fired York single effect absorption chiller is used for peak shaving in July and August only. The maintenance staff reported that although the absorption chiller works well, it takes several days to put online due to salt solidification, which is an inherent problem for absorbers that are not operated constantly. They cannot use this machine as the primary chiller as it is oversized for all but design weather conditions. *We have included an ECM that evaluated the savings potential for replacing this chiller with a smaller capacity natural gas engine driven chiller that could be used as the primary cooling unit and produce waste heat that could be used for domestic hot water production.* Two air cooled chillers—one York 12-ton reciprocating compressor and one Trane reciprocating compressor – provide supplemental and shoulder month cooling. Two cooling towers provide heat rejection, one for the centrifugal and one for the absorption chiller. Each air cooled chiller has its own condenser. All chillers are connected together on a variable primary/secondary pumping system. Chilled water is used at multiple roof and ceiling mounted air handling units as well as two-pipe fan coil units. The emergency department is provided with cooling from the same two packaged DX air handling units that provide heating. Specialty areas at the rear of the hospital are cooled with individual packaged rooftop cooling units.

Heating cooling and ventilation is provided by multiple air handling units having chilled water cooling and hot water re-heating (or electric re-heating). Larger central units are located on the roof and serve major areas while several smaller air handling units are mounted above ceilings serving common spaces. All air handling systems utilize ducted supply and return air distribution systems and have 100% outdoor air capability. Patient rooms are provided with heating or cooling and ventilation through individual perimeter two-pipe fan coil units which have a small outdoor air intakes. A large area of the first floor is served by an air handling unit tagged AHU-4 that has a separate large exhaust fan tagged EF-36. Both of these units operate 24/7. *This system appears to present an opportunity to install an energy recovery unit that could pre-heat and pre – dehumidify the outdoor air using waste heat from the exhaust air stream. We have included an ECM that evaluated the energy savings potential for adding such a unit to this system.*

Exhaust: Separate exhaust is provided for isolation spaces, toilet rooms, the kitchen hood and dishwasher. Large areas served by large ducted distribution systems such as the operating/ surgical suite (mentioned above) and emergency department have large, central exhaust fans in addition to the specialty exhaust fans.

An inventory of major HVAC equipment is included in Appendix B.

Controls Systems

The hospital uses a Honeywell Tridium direct digital controls system to operate all major HVAC equipment including the large air handling units, chillers, pumps and boilers. Small terminal units such as fan coils and independent packaged heating/ cooling equipment are not controlled by this system and are manually controlled by the staff using electric controls. Generally, all systems are operating 24/7 regardless of occupancy. Space temperature set points are maintained at 68-72 F heating and 72-74 F cooling, with the exception of the operating suites which are maintained at cooler temperatures, 62-66 F. Fan coil units have electric coil valves that are modulated by wall

mounted electric thermostats. *We have included an ECM that estimated the savings potential for retro-commissioning the Honeywell system to confirm proper outdoor air and economizer control.*

Domestic Hot Water Systems

Domestic hot water is produced year round by two (2) 30 HP Cleaver Brooks steam boilers that supply low pressure (<15 psig) steam to a tube bundle mounted in a 2000 gallon storage tank. These boilers were installed in 1987 and appear to be in very good condition. Domestic hot water is distributed to lavatory sinks clinical sinks and to the kitchen scullery sinks and to the dishwasher at 110 F. The dishwasher has an internal water booster heaters that creates 180 F water for disinfection. Steam condensate is returned to the boilers via a duplex receiver tank/ pump set.

Humidification/ Sterilization

The same two 30 HP steam boilers that produce domestic hot water also provide direct steam to duct mounted humidifiers (in the winter months) . Sterilization is achieved using three electric steam boilers having capacities of (2) at 30 KW and (1) at 60 KW.

Kitchen Equipment

The hospital has a full service kitchen and cafeteria that is operated daily from 7:00AM to 7:00PM. Patient and staff meals are served three time per day. The majority of the cooking equipment is gas fired however there are several mobile electric warmers, coolers and ovens. There are two hoods connected to a single 3 HP exhaust fan to remove cooking fumes and heat. Dishes are washed continuously during the day using a new Hobart dishwasher. A separate exhaust fan is ducted to the unit to remove steam. In addition to two large side by side refrigerators, the kitchen has a combination walk in cooler/ freezer. The refrigeration compressors are located outdoors. *We have included ECMs that evaluate the savings potential for adding a variable speed hood controlled as well as more precise control of the walk-in cooler/ freezer refrigeration systems.*

Plug Load

The hospital has some medical related plug loads primarily dialysis machines and emergency room associated equipment. Offices have one personal computer each and each floor has at least one copier. There are also several vending machines and personal appliances that contribute to the plug load. *We have included an O & M measure for the hospital to contact the vending machine vendor to investigate replacing current machines with more efficient models.*

Plumbing Systems

Water efficient plumbing fixtures have been installed in different wings of the building. The majority of water closets in the building have been upgraded to low-flow fixtures as sections of the building have been remodeled. Higher flow water closets (2.0 gpf) are still present in toilet rooms that have not been remodeled. Lavatories are equipped with low flow aerators. Patient rooms in the adolescent mental health and the pre-adolescent mental health wings are security-grade fixtures.

Lighting Systems

The building has a mixture of 32W T-8 fluorescent lighting in hallways and office spaces. Patient rooms have 32W T-8 fluorescent lighting and compact fluorescent bulbs in patient bathroom fixtures. Lobby lighting contains compact fluorescent biaxial bulbs in recessed fixtures. Exterior

lights are metal halide and high pressure sodium wall packs. Maintenance has replaced these fixtures with LED lights as the existing fixtures have failed.

Individual private offices, closets, patient rooms and bathrooms are equipped with wall switches. Some storage areas, offices and restrooms are equipped with wall mounted occupancy sensors.

LED lights are recommended in this study. We have provided three alternatives for the observed lighting that include adding occupancy sensors to the existing lights, replacing the lights with LED lights and a third ECM that evaluates adding occupancy sensors to the proposed LED lights.

3.0 UTILITIES

Natural gas and electricity are separately metered into this building. Utilities used by the building are delivered and supplied by the following utility companies:

	Electric	Natural Gas
Deliverer	Atlantic City Electric	South Jersey Gas
Supplier	Atlantic City Electric	South Jersey Gas

For the 12-month period ending in April 2015, the utilities usages and costs for the building were as follows:

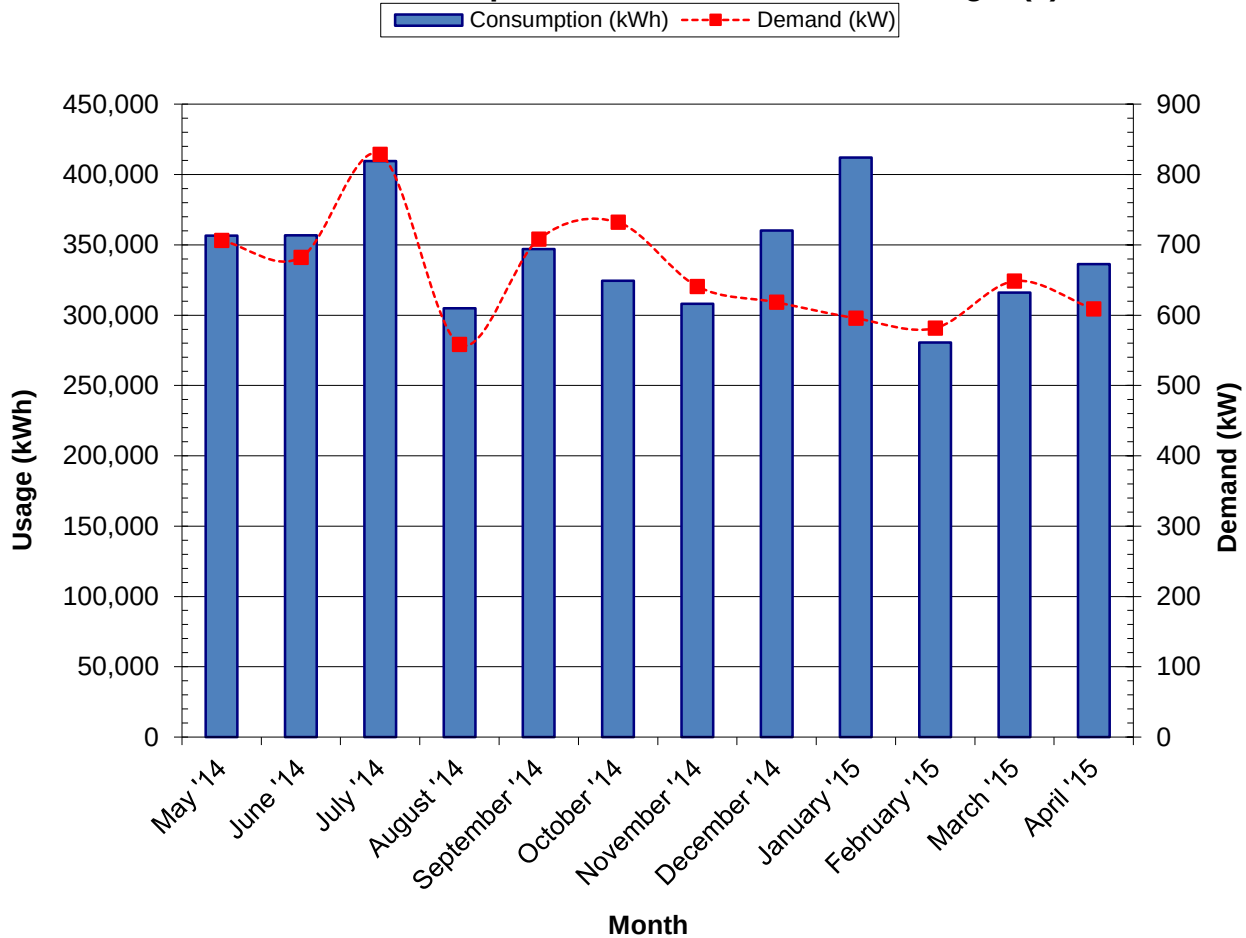
Electric		
Annual Consumption	4,167,528	kWh
Annual Cost	563,180	\$
Blended Unit Rate	0.13	\$/kWh
Consumption Rate	0.12	\$/kWh
Demand Rate	8.28	\$/kW
Peak Demand	828.5	kW
Natural Gas		
Annual Consumption	138,747	Therms
Annual Cost	136,617	\$
Unit Rate	0.985	\$/therm

Blended Rate: Average rate charged determined by the annual cost / annual usage

Supply Rate: Estimated

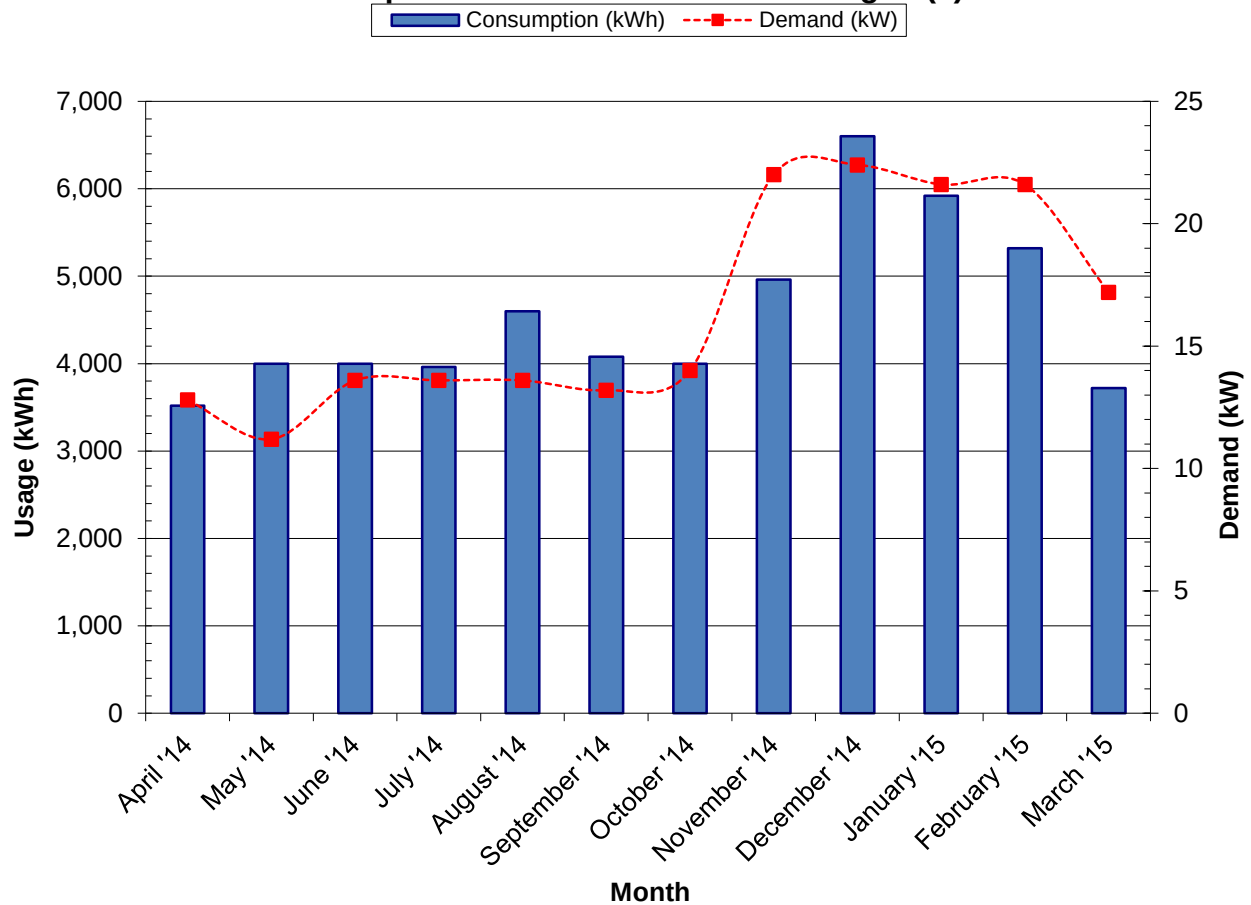
Demand Rate: Rate charged for actual electrical demand in kW (based on most recent electric bill)

Inspira Health Elmer - Electric Usage -(1)

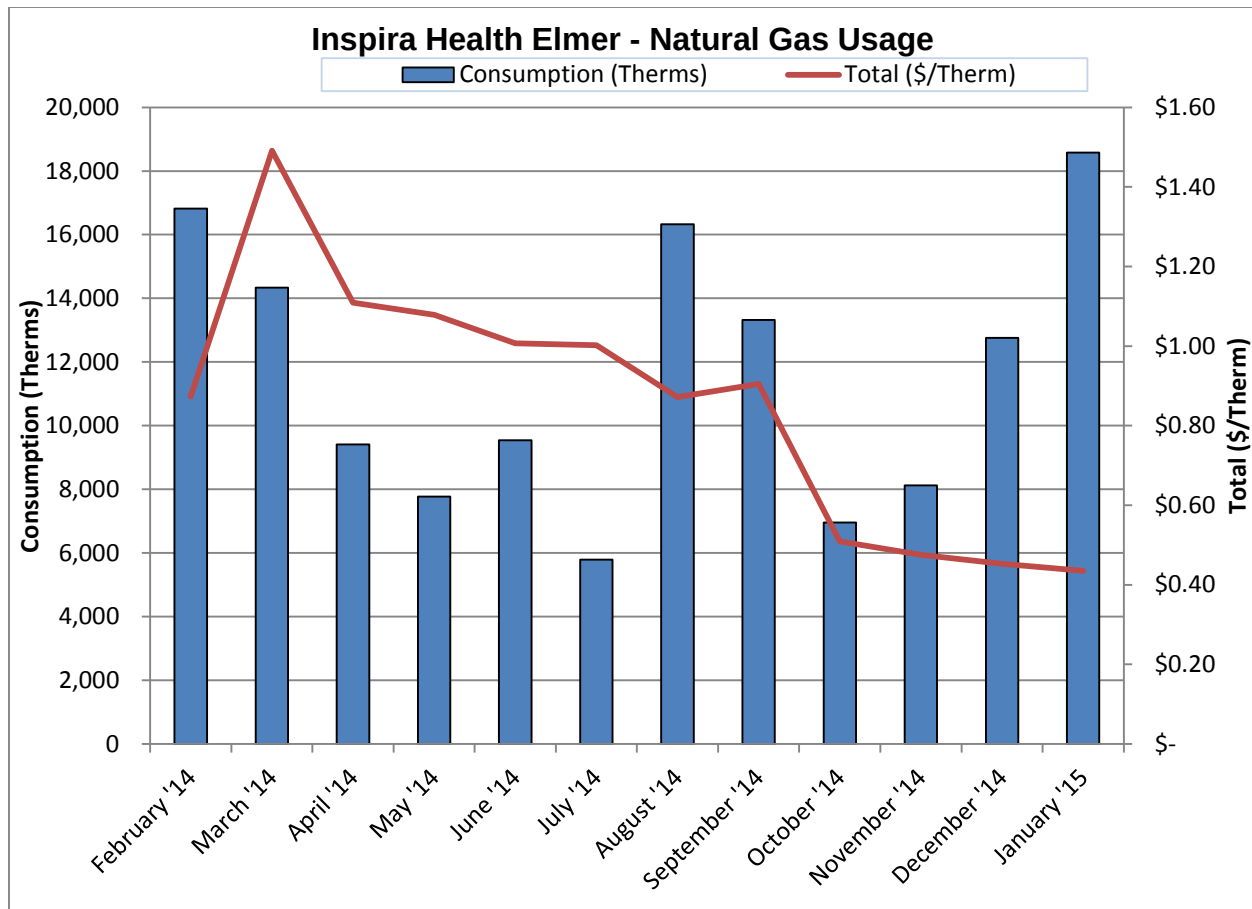


The electric usage is fairly consistent each month with peak usage occurring during the summer months when the cooling is in use. The main electrical consumers are the lights and the HVAC motors.

Inspira Health Elmer - Electric Usage - (2)



This set of data corresponds to a smaller 300 kVa service connected to some equipment in the building. This service was formerly connected to equipment in the X-ray suite but has been repurposed. The electrical usage from this meter are lights and connected plug load equipment. The peak usage in December 2014 is an indication that electric heaters are used in the building.



The natural gas is used for the steam boilers, Steam absorption chiller, domestic hot water boilers, laundry and kitchen appliances. The gas usage in non-heating season is for DHW heating, laundry and kitchen appliances. The summer usage is contributed to DHW, re-heat and absorption cooling usage.

See Appendix A for utility analysis.

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

Comparison of Utility Rates to NJ State Average Rates*				Recommended to Shop for Third Party Supplier?
Utility	Units	Average Rate	NJ Average Rate	
Electricity	\$/kWh	\$0.13	\$0.13	N
Natural Gas	\$/Therm	\$0.97	\$0.96	Y

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

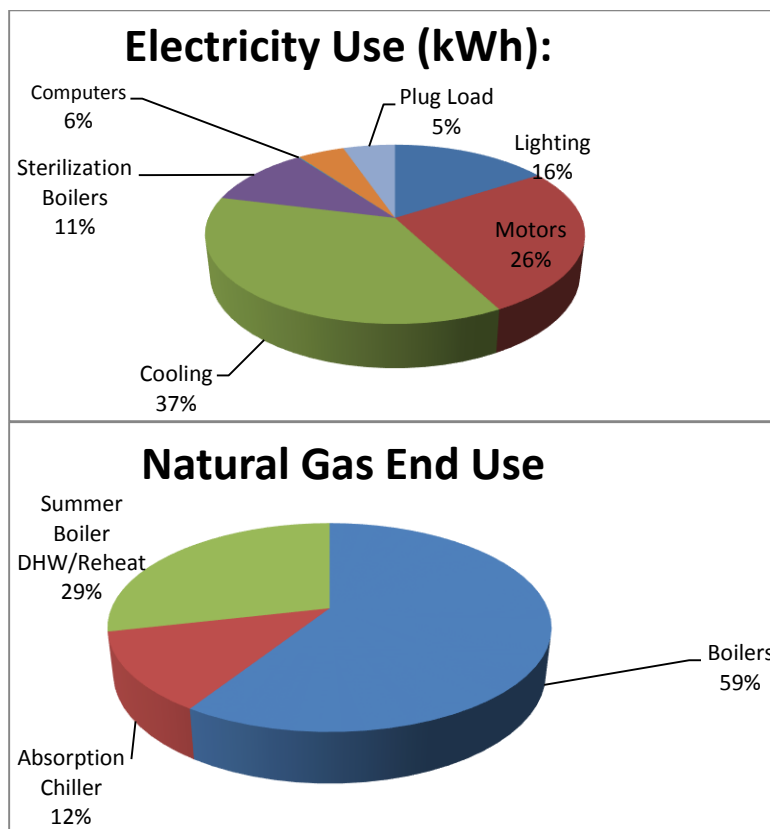
Additional information on selecting a third party energy supplier is available here:

<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



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/ft²/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 an 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. However, the EPA does not have score for all types of buildings. The buildings that do not have energy rating now are compared with national median EUI.

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	Source EUI (kBtu/ft ² /yr)	Energy Star Rating (1-100)
211.9	444.3	88

The building is eligible for an Energy Star Score because the space classification “Hospital (General Medical and Surgical)” is a qualifying space. The median Energy Star score for buildings with similar usage is 50. Also, the building’s Site EUI score of 211.9 and Source EUI score of 444.3 fall 23% below the national median EUIs (national median site EUI is 273.8 kBtu/ft² and national median source EUI is 574.0 kBtu/ft² for similar spaces).

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 the remaining 1966 single pane windows at the rear of the second floor

The second floor windows on the west side of the hospital are from the original 1966 construction. These windows are single pane with aluminum frames, and have low thermal resistance values (R-Values). Significant heat loss through these windows is possible. This ECM evaluates the potential energy savings associated with replacing these approximately 24 windows with aluminum framed, double glazed windows. New windows will reduce solar heat gains in summer and provide better insulation (U) value for winter as well as greatly reduced infiltration.

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

ECM-1 Replace the remaining 1966 single pane windows at the rear of the second floor

Budgetary Cost	Annual Utility Savings			ROI	Potential Incentive	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas				
\$	kW	kWh	Therms	\$	%	\$	Years
47,600	0	461	758	808	(58%)	0	58.9

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

This measure is recommended despite the long payback period because it will correct occupant comfort issues within the respective spaces.

5.2 ECM-2 Retro-commission the current controls

There are several retro commissioning opportunities that could result in energy savings. Electric reheat coils used for space humidification are a source of significant electrical usage. Use of reheat coils during the winter months is not necessary when outdoor temperatures are lower than the sub-cooling temperatures required for reheating. Turning off these reheat coils during the winter months could save electrical energy. Adjusting unit schedules to mirror space occupancy and operation would ensure that units are operating only when necessary. Currently, many units are scheduled for 24/7 operation when the spaces served are not occupied during all hours. Structuring chiller operation sequences around chilled water temperature rise would allow for closer load modulation, to ensure the chiller is not operating at an excise capacity not needed to meet the load.

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

ECM-2 Retro-commission the current controls

Budgetary Cost	Annual Utility Savings			ROI	Potential Incentive	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas				
\$	kW	kWh	Therms	\$	%	\$	Years
50,536	0	152,535	8,197	28,582	466%	0	1.8

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

This measure is recommended.

5.3 ECM-3 Install a condensing boiler for summer re-heat and domestic hot water production

The hospital currently operates (2) Cleaver Brooks steam boilers to make domestic hot water and uses electric reheat coils for dehumidification during the summer months. Steam boilers of this approximate vintage are generally about 80% efficient. Both the reheat function and domestic hot water production could be handled with a condensing boiler. Condensing boilers generally operate with a combustion efficiency of approximately 92%, which is a significant efficiency upgrade. The electric reheat coils would be replaced with hot water reheat coils as part of this measure.

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

ECM-3 Install a condensing boiler for summer re-heat and domestic hot water production

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
\$	kW	kWh	Therms	\$	%	\$	Years	Years
184,041	0	0	8,667	8,534	16%	4,400	21.6	21.1

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

This measure is recommended.

5.4 ECM-4 Convert DX/Electric Packaged Rooftop Units to DX/Gas

There are several packaged rooftop units that utilize electric heating coils. The cost of electricity is fairly high compared to the cost of natural gas in this area. Significant energy savings are possible with the installation of gas heating elements within existing air handling units where electric heating coils are utilized.

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

ECM-4 Convert DX/Electric Packaged Rooftop Units to DX/Gas

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
\$	kW	kWh	Therms	\$	%	\$	Years	Years
146,102	0	198,497	(8,468)	18,352	164%	0	8.0	8.0

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

This measure is recommended.

5.5 ECM-5 Install an energy recovery unit on AHU-4

AHU-4 serves the lobby, laboratory, ICU, operating room and same day surgery suite. This unit has a set minimum amount of outdoor air during occupied times. The same quantity of outdoor air is currently being exhausted from this space. This expelled air has been heated or cooled and has energy value that is currently being wasted. Adding an energy recovery unit (ERU) that has a desiccant sensible/ latent heat transfer wheel will allow the thermal energy of the exhaust air to be transferred to the un-tempered outdoor air stream thus saving heating therms in the winter and cooling kilowatts in the summer months.

To implement this ECM, a stand-alone ERU would be mounted on the roof adjacent to the outdoor air intake. Insulated ductwork would be constructed to connect the ERU to the return air duct (which would act as the exhaust) and to the outdoor intake duct to AHU-4. Additional controls points and power wiring would be needed as well. The current exhaust fan would be de-energized at all times except when the AHU-1 is in economizer mode.

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

ECM-5 Install an energy recovery unit on AHU-4

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
\$	kW	kWh	Therms	\$	%	\$	Years	Years
163,600	0	50,517	4,013	10,744	64%	0	15.2	15.2

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

This measure is recommended.

5.6 ECM-6 Install a kitchen hood control system

The kitchen hoods are exhausted by fans that run at 100% speed during the kitchen operational hours. Cooking operations vary and therefore so does the amount of grease laden air that is being expelled through the hood. The hoods in the kitchen are typically turned on from 7:00AM-7:00PM, regardless of whether cooking activities are taking place.

This measure evaluates the savings associated with installing a control system that varies the amount of exhaust air volume based on the actual density of the grease laden air coming off the kitchen equipment. This system uses infrared beams and temperature sensors mounted within the hood enclosure that sense air density and temperature, which is then converted into an electronic signal which is used to control the speed of the exhaust fan (and make-up air fan, when applicable). The fan(s) speed is never reduced to zero, draft is always maintained during cooking operations. This control system also has a timer feature that can be programmed to shut the fan(s) off entirely when the cooking operations are completed. The system components include new inverter duty, high efficiency motors, variable frequency drives, sensors and control relays. All interconnecting wiring is provided in the field.

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

ECM-6 Install a kitchen hood control system

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
\$	kW	kWh	Therms	\$	%	\$	Years	Years
41,453	0	8,441	6,392	7,428	169	900	5.6	5.5

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

This measure is recommended.

5.7 ECM-7 Install a walk-in cooler/freezer control system

The kitchen has a walk-in freezer and three walk-in refrigerators for food storage. The refrigeration systems within the coolers and freezer run constantly to maintain internal temperatures based on dry bulb measurements. Walk-in freezer and refrigerator controls can further reduce the run time of the evaporator fans and electric door heaters based on dew point instead of dry bulb temperature, saving electrical energy. The units also provide diagnostic and trending features to aid in system maintenance and trouble shooting. All walk-in units would benefit from the refrigeration controls.

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

ECM-7 Install a walk-in cooler/freezer control system

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
\$	kW	kWh	Therms	\$	%	\$	Years	Years
22,275	0	4,916	0	661	(55%)	175	33.7	33.4

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

This measure is recommended.

5.8 ECM-8 Replace gas fired absorption chiller with a natural gas engine driven absorption chiller

A gas fired absorption chiller is used during the summer months of July and August in order to meet high cooling load conditions in the hospital. The existing absorption chiller has had maintenance issues with salt buildup during startup. While this unit is only used for a couple of months per year, an engine driven absorption chiller would be more efficient. This measure proposes the installation of an engine driven absorption chiller that would be used as the primary source of cooling, and could be used to produce domestic hot water with waste heat. The existing 220 ton centrifugal chiller (York) would be taken offline.

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

ECM-8 Replace gas fired absorption chiller with a natural gas engine driven absorption chiller

Budgetary Cost	Annual Utility Savings				ROI	Potential Incentive	Payback (without incentive)	Payback (with incentive)
	Electricity		Natural Gas	Total				
\$	kW	kWh	Therms	\$	%	\$	Years	Years
661,260	0	463,557	15,222	77,319	169%	50,600	8.6	7.9

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

This measure is recommended.

5.9.1 ECM-L1 Lighting Replacement / Upgrades

The building has a mixture of some 32 Watt T-8 fluorescent lighting fixtures and compact fluorescent bulbs. The lights in this building are controlled by manual wall switches or wall mounted switches with occupancy sensors. Exterior lighting consists of metal halide and high pressure sodium fixtures controlled by photocell sensors. Recent technological improvements in light emitting diode (LED) technologies have driven down the initial costs making it a viable option for installation. The T-8 and compact fluorescent lamps could be replaced by LEDs.

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
383,042	72.8	332,409	0	46,633	36%	12,165	8.2	8.0

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

This measure is not recommended in lieu of ECM-L3.

5.9.2 ECM-L2 Install Lighting Controls (Occupancy Sensors)

Patient rooms, offices and closets in recently renovated parts of the building have wall switches. Several private offices and storage areas have wall mounted occupancy sensors. Review of the comprehensive lighting survey determined that lighting in some

areas could benefit from installation of occupancy sensors to turn off lights when they are unoccupied.

This measure recommends installing occupancy sensors for the current lighting system. Using a process similar to that utilized in Section ECM-L1, 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
8,640	0	7,117	0	957	11%	1,120	9.0	7.9

* 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.

5.9.3 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
391,682	72.8	335,850	0	47,009	34%	13,285	8.3	8.0

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

This measure is recommended.

5.10 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:

- Clean all heat transfer coils- how water , steam, cooling and condenser
- Replace filters regularly
- Check/ replace belts regularly
- Contact vending machine provider and request energy efficient vending machines

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 city 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.

Refer to Appendix D for more information on this program.

6.1.3 New Jersey Pay For Performance Program (P4P)

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

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

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

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

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

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 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 area available and the associated solar array size that can be installed.

Available Area (Ft ²)	Potential PV Array Size (kW)
17,471	80

The PVWATTS solar power generation model was utilized to calculate PV power generation; this model is provided in Appendix E.

Installation of (PV) arrays in the state New Jersey will allow the owner to participate in the New Jersey Solar Renewable Energy Certificates Program (SREC). This is a program that has been set up to allow entities with large amounts of environmentally unfriendly emissions to purchase credits from zero emission (PV) solar-producers. An alternative compliance penalty (ACP) is paid for by the high emission producers and is set each year on a declining scale of 3% per year. One SREC credit is equivalent to 1000 kilowatt hours of PV electrical production; these credits can be traded for period of 15 years from the date of installation. Payments that will be received by the PV producer will change from year to year dependent upon supply and demand. There is no definitive way to calculate an exact price that will be received by the PV producer for SREC credits over the next 15 years. Renewable Energy Consultants estimates an average of \$230/SREC for 2015 and this number was utilized in the cash flow for this report.

The system costs for PV installations were derived from recent solar contractor budgetary pricing in the state of New Jersey and include the total cost of the system installation (PV panels, inverters, wiring, ballast, controls). The cost of installation is currently about \$4.00 per watt or \$4,000 per kW of installed system, for a typical system. There are other considerations that have not been included in this pricing, such as the condition of the roof and need for structural reinforcement. Photovoltaic systems can be ground mounted if the roof is not suitable, however, this installation requires a substantial amount of open property (not wooded) and underground wiring, which adds more cost. PV panels have an approximate 20 year life span; however, the inverter device that converts DC electricity to AC has a life span of 10 to 12 years and will most likely need to be replaced during the useful life of the PV system.

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

Photovoltaic (PV) Rooftop Solar Power Generation

Budgetary Cost	Annual Utility Savings			Total Savings	New Jersey Renewable SREC	Payback (without SREC)	Payback (with SREC)	Recommended
	Electricity		Natural Gas					
\$	kW	kWh	Therms	\$	\$	Years	Years	
\$320,000	80.0	107,389	0	\$14,512	\$24,699	22.1	8.2	

Note: CHA typically recommends a more detailed evaluation be conducted for the installation of PV Solar arrays when the screening evaluation shows a payback of less than 20 years. Therefore, this ECM is recommended for further study. Before implementation is pursued, the school should consult with a certified solar PV contractor.

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.

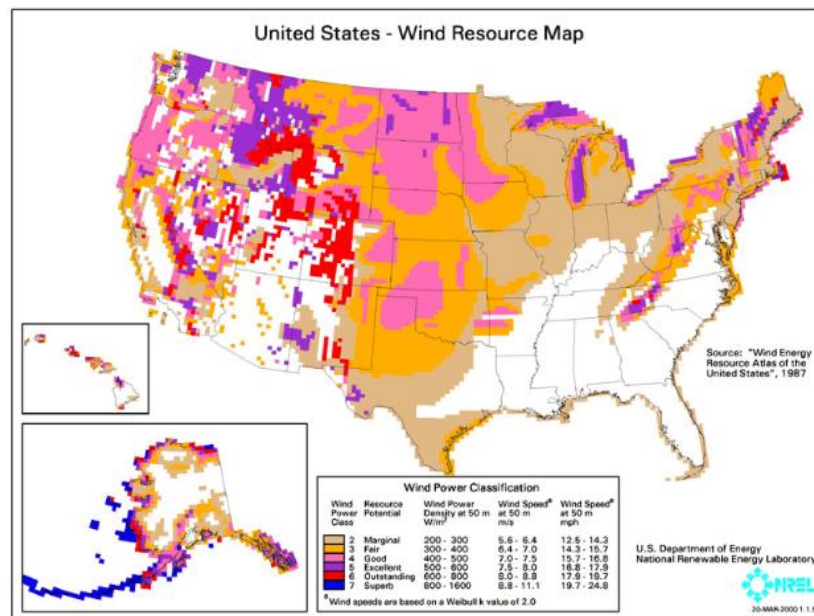
Several options exist for using active solar thermal systems for space heating. The most common method is called a passive solar hot water system involves using glazed collectors to heat a liquid held in a storage tank (similar to an active solar hot water system described above which requires pumping). 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. Based on the utility analysis, this facility has the potential to use a CHP system. Based on discussions with the maintenance staff, they asked us to evaluate replacing their natural gas fired absorption chiller with a gas engine driven chiller that could provide full summer cooling as well as summer thermal loads such as re-heat coils and domestic hot water. This measure is described in the ECM section 5.0 above. If the facility is contemplating replacing their boilers, it is recommended that a more detailed

analysis of a full CHP system be performed as a possible alternative to the hot water boilers.

7.4 Demand Response Curtailment

Presently, electricity is delivered by Atlantic City Electric, which receives the electricity from regional power grid RFC. Atlantic City Electric 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 May 2014 through April 2015 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
828.5	558.6	645.3	Y	N

*the demand is estimated from one month bill

This measure is not recommended due to the 24/7 operation of the emergency room and the presence of connected life support equipment. The current generator is connected to egress and life support systems and is not intended to be used as a demand limiting generator. To pursue demand response opportunities, this generator would need to include non-life safety loads and would require additional switchgear/transfer switch modifications. Alternatively, a second generator could be installed that would be used solely for response curtailment purposes.

8.0 CONCLUSIONS & RECOMMENDATIONS

The following section summarizes the LGEA energy audit conducted by CHA for Inspira Health Network Elmer Hospital.

The following projects should be considered for implementation:

- Replace the remaining 1966 single pane windows at the rear of the second floor
- Retro-commission the current controls
- Install a condensing boiler for summer re-heat and domestic hot water production
- Convert DX/Electric Packaged Rooftop Units to DX/Gas
- Install an energy recovery unit on AHU-4
- Install a kitchen hood control system
- Install a walk-in cooler/freezer control system
- Replace gas fired absorption chiller with a natural gas engine driven absorption chiller
- Lighting Replacements with Controls (Occupancy Sensors)

The following operations & maintenance measures should be considered for implementation:

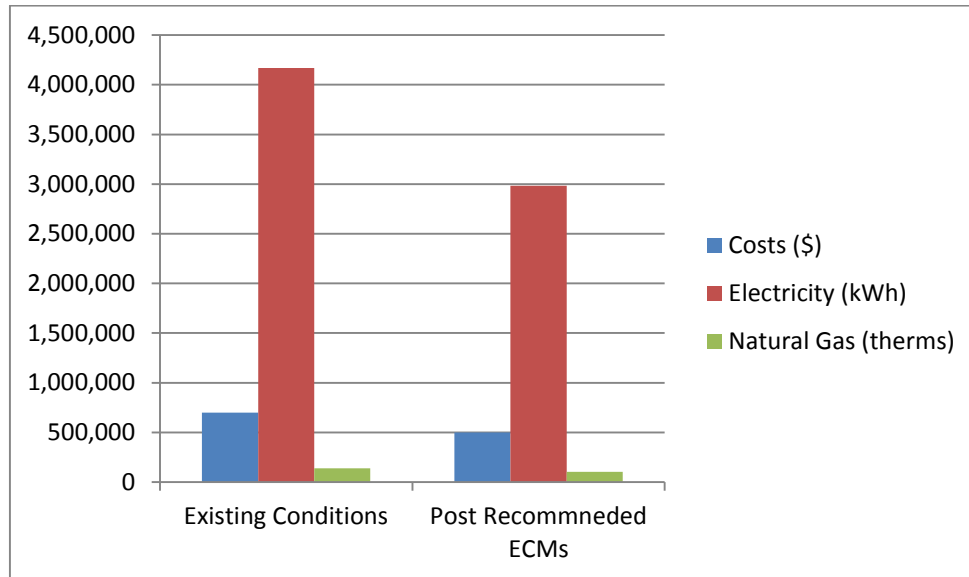
- Clean all heat transfer coils- how water , steam, cooling and condenser
- Replace filters regularly
- Check/ replace belts regularly
- Contact vending machine provider and request energy efficient vending machines

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)
1,214,530	34,780	199,438	8.2

If the Inspira Health Network implements the recommended ECMs, energy savings would be as follows:

	Existing Conditions	Post Recommended ECMs	Percent Savings
Costs (\$)	699,796	500,358	29%
Electricity (kWh)	4,167,528	2,982,768	28%
Natural Gas (therms)	138,747	103,967	25%
Site EUI (kbtu/SF/Yr)	208.1	152.4	



Next Steps: This energy audit has identified several areas of potential energy savings. Inspira Health Network can use this information to pursue incentives offered by the NJBPU's NJ Clean Energy Program. Additional meetings will be scheduled with staff members to review possible options.

APPENDIX A

Utility Usage Analysis and Alternate Utility Suppliers

South Jersey Hospital Elmer
501 W. Front St. Elmer, NJ

Utility Bills: Account Numbers

<u>Account Number</u>	<u>Building</u>	<u>Location</u>	<u>Type</u>	<u>Notes</u>
0353 8419 9952	South Jersey Hospital Elmer	501 W. Front St. Elmer, NJ	Electricity	
0353 8429 9992	South Jersey Hospital Elmer	502 W. Front St. Elmer, NJ	Electricity	
2 13 41 0066 0 5	South Jersey Hospital Elmer	501 W. Front St. Elmer, NJ	Natural Gas	

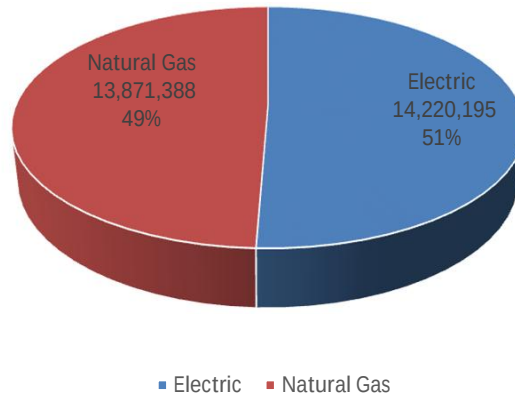
South Jersey Hospital Elmer
501 W. Front St. Elmer, NJ

Annual Utilities
12-month Summary

Electric		
Annual Usage	4,167,528	kWh/yr
Annual Cost	563,179	\$
Blended Rate	0.135	\$/kWh
Consumption Rate	0.119	\$/kWh
Demand Rate	8.28	\$/kW
Peak Demand	828.5	kW
Min. Demand	558.6	kW
Avg. Demand	645.3	kW
Natural Gas		
Annual Usage	138,747	Therms/yr
Annual Cost	136,617	\$
Rate	0.985	\$/Therm
Energy Summary		
Building Area	135,000	SF
Energy Usage Intensity (EUI)	208	kBtu/SF/yr
Energy Cost Index (ECI)	5.18	\$/SF/yr
Total Annual Utility Costs	699,796	\$

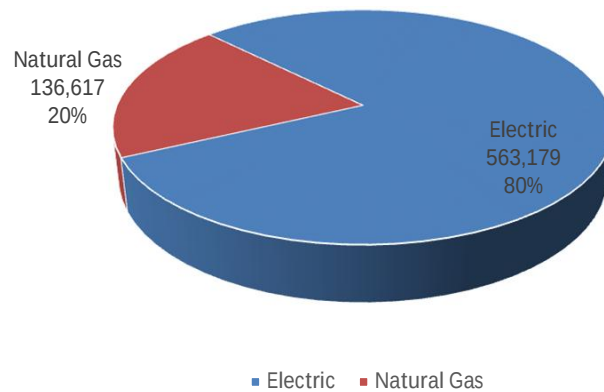
Utility	kBtu	%
Electric	14,220,195	51%
Natural Gas	13,871,388	49%
	28,091,583	100%

Energy Usage by Utility



Utility	\$	%
Electric	563,179	80%
Natural Gas	136,617	20%
	699,796	100%

Energy Cost By Utility



South Jersey Hospital Elmer
501 W. Front St. Elmer, NJ

Electric Service

For Service at: 501 W. Front St. Elmer, NJ

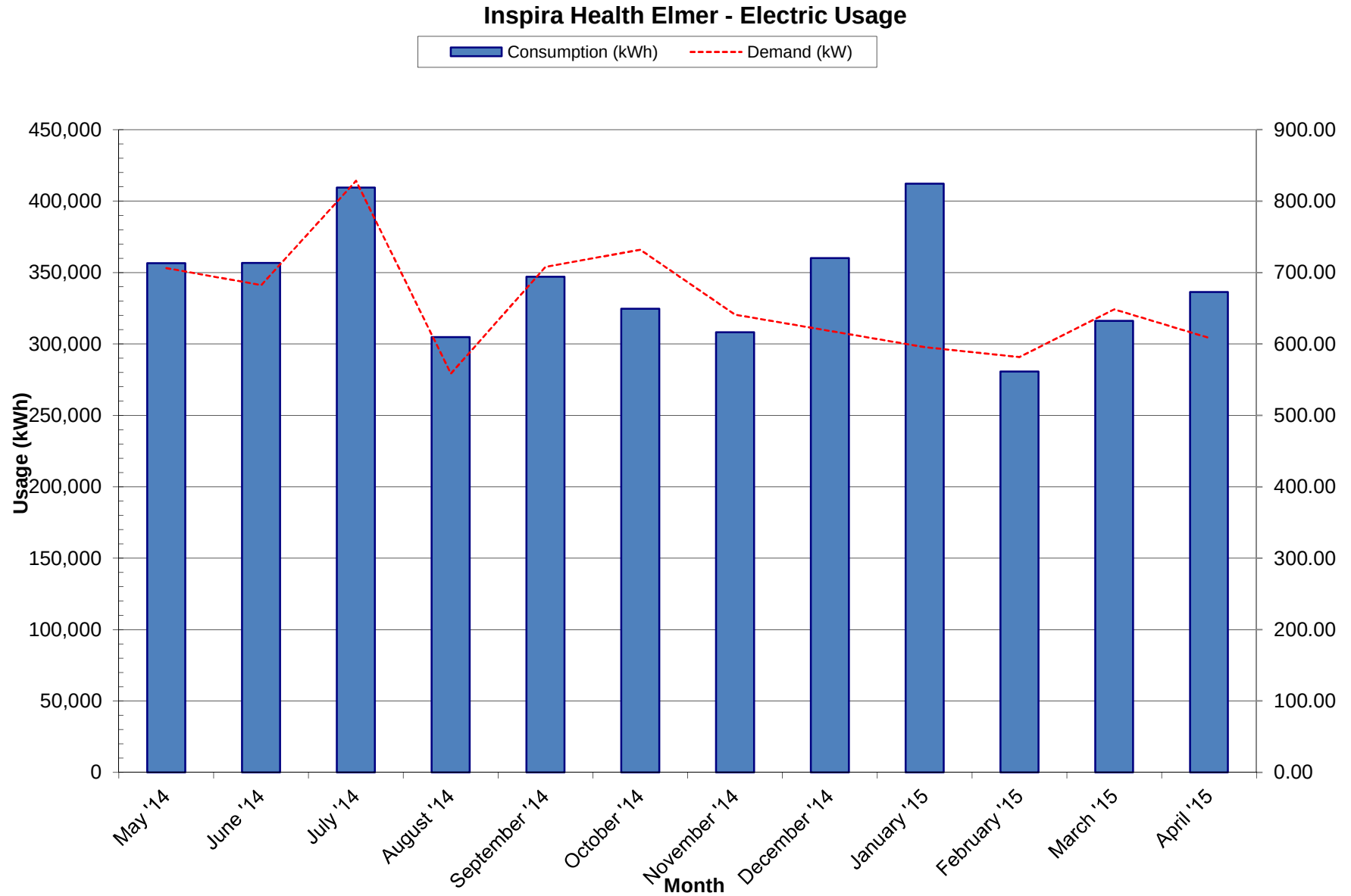
Account No.: 0353 8419 9952

Meter No.: 79008966

Delivery - Atlantic City Electric
Supplier - Atlantic City Electric

			Provider Charges			Usage (kWh) vs. Demand (kW) Charges		Unit Costs				
Month	Consumption (kWh)	Demand (kW)	Delivery (\$)	Supplier (\$)	Total (\$)	Consumption (\$)	Demand (\$)	Delivery (\$/kWh)	Supplier (\$/kWh)	Consumption Rate (\$/kWh)	Demand (\$/kW)	Blended Rate (\$/kWh)
January '14	334,510	588.96	16985.64	26054.98	43040.62	38221.80	4818.82	0.051	0.078	0.114	8.182	0.129
February '14	311,546	591.66	15817.59	25406.58	41224.17	36716.24	4507.93	0.051	0.082	0.118	7.619	0.132
March '14	335,115	598.14	16820.61	52244.43	69065.04	64401.67	4663.37	0.050	0.156	0.192	7.796	0.206
April '14	352,497	635.94	17792.68	30015.12	47807.80	42833.54	4974.26	0.050	0.085	0.122	7.822	0.136
May '14	356,620	706.32	18033.53	30366.19	48399.72	43335.41	5064.31	0.051	0.085	0.122	7.170	0.136
June '14	356,787	682.38	16168.11	30380.41	46548.52	41741.58	4806.94	0.045	0.085	0.117	7.044	0.130
July '14	409,493	828.54	19163.44	34868.33	54031.77	47616.99	6414.78	0.047	0.085	0.116	7.742	0.132
August '14	304,807	558.60	14142.44	26298.75	40441.19	35813.36	4627.83	0.046	0.086	0.117	8.285	0.133
September '14	347,050	708.12	16229.25	29943.47	46172.72	40750.82	5421.90	0.047	0.086	0.117	7.657	0.133
October '14	324,566	732.06	15997.31	28003.55	44000.86	38524.63	5476.23	0.049	0.086	0.119	7.481	0.136
November '14	308,172	640.98	15386.39	26589.08	41975.47	36696.14	5279.33	0.050	0.086	0.119	8.236	0.136
December '14	360,162	618.39	17766.27	31076.85	48843.12	42883.56	5959.56	0.049	0.086	0.119	9.637	0.136
January '15	412,152	595.80	20146.14	35564.62	55710.76	49070.98	6639.78	0.049	0.086	0.119	11.144	0.135
February '15	280,638	581.76	13954.70	24213.45	38168.15	33416.39	4751.76	0.050	0.086	0.119	8.168	0.136
March '15	316,103	648.54	15809.08	27273.37	43082.45	37641.30	5441.15	0.050	0.086	0.119	8.390	0.136
April '15	336,298	608.70	16636.64	29017.15	45653.79	40042.89	5610.90	0.049	0.086	0.119	9.218	0.136
Total (All)	5,446,516	829	266,850	487,316	754,166	669,707	84,459	\$0.05	\$0.09	\$0.12	\$8.18	\$0.14
Total (last 12-months)	4,112,848	829	199,433	353,595	553,029	487,534	65,494	\$0.05	\$0.09	\$0.12	\$8.28	\$0.13
Notes	1	2	3	4	5			6	7			8

- 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 - note, includes 8.875% tax
- 5.) Total charges (Delivery + Supplier)
- 6.) Delivery Charges (\$) / Consumption (kWh)
- 7.) Supplier Charges (\$) / Consumption (kWh)
- 8.) Total Charges (\$) / Consumption (kWh)
- 9.) Data shown in RED are approximate values since bills were not available for these months.



South Jersey Hospital Elmer
501 W. Front St. Elmer, NJ

Electric Service

For Service at: 501 W. Front St. Elmer, NJ

Account No.: 0353 8429 9992

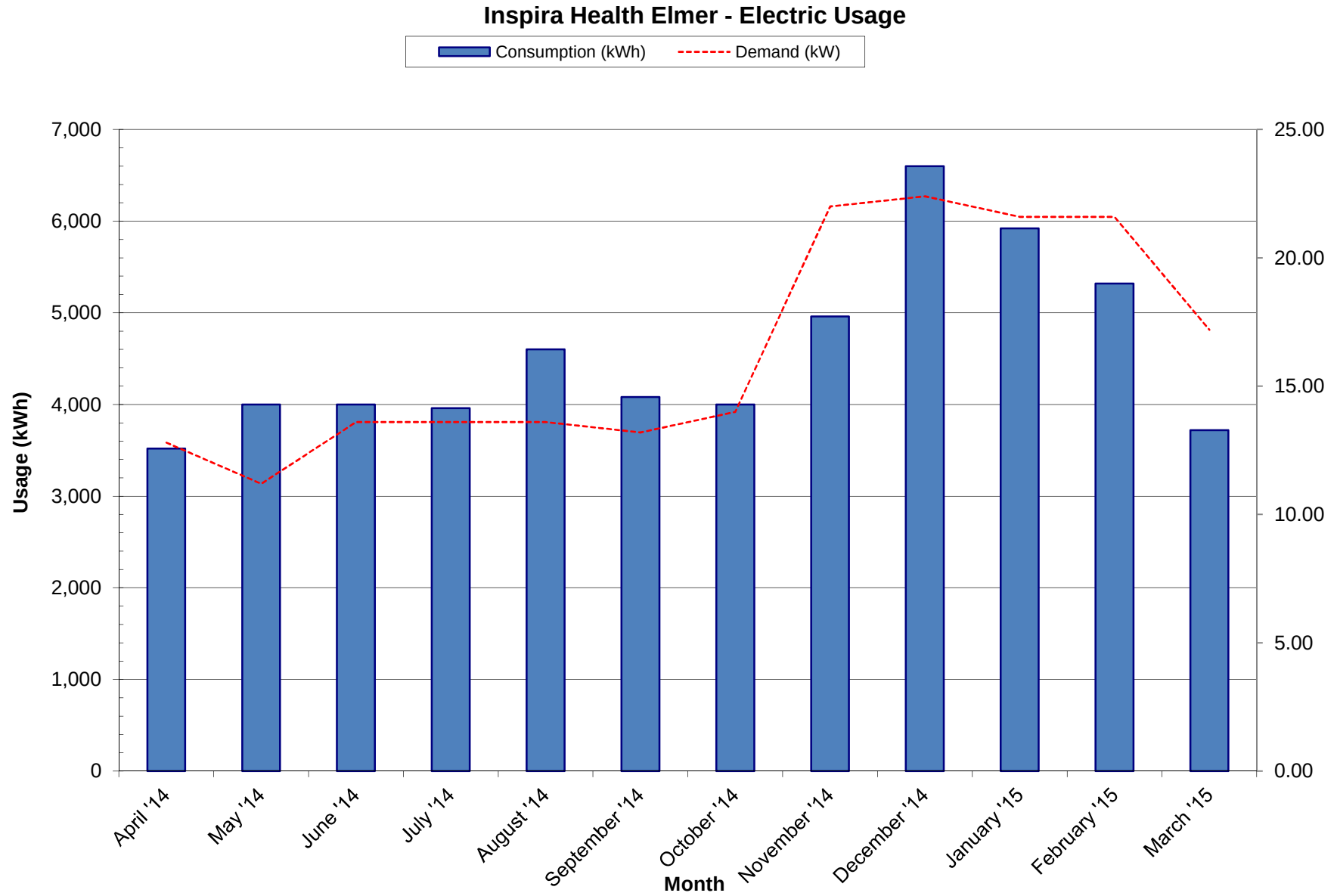
Meter No.: 7369734

Delivery - Atlantic City Electric

Supplier - Atlantic City Electric

	Provider Charges			Usage (kWh) vs. Demand (kW) Charges		Unit Costs						
Month	Consumption (kWh)	Demand (kW)	Delivery (\$)	Supplier (\$)	Total (\$)	Consumption (\$)	Demand (\$)	Delivery (\$/kWh)	Supplier (\$/kWh)	Consumption Rate (\$/kWh)	Demand (\$/kW)	Blended Rate (\$/kWh)
April '14	4,120	18.80	346.36	320.74	667.10	603.16	63.94	0.084	0.078	0.146	3.401	0.162
May '14	3,520	12.80	289.68	263.49	553.17	515.70	37.47	0.082	0.075	0.147	2.927	0.157
June '14	4,000	11.20	324.76	339.25	664.01	626.74	37.27	0.081	0.085	0.157	3.328	0.166
July '14	4,000	13.60	330.92	373.37	704.29	651.16	53.13	0.083	0.093	0.163	3.907	0.176
August '14	3,960	13.60	324.98	367.23	692.21	644.07	48.14	0.082	0.093	0.163	3.540	0.175
September '14	4,600	13.60	380.95	809.25	1190.20	1135.88	54.32	0.083	0.176	0.247	3.994	0.259
October '14	4,080	13.20	336.50	401.01	737.51	696.91	40.60	0.082	0.098	0.171	3.076	0.181
November '14	4,000	14.00	322.23	399.87	722.10	674.58	47.52	0.081	0.100	0.169	3.394	0.181
December '14	4,960	22.00	404.13	510.15	914.28	835.02	79.26	0.081	0.103	0.168	3.603	0.184
January '15	6,600	22.40	538.12	679.77	1217.89	1111.06	106.83	0.082	0.103	0.168	4.769	0.185
February '15	5,920	21.60	477.57	601.55	1079.12	995.90	83.22	0.081	0.102	0.168	3.853	0.182
March '15	5,320	21.60	434.07	548.50	982.57	896.58	85.99	0.082	0.103	0.169	3.981	0.185
April '15	3,720	17.20	307.56	385.89	693.45	629.03	64.42	0.083	0.104	0.169	3.745	0.186
Total (All)	58,800	216	4,818	6,000	10,818	10,016	802	\$0.08	\$0.10	\$0.17	\$3.72	\$0.18
Total (last 12-months)	54,680	197	4,471	5,679	10,151	9,413	738	\$0.08	\$0.10	\$0.17	\$3.75	\$0.19
Notes	1	2	3	4	5			6	7			8

- 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 - note, includes 8.875% tax
- 5.) Total charges (Delivery + Supplier)
- 6.) Delivery Charges (\$) / Consumption (kWh)
- 7.) Supplier Charges (\$) / Consumption (kWh)
- 8.) Total Charges (\$) / Consumption (kWh)
- 9.) Data shown in **RED** are approximate values since bills were not available for these months.



South Jersey Hospital Elmer
501 W. Front St. Elmer, NJ

Natural Gas Service

For Service at: 501 W. Front St. Elmer, NJ

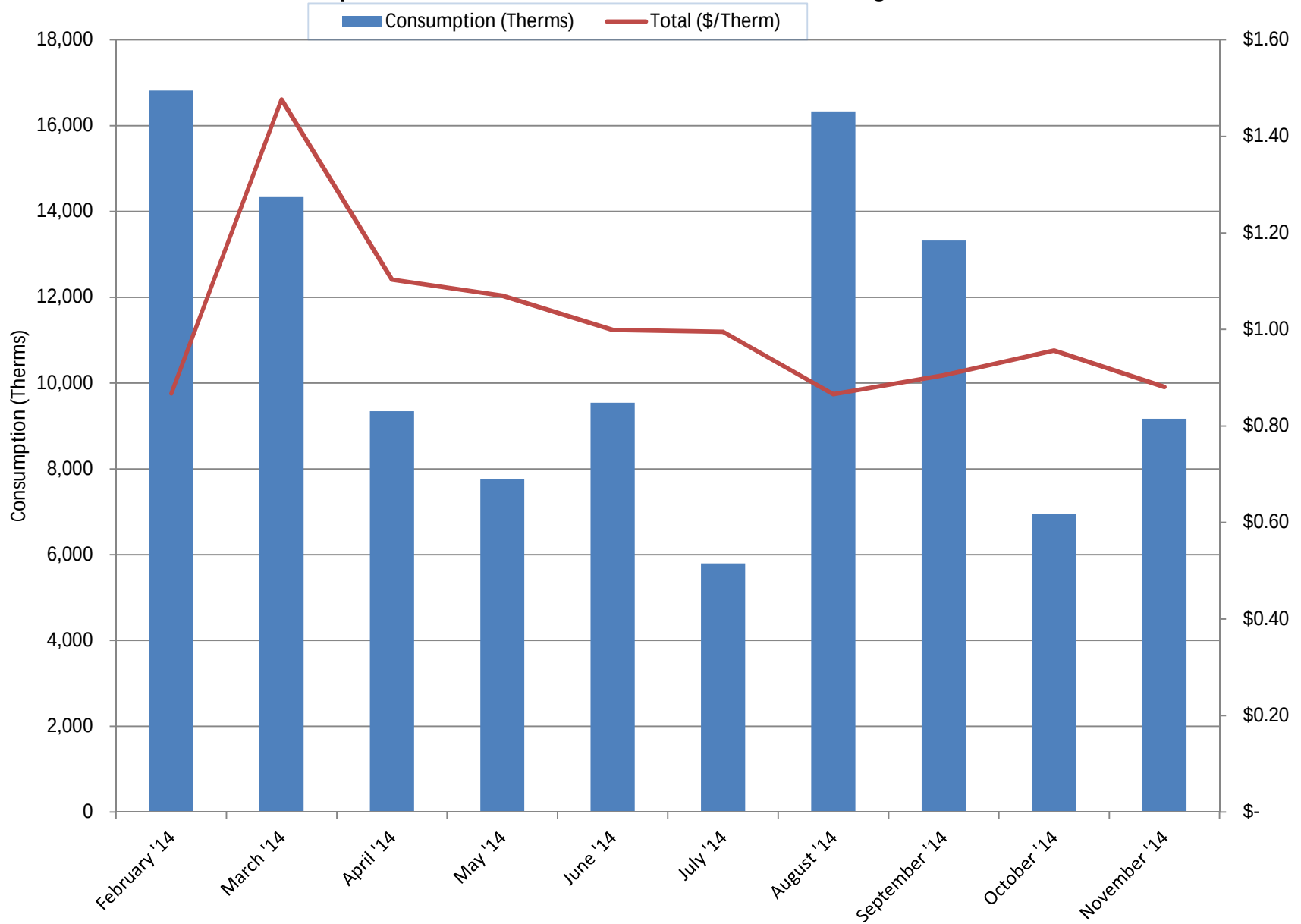
Account No.: 2 13 41 0066 0 5

Delivery: South Jersey Gas

Supplier: South Jersey Gas

Month	Consumption (Therms)	Charges			Unit Costs		
		Delivery (\$)	Supply (\$)	Total (\$)	Delivery (\$/Therm)	Supply (\$/Therm)	Total (\$/Therm)
December '13	13,716	\$ 6,427.24	\$ 5,797.20	\$ 12,224.44	\$ 0.47	\$ 0.42	\$ 0.89
January '14	15,645	\$ 7,186.66	\$ 6,612.16	\$ 13,798.82	\$ 0.46	\$ 0.42	\$ 0.88
February '14	16,820	\$ 7,477.00	\$ 7,108.96	\$ 14,585.96	\$ 0.44	\$ 0.42	\$ 0.87
March '14	14,336	\$ 6,512.43	\$ 14,651.89	\$ 21,164.32	\$ 0.45	\$ 1.02	\$ 1.48
April '14	9,346	\$ 4,436.96	\$ 5,873.93	\$ 10,310.89	\$ 0.47	\$ 0.63	\$ 1.10
May '14	7,772	\$ 3,860.06	\$ 4,455.85	\$ 8,315.91	\$ 0.50	\$ 0.57	\$ 1.07
June '14	9,541	\$ 4,641.55	\$ 4,892.03	\$ 9,533.58	\$ 0.49	\$ 0.51	\$ 1.00
July '14	5,796	\$ 3,046.31	\$ 2,720.51	\$ 5,766.82	\$ 0.53	\$ 0.47	\$ 0.99
August '14	16,331	\$ 7,249.01	\$ 6,887.60	\$ 14,136.61	\$ 0.44	\$ 0.42	\$ 0.87
September '14	13,321	\$ 6,124.14	\$ 5,928.52	\$ 12,052.66	\$ 0.46	\$ 0.45	\$ 0.90
October '14	6,956	\$ 3,541.73	\$ 3,110.78	\$ 6,652.51	\$ 0.51	\$ 0.45	\$ 0.96
November '14	9,167	\$ 4,344.28	\$ 3,730.02	\$ 8,074.30	\$ 0.47	\$ 0.41	\$ 0.88
Total (12 - Month)	138,747	\$ 64,847.37	\$ 71,769.45	\$ 136,616.82	\$ 0.467	\$ 0.517	\$ 0.98

Inspira Health Elmer - Natural Gas Usage



ATLANTIC CITY ELECTRIC SERVICE TERRITORY
Last Updated: 12/11/14

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

Supplier	Telephone & Web Site	*Customer Class
Abest Power & Gas of NJ, LLC 202 Smith Street Perth Amboy, NJ 08861	(888) 987-6937 www.AbestPower.com	R/C/I ACTIVE
AEP Energy, Inc. f/k/a BlueStar Energy Services 309 Fellowship Road 2 nd Fl. Mount Laurel, NJ 08054	(866)258-3782 www.aepenergy.com	R/C/I ACTIVE
Alpha Gas and Electric, LLC 641 5 th 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 Grove Street Berlin, NJ 08009	(877) 977-2636 www.americanpowernet.com	C/I 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	R/C/I 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
Blue Pilot Energy, LLC 197 State Rte., 18 South Ste. 3000 East Brunswick, NJ 08816	(800) 451-6956 www.bluepilotenergy.com	R/C ACTIVE

Brick Standard, LLC 235 Hudson Street Suite 1 Hoboken, NJ 07030	(201) 706-8101 www.standardalternative.com	C/I ACTIVE
CCES LLC dba Clean Currents Energy Services 566 Terhune Street Teaneck, NJ 07666	(877) 933-2453 www.cleancurrents.com	R/C ACTIVE
Champion Energy Services, LLC 1200 Route 22 East Bridgewater, NJ 08807	(888) 653-0093 www.championenergyservices.com	R/C/I ACTIVE
Choice Energy, LLC 4257 US Highway 9, Suite 6C Freehold, NJ 07728	(888)-565-4490 www.4choiceenergy.com	R/C ACTIVE
Clearview Electric, Inc. 1744 Lexington Avenue Pennsauken, NJ 08110	(888) CLR-VIEW (800) 746- 4702 www.clearviewenergy.com	R/C/I ACTIVE
Community Energy Inc. 51 Sandbrook Headquarters Road Stockton, NJ 08559	(866)946-3123 www.communityenergyinc.com	R/C/I ACTIVE
ConEdison Solutions Cherry Tree Corporate Center 535 State Highway, Suite 180 Cherry Hill, NJ 08002	(888) 665-0955 www.conedsolutions.com	C/I ACTIVE
Constellation New Energy, Inc. 116 Village Blvd., Suite 200 Princeton, NJ 08540	800-785-4373 www.constellation.com	R/C/I ACTIVE
Constellation Energy 116 Village Blvd., Suite 200 Princeton, NJ 08540	800-785-4373 www.constellation.com	R/C/I ACTIVE
Direct Energy Business, LLC 120 Wood Avenue Suite 611 Iselin, NJ 08830	(888) 925-9115 http://www.business.directenergy.com/	C/I ACTIVE

Direct Energy Business Marketing, LLC (fka Hess Energy Marketing) 1 Hess Plaza Woodbridge, NJ 07095	(800) 437-7872 http://www.business.directenergy.com/	C/I ACTIVE
Direct Energy Services, LLC 120 Wood Avenue, Suite 611 Iselin, NJ 08830	(866) 547-2722 www.directenergy.com	C/I INACTIVE
Direct Energy Small Business, LLC 1 Hess Plaza Woodbridge, NJ 07095	(888) 464-4377 http://www.business.directenergy.com/	C/I ACTIVE
Discount Energy Group, LLC 811 Church Road, Suite 149 Cherry Hill, NJ 08002	(800) 282-3331 www.discountenergygroup.com	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 Plus Holdings LLC 309 Fellowship Road East Gate Center, Suite 200 Mt. Laurel, NJ 08054	(877) 866-9193 www.energypluscompany.com	R/C ACTIVE
Energy.me Midwest LLC 90 Washington Blvd Bedminster, NJ 07921	(855)243-7270 www.energy.me	R/C/I ACTIVE
EnerPros, LLC 522 Highway 9 North, Unit 200 Manalapan, NJ 07726	(732) 391-6161 www.enerpros.com	R/C/I ACTIVE
Ethical Electric Benefit Co. d/b/a Ethical Electric 100 Overlook Center, 2 nd Fl. Princeton, NJ 08540	(888) 444-9452 www.ethicalelectric.com	R/C ACTIVE
FirstEnergy Solutions Corp.	(800) 977-0500	C/I

150 West State Street Trenton, NJ 08608	www.fes.com	ACTIVE
Gateway Energy Services Corporation 120 Wood Avenue Suite 611 Iselin, NJ 08830	(800) 313-8333 Residential (800) 715-8777 Commercial www.gesc.com	R/C ACTIVE
GDF SUEZ Energy Resources NA, Inc. 333 Thornall Street, Sixth Floor Edison, New Jersey 08819	(866) 999-8374 www.gdfsuezenenergyresources.com	C/I ACTIVE
GDF Suez Retail Energy Solutions LLC d/b/a THINK ENERGY 333 Thornall St. Sixth Floor Edison, NJ 08819	1-866-252-0078 www.mythinkenergy.com	R/C/I ACTIVE
Glacial Energy of New Jersey, Inc. 21 Pine Street, Suite 237 Rockaway, NJ 07866	(888) 452-2425 www.glacialenergy.com	C/I ACTIVE
Global Energy Marketing LLC 129 Wentz Avenue Springfield, NJ 07081	(800) 542-0778 www.globalp.com	R/C/I ACTIVE
Green Mountain Energy Company 211 Carnegie Center Drive Princeton, NJ 08540	(866) 767-5818 www.greenmountain.com/commercial-home	C/I ACTIVE
Hess Corporation 1 Hess Plaza Woodbridge, NJ 07095	(800) 437-7872 www.hess.com	C/I ACTIVE
HIKO Energy, LLC 655 Suffern Road Teaneck, NJ 07666	(888) 264-4908 www.hikoenergy.com	R/C/I ACTIVE
IDT Energy, Inc. 550 Broad Street Newark, NJ 07102	(877) 887-6866 www.idtenergy.com	R/C ACTIVE
Independence Energy Group, LLC 211 Carnegie Center Princeton, NJ 08540	(877) 235-6708 www.chooseindependence.com	R/C ACTIVE

Inspire Energy Holdings LLC 923 Haddonfield Road 3 rd Fl. Building B2 Cherry Hill, NJ 08002	(866) 403-2620 www.inspireenergy.com	R/C/I
Integrus Energy Services, Inc. 33 Wood Avenue, South Suite 610 Iselin, NJ 08830	(800) 536-0151 www.integrusenergy.com	C/I ACTIVE
Liberty Power Delaware, LLC 3000 Atrium Way, Suite 273 Mt. Laurel, NJ 08054	(866) 769-3799 www.libertypowercorp.com	R/C/I ACTIVE
Liberty Power Holdings, LLC 3000 Atrium Way, Suite 273 Mt. Laurel, NJ 08054	(866) 769-3799 www.libertypowercorp.com	R/C/I ACTIVE
Linde Energy Services 575 Mountain Avenue Murray Hill, NJ 07974	(800) 247-2644 www.linde.com	C/I ACTIVE
Mondre Energy, Inc. 15 N.Osborne Avenue Margate, NJ 08402	(888) 988-8360 www.mondreenergy.com	R/C ACTIVE
MP2 Energy NJ, LLC 111 River Street, Suite 1204 Hoboken, NJ 07030	(877) 238-5343 www.mp2energy.com	R/C/I ACTIVE
NATGASCO (Supreme Energy, Inc.) 532 Freeman St. Orange, NJ 07050	(800) 840-4427 www.supremeenergyinc.com	R/C ACTIVE
NextEra Energy Services New Jersey, LLC 651 Jernee Mill Road Sayreville, New Jersey 08872	(877) 528-2890 Commercial (800) 882-1276 Residential www.nexteraenergyservices.com	R/C/I ACTIVE
New Jersey Gas & Electric 10 North Park Place Suite 420 Morristown, New Jersey 07960	(866) 568-0290 www.NJGandE.com	R/C/I 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
Nordic Energy Services, LLC 50 Tice Boulevard, Suite 340 Woodcliff Lake, NJ 07677	(877) 808-1027 www.nordiceenergy.us.com	R/C/I ACTIVE
North American Power and Gas, LLC 222 Ridgedale Ave. Cedar Knolls, NJ 07927	(888) 313-9086 www.napower.com	R/C/I ACTIVE
North Eastern States, Inc. d/b/a Entrust Energy 90 Washington Valley Road Bedminster, NJ 07921	(888) 535-6340 www.entrustenergy.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
Park Power, LLC 1200 South Church St. Suite 23 Mount Laurel, NJ 08054	(856)-778-0079 www.parkpower.com	R/C/I ACTIVE
Power Management Co., LLC 1600 Mosely Road Victor, NY 14564	(585) 249-1360 www.powermanagementco.com	C/I ACTIVE
PPL EnergyPlus, LLC 811 Church Road Cherry Hill, NJ 08002	(800) 281-2000 www.pplenergyplus.com	C/I ACTIVE
PPL EnergyPlus Retail, LLC 788 Shrewsbury Avenue, Suite 220 Tinton Falls, NJ 07724	(732) 741-0505 – 2000 www.pplenergyplus.com	C/I ACTIVE
Prospect Resources Inc. 208 W. State Street Trenton, NJ 08608-1002	(847) 673-1959 www.prospectresources.com	C ACTIVE

Public Power & Utility of New Jersey, LLC One International Blvd, Suite 400 Mahwah, NJ 07495	(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	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
Residents Energy, LLC 550 Broad Street Newark, NJ 07102	(888) 828-7374 www.residentsenergy.com	R/C ACTIVE
Respond Power LLC 1001 East Lawn Drive Teaneck, NJ 07666	(877) 973-7763 www.respondpower.com	R/C/I ACTIVE
Save on Energy, LLC 1101 Red Ventures Drive Fort Mill, SC 29707	1 (877)658-3183 www.saveonenergy.com	R/C ACTIVE
SFE Energy One Gateway Center Suite 2600 Newark, NJ 07012	1 (877) 316-6344 www.sfeenergy.com	R/C/I ACTIVE
SIMEC, LLC 116 Village Blvd. Suite 200 Princeton, NJ 08540	(917) 620-0249 www.simecenergy.com	R/C/I ACTIVE
SmartEnergy Holdings, LLC 100 Overlook Center 2 nd Floor Princeton, NJ NJ 08540	(800) 443-4440 www.smartenergy.com	R/C/I ACTIVE
South Jersey Energy Company 1 South Jersey Plaza, Route 54 Folsom, NJ 08037	(800) 266-6020 www.southjerseyenergy.com	R/C/I ACTIVE
Sperian Energy Corp. 1200 Route 22 East, Suite 2000 Bridgewater, NJ 08807	(888) 682-8082 www.sperianenergy.com	R/C/I ACTIVE
Starion Energy PA Inc. 101 Warburton Avenue Hawthorne, NJ 07506	(800) 600-3040 www.starionenergy.com	R/C/I ACTIVE

Stream Energy New Jersey, LLC 309 Fellowship Road, Suite 200 Mt. Laurel, NJ 08054	(877) 369-8150 www.streamenergy.net	R/C ACTIVE
Summit Energy Services, Inc. 10350 Ormsby Park Place Suite 400 Louisville, KY 40223	1 (800) 90-SUMMIT www.summitenergy.com	C/I ACTIVE
Supernova Partners, LLC d/b/a Affordable Gas & Electric 10749 E. Garden Road Mt. Vernon, IL 62864	(615) 205-0115 www.agellc.com	R/C/I ACTIVE
Texas Retail Energy LLC Park 80 West Plaza II, Suite 200 Saddle Brook, NJ 07663 Attn: Chris Hendrix	(866) 532-0761 www.texasretailenergy.com	C/I ACTIVE
TransCanada Power Marketing Ltd. 190 Middlesex Essex Turnpike, Suite 200 Iselin, NJ 08830	(877) MEGAWAT www.transcanada.com/powermarketing	C/I ACTIVE
TriEagle Energy, LP 90 Washington Valley Rd Bedminster, NJ 07921	(877) 933-2453 www.trieagleenergy.com	R/C/I ACTIVE
UGI Energy Services, Inc. dba UGI Energy Link 224 Strawbridge Drive Suite 107 Moorestown, NJ 08057	(800) 427-8545 www.ugienergylink.com	C/I ACTIVE
Verde Energy USA, Inc. 2001 Route 46 Waterview Plaza Suite 301 Parsippany, NJ 07054	(800) 388-3862 www.lowcostpower.com	R/C ACTIVE
Viridian Energy 2001 Route 46 Waterview Plaza, Suite 310 Parsippany, NJ 07054	(866) 663-2508 www.viridian.com	R/C/I ACTIVE
XOOM Energy New Jersey, LLC 744 Broad Street. 16th Floor	(888) 997-8979	R/C/I

Newark, NJ 07102	www.xoomenergy.com	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 main supplier information page](#)

SOUTH JERSEY GAS SERVICE TERRITORY

Last Updated: 12/11/14

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

Supplier	Telephone & Web Site	Customer Class
Alpha Gas and Electric, LLC 641 5 th Street Lakewood, NJ 08701	855-553-6374 www.alphagasandelectric.com	R/C ACTIVE
Ambit Northeast, LLC d/b/a Ambit Energy 103 Carnegie Center, Suite 300 Princeton, NJ 08540	877-282-6284 www.ambitenergy.com	R/C ACTIVE
Astral Energy LLC 16 Tyson Place Bergenfield, NJ 07621	201- 384-5552 www.astralenergyllc.com	R/C/I ACTIVE
BBPC, LLC d/b/a Great Eastern Energy 116 Village Blvd. Suite 200 Princeton, NJ 08540	888-651-4121 www.greateasternenergy.com	C ACTIVE
Choice Energy, LLC 4257 US Highway 9, Suite 6C Freehold, NJ 07728	(888) 565-4490 www.4choiceenergy.com	R/C/I
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
Compass Energy Services, Inc. 33 Wood Avenue South, Suite 610 Iselin, NJ 08830	866-867-8328 www.compassenergy.net	C/I ACTIVE
Compass Energy Gas Services, LLC 33 Wood Avenue South	866-867-8328	C/I

Suite 610 Iselin, NJ 08830	www.compassenergy.net	ACTIVE
ConocoPhillips Company 224 Strawbridge Drive, Suite 107 Moorestown, NJ 08057	800-646-4427 www.conocophillips.com	C/I ACTIVE
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 Energy Gas Choice, Inc. 116 Village Blvd., Suite 200 Princeton, NJ 08540	800-785-4373 www.constellation.com	R/C/I ACTIVE
Constellation NewEnergy-Gas Division, LLC 116 Village Boulevard, Suite 200 Princeton, NJ 08540	800-785-4373 www.constellation.com	C/I ACTIVE
Core Energy Inc. 37 West 55 th Street, Suite 200 Ocean City, NJ 08226	877-329-3495 www.core-energy.net	R/C ACTIVE
Direct Energy Business, LLC 120 Wood Avenue, Suite 611 Iselin, NJ 08830	(888) 925-9115 http://www.business.directenergy.com/	R ACTIVE
Direct Energy Business Marketing, LLC (fka Hess Energy Business Marketing, LLC) One Hess Plaza Woodbridge, NJ 07095	(800) 437-7872 http://www.business.directenergy.com/	C/I ACTIVE
Direct Energy Services, LLC 120 Wood Avenue, Suite 611 Iselin, NJ 08830	(888) 925-9115 www.directenergy.com	R INACTIVE
Direct Energy Small Business, LLC (fka Hess Small Business Services, LLC) One Hess Plaza Woodbridge, NJ 07095	(888) 464-4377 http://www.directenergy.com/	C/I ACTIVE

Energy Plus Natural Gas LP 309 Fellowship Road, East Gate Center, Suite 200 Mt. Laurel, NJ 08054	877-866-9193 www.energypluscompany.com	R/C ACTIVE
Gateway Energy Services Corp. 120 Wood Avenue Suite 611 Iselin, NJ 08830	800-313-8333 Residential 800-715-8777 Commercial www.gesc.com	R/C 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
Glacial Energy of New Jersey, Inc. 21 Pine Street, Suite 237 Rockaway, NJ 07866	888-452-2425 www.glacialenergy.com	C/I ACTIVE
Global Energy Marketing LLC 129 Wentz Avenue Springfield, NJ 07081	800-542-0778 www.globalp.com	C/I ACTIVE
Great Eastern Energy 116 Village Blvd., Suite 200 Princeton, NJ 08540	888-651-4121 www.greateastern.com	R/C/I ACTIVE
Greenlight Energy 330 Hudson Street, Suite 4 Hoboken, NJ 07030	718-204-7467 www.greenlightenergy.us	R/C ACTIVE
Hess Energy, Inc. One Hess Plaza Woodbridge, NJ 07095	800-437-7872 www.hess.com	C/I ACTIVE
HIKO Energy, LLC 655 Suffern Road Teaneck, NJ 07666-1808	888-264-4908 www.hikoenergy.com	R/C/I ACTIVE
IDT Energy, Inc. 550 Broad Street Newark, NJ 07102	877-887-6866 www.idtenergy.com	R/C ACTIVE
Infinite Energy dba Intelligent Energy 1200 Route 22 East Suite 2000 Bridgewater, NJ 08807-2943	(800) 927-9794 www.InfiniteEnergy.com	R/C/I ACTIVE

Integrus Energy Services-Natural Gas, LLC 101 Eisenhower Parkway Suite 300 Roseland, NJ 07068	800-536-0151 www.integrusenergy.com	C/I ACTIVE
Major Energy Services, LLC 1001 East Lawn Drive Teaneck NJ 07666	(888) 625-6760 www.majorenergy.com	R/C/I ACTIVE
NATGASCO (Supreme Energy, Inc.) 532 Freeman Street Orange, NJ 07050	800-840-4427 www.supremeenergyinc.com	R/C/I ACTIVE
New Jersey Gas & Electric 10 North Park Place Suite 420 Morristown, NJ 07960	866-568-0290 www.njgande.com	R/C ACTIVE
North American Power & Gas, LLC d/b/a North American Power 197 Route 18 South Ste. 300 New Brunswick, NJ 08816	888-313-8086 www.napower.com	R/C/I ACTIVE
North Eastern States, Inc. d/b/a Entrust Energy 90 Washington Valley Road Bedminster, NJ 07921	888-535-6340 www.entrustenergy.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
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
Plymouth Rock Energy, LLC 338 Maitland Avenue Teaneck, NJ 07666	855-32-POWER (76937) www.plymouthenergy.com	R/C/I ACTIVE
PPL EnergyPlus, LLC Shrewsbury Executive Offices 788 Shrewsbury Avenue Suite 2200 Tinton Falls, NJ 07724	(732) 741-0505 www.pplenergyplus.com	C/I ACTIVE

PPL EnergyPlus Retail, LLC Shrewsbury Executive Offices 788 Shrewsbury Avenue, Suite 220 Tinton Falls, NJ 07724	(732) 741-0505 – 2000 www.pplenergyplus.com	C/I ACTIVE
Residents Energy, LLC 550 Broad Street Newark, NJ 07102	(888) 828-7374 www.residentsenergy.com	R/C
SFE Energy One Gateway Center Suite 2600 Newark, NJ 07012	1 (877) 316-6344 www.sfeenergy.com	R/C/I ACTIVE
Shell Energy North America (US) L.P. 17 Denison Street, Room 101B Highland Park, NJ 08904	800-281-2824 www.shell.com/us/energy	C/I ACTIVE
South Jersey Energy Company 1 South Jersey Plaza, Route 54 Folsom, NJ 08037	800-266-6020 www.southjerseyenergy.com	R/C/I ACTIVE
SouthStar Energy d/b/a New Jersey Energy 1085 Morris Avenue, Suite 155 Union, NJ 07083	(866) 477-8823 www.newjerseyenergy.com	R/C ACTIVE
Sperian Energy Corp. Bridgewater Center 1200 Route 22 East Bridgewater, NJ 08807	888-682-8082 www.sperianenergy.com	R/C/I ACTIVE
Sprague Energy Corp. 12 Ridge Road Chatham Township, NJ 07928	855-466-2842 www.spragueenergy.com	C/I ACTIVE
Stream Energy New Jersey, LLC 309 Fellowship Road Suite 200 Mt. Laurel, NJ 08054	(877) 369-8150 www.streamenergy.net	R/C ACTIVE
Tiger Natural Gas, Inc. 234 20 th Avenue Brick, NJ 08724	(888) 875-6122 www.tigernaturalgas.com	R/C/I
UGI Energy Services, Inc. dba UGI Energy Link 224 Strawbridge Drive Suite 107	800-427-8545	C/I

Moorestown, NJ 08057	www.ugienergylink.com	ACTIVE
Verde Energy USA, Inc. 2001 Route 46 Waterview Plaza Suite 301 Parsippany, NJ 070543	(800) 388-3862 www.lowcostpower.com	R/C/I ACTIVE
Viridian Energy PA LLC 2001 Route 46, Waterview Plaza Suite 230 Parsippany, NJ 07054	866-663-2508 www.viridian.com	R/C ACTIVE
Vista Energy Marketing, L.P. 197 State Route 18 South, Suite 3000, South Wing East Brunswick, NJ 08816	888-508-4782 www.vistaenergymarketing.com	R/C/I ACTIVE
Woodruff Energy US LLC 73 Water Street, P.O. Box 777 Bridgeton, NJ 08302	800-557-1121 www.woodruffenergy.com	C/I ACTIVE
XOOM Energy New Jersey, LLC 744 Broad Street. 16th Floor Newark, NJ 07102	888-997-8979 www.xoomenergy.com	R/C/I ACTIVE
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

CHA Project # 30212 - Inspira Health Network
NJBPU Municipal Audit Program
Appendix B - Inventory of Major Equipment - Elmer Hospital

Description	QTY	Manufacturer Name	Model No.	Serial No.	Equipment Type / Utility	Capacity/Size	Efficiency	Location	Areas/Equipment Served	Date Installed	Remaining Useful Life (years)
AHU #2								1 SOUTH	1ST FLOOR CORRIDOR	N/A	N/A
AHU #3	1	Trane	-	-	Air Handling Unit			X-RAY ROOF	X-RAY DEPT. ULTRASOUND	1993	3
AHU #4	1	York	CP89DWDIAF-40-15-460	AEJM008001	Air Handling Unit	40 HP Supply Fan	Constant Volume	NEW SECTION ROOF	OR, ICU, SDS, CSR, LAB, LOBBY	2000	5
AHU #5	1	-	-	-	Packaged Electric Heating / DX Cooling Rooftop Unit	5 kW electric heat	Constant Volume / WFD	EAST NURSES STATION HALL	EST CORRIDOR, 244, 246, 259	1984	-11
AHU #6	1	-	-	-	Packaged Electric Heating / DX Cooling Rooftop Unit	5 kW electric heat	Constant Volume / WFD	SOUTH CEILING	2 SOUTH COORIDOR	2005	10
AHU #7	1	-	-	-	Packaged Electric Heating / DX Cooling Rooftop Unit	5 kW electric heat	Constant Volume / WFD	ICU WAITING ROOM	PHARMACY, STORAGE, RM 216	2005	10
AHU #8	1	York	YCM-OTC-1	84030-Y84I75	Air Handling Unit		VFD	OLD O.R. UNIT	ADMINISTRATIVE AREA	N/A	N/A
AHU #9	1							EAST NURSES STATION	EST NURSES STATION	N/A	N/A
AHU #11	1							EMPLOYEE HALL	HALL, HSKP, EDUC. NURS. REC.	N/A	N/A
AHU #12	1							MORGUE	MORGUE	N/A	N/A
AHU #13	1							TELE. SWITCH ROOM	TELEPHRM/BASEMENT	N/A	N/A
AHU #14	1							FIRE PANEL ROOM	TRANSCRIPTION, HR	N/A	N/A
AHU #15	1								CAFATERIA	N/A	N/A
AHU #16	1							MAINT	MAINT SHOP	N/A	N/A
AHU #17	1							NUC MED CRAWL	NEC-MED	N/A	N/A
AHU #18	1							STOREROOM	STOREROOM, LINEN ROOM	N/A	N/A
AHU #19	1							BACK STOREROOM	STOREROOM	N/A	N/A
AHU #21	1	-	-	-	Packaged Electric Heating / DX Cooling Rooftop Unit	2.5 Tons	-	CT HALL RETURN	RETURN	1980	4
AHU #22	1	Carrier	50TM-005-A-501	3405G20137	Packaged Electric Heating / DX Cooling Rooftop Unit	4 Tons Cooling / 5.3 kW / 1600 CFM / 1 HP Fan	8.8 EER	CT IMAGE ROOM	CT IMAGE RM	2000	25
AHU #23	1	Carrier	50TM-005-A-501	3405G20137	Packaged Electric Heating / DX Cooling Rooftop Unit	4 Tons Cooling / 5.3 kW / 1600 CFM / 1 HP Fan	8.8 EER	MAMMO ROOM	MAMMO ROOM & DARKROOM	2000	26
AHU #24								BIO MED OFF	BIO-MED/VOLUNTEERS	N/A	N/A
AHU #25	1	Trane	SAHE-C106-AA	C88L-10532	Air Handling Unit (electric heat)	107 Tons Cooling	-	STOREROOM ROOF	DIETARY	N/A	N/A
AHU #34	1	Trane	-	-	Air Handling Unit	-	VFD	CARDIO ROOF	CARDIAC REHAB	1993	22
AHU #35	1	Trane	-	-	Air Handling Unit	-	VFD	CARDIO ROOF	CARDIO	1993	23
AHU #37								MAINT OFFICE	MAINT	N/A	N/A
MRI RTU #1	1	Koolant Kooler	-	-	Air Cooled Chiller	24,000 btu/hr		MRI ROOF		N/A	N/A
Absorption Chiller	1	York	FN-14SC-46-C-S-C	GHJM937810	Gas driven Absorption Chiller	900 MBH output / 2925 mbh input / 75 Tons	30%	Boiler Room	Hospital	N/A	N/A
CH-2	1	York	YS-CB-C+A42B-S1-CGE	SFJM-999470	Screw Chiller	220 tons / 440 GPM	30%	Boiler Room	Hospital	N/A	N/A
CHWP-1	2	Marathon	7VO-286TTDC4036BBS	-	Chilled Water Pump	30 HP	96% / VFD	Boiler Room	Chilled Water System	N/A	N/A
B-1	2	Cleaver Brooks	C8200-125A	L-99824	Steam Boiler	5230 MBH Input	80%	Boiler Room	Hospital	N/A	N/A
HWP-1	2	Emerson	AE534	D15E2D	Hot Water Pump	15 HP	91%	Boiler Room	Hospital	N/A	N/A
CH-1	1	Trane	RTUA1004YA01R1D0VN	U96F04928	Rotary Chiller	50 Tons Cooling		Boiler Room	Hospital	N/A	N/A
CH-3	1	Carrier	30HXAA-106RZ-561KA	1808Q09115	Chiller	100 Tons Cooling		Boiler Room	Hospital	N/A	N/A
CHWP-2	2	Marathon	7VF254TTDX4026ADL	-	Chilled Water Pump	15 HP	91%	Boiler Room	Hospital	N/A	N/A
CHWP-3	2	Baldor	37303A33	BD232	Chilled Water Pump	15 HP	91%	Boiler Room	Hospital	N/A	N/A
CT-1	1	Marley	NC13201L65		Cooling Tower	660 GPM / 20 HP Fan	Fan VFD	Back of House	Electric Chiller	N/A	N/A
CT-2	1	Marley	NC3221LGS		Cooling Tower	660 GPM / 10 HP Fan	Fan VFD	Back of House	Absorption Chiller	N/A	N/A
ACCU-1	1	Trane			Air Cooled Condensing Unit	10 Fans		Back of House	Cooling System	N/A	N/A
B-2 (DHW)	1	Cleaver Brooks	CBH-700-30	L-83754	Low Pressure Steam Boiler	30 HP / 1,255 MBH	80%	Boiler Room	Humidifiers / DHW System	1987	32
B-3 (DHW)	1	Cleaver Brooks	CBH-700-30	L-81105	Low Pressure Steam Boiler	30 HP / 1,255 MBH	80%	Boiler Room	Humidifiers / DHW System	1986	32
B-4	1	Cleaver Brooks	CB-600-300	77182	Steam Boiler	300 HP / 12,553 MBH		Boiler Room	Heating System		-1953
B-5	1	Cleaver Brooks	CB-200-125A	99824	Hot Water Boiler	125 HP / 5,230 MBH Input / 4,184 MBH Output	80%	Boiler Room	Reheat Coils	N/A	N/A
HWP-2	2	Bell & Gossett	-	-	Hot Water Pumps	15 HP	-	Boiler Room	HHW System	N/A	N/A
DTP-1	2	-	-	-	Dual Temperature Pumps	10 HP	87%	Boiler Room	Building Water Loop	N/A	N/A
CUH	5	Airtherm	Various	Various	Cabinet Unit Heaters	800 CFM / 3.0 GPM	-	Various	Hallways	N/A	N/A
EF-1 (EF-36)	1	Greenheck	Cube-30-50	00603908	Exhaust Fan	1.5 HP		Roof	AHU-4	N/A	N/A
CU-1	1	York	YHDJ18S41S2A	-	Condensing Unit	18,000 btu/hr		Roof	Manager's Office	2010	65
CU-2	1	Mitsubishi	MUY-D30NA	1001904T	Condensing Unit	30,000 btu/hr		Roof	Nurse's Station	2011	67
AHU-44	1	Carrier	38ARZ012	2509G50102	Air Handling Unit	12 Tons Cooling / 20 HP Fan		Roof	Rear Roof	2007	64
RTU-1	1	York	IO-05-084-JJNJ040	CATMXI0211	Packaged Heating / Cooling Rooftop Unit	625 MBH Input / 500 MBH Output	80%	Roof	ER	2007	65
RTU-2	1	York	IO-05-084-JJNJ040	CATMXI0211	Packaged Heating / Cooling Rooftop Unit	625 MBH Input / 500 MBH Output	80%	Roof	ER	2007	65
ACC-1	1	York	HB480C00ADAA2B	NON7493038	Packaged Heating / Cooling Rooftop Unit	40 Tons Cooling		Roof	ER	2007	67
ACC-2	1	York	HB480C00ADAA2B	NON7493037	Packaged Heating / Cooling Rooftop Unit	40 Tons Cooling		Roof	ER	2007	68
CU-3	1	Carrier	38ARZ012	2509G50102	Condensing Unit	12,000 btu/hr		Roof	Ahu-44	2007	69
CU-4	7	-	-	-	Condensing Unit	24,000 btu/hr	-	Roof	Specialty labs / Offices	N/A	N/A
CU-5	1	Liebert	-	-	Condensing Unit	-	-	Roof	Computer Room	N/A	N/A
AHU	1	Carrier	50HCQA6A2A5A0A0A0	-	Packaged Electric Heating / DX Cooling Rooftop Unit	58,500 btu/hr 17.1 kW cooling // 55,000 btu/hr 16.1 kW heating	15.0 SEER //3.7 cop	Roof	Hyperbaric Chamber Unit	2012	78
AHU	1	Trane	WSC036E4REA014A00001	829102987L	Packaged Electric Heating / DX Cooling Rooftop Unit	5 Tons Cooling / 12 kW electric heat	-	Roof	MRI Unit	2008	75
EF-21	1	-	-	-	Exhaust Fan	3/4 hp				N/A	N/A
EF-13	1	-	-	-	Exhaust Fan	1.5 hp		Roof	Kitchen Hood	N/A	N/A
Dishwasher	1	Hobart	-	-	Dishwasher	-	-	Kitchen	Kitchen	N/A	N/A
Double Oven	1	Blodgett	-	-	-	-	-	Kitchen	Kitchen	N/A	N/A
Oven	1	-	-	-	Double Oven - Electric	-	-	Kitchen	Kitchen	N/A	N/A
Steamer	1	-	-	-	Oven	-	-	Kitchen	Kitchen	N/A	N/A
Fryer	1	Hylplus	-	-	Steamer - Gas	-	-	Kitchen	Kitchen	N/A	N/A
-	1	-	-	-	Fryer - Gas	-	-	Kitchen	Kitchen	N/A	N/A
Cooktops	2	-	-	-	-	-	-	Kitchen	Kitchen	N/A	N/A
Sterilization Boilers	3	-	-	-	Cooktop - Gas	-	-	Kitchen	Kitchen	N/A	N/A
					Electric sterilization boiler	(2) at 208-84 amps, (1) at 480-72 amps	-	Central Utilities Building	Laundry	N/A	N/A
Backup Generator	2	-	-	-	Backup Generator	-	-	Central Utilities Building	Complex	N/A	N/A
HEX-1	1	-	-	-	Steam to DHW Heat Exchanger	-	-	Central Utilities Building	DHW System	N/A	N/A

Cost of Electricity:

\$0.119	\$/kWh
\$8.28	\$/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
198LED	ICU Patient Room 1	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	ICU Patient Room 1	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	ICU Patient Room 1-Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	ICU Patient Room 1-Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	ICU Patient Room 2	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	ICU Patient Room 2	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
247LED	ICU Patient 2/3 Washroom	Patient Bathroom	1	T 40 R F 3 (MAG)	F43SE	136	0.14	SW	1800	245	NONE	
198LED	ICU Patient Room 3	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	ICU Patient Room 3	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
198LED	ICU Patient Room 4	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	ICU Patient Room 4	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
198LED	ICU Patient Room 5	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	ICU Patient Room 5	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
198LED	ICU Patient Room 6	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	ICU Patient Room 6	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
198LED	ICU Patient Room 7	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	ICU Patient Room 7	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
220	ICU Nursing Station	Nursing Station	5	S 17 C F 1(ELE)	F21ILL	20	0.10	SW	5840	584	NONE	
40LED	ICU Nursing Station	Nursing Station	15	T 32 R F 2 (ELE)	F42LL	60	0.90	SW	5840	5,256	NONE	
40LED	Nurse's Lounge	Nursing Station	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	5840	350	NONE	
40LED	Clean Utility	Linen/Utility/Wet/Janitor/Electrical	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	1456	349	NONE	
40LED	Bathroom	Restroom	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	3120	374	C-OCC	
40LED	Soiled Utility	Linen/Utility/Wet/Janitor/Electrical	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	1456	175	NONE	
40LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1456	87	C-OCC	
40LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1456	87	C-OCC	
40LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1456	87	C-OCC	
196LED	Elevator Hallway	Hallways	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	Breaker	8760	1,962	NONE	
196LED	Storage	Storage Areas	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	1040	233	NONE	
196LED	Anesthesia	Offices	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	SW	2600	291	NONE	
196LED	Men's Bathroom	Restroom	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	SW	3120	349	NONE	
135	Men's Bathroom	Restroom	1	SP 13 R C F 1	CFQ13/1-L	15	0.02	SW	3120	47	NONE	
196LED	Women's Bathroom	Restroom	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	SW	3120	349	NONE	
135	Women's Bathroom	Restroom	1	SP 13 R C F 1	CFQ13/1-L	15	0.02	SW	3120	47	NONE	
135	Closet	Linen/Utility/Wet/Janitor/Electrical	2	SP 13 R C F 1	CFQ13/1-L	15	0.03	SW	1456	44	NONE	
196LED	Office	Offices	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2600	582	C-OCC	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
196LED	Office	Offices	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2600	582	C-OCC	
40LED	Case Worker Office	Offices	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	2600	468	C-OCC	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
247LED	Administration Conference Room	Conference Room	9	T 40 R F 3 (MAG)	F43SE	136	1.22	SW	4000	4,896	C-OCC	
254LED	Administration Conference Room	Conference Room	2	CFQ26/2	CFQ26/2	66	0.13	SW	4000	528	C-OCC	
196LED	Clinical Office 1	Offices	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	2 SW Hi/low	2600	582	C-OCC	
196LED	Clinical Office 2	Offices	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	2 SW Hi/low	2600	582	C-OCC	
196LED	Office	Offices	6	W 32 C F 4 (ELE)	F44ILL	112	0.67	2 SW Hi/low	2600	1,747	C-OCC	
196LED	Administration Office	Offices	6	W 32 C F 4 (ELE)	F44ILL	112	0.67	2 SW Hi/low	2600	1,747	C-OCC	
196LED	Administration Office	Offices	6	W 32 C F 4 (ELE)	F44ILL	112	0.67	2 SW Hi/low	2600	1,747	C-OCC	
40LED	Copy Room	Copy Room	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	2500	150	C-OCC	
40LED	Case Worker Office	Offices	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	2600	468	C-OCC	
196LED	Patient Relations Office	Offices	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	2600	874	C-OCC	
196LED	Case Management Office	Offices	4	W 32 C F 4 (ELE)	F44ILL	112	0.45	SW	2600	1,165	C-OCC	
196LED	Conference Room A	Conference Room	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	4000	1,344	C-OCC	
196LED	Conference Room B	Conference Room	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	4000	1,344	C-OCC	
196LED	Nurse's Office	Offices	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2600	582	C-OCC	
196LED	Community Room	Conference Room	12	W 32 C F 4 (ELE)	F44ILL	112	1.34	SW	4000	5,376	C-OCC	
196LED	Staff Lounge	Staff Lounge	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	4368	1,468	C-OCC	
196LED	Locker Room	Locker Room	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	8736	2,935	NONE	
40LED	Bathroom	Restroom	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	3120	374	NONE	
196LED	Solarium	Storage Areas	4	W 32 C F 4 (ELE)	F44ILL	112	0.45	SW	1040	466	NONE	
196LED	Storage	Storage Areas	5	W 32 C F 4 (ELE)	F44ILL	112	0.56	SW	1040	582	NONE	
218LED	Patient Room 200	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 200 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 200 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
50LED	Hallway	Hallways	1	W 32 W F 2 (ELE)	F42LL	60	0.06	Breaker	8760	526	NONE	
218LED	Patient Room 201	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 201 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 201 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 202	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 202 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	

Cost of Electricity:

\$0.119	\$/kWh
\$8.28	\$/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
133	Patient Room 202 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 203	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 203 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 203 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 204	Patient	4	W 32 C F 3 (ELE)	F43ILL/2	90	0.36	SW	4368	1,572	NONE	
96	Patient Room 204 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 204 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 205	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 205 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 205 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
50LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	W 32 W F 2 (ELE)	F42LL	60	0.06	SW	1456	87	NONE	
50LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	W 32 W F 2 (ELE)	F42LL	60	0.06	SW	1456	87	NONE	
50LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	W 32 W F 2 (ELE)	F42LL	60	0.06	SW	1456	87	NONE	
50LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	W 32 W F 2 (ELE)	F42LL	60	0.06	SW	1456	87	NONE	
218LED	Patient Room 206	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 206 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 206 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 207	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 207 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 207 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 208	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 208 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 208 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 209	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 209 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 209 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 210	Patient	4	W 32 C F 3 (ELE)	F43ILL/2	90	0.36	SW	4368	1,572	NONE	
96	Patient Room 210 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 210 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 211	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 211 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 211 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 212	Patient	4	W 32 C F 3 (ELE)	F43ILL/2	90	0.36	SW	4368	1,572	NONE	
96	Patient Room 212 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 212 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 213	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 213 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 213 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 214	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 214 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 214 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Patient Room 215	Patient	4	W 32 C F 3 (ELE)	F43ILL/2	90	0.36	SW	4368	1,572	NONE	
96	Patient Room 215 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 215 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
218LED	Room 216 - Staff Lounge	Staff Lounge	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Room 216 Bathroom	Restroom	1	W 17 C F 2	F22ILL	33	0.03	SW	3120	103	NONE	
133	Room 216 Bathroom	Restroom	1	CF 26	CFQ26/1-L	27	0.03	SW	3120	84	NONE	
40LED	Hallway	Hallways	5	T 32 R F 2 (ELE)	F42LL	60	0.30	Breaker	8760	2,628	NONE	
196LED	Hallway	Hallways	16	W 32 C F 4 (ELE)	F44ILL	112	1.79	Breaker	8760	15,698	NONE	
196LED	Clean Utility	Linen/Utility/Wet/Janitor/Electrical	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	1456	326	NONE	
196LED	Pantry	Linen/Utility/Wet/Janitor/Electrical	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	SW	1456	163	NONE	
7LED	Soiled Utility	Linen/Utility/Wet/Janitor/Electrical	2	2T 32 R F 2 (u)	FU2LL	60	0.12	SW	1456	175	NONE	
40LED	Nurse's Prep Area	Nursing Station	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	5840	701	NONE	
196LED	Pharmacy Suite	Pharmacy	18	W 32 C F 4 (ELE)	F44ILL	112	2.02	SW	3640	7,338	NONE	
15LED	Pharmacy Suite	Pharmacy	2	S 32 C F 2 (ELE)	F42LL	60	0.12	SW	3640	437	NONE	
196LED	Second Floor Hallway	Hallways	12	W 32 C F 4 (ELE)	F44ILL	112	1.34	Breaker	8760	11,773	NONE	
196LED	Second Floor Hallway	Hallways	10	W 32 C F 4 (ELE)	F44ILL	112	1.12	Breaker	8760	9,811	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	C-OCC	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	C-OCC	
196LED	Office	Offices	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	2600	874	C-OCC	
40LED	ICU Storage	Storage Areas	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1040	62	C-OCC	
40LED	Chapel	Chapel	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2920	350	NONE	
71	Chapel	Chapel	3	I 60	I60/1	60	0.18	SW	2920	526	NONE	
196LED	Storage	Storage Areas	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	1040	233	NONE	
196LED	Office	Offices	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	2600	874	NONE	
15LED	East Wing Hallway	Hallways	4	S 32 C F 2 (ELE)	F42LL	60	0.24	Breaker	8760	2,102	NONE	
40LED	East Wing Hallway	Hallways	6	T 32 R F 2 (ELE)	F42LL	60	0.36	Breaker	8760	3,154	NONE	
40LED	East Wing Hallway	Hallways	9	T 32 R F 2 (ELE)	F42LL	60	0.54	Breaker	8760	4,730	NONE	

Cost of Electricity:

\$0.119	\$/kWh
\$8.28	\$/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
40LED	Elevator Landing	Hallways	1	T 32 R F 2 (ELE)	F42LL	60	0.06	Breaker	8760	526	NONE	
254LED	Elevator Landing	Hallways	2	CFQ26/2	CFQ26/2	66	0.13	Breaker	8760	1,156	NONE	
40LED	Office Manager	Offices	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	2600	468	C-OCC	
40LED	Office	Offices	6	T 32 R F 2 (ELE)	F42LL	60	0.36	SW	2600	936	NONE	
40LED	Nurse	Nursing Station	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	5840	350	NONE	
40LED	Nurse	Nursing Station	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	5840	350	NONE	
220	Computer Desk	Nursing Station	3	S 17 C F 1(ELE)	F21ILL	20	0.06	SW	5840	350	NONE	
40LED	East Wing Office	Offices	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2600	312	C-OCC	
254LED	East Wing Office	Offices	1	CFQ26/2	CFQ26/2	66	0.07	SW	2600	172	C-OCC	
40LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1456	87	NONE	
7LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	2T 32 R F 2 (u)	FU2LL	60	0.06	SW	1456	87	NONE	
40LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1456	87	NONE	
40LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1456	87	NONE	
198LED	Patient Room 243	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 243	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 243 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 243 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 244	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 244	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 244 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 244 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 245	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 245	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 245 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 245 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
40LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1456	87	NONE	
198LED	Patient Room 246	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 246	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 246 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 246 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 247	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 247	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 247 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 247 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
133	East Wing Staff Lounge	Staff Lounge	4	CF 26	CFQ26/1-L	27	0.11	SW	4368	472	NONE	
40LED	East Wing Staff Lounge	Staff Lounge	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	4368	524	NONE	
96	East Wing Staff Lounge Bathroom	Restroom	1	W 17 C F 2	F22ILL	33	0.03	SW	3120	103	NONE	
254LED	East Wing Staff Lounge Bathroom	Restroom	1	CFQ26/2	CFQ26/2	66	0.07	SW	3120	206	NONE	
133	East Wing Solarium	Staff Lounge	4	CF 26	CFQ26/1-L	27	0.11	SW	4368	472	NONE	
96	East Wing Solarium Bathroom	Restroom	1	W 17 C F 2	F22ILL	33	0.03	SW	3120	103	NONE	
254LED	East Wing Solarium Bathroom	Restroom	1	CFQ26/2	CFQ26/2	66	0.07	SW	3120	206	NONE	
198LED	Patient Room 248	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 248	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 248 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 248 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 249	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 249	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 249 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 249 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 250	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 250	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 250 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 250 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 251	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 251	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 251 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 251 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 252	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 252	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 252 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 252 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 253	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 253	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 253 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 253 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 254	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 254	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 254 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	

Cost of Electricity:

\$0.119	\$/kWh
\$8.28	\$/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
133	Patient Room 254 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 255	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 255	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 255 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 255 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 256	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 256	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 256 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 256 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 257	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 257	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 257 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 257 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 258	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 258	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 258 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 258 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 259	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 259	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 259 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 259 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 260	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 260	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 260 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 260 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 261	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 261	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 261 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 261 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 262	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 262	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 262 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 262 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
198LED	Patient Room 263	Patient	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	4368	271	NONE	
218LED	Patient Room 263	Patient	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4368	786	NONE	
96	Patient Room 263 Bathroom	Patient Bathroom	1	W 17 C F 2	F22ILL	33	0.03	SW	1800	59	NONE	
133	Patient Room 263 Bathroom	Patient Bathroom	1	CF 26	CFQ26/1-L	27	0.03	SW	1800	49	NONE	
40LED	East Wing Hallway	Hallways	14	T 32 R F 2 (ELE)	F42LL	60	0.84	Breaker	8760	7,358	NONE	
15LED	Nursing Station	Nursing Station	6	S 32 C F 2 (ELE)	F42LL	60	0.36	SW	5840	2,102	NONE	
247LED	Nursing Station	Nursing Station	6	T 40 R F 3 (MAG)	F43SE	136	0.82	SW	5840	4,765	NONE	
50LED	Stairway A	Hallways	3	W 32 W F 2 (ELE)	F42LL	60	0.18	Breaker	8760	1,577	NONE	
50LED	Stairway B	Hallways	3	W 32 W F 2 (ELE)	F42LL	60	0.18	Breaker	8760	1,577	NONE	
50LED	Stairway C	Hallways	3	W 32 W F 2 (ELE)	F42LL	60	0.18	Breaker	8760	1,577	NONE	
50LED	Stairway D	Hallways	3	W 32 W F 2 (ELE)	F42LL	60	0.18	Breaker	8760	1,577	NONE	
247LED	Triage 2	Patient	3	T 40 R F 3 (MAG)	F43SE	136	0.41	SW	4368	1,782	NONE	Recessed
247LED	Triage 1	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
247LED	Hallway	Hallways	8	T 40 R F 3 (MAG)	F43SE	136	1.09	SW	8760	9,531	NONE	Every 3rd Emergency
135	Hallway	Hallways	2	SP 13 R C F 1	CFQ13/1-L	15	0.03	SW	8760	263	NONE	
55LED	Entrance	Hallways	4	2T 17 R F 3 (ELE)	F23ILL	47	0.19	Sw	8760	1,647	NONE	
40LED	EMS	Offices	7	T 32 R F 2 (ELE)	F42LL	60	0.42	SW	2600	1,092	NONE	Recessed
202	Triage 16	Patient	4	2T 17 R F 4 (ELE)	F24ILL	61	0.24	SW	4368	1,066	NONE	
40LED	Triage 15	Patient	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	4368	524	NONE	
135	Nurses Station	Nursing Station	20	SP 13 R C F 1	CFQ13/1-L	15	0.30	SW	5840	1,752	NONE	
247LED	Nurses Station	Nursing Station	6	T 40 R F 3 (MAG)	F43SE	136	0.82	SW	5840	4,765	NONE	Recessed
40LED	Soiled Utility	Linen/Utility/Wet/Janitor/Electrical	2	T 32 R F 2 (ELE)	F42LL	60	0.12	C-OCC	1456	175	NONE	
40LED	Med Room	Patient	2	T 32 R F 2 (ELE)	F42LL	60	0.12	C-OCC	4368	524	NONE	
247LED	Emergency Exit	Hallways	1	T 40 R F 3 (MAG)	F43SE	136	0.14	SW	8760	1,191	NONE	
247LED	14	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
40LED	14 BR	Patient Bathroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1800	108	NONE	
202	13	Patient	4	2T 17 R F 4 (ELE)	F24ILL	61	0.24	SW	4368	1,066	NONE	
40LED	Storage	Storage Areas	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	1040	125	NONE	
247LED	Patient Room 1	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
247LED	Patient Room 2	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
247LED	Patient Room 3	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
247LED	Patient Room 4	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
247LED	Patient Room 5	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
247LED	Patient Room 6	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
247LED	Patient Room 7	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	

Cost of Electricity:

\$0.119	\$/kWh
\$8.28	\$/kW

EXISTING CONDITIONS												Retrofit Control
Field Code	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
247LED	Patient Room 8	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
247LED	Patient Room 9	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
247LED	Patient Room 10	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
247LED	Patient Room 11	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
247LED	Patient Room 12	Patient	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4368	1,188	NONE	
247LED	Hallway	Hallways	11	T 40 R F 3 (MAG)	F43SE	136	1.50	SW	8760	13,105	NONE	
247LED	Bathroom	Restroom	1	T 40 R F 3 (MAG)	F43SE	136	0.14	SW	3120	424	NONE	
247LED	Conference Room	Conference Room	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	4000	1,088	C-OCC	
40LED	Mechanical Room	Mechanical Room	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	8736	524	NONE	
247LED	Managers Office	Offices	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	2600	707	NONE	
247LED	PR. On Call	Offices	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	2600	707	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
40LED	Hallway	Hallways	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	8760	1,051	NONE	
40LED	Staff Office	Offices	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2600	312	NONE	
40LED	Bathrom 1	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
40LED	Bathrrom 2	Restroom	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	3120	374	NONE	
40LED	Staff Lounge	Staff Lounge	6	T 32 R F 2 (ELE)	F42LL	60	0.36	C-OCC	4368	1,572	NONE	
198LED	Closet	Storage Areas	1	2T 17 R F 2 (ELE)	F22LL	31	0.03	C-OCC	1040	32	NONE	
40LED	Storage	Storage Areas	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1040	62	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
247LED	Security	Offices	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	2600	707	NONE	
55LED	Entrance	Hallways	4	2T 17 R F 3 (ELE)	F23ILL	47	0.19	SW	8760	1,647	NONE	
247LED	ER	Patient	4	T 40 R F 3 (MAG)	F43SE	136	0.54	SW	4368	2,376	NONE	
247LED	ER Waiting Room	Patient	3	T 40 R F 3 (MAG)	F43SE	136	0.41	SW	4368	1,782	NONE	
40LED	ER Waiting Room	Patient	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	4368	524	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	C-OCC	3120	187	NONE	
135	Reception	Offices	5	SP 13 R C F 1	CFQ13/1-L	15	0.08	SW	2600	195	NONE	
247LED	Reception	Offices	1	T 40 R F 3 (MAG)	F43SE	136	0.14	SW	2600	354	NONE	
220	Reception	Offices	2	S 17 C F 1 (ELE)	F21ILL	20	0.04	SW	2600	104	NONE	
254LED	Bathroom	Restroom	1	CFQ26/2	CFQ26/2	66	0.07	SW	3120	206	NONE	
40LED	Phone Closet	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1456	87	NONE	
247LED	Hallway	Hallways	5	T 40 R F 3 (MAG)	F43SE	136	0.68	SW	8760	5,957	NONE	
276	Hyperbaric Wing	Offices	9	2T 25 R LED	2RTLLED	25	0.23	3 SW	2600	585	NONE	
276	Hallway	Hallways	4	2T 25 R LED	2RTLLED	25	0.10	SW	8760	876	NONE	
276	Director's Office	Offices	2	2T 25 R LED	2RTLLED	25	0.05	C-OCC	2600	130	NONE	
276	Treatment	Patient	3	2T 25 R LED	2RTLLED	25	0.08	C-OCC	4368	328	NONE	
89	Closet	Storage Areas	1	CF 13 2 LAMP	CFQ13/2-L	28	0.03	C-OCC	1040	29	NONE	
135	Bathroom	Restroom	2	SP 13 R C F 1	CFQ13/1-L	15	0.03	SW	3120	94	NONE	
276	Bathroom	Restroom	1	2T 25 R LED	2RTLLED	25	0.03	SW	3120	78	NONE	
57	Hallway	Hallways	7	S 34 C F 1 (MAG)	F41EE	43	0.30	SW	8760	2,637	NONE	
40LED	Radiology WR	Offices	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	2600	624	NONE	
135	Waiting Room	Waiting/Family/Play	3	SP 13 R C F 1	CFQ13/1-L	15	0.05	SW	5824	262	NONE	
57	Hallway	Hallways	10	S 34 C F 1 (MAG)	F41EE	43	0.43	SW	8760	3,767	NONE	
40LED	Reception	Offices	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2600	312	NONE	
57	Radiology	Offices	1	S 34 C F 1 (MAG)	F41EE	43	0.04	SW	2600	112	NONE	
89	Soiled Utility	Linen/Utility/Wet/Janitor/Electrical	1	CF 13 2 LAMP	CFQ13/2-L	28	0.03	SW	1456	41	NONE	
40LED	Changing Room	Locker Room	2	T 32 R F 2 (ELE)	F42LL	60	0.12	C-OCC	8736	1,048	NONE	
40LED	X-Ray	Patient	5	T 32 R F 2 (ELE)	F42LL	60	0.30	SW	4368	1,310	NONE	
40LED	X-Ray	Patient	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	4368	262	NONE	
40LED	Hallway	Hallways	5	T 32 R F 2 (ELE)	F42LL	60	0.30	SW	8760	2,628	NONE	
40LED	File Room	Storage Areas	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	1040	187	NONE	
40LED	Hallway	Hallways	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	8760	2,102	NONE	
40LED	Office	Offices	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2600	312	NONE	
40LED	Exam Cat Scan	Patient	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	4368	1,048	NONE	
135	Cat Scan Office	Offices	4	SP 13 R C F 1	CFQ13/1-L	15	0.06	SW	2600	156	NONE	
40LED	Mammogram	Patient	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	4368	524	NONE	
198LED	Bathroom	Restroom	1	2T 17 R F 2 (ELE)	F22LL	31	0.03	SW	3120	97	NONE	
196LED	File Storage	Storage Areas	6	W 32 C F 4 (ELE)	F44ILL	112	0.67	SW	1040	699	NONE	
40LED	X-Ray 2	Patient	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	4368	524	NONE	
40LED	X-Ray 3	Patient	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	4368	524	NONE	
40LED	Office	Offices	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	2600	156	NONE	
40LED	Corridor	Hallways	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	8760	1,051	NONE	
40LED	Nuclear Medicine	Offices	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	2600	156	NONE	
40LED	Nuclear Medicine	Offices	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	2600	468	NONE	
247LED	Exam	Patient	6	T 40 R F 3 (MAG)	F43SE	136	0.82	SW	4368	3,564	NONE	
71	Exam	Patient	1	I 60	I60/1	60	0.06	SW	4368	262	NONE	
198LED	Bathroom	Restroom	1	2T 17 R F 2 (ELE)	F22LL	31	0.03	SW	3120	97	NONE	
40LED	Ultrasound	Patient	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	4368	262	NONE	

Cost of Electricity:

\$0.119	\$/kWh
\$8.28	\$/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
40LED	Lobby	Hallways	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	8760	1,051	NONE	
196LED	Cardiopulmonary Waiting Room	Waiting/Family/Play	4	W 32 C F 4 (ELE)	F44ILL	112	0.45	SW	5824	2,609	NONE	
196LED	Cardiopulmonary Reception	Hallways	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	8760	2,943	NONE	
40LED	Cardiopulmonary Lab	Lab	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3000	180	NONE	
40LED	Cardiopulmonary Director	Offices	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	2600	156	NONE	
40LED	Hallway	Hallways	5	T 32 R F 2 (ELE)	F42LL	60	0.30	SW	8760	2,628	NONE	
198LED	Storage	Storage Areas	2	2T 17 R F 2 (ELE)	F22LL	31	0.06	SW	1040	64	NONE	
198LED	Blood Gas Lab	Lab	1	2T 17 R F 2 (ELE)	F22LL	31	0.03	SW	3000	93	NONE	
40LED	Storage	Storage Areas	1	T 32 R F 2 (ELE)	F42LL	60	0.06	C-OCC	1040	62	NONE	
40LED	Storage	Storage Areas	1	T 32 R F 2 (ELE)	F42LL	60	0.06	C-OCC	1040	62	NONE	
40LED	EEG	Lab	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3000	180	NONE	
40LED	EEG	Lab	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3000	180	NONE	
40LED	EEG	Lab	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3000	180	NONE	
40LED	Echo Lab 1	Lab	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	3000	360	NONE	
40LED	Stress EEG 2	Lab	6	T 32 R F 2 (ELE)	F42LL	60	0.36	SW	3000	1,080	NONE	
40LED	Physician Office	Offices	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2600	312	NONE	
198LED	Physician Office	Offices	1	2T 17 R F 2 (ELE)	F22LL	31	0.03	SW	2600	81	NONE	
196LED	Rehab Waiting Room	Waiting/Family/Play	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	5824	1,305	NONE	
196LED	Rehab Waiting Room	Waiting/Family/Play	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	SW	5824	652	NONE	
196LED	EMG	Exercise	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	3276	734	NONE	
40LED	Workout Area	Exercise	11	T 32 R F 2 (ELE)	F42LL	60	0.66	SW	3276	2,162	NONE	
198LED	Workout Area	Exercise	4	2T 17 R F 2 (ELE)	F22LL	31	0.12	SW	3276	406	NONE	
198LED	Locker Room	Locker Room	4	2T 17 R F 2 (ELE)	F22LL	31	0.12	SW	8736	1,083	NONE	
198LED	Locker Room	Locker Room	1	2T 17 R F 2 (ELE)	F22LL	31	0.03	SW	8736	271	NONE	
198LED	Bathroom	Restroom	1	2T 17 R F 2 (ELE)	F22LL	31	0.03	SW	3120	97	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
198LED	Bathroom	Restroom	1	2T 17 R F 2 (ELE)	F22LL	31	0.03	SW	3120	97	NONE	
198LED	Bathroom	Restroom	1	2T 17 R F 2 (ELE)	F22LL	31	0.03	SW	3120	97	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
198LED	Bathroom	Restroom	1	2T 17 R F 2 (ELE)	F22LL	31	0.03	SW	3120	97	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
40LED	Records	Restroom	6	T 32 R F 2 (ELE)	F42LL	60	0.36	SW	3120	1,123	NONE	
40LED	Office	Offices	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	2600	156	NONE	
40LED	Records	Offices	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2600	312	NONE	
133	Reading Room	Offices	4	CF 26	CFQ26/1-L	27	0.11	SW	2600	281	NONE	
276	Lounge	General Common	7	2T 25 R LED	2RTL	25	0.18	SW	3640	637	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
133	Bathroom	Restroom	2	CF 26	CFQ26/1-L	27	0.05	SW	3120	168	NONE	
40LED	Records Office	Offices	8	T 32 R F 2 (ELE)	F42LL	60	0.48	SW	2600	1,248	NONE	
135	Bathroom	Restroom	2	SP 13 R C F 1	CFQ13/1-L	15	0.03	SW	3120	94	NONE	
71	Closet	Linen/Utility/Wet/Janitor/Electrical	1	I 60	I60/1	60	0.06	SW	1456	87	NONE	
40LED	Closet	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1456	87	NONE	
40LED	Shelves	General Common	6	T 32 R F 2 (ELE)	F42LL	60	0.36	SW	3640	1,310	NONE	
40LED	Office	Offices	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2600	312	NONE	
40LED	Hallway	Hallways	11	T 32 R F 2 (ELE)	F42LL	60	0.66	SW	8760	5,782	NONE	
40LED	Café	Cafeteria_other	14	T 32 R F 2 (ELE)	F42LL	60	0.84	SW	3640	3,058	NONE	
40LED	Elevator EQ	General Common	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3640	218	NONE	
40LED	Bathroom	Restroom	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	3120	374	NONE	
40LED	Bathroom	Restroom	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	3120	374	NONE	
40LED	Elevator Lobby	General Common	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	3640	655	NONE	
196LED	Lobby	General Common	45	W 32 C F 4 (ELE)	F44ILL	112	5.04	SW	3640	18,346	NONE	
196LED	Lobby	General Common	37	W 32 C F 4 (ELE)	F44ILL	112	4.14	SW	3640	15,084	NONE	
40LED	Discharge	General Common	9	T 32 R F 2 (ELE)	F42LL	60	0.54	SW	3640	1,966	NONE	
196LED	Exam 1	Exam Room	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	5000	1,120	NONE	
196LED	Pre-exam	Exam Room	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	5000	1,120	NONE	
196LED	Exam 2	Exam Room	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	5000	1,120	NONE	
196LED	Exam 3	Exam Room	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	5000	1,120	NONE	
196LED	Exam 4	Exam Room	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	5000	1,120	NONE	
196LED	Bathroom	Restroom	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	SW	3120	349	NONE	
196LED	Closet	Storage Areas	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	SW	1040	116	NONE	
196LED	Lab Corridor	Hallways	4	W 32 C F 4 (ELE)	F44ILL	112	0.45	SW	8760	3,924	NONE	
196LED	Lab	Lab	17	W 32 C F 4 (ELE)	F44ILL	112	1.90	SW	3000	5,712	NONE	
196LED	Office	Offices	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2600	582	NONE	
196LED	Lab	Lab	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	3000	672	NONE	
196LED	Pharm Closet	Storage Areas	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	C-OCC	1040	116	NONE	
196LED	Staff Locker Room	Cafeteria_other	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	C-OCC	3640	408	NONE	
196LED	Lab	Lab	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	3000	672	NONE	
198LED	Phone Lobby	Hallways	3	2T 17 R F 2 (ELE)	F22LL	31	0.09	SW	8760	815	NONE	

Cost of Electricity:

\$0.119	\$/kWh
\$8.28	\$/kW

EXISTING CONDITIONS												Retrofit Control
Field Code	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
40LED	Gift Shop	General Common	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	3640	874	NONE	
196LED	Hallway	Hallways	6	W 32 C F 4 (ELE)	F44ILL	112	0.67	SW	8760	5,887	NONE	
196LED	HR Office	Offices	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2600	582	NONE	
196LED	HR Office	Offices	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2600	582	NONE	
196LED	HR Office	Offices	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2600	582	NONE	
196LED	HR Office	Offices	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	2600	582	NONE	
196LED	HR Office	Offices	8	W 32 C F 4 (ELE)	F44ILL	112	0.90	SW	2600	2,330	NONE	
196LED	HR Hallway	Hallways	9	W 32 C F 4 (ELE)	F44ILL	112	1.01	SW	8760	8,830	NONE	
196LED	Elevator Room	Mechanical Room	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	8736	1,957	NONE	
196LED	Staff Development	Offices	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	2600	874	NONE	
196LED	Volunteer	Offices	6	W 32 C F 4 (ELE)	F44ILL	112	0.67	SW	2600	1,747	NONE	
196LED	IT	Offices	4	W 32 C F 4 (ELE)	F44ILL	112	0.45	SW	2600	1,165	NONE	
196LED	Storage	Storage Areas	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	1040	349	NONE	
40LED	Storage	Storage Areas	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1040	62	NONE	
196LED	Surgery Waiting Room	Waiting/Family/Play	4	W 32 C F 4 (ELE)	F44ILL	112	0.45	SW	5824	2,609	NONE	
196LED	Cancer Waiting Rom	Waiting/Family/Play	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	5824	1,305	NONE	
196LED	Office	Offices	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	2600	874	NONE	
196LED	Receiving Hall	Hallways	5	W 32 C F 4 (ELE)	F44ILL	112	0.56	SW	8760	4,906	NONE	
196LED	Storage	Storage Areas	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	1040	233	NONE	
196LED	Electrical	Linen/Utility/Wet/Janitor/Electrical	9	W 32 C F 4 (ELE)	F44ILL	112	1.01	SW	1456	1,468	NONE	
196LED	Closet	Storage Areas	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	SW	1040	116	NONE	
196LED	Receiving	Receiving Area	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	SW	6570	736	NONE	
40LED	Receiving	Receiving Area	14	T 32 R F 2 (ELE)	F42LL	60	0.84	SW	6570	5,519	NONE	
40LED	Office	Offices	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2600	312	NONE	
196LED	Clean Linen	Storage Areas	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	1040	233	NONE	
196LED	Sterile Supply	Storage Areas	9	W 32 C F 4 (ELE)	F44ILL	112	1.01	SW	1040	1,048	NONE	
196LED	Hallway	Hallways	9	W 32 C F 4 (ELE)	F44ILL	112	1.01	SW	8760	8,830	NONE	
196LED	Dietician	Offices	4	W 32 C F 4 (ELE)	F44ILL	112	0.45	SW	2600	1,165	NONE	
196LED	Supply Sterile	Storage Areas	4	W 32 C F 4 (ELE)	F44ILL	112	0.45	SW	1040	466	NONE	
57	Supply Sterile	Storage Areas	1	S 34 C F 1 (MAG)	F41EE	43	0.04	SW	1040	45	NONE	
40LED	Female Staff Lounge	Staff Lounge	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	4368	524	NONE	
198LED	Hallway	Hallways	1	2T 17 R F 2 (ELE)	F22LL	31	0.03	SW	8760	272	NONE	
96	Bathroom	Restroom	2	W 17 C F 2	F22ILL	33	0.07	SW	3120	206	NONE	
196LED	Bathroom	Restroom	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	SW	3120	349	NONE	
196LED	Dishwasher	Kitchen	4	W 32 C F 4 (ELE)	F44ILL	112	0.45	SW	4914	2,201	NONE	
196LED	Kitchen	Kitchen	16	W 32 C F 4 (ELE)	F44ILL	112	1.79	SW	4914	8,806	NONE	
71	Cooler	Cooler/Freezer	2	I 60	I60/1	60	0.12	SW	8760	1,051	NONE	
71	Freezer	Cooler/Freezer	6	I 60	I60/1	60	0.36	SW	8760	3,154	NONE	
71	Hood	Kitchen	4	I 60	I60/1	60	0.24	SW	4914	1,179	NONE	
196LED	Hallway	Hallways	5	W 32 C F 4 (ELE)	F44ILL	112	0.56	SW	8760	4,906	NONE	
135	Cafeteria	Cafeteria_other	4	SP 13 R C F 1	CFQ13/1-L	15	0.06	SW	3640	218	NONE	
7LED	Cafeteria	Cafeteria_other	15	2T 32 R F 2 (U)	FU2LL	60	0.90	SW	3640	3,276	NONE	
196LED	Cafeteria	Cafeteria_other	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	3640	1,223	NONE	
169LED	Exterior	Outdoor Lighting	5	WP 250 MH	MH250/1	295	1.48	PHC	4732	6,980	NONE	
143LED	Single Pole	Outdoor Lighting	8	HPS 100 POLE	HPS100/1	138	1.10	PHC	4732	5,224	NONE	
145LED	Double Pole	Outdoor Lighting	9	HPS 150 POLE	HPS150/1	188	1.69	PHC	4732	8,007	NONE	
231LED	Exterior	Outdoor Lighting	1	WP400MH1	MH400/1	458	0.46	PHC	4732	2,167	NONE	
133	Exterior	Outdoor Lighting	1	CF 26	CFQ26/1-L	27	0.03	PHC	4732	128	NONE	
227LED	Exterior - Back of House	Outdoor Lighting	13	70 W MH Wall Pack	MH70/1	95	1.24	PHC	4732	5,844	NONE	
277	Exterior - Central Plant	Outdoor Lighting	4	WPLED20	WPLED20	20	0.08	PHC	4732	379	NONE	
143LED	Exterior	Outdoor Lighting	2	HPS 100 POLE	HPS100/1	138	0.28	PHC	4732	1,306	NONE	
133	Overhang Lighting	Outdoor Lighting	10	CF 26	CFQ26/1-L	27	0.27	PHC	4732	1,278	NONE	
133	Overhang Lighting	Outdoor Lighting	8	CF 26	CFQ26/1-L	27	0.22	PHC	4732	1,022	NONE	
41LED	Basement - Kitchen Storage	Storage Areas	9	1B 40 R F 2 (MAG)	F42SS	94	0.85	SW	1040	880	NONE	
40LED	Basement - Kitchen Storage	Storage Areas	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	1040	250	NONE	
40LED	Maternity Hallway	Hallways	7	T 32 R F 2 (ELE)	F42LL	60	0.42	SW	8760	3,679	NONE	
40LED	Electrical Closet	Linen/Utility/Wet/Janitor/Electrical	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	1456	349	NONE	
40LED	Staff Lounge	Staff Lounge	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	4368	524	NONE	
40LED	Sleep Rooms	Staff Lounge	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	4368	262	NONE	
40LED	Sleep Rooms	Staff Lounge	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	4368	262	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
57	Closet	Storage Areas	1	S 34 C F 1 (MAG)	F41EE	43	0.04	SW	1040	45	NONE	
40LED	Equipment Storage	Storage Areas	7	T 32 R F 2 (ELE)	F42LL	60	0.42	SW	1040	437	NONE	
40LED	Hallway	Hallways	19	T 32 R F 2 (ELE)	F42LL	60	1.14	SW	8760	9,986	NONE	
133	Wall Sconces	Hallways	11	CF 26	CFQ26/1-L	27	0.30	SW	8760	2,602	NONE	
218LED	Managers Office	Offices	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	2600	468	NONE	
218LED	Storage	Storage Areas	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	1040	187	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	

Cost of Electricity:

\$0.119	\$/kWh
\$8.28	\$/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
218LED	Conference Room	Conference Room	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	4000	720	C-OCC	
218LED	Waiting Room	Waiting/Family/Play	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	5824	1,048	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
40LED	Emergency Exit	Hallways	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	8760	1,051	NONE	
40LED	Consultation	Offices	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2600	312	NONE	
218LED	Meds Closet	Nursing Station	1	W 32 C F 3 (ELE)	F43ILL/2	90	0.09	SW	5840	526	NONE	
218LED	Pantry	Storage Areas	1	W 32 C F 3 (ELE)	F43ILL/2	90	0.09	SW	1040	94	NONE	
261	Patient 101	Patient	2	PAR 38 SP	H100/1	100	0.20	SW	4368	874	NONE	
274LED	Patient 101	Patient	9	I 100	I100/1	100	0.90	SW	4368	3,931	NONE	
50LED	Patient 101	Patient	1	W 32 W F 2 (ELE)	F42LL	60	0.06	SW	4368	262	NONE	
15LED	Patient 101 Bathroom	Patient Bathroom	1	S 32 C F 2 (ELE)	F42LL	60	0.06	SW	1800	108	NONE	
261	Patient 102	Patient	2	PAR 38 SP	H100/1	100	0.20	SW	4368	874	NONE	
274LED	Patient 102	Patient	9	I 100	I100/1	100	0.90	SW	4368	3,931	NONE	
50LED	Patient 102	Patient	1	W 32 W F 2 (ELE)	F42LL	60	0.06	SW	4368	262	NONE	
15LED	Patient 102 Bathroom	Patient Bathroom	1	S 32 C F 2 (ELE)	F42LL	60	0.06	SW	1800	108	NONE	
261	Patient 103	Patient	2	PAR 38 SP	H100/1	100	0.20	SW	4368	874	NONE	
274LED	Patient 103	Patient	9	I 100	I100/1	100	0.90	SW	4368	3,931	NONE	
50LED	Patient 103	Patient	1	W 32 W F 2 (ELE)	F42LL	60	0.06	SW	4368	262	NONE	
15LED	Patient 103 Bathroom	Patient Bathroom	1	S 32 C F 2 (ELE)	F42LL	60	0.06	SW	1800	108	NONE	
261	Patient 104	Patient	2	PAR 38 SP	H100/1	100	0.20	SW	4368	874	NONE	
274LED	Patient 104	Patient	9	I 100	I100/1	100	0.90	SW	4368	3,931	NONE	
50LED	Patient 104	Patient	1	W 32 W F 2 (ELE)	F42LL	60	0.06	SW	4368	262	NONE	
15LED	Patient 104 Bathroom	Patient Bathroom	1	S 32 C F 2 (ELE)	F42LL	60	0.06	SW	1800	108	NONE	
261	Patient 105	Patient	2	PAR 38 SP	H100/1	100	0.20	SW	4368	874	NONE	
274LED	Patient 105	Patient	9	I 100	I100/1	100	0.90	SW	4368	3,931	NONE	
50LED	Patient 105	Patient	1	W 32 W F 2 (ELE)	F42LL	60	0.06	SW	4368	262	NONE	
15LED	Patient 105 Bathroom	Patient Bathroom	1	S 32 C F 2 (ELE)	F42LL	60	0.06	SW	1800	108	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
218LED	Clean Storage	Storage Areas	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.18	SW	1040	187	NONE	
249	Nusery	Waiting/Family/Play	8	F 48 R F 2 (ELE)	F41GL	32	0.26	SW	5824	1,491	NONE	
261	Nusery	Waiting/Family/Play	8	PAR 38 SP	H100/1	100	0.80	SW	5824	4,659	NONE	
218LED	Nusery	Waiting/Family/Play	1	W 32 C F 3 (ELE)	F43ILL/2	90	0.09	SW	5824	524	NONE	
57	Isolation	Patient	4	S 34 C F 1 (MAG)	F41EE	43	0.17	SW	4368	751	NONE	
261	Isolation	Patient	1	PAR 38 SP	H100/1	100	0.10	SW	4368	437	NONE	
218LED	Isolation	Patient	1	W 32 C F 3 (ELE)	F43ILL/2	90	0.09	SW	4368	393	NONE	
218LED	Nurses Station	Nursing Station	1	W 32 C F 3 (ELE)	F43ILL/2	90	0.09	SW	5840	526	NONE	
218LED	Soiled Utility	Linen/Utility/Wet/Janitor/Electrical	3	W 32 C F 3 (ELE)	F43ILL/2	90	0.27	C-OCC	1456	393	NONE	
40LED	Mechanical	Mechanical Room	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	8736	1,048	NONE	
40LED	Office	Offices	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2600	312	NONE	
40LED	Sterile Storage	Storage Areas	6	T 32 R F 2 (ELE)	F42LL	60	0.36	SW	1040	374	NONE	
40LED	Women's Locker	Locker Room	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	8736	2,097	NONE	
40LED	Men's Locker	Locker Room	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	8736	2,097	NONE	
40LED	Storage	Storage Areas	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	1040	250	NONE	
196LED	Endoscope	Patient	2	W 32 C F 4 (ELE)	F44ILL	112	0.22	SW	4368	978	NONE	
40LED	Endoscope Exam	Patient	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	4368	1,048	NONE	
40LED	Lounge	Staff Lounge	5	T 32 R F 2 (ELE)	F42LL	60	0.30	SW	4368	1,310	NONE	
40LED	Anesthesia Work Room	Nursing Station	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	5840	701	NONE	
196LED	OR1	Operating Room	10	W 32 C F 4 (ELE)	F44ILL	112	1.12	SW	5000	5,600	NONE	
196LED	OR2	Operating Room	10	W 32 C F 4 (ELE)	F44ILL	112	1.12	SW	5000	5,600	NONE	
196LED	OR3	Operating Room	10	W 32 C F 4 (ELE)	F44ILL	112	1.12	SW	5000	5,600	NONE	
196LED	OR4	Operating Room	10	W 32 C F 4 (ELE)	F44ILL	112	1.12	SW	5000	5,600	NONE	
196LED	OR5	Operating Room	10	W 32 C F 4 (ELE)	F44ILL	112	1.12	SW	5000	5,600	NONE	
40LED	OR Hallways	Hallways	20	T 32 R F 2 (ELE)	F42LL	60	1.20	SW	8760	10,512	NONE	
40LED	Sub-sterile	Storage Areas	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	1040	125	NONE	
40LED	Hallway	Hallways	12	T 32 R F 2 (ELE)	F42LL	60	0.72	SW	8760	6,307	NONE	
40LED	Recovery	Patient	16	T 32 R F 2 (ELE)	F42LL	60	0.96	SW	4368	4,193	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
40LED	Rooms	Patient	10	T 32 R F 2 (ELE)	F42LL	60	0.60	SW	4368	2,621	NONE	
40LED	Corridor	Hallways	15	T 32 R F 2 (ELE)	F42LL	60	0.90	SW	8760	7,884	NONE	
40LED	Nurses Station	Nursing Station	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	5840	1,402	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
40LED	Bathroom	Restroom	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	3120	187	NONE	
40LED	Office	Offices	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	2600	312	NONE	
40LED	Hallway	Hallways	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	8760	1,577	NONE	
254LED	entrance	Hallways	4	CFQ26/2	CFQ26/2	66	0.26	SW	8760	2,313	NONE	
254LED	Basement East	Storage Areas	2	CFQ26/2	CFQ26/2	66	0.13	SW	1040	137	NONE	
41LED	Basement East	Storage Areas	3	1B 40 R F 2 (MAG)	F42SS	94	0.28	SW	1040	293	NONE	
41LED	Basement East	Storage Areas	2	1B 40 R F 2 (MAG)	F42SS	94	0.19	SW	1040	196	NONE	

Cost of Electricity:

\$0.119	\$/kWh
\$8.28	\$/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
40LED	Boiler Room	Boiler Room	6	T 32 R F 2 (ELE)	F42LL	60	0.36	SW	1200	432	NONE	
40LED	Boiler Room	Boiler Room	6	T 32 R F 2 (ELE)	F42LL	60	0.36	SW	1200	432	NONE	
40LED	Chiller	Mechanical Room	6	T 32 R F 2 (ELE)	F42LL	60	0.36	SW	8736	3,145	NONE	
40LED	Chiller	Mechanical Room	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	8736	1,048	NONE	
219	Tanks	Mechanical Room	1	T 32 R F 4 (ELE)	F44ILL/2	118	0.12	SW	8736	1,031	NONE	
40LED	Pumps	Mechanical Room	7	T 32 R F 2 (ELE)	F42LL	60	0.42	SW	8736	3,669	NONE	
40LED	Chiller	Mechanical Room	4	T 32 R F 2 (ELE)	F42LL	60	0.24	SW	8736	2,097	NONE	
196LED	Boiler Room	Boiler Room	4	W 32 C F 4 (ELE)	F44ILL	112	0.45	SW	1200	538	NONE	
196LED	Bathroom	Restroom	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	SW	3120	349	NONE	
40LED	Maintenance	Mechanical Room	14	T 32 R F 2 (ELE)	F42LL	60	0.84	SW	8736	7,338	NONE	
40LED	Maintenance	Mechanical Room	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	8736	1,048	NONE	
40LED	Closet	Storage Areas	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1040	62	NONE	
40LED	Electrical	Linen/Utility/Wet/Janitor/Electrical	20	T 32 R F 2 (ELE)	F42LL	60	1.20	SW	1456	1,747	NONE	
247LED	Gym	Gymnasium	12	T 40 R F 3 (MAG)	F43SE	136	1.63	SW	3640	5,940	NONE	
247LED	Storage	Storage Areas	6	T 40 R F 3 (MAG)	F43SE	136	0.82	SW	1040	849	NONE	
247LED	Closet	Storage Areas	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	1040	283	NONE	
247LED	Closet	Storage Areas	2	T 40 R F 3 (MAG)	F43SE	136	0.27	SW	1040	283	NONE	
196LED	Storage	Storage Areas	3	W 32 C F 4 (ELE)	F44ILL	112	0.34	SW	1040	349	NONE	
196LED	Bathroom	Restroom	1	W 32 C F 4 (ELE)	F44ILL	112	0.11	SW	3120	349	NONE	
247LED	DHW Closet	Linen/Utility/Wet/Janitor/Electrical	1	T 40 R F 3 (MAG)	F43SE	136	0.14	SW	1456	198	NONE	
7LED	DHW Closet	Linen/Utility/Wet/Janitor/Electrical	1	2T 32 R F 2 (u)	FU2LL	60	0.06	SW	1456	87	NONE	
196LED	Maintenance Office	Offices	9	W 32 C F 4 (ELE)	F44ILL	112	1.01	SW	2600	2,621	NONE	
275LED	Morgue	Storage Areas	2	I 150	I150/1	150	0.30	SW	1040	312	NONE	
	Total	Total Total	1,829				144.68			664,474		

APPENDIX C

ECM Calculations

Utility Costs		Yearly Usage	Metric Ton Carbon Dioxide Equivalent	Building Area	Annual Utility Cost		
\$	0.134	\$/kWh blended	0.000420205	135,000	Electric	Natural Gas	Fuel Oil
\$	0.119	\$/kWh supply	0.000420205		\$ 563,179	\$ 136,617	
\$	8.28	\$/kW	828.5				
\$	0.98	\$/Therm	138,747				
			0.00533471				
		\$/kgals	0				
		\$/Gal					

Estimated

Elmer Hospital																							
Recommend? Y or N		Item	Savings					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				ROI	NPV	IRR		
			kW	kWh	therms	No. 2 Oil gal	Water kgal								\$	kW	kWh	therms				kgal/yr	\$
Y	ECM-1	Replace the remaining 1966 single pane windows at the rear of the second floor	0.0	461	758	0	0	808	\$ 47,600	58.9	25	4.2	\$ -	N	58.9	0.0	11,537	18,948	0	\$ 20,208	-58%	(\$33,524)	-5.7%
Y	ECM-2	Retro-commission the current controls	0.0	152,535	8,197	0	0	28,582	\$ 50,536	1.8	10	107.8	\$ -	N	1.8	0.0	1,525,350	81,971	0	\$ 285,817	466%	\$193,271	55.9%
Y	ECM-3	Install a condensing boiler for summer re-heat and domestic hot water production	0.0	0	8,667	0	0	8,534	\$ 184,041	21.6	25	46.2	\$ 4,400	N	21.1	0.0	0	216,672	0	\$ 213,345	16%	(\$31,041)	1.4%
Y	ECM-4	Convert DX/Electric Packaged Rooftop Units to DX/Gas	0.0	198,497	(8,468)	0	0	18,352	\$ 146,102	8.0	21	38.2	\$ -	N	8.0	0.0	4,168,441	(177,836)	0	\$ 385,398	164%	\$136,799	11.2%
Y	ECM-5	Install an energy recovery unit on AHU-4	0.0	50,517	4,013	0	0	10,744	\$ 163,600	15.2	25	42.6	\$ -	N	15.2	0.0	1,262,913	100,330	0	\$ 268,605	64%	\$23,491	4.2%
Y	ECM-6	Install a kitchen hood control system	0.0	8,441	6,392	0	0	7,428	\$ 41,453	5.6	15	37.6	\$ 900	N	5.5	0.0	126,609	95,874	0	\$ 111,426	169%	\$48,126	16.5%
Y	ECM-7	Install a walk-in cooler/freezer control system	0.0	4,916	0	0	0	661	\$ 22,275	33.7	15	2.1	\$ -	N	33.7	0.0	73,734	0	0	\$ 9,915	-55%	(\$14,384)	-8.7%
Y	ECM-8	Replace gas fired absorption chiller with a natural gas engine driven absorption chiller	0.0	463,557	15,222	0	0	77,319	\$ 661,260	8.6	23	276.0	\$ 50,600	N	7.9	0.0	10,661,800	350,097	0	\$ 1,778,346	169%	\$660,750	11.7%
N	ECM-L1	Lighting Replacements / Upgrades	72.8	332,409	0	0	0	46,633	\$ 383,042	8.2	10	139.7	\$ 12,165	N	8.0	727.7	3,324,093	0	0	\$ 519,267	36%	\$26,914	4.4%
N	ECM-L2	Install Lighting Controls (Add Occupancy Sensors)	0.0	7,117	0	0	0	957	\$ 8,640	9.0	10	3.0	\$ 1,120	N	7.9	0.0	71,173	0	0	\$ 9,570	11%	\$644	4.6%
Y	ECM-L3	Lighting Replacements with Controls (Occupancy Sensors)	72.8	335,580	0	0	0	47,009	\$ 391,682	8.3	10	141.0	\$ 13,285	N	8.0	727.7	3,355,800	0	0	\$ 523,531	34%	\$22,600	4.2%
Recommended Measures (highlighted green above)			72.8	1,214,503	34,780	0	0	\$ 199,438	\$ 1,708,551	8.6	18.8	696	\$ 69,185	0	8.2	728	21,186,185	686,055	-	\$ 3,596,591	1.1	1,006,087	10.0%
% of Existing			9%	29%	25%	0	0																

City:		Philadelphia, PA					
Occupied Hours/Week		168	40				
		Hospital	Office 1	Building	Library	Classrooms	
Temp	Enthalpy h (Btu/lb)	Operating Hours	Occupied Hours	Occupied Hours	Occupied Hours	Occupied Hours	
102.5	0.0	0					
97.5	33.1	3	1	0	0	0	
92.5	38.0	33	33	8	0	0	
87.5	36.2	123	123	29	0	0	
82.5	33.8	477	477	114	0	0	
77.5	32.7	656	656	156	0	0	
72.5	31.0	742	742	177	0	0	
67.5	28.1	784	784	187	0	0	
62.5	24.6	983	983	234	0	0	
57.5	21.2	625	625	149	0	0	
52.5	18.3	540	540	129	0	0	
47.5	16.0	457	457	109	0	0	
42.5	14.4	671	671	160	0	0	
37.5	12.5	1,067	1,067	254	0	0	
32.5	10.5	685	685	163	0	0	
27.5	8.5	369	369	88	0	0	
22.5	7.0	321	321	76	0	0	
17.5	5.3	184	184	44	0	0	
12.5	3.8	40	40	10	0	0	
7.5	0.0	0	0	0	0	0	
2.5	0.0	0	0	0	0	0	
-2.5	0.0	0					
-7.5	0.0	0					
		8,760	8,760				

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

Heating System Efficiency	75%
Cooling Eff (kW/ton)	1.0

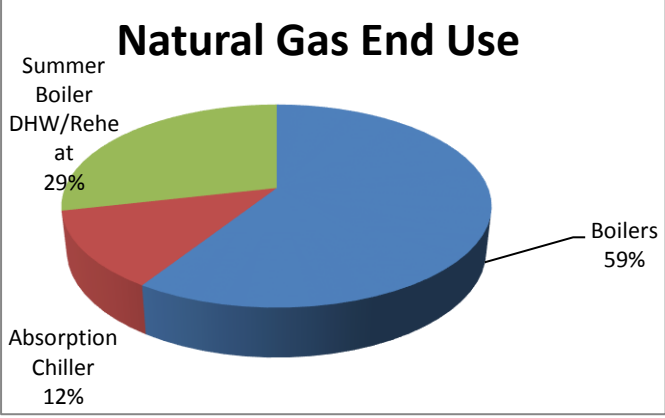
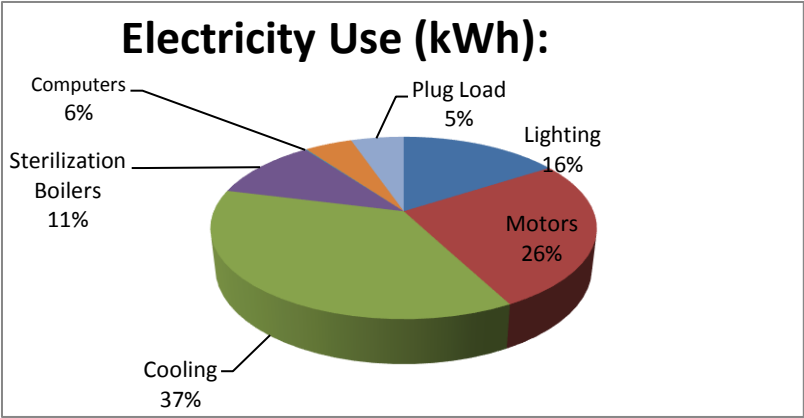
Heating	
Hours	4,334 Hrs
Weighted Avg	38 F
Avg	33 F

Cooling	
Hours	4,426 Hrs
Weighted Avg	68 F
Avg	78 F

Utility End Use Analysis		
Electricity Use (kWh):		Notes/Comments:
4,167,528	Total	Based on utility analysis
664,474	Lighting	From Lighting Calculations
1,097,195	Motors	Estimated based on EF's, Pump Motors, AHUs
1,525,350	Cooling	Calculated based on runtime and equipment E
456,615	Sterilization Boilers	Estimated based on drawings
5,000	Computers	Estimated
198,497	Electric Heat Coils	Calculated based on runtime and coil data
220,396	Plug Load	Remaining
Natural Gas Use (Therms):		Notes/Comments:
138,747	Total	Based on utility analysis
81,971	Boilers	Estimated
17,156	Absorption Chiller	Based on utility analysis
39,620	Summer Boiler DHW/Reheat	Based on utility analysis

16%
26%
37%
11%
0%
5%
5%
100%

59%
12%
29%



Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

ECM-1 Replace the remaining 1966 single pane windows at the rear of the second floor

Existing: The building has some remaining 1966 single pane windows on the second floor. These windows are in poor condition and have inferior heat transfer and infiltration properties as compared to modern double pane windows having thermally broken frames. This ECM evaluates the savings for replacing these windows with double pane windows having thermally broken aluminum frames.

Proposed: Replace single pane windows with double windows.

Linear Feet of panel Edge	360.0 LF	Cooling System Efficiency	1 kW/ton	Heating System Efficiency	75%
Area of Panel	336.0 SF	Ex Occupied Cing Temp.	72 °F	Heating On Temp.	60 °F
Existing Infiltration Factor	0.75 cfm/LF	Ex Unoccupied Cing Temp.	72 °F	Ex Occupied Htg Temp.	72 °F
Proposed Infiltration Factor	0.15 cfm/LF	Cooling Occ Enthalpy Setpoint	27.5 Btu/lb	Ex Unoccupied Htg Temp.	72 °F
Existing U Value	1.13 Btuh/SF°F	Cooling Unocc Enthalpy Setpoint	27.5 Btu/lb	Electricity	\$ 0.134 \$/kWh
Proposed U Value	0.50 Btuh/SF°F			Natural Gas	\$ 0.98 \$/therm

					EXISTING LOADS		PROPOSED LOADS		COOLING ENERGY		HEATING ENERGY	
Avg Outdoor Air Temp. Bins °F	Avg Outdoor Air Enthalpy	Existing Equipment Bin Hours	Occupied Equipment Bin Hours	Unoccupied Equipment Bin Hours	Occupied Window Infiltration & Heat Load BTUH	Unoccupied Window Infiltration & Heat Load BTUH	Occupied Window Infiltration & Heat Load BTUH	Unoccupied Window Infiltration & Heat Load BTUH	Existing Cooling Energy kWh	Proposed Cooling Energy kWh	Existing Heating Energy Therms	Proposed Heating Energy Therms
					E	F	G	H	I	J	K	L
102.5	50.1	0	0	0	-28,554	-28,554	-10,616	-10,616	0	0	0	0
97.5	42.5	6	2	4	-20,718	-20,718	-7,929	-7,929	10	4	0	0
92.5	39.5	45	16	29	-16,608	-16,608	-6,360	-6,360	62	24	0	0
87.5	36.6	146	52	94	-12,579	-12,579	-4,815	-4,815	153	59	0	0
82.5	34.0	298	106	192	-8,793	-8,793	-3,344	-3,344	218	83	0	0
77.5	31.6	476	170	306	-5,169	-5,169	-1,920	-1,920	205	76	0	0
72.5	29.2	662	237	426	-1,545	-1,545	-497	-497	85	27	0	0
67.5	27.0	740	264	476	0	0	0	0	0	0	0	0
62.5	24.5	765	273	492	0	0	0	0	0	0	0	0
57.5	21.4	733	262	471	7,691	7,691	3,282	3,282	0	0	75	32
52.5	18.7	668	239	430	10,343	10,343	4,413	4,413	0	0	92	39
47.5	16.2	659	235	424	12,995	12,995	5,545	5,545	0	0	114	49
42.5	14.4	685	245	441	15,647	15,647	6,676	6,676	0	0	143	61
37.5	12.6	739	264	475	18,299	18,299	7,808	7,808	0	0	180	77
32.5	10.7	717	256	461	20,951	20,951	8,940	8,940	0	0	200	86
27.5	8.6	543	194	349	23,603	23,603	10,071	10,071	0	0	171	73
22.5	6.8	318	114	205	26,255	26,255	11,203	11,203	0	0	111	48
17.5	5.5	245	88	158	28,907	28,907	12,334	12,334	0	0	94	40
12.5	4.1	156	56	100	31,559	31,559	13,466	13,466	0	0	66	28
7.5	2.6	92	33	59	34,211	34,211	14,598	14,598	0	0	42	18
2.5	1.0	36	13	23	36,863	36,863	15,729	15,729	0	0	18	8
-2.5	0.0	19	7	12	39,515	39,515	16,861	16,861	0	0	10	4
-7.5	-1.5	8	3	5	42,167	42,167	17,992	17,992	0	0	4	2
TOTALS		8,760	3,129	5,631					735	273	1,322	564

Existing Panel Infiltration	180 cfm	Savings	758 Therms	\$ 746
Existing Panel Heat Transfer	336 Btuh°F		461 kWh	\$ 62
Proposed Panel Infiltration	54 cfm			\$ 808
Proposed Panel Heat Transfer	168 Btuh°F			

Panel 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	West Wall Second Floor	12	4	1	120.0	48.0	0.5	1	60.0	48.0
2	West Wall Second Floor	12	4	6	240.0	288.0	0.5	1	120.0	288.0
Total		12	4	6	360.0	336.0	0.33	1.13	180.0	336.0

Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

ECM-1 Replace the remaining 1966 single pane windows at the rear of the second floor - Cost

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
Window Replacement	336	sqft	\$ 65	\$ 40	\$ -	\$ 21,840	\$ 13,440	\$ -	\$ 35,280	Vendor Est per SF

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

\$ 35,280	Subtotal
\$ 12,348	35% Contingency
\$ 47,600	Total

ECM-1: Re-Commission Building Controls System

Summary: The existing controls system has been in place for several years and appears to be out of calibration since its original installation. Several energy saving controls algorithms do not appear to be functioning properly including night setback, economizer cooling, OA dampers and the use of trends and energy metering. It is proposed to retro-commission the entire building to bring the HVAC systems back into the originally designed operating parameters, as well as to make some enhancements where applicable.

Building Information:

135,000 Sq Footage	\$0.13 \$/kWh Blended
	\$0.98 \$/Therm

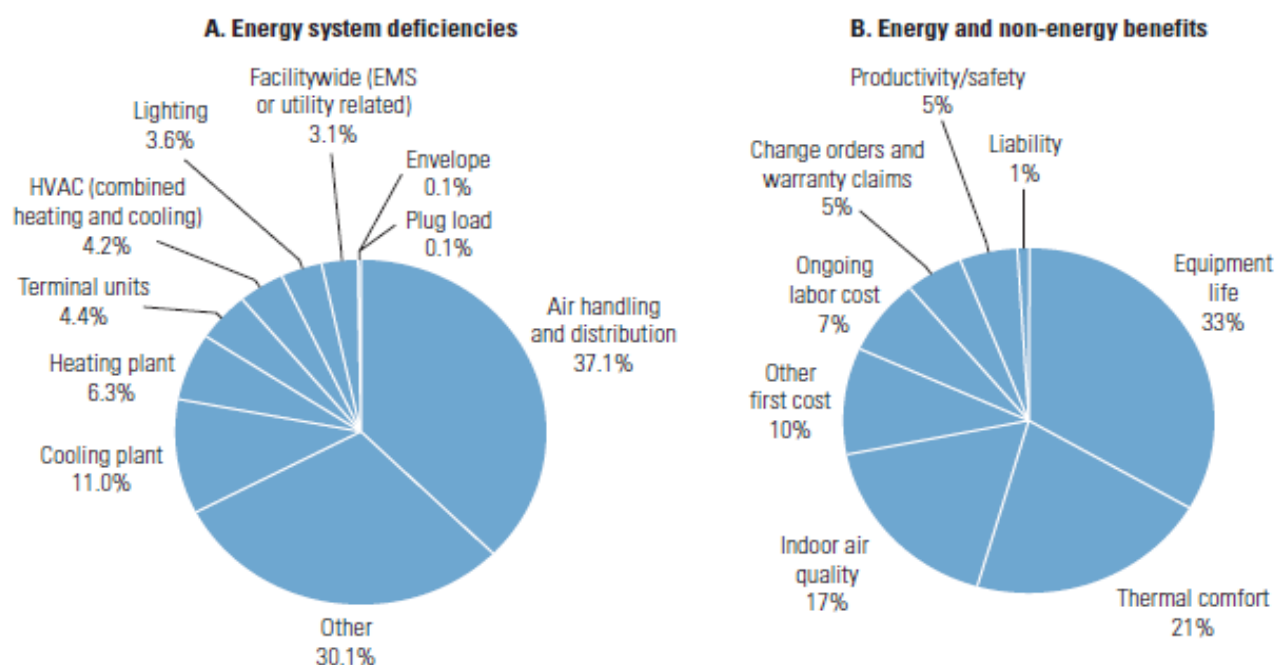
EXISTING CONDITIONS		
Existing Facility Total Electric usage	4,167,528	kWh
Existing Facility Total Gas usage	138,747	Therms
Existing Facility Cooling Electric usage	1,525,350	kWh ¹
Existing Facility Heating Natural Gas usage	81971	Therms ²
PROPOSED CONDITIONS		
Proposed Facility Cooling Electric Savings	152,535	kWh
Proposed Facility Natural Gas Savings	8197.1	Therms
SAVINGS		
Retro-Commissioning Electric Savings	152,535	kWh
Retro-Commissioning Natural Gas Savings	8,197	Therms
Total cost savings	\$ 28,581.67	

Assumptions

- 1 37% of facility total electricity dedicated to Cooling based on Building Utility Analysis
- 2 59% of facility total natural gas dedicated to Heating based on Building Utility Analysis
- 3 10% Typical Savings associated with Retro-Commissioning of controls based on EPA Energy Star Report (CH 5 - Retrocommissioning)

Figure 5.2: Retrocommissioning results

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



Note: EMS = energy management system.

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

Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

ECM-1: Re-Commission Building Controls System - Cost

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
									\$ -	
Controls and Sensors Retro-Commissioning	135000	SF	\$ 0.27	INC	INC	\$ 37,434	INC	INC	\$ 37,434	EPA Estimate
						\$ -	\$ -	\$ -	\$ -	

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

\$ 37,434	Subtotal
\$ 13,102	35% Contingency
\$ 50,536	Total

Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

ECM-3: Install Condensing Boiler to serve HW Reheat Coils and DHW

Currently a small steam boiler provides summer re-heat hot water (using heat exchangers) as well as direct steam to produce domestic hot water. This ECM evaluates adding a condensing hot water boiler to provide re-heat hot water directly as well as manufacturing domestic hot water using a heat exchanger. This boiler will operate in condensing mode all of the time , thus its efficiency will be 96%

+

Existing Fuel

Nat.Gas ▼

Proposed Fuel

Nat.Gas ▼

Item	Value	Units	Formula/Comments
Baseline Fuel Cost	\$ 0.98	/ Therm	
Proposed Fuel Cost	\$ 0.98	/ Therm	
Baseline Fuel Use	39,620	Therms	Based on utility data, and equipment input gas rates
Existing Boiler Efficiency	75%		Nameplate Efficiency
Baseline Boiler Load	2,971,500	Mbtu/yr	
Baseline Fuel Cost	\$ 39,012		
Proposed Boiler Plant Efficiency	96%		New Boiler Efficiency
Proposed Fuel Use	30,953	Therms	
Proposed Fuel Cost	\$ 30,478		
Estimated Annual Savings	8,667	Therms	

*Note to engineer: Link savings back to summary sheet in appropriate column.

Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

Multipliers	
Material:	1.03
Labor:	1.25
ECM-3: Install Condensing Boiler to serve HW Reheat Coils and DHW Equipment:	1.12

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
2000 MBH condensing boiler	1	EA	\$ 32,000	\$ 16,000		\$ 32,864	\$ 19,936	\$ -	\$ 52,800	Vendor Quote
Flue Installation	1	EA	\$ 5,000.0	\$ 2,500.00		\$ 5,135	\$ 3,115	\$ -	\$ 8,250	RS Means
DHW heat exchanger	1	EA	\$ 15,000.0	\$ 7,500.00		\$ 15,405	\$ 9,345	\$ -	\$ 24,750	RS Means
Pumps	3	EA	\$ 2,500.0	\$ 1,000.00		\$ 7,703	\$ 3,738	\$ -	\$ 11,441	RS Means
Controls	1	LS	\$ 1,000.0	\$ 2,500.00		\$ 1,027	\$ 3,115	\$ -	\$ 4,142	RS Means
Electrical	1	LS	\$ 5,000	\$ 3,000		\$ 5,135	\$ 3,738	\$ -	\$ 8,873	Est
Piping (Gas, HW, condensate)	1	LS	\$ 15,000	\$ 5,000		\$ 15,405	\$ 6,230	\$ -	\$ 21,635	Est
General Construction	1	LS	\$ 2,500	\$ 1,500		\$ 2,568	\$ 1,869	\$ -	\$ 4,437	Est

Note: Cost Estimates are for energy calculations only - do not use for procurement

\$ 136,327	Subtotal
\$ 47,714.45	35% Contingency
\$ 184,041	Total

Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

ECM-4: Replace Elctric Rooftop units with Gas Rooftop units

There are several small packaged rooftop HVAC units that have electric resistance heat coils. This measure proposes to replace these units with new packaged untis having natural gas heat exchangers .

Existing Fuel

Electric ▼

Proposed Fuel

Nat.Gas ▼

Item	Value	Units	Formula/Comments
Baseline Fuel Cost	\$ 0.13	/ kWh	
Proposed Fuel Cost	\$ 0.98	/ Therm	Estimated price rate for natural gas based Rectory utility data
Baseline Fuel Use	198,497	kWh	Based on historical utility data
Existing Coil Efficiency	100%		Estimated or Measured
Baseline RTU Load	677,471	Mbtu/yr	Baseline Fuel Use x Existing Efficiency x 138 Mbtu/Gals # 2
Baseline Fuel Cost	\$ 26,691		
Proposed RTU Efficiency	80%		
Proposed Fuel Use	8,468	Therms	Baseline Boiler Load / Proposed Efficiency / 100 Mbtu/Therms
Proposed Fuel Cost	\$ 8,338		

*Note to engineer: Link savings back to summary sheet in appropriate column.

FUEL SWITCH SAVINGS SUMMARY					
	Electric		Nat Gas Usage		Total Cost
	(kWh)		(Therms)		(\$)
Savings	198,497		(8,468)		\$18,352

Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

Multipliers	
Material:	1.05
Labor:	1.67
Equipment:	1.32

ECM-4: Replace Elctric Rooftop units with Gas Rooftop units - Cost

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
						\$ -	\$ -	\$ -	\$ -	
Packaged 5.0 ton gas / DX rooftop units	8	EA	\$ 3,500	\$ 500	\$ 500	\$ 29,344	\$ 6,676	\$ 5,288	\$ 41,308	
Gas Piping, Valves, etc	8	LS	\$ 2,500	\$ 1,500		\$ 20,960	\$ 20,028	\$ -	\$ 40,988	
Electrical	8	LS	\$ 1,500	\$ 1,000		\$ 12,576	\$ 13,352	\$ -	\$ 25,928	
						\$ -	\$ -	\$ -	\$ -	

Cost estimated are for calculations only – do not use for procurement

No asbestos abatement costs are included

\$ 108,224	Subtotal
\$37,878.40	35% Contingency
\$ 146,102	Total

ECM-5 Install Energy Recovery on AHU-4

Summary:

AHU-4 is a large heating / cooling / humidification air handling unit that serves multiple spaces in the hospital. This unit is constant volume and has a separate constant volume exhaust fan located nearby on the the roof. This measure analyzes energy savings that result from the installation of a total energy recovery unit that will reclaim heat and latent energy from the exhaust air stream and transfer it to pre-heat (pre-cool) outdoor air. Natural Gas and Electrical energy savings result in reduced heating, cooling, dehumidifaction and reheat loads.

Energy Recovery Capacities	
81,909	Peak BTUH Cooling Energy Recovered*
97,835	Peak BTUH Heating Energy Recovered*

*See unit data table below

Bin Data		Heating	Cooling	Heating Energy Recovered	Cooling Energy Recovered
OAT	Hours	% Load	% Load	Therms	kWh
97.5	3	0%	100%	0	90
92.5	33	0%	95%	0	940
87.5	123	0%	85%	0	3,136
82.5	477	0%	75%	0	10,732
77.5	656	0%	65%	0	12,792
72.5	742	0%	55%	0	12,243
67.5	784	0%	45%	0	10,584
62.5	983	0%	0%	0	0
57.5	625	0%	0%	0	0
52.5	540	60%	0%	396	0
47.5	457	65%	0%	363	0
42.5	671	70%	0%	574	0
37.5	1,067	75%	0%	979	0
32.5	685	80%	0%	670	0
27.5	369	85%	0%	384	0
22.5	321	95%	0%	373	0
17.5	184	100%	0%	225	0
12.5	40	100%	0%	49	0
7.5	0	100%	0%	0	0
2.5	0	100%	0%	0	0
-2.5	0	100%	0%	0	0
Totals:				4,013	50,517

Affected Equipment & ERU Schedule

AHU Data						Exhaust Fan Data	
Tag	Service	Total CFM	Return CFM	Summer Discharge	Winter Discharge	Tag	CFM
				(°F)	(°F)		
AHU-4	Multiple	35000	15000	68	72	EF	20000

Energy Recovery Unit Data							
Tag	Supply CFM (OA)	Summer Leaving Air Temp	Summer Recovery Effectiveness	Summer Energy Recovered	Winter Leaving Air Temp	Winter Recovery Effectiveness	Winter Energy Recovered
		(°F)	(%)	(Btu/hr)	(°F)	(%)	(Btu/hr)
ERU	35000	75	72.23%	81,909	80	75.49%	97,835

Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

ECM-5 Install Energy Recovery on AHU-4 - 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.		
						\$ -	\$ -	\$ -	\$ -	
Heat Recovery Units	1	EA	\$ 55,000	\$ 15,000	\$ 5,000	\$ 56,485	\$ 18,690	\$ 5,620	\$ 80,795	Vendor Quote
Misc. Electrical	1	EA	\$ 5,000	\$ 2,500		\$ 5,135	\$ 3,115	\$ -	\$ 8,250	RSMeans 2015
Ductwork	1	LS	\$ 15,000	\$ 7,500		\$ 15,405	\$ 9,345	\$ -	\$ 24,750	RSMeans 2015
Ductwork Insulation	1	LS	\$ 2,500	\$ 2,000		\$ 2,568	\$ 2,492	\$ -	\$ 5,060	RSMeans 2015
TAB	1	LS	\$ 450	\$ 1,500		\$ 462	\$ 1,869	\$ -	\$ 2,331	RSMeans 2015
						\$ -	\$ -	\$ -	\$ -	

Note: cost Estimates are for energy calculations only - do not use for procurement

\$ 121,186	Subtotal
\$ 42,415	35% Contingency
\$ 163,600	Total

Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

ECM-6 Install Kitchen Hood Control System

Description: This ECM evaluates the thermal and electrical energy savings associated with the implementation of a variable flow controlled exhaust hood (Fan) and make-up air unit. The Hood controller uses infrared heat sensors to detect the level of smoke produced by the cooking operations and automatically adjusts the exhasut fan and make-up air fan to provide the proper amount of air flow needed to remove the particulate from the hood. The system uses a default minimum air flow value to ensure that smoke particulate is removed at all times during cooking operations.

Item	Value	Units	Formula/Comments
Fuel Cost	\$ 0.98	/ Therm	
Electricity Cost	\$ 0.13	/kWh	
FORMULA CONSTANTS			
Conversion	0.746	HP/kW	
Constant	24	hrs/day	
Constant	1.08	(btu/hr)/CFM·F	
Conversion	3.412	btu/kWh	
ELECTRIC FAN SAVINGS			
Facility Type	Other		
Quantity of Kitchen Hood Fan Motors	1		
Kitchen Hood Fan Motor HP	3.0	HP	Estimated
Motor Load Factor	0.90		NJ Protocols
Efficiency of Fan Motor(s)	87.5%		
Kitchen Hood Fan Run Hours	5,250		
Fan Motor Power Reduction (From VFD)	0.584		
Fan Electricity Savings	7,057	kWh	
HEATING SAVINGS			
Kitchen is Heated?	Y		
Square Footage of Kitchen	1,200	ft²	Estimated
Code Required Ventilation Rate	0.70	CFM/ft²	NJ Protocols
Ventilation Oversize Factor	1.40		NJ Protocols
Flow Reductuion (from VFD/Control)	0.310		
Heating Degree Day	5,073		NJ Protocols Table - Atlantic City - Health Care
Heating System Efficiency	75%		System efficiency
Heating Savings	639	MMbtu	
Heating Savings	6,392	Therms	
COOLING SAVINGS			
Kitchen is Cooled?	Y		
Cooling Degree Day	1,499		NJ Protocols Table- Atlantic city -Healthcare
Cooling System Efficiency	3.00		COP
Cooling Savings	1,384	kWh	
TOTAL SAVINGS			
Electricity Savings	8,441	kWh	
Fuel Savings	6,392	Therms	
Cost Savings	\$ 7,428		

Q
HP
LF
FEFF
RH
PR

SF
CFM/SF
OF
FR
HDD
HEFF

CDD
CEFF

Savings calculation formulas are taken from NJ Protocols document for Kitchen Hood

Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

ECM-6 Install Kitchen Hood Control System - Cost

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
MeLink Kitchen Hood Control System	1	ea	\$ 15,000	\$ 5,000		\$ 15,405	\$ 6,230	\$ -	\$ 21,635	Vendor Est
3.0 HP Motor	1	ea	\$ 250	\$ 250		\$ 257	\$ 312	\$ -	\$ 568	RS Means 2012
Electrical - misc.	1	ls	\$ 1,000	\$ 6,000		\$ 1,027	\$ 7,476	\$ -	\$ 8,503	RS Means 2012
						\$ -	\$ -	\$ -	\$ -	
						\$ -	\$ -	\$ -	\$ -	

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

\$ 30,706	Subtotal
\$ 10,747	35% Contingency
\$ 41,453	Total

ECM-7 Install a walk-in cooler/freezer control system

ECM Description :

For kitchens that contain walk-in coolers and freezers, CoolTrol is a controller that reduces energy consumption by controlling off of dewpoint temperature. Compressor cycling is reduced and the evaporator fans run 25% to 80% less. Door and frame heaters are also installed and controlled by store dew point temperature; this can reduce run time by up to 95% in coolers and 60% in freezers. The evaporator fan motors are also replaced with hi-efficiency fan motors saving 40% to 70% in energy. The proposed system comprises of an anti-sweat door controller, evaporator fan motor replacement and CoolTrol Cooler Control System.

Utility Cost

\$0.13 \$/kWh Blended

EXISTING CONDITIONS		
Walk-In Freezer(s)		
Existing Freezer Controls?	N	
Quantity of Walk-In Freezers	1	
Nameplate Amps of Freezer Evaporator Fan	3.0	AmpsEF
Nameplate Volts of Freezer Evaporator Fan	208	VoltsEF
Phase of Evaporator Fan	1	PhaseEF
Power Factor of Evaporator Fan	0.55	PFEF
Operating Hours	8,760	hrs
Load Reduction	65%	LR
Electricity Savings (Evaporator Fan)	1,954	kWhEF
Electricity Savings (Evaporator Fan Reduced Heat)	875	kWhRH
Total Walk-In Freezer(s) Electricity Savings	2,830	kWh
Walk-In Cooler(s)		
Existing Cooler Controls?	N	
Quantity of Walk-In Coolers	1	
Nameplate Amps of Cooler Evaporator Fan	4.0	
Nameplate Volts of Cooler Evaporator Fan	115	
Phase of Evaporator Fan	1	
Power Factor of Evaporator Fan	0.55	
Operating Hours	8,760	hrs
Load Reduction	65%	
Electricity Savings (Evaporator Fan)	1,441	kWh
Electricity Savings (Evaporator Fan Reduced Heat)	645	kWh
Total Walk-In Cooler(s) Electricity Savings	2,086	kWh
SAVINGS		
Total Electricity Savings	4,916	kWh
Total Cost Savings	\$ 661	
Estimated Cost	\$ 22,275	
Simple Payback	33.7	years

Savings calculation formulas are taken from NJ Protocols document for Walk-in Controller

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

Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

ECM-7 Install a walk-in cooler/freezer control system - Cost

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
									\$ -	
Turnkey Walk-In Controller & Equipment	1	EA	\$ 10,000	\$ 5,000	\$ -	\$ 10,270	\$ 6,230	\$ -	\$ 16,500	Vendor Estimate
						\$ -	\$ -	\$ -	\$ -	

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

\$ 16,500	Subtotal
\$ 5,775	35% Contingency
\$ 22,275	Total

ECM-8 Replace gas fired absorption chiller with a natural gas engine driven absorption chiller

Description: This ECM evaluates the natural gas energy savings associated with the 75 ton absorption chiller, the 220 ton centrifugal chiller, and augmenting their combined operation with an engine driven gas fired absorption chiller of similar capacity. This replacement engine driven chiller has a capacity of 300 tons and the waste heat generated from operation will be used to produce domestic hot water and hot water for reheat coils.

Item	Value	Units	Formula/Comments
Demand Unit Cost	\$ 8.28	/ kW	
Consumption Rate	\$ 0.13	/ kWh	
FORMULA CONSTANTS			
Peak Duty Cycle	67%		NJ Protocols
Equivalent full Load Hours	947	hrs	NJ Protocols
Capacity of Chillers	220	tons	
PART-LOAD CONDITIONS			
Baseline IPLV	0.67	kW/ton	From NJ Protocols Table
Proposed IPLV	1.35	kW/ton	From Vender - Tecogen CH-300x
FULL LOAD CONDITIONS			
Baseline FLV	1.89	kW/ton	From NJ Protocols Table
Proposed FLV	2.07	kW/ton	From Vender - Tecogen CH-300x
EXISTING OPERATION - SUMMER BOILER			
	39,620	Therms	
	\$ 39,012	\$	
EXISTING OPERATION - CENTRIFUGAL CHILLER			
	463,557	kWh	
	\$ 62,331	\$	
EXISTING OPERATION - ABSORPTION CHILLER			
	17,156	Therms required (based on utility breakdown)	
Cost of Operation	\$ 16,893	\$	
PROPOSED OPERATION			
Gas Engine Efficiency	80%		
Natural Gas Usage	24,398	Therms required	
Cost of Operation	\$ 24,024		
Cost per therm	\$ 0.98	\$/Therm	
ENERGY SAVINGS			
Electric Savings	463,557	kWh	
Natural Gas Saved	15,222		
Annual Cost of Operation	\$ 23,655		
Cost Savings	\$ 77,319		

Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

ECM-8 Replace gas fired absorption chiller with a natural gas engine driven absorp

Description	QTY	UNIT	UNIT COSTS			SUBTOTAL COSTS			TOTAL COST	REMARKS
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.		
300 Ton Chiller	1	EA	\$ 450,000	\$ 15,000	\$ -	\$ 462,150	\$ 18,690	\$ -	\$ 480,840	RS Means 2012
Miscellaneous Piping	1	EA	\$ 2,000	\$ 2,000		\$ 2,054	\$ 2,492	\$ -	\$ 4,546	Estimated
Electrical	1	EA	\$ 2,500	\$ 1,500		\$ 2,568	\$ 1,869	\$ -	\$ 4,437	
						\$ -	\$ -	\$ -	\$ -	
						\$ -	\$ -	\$ -	\$ -	

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

\$ 489,823	Subtotal
\$ 171,438	35% Contingency
\$ 661,260	Total

Inspira Health Network
CHA Project Numer: 30212
Elmer Hospital

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 governments 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)	135,000
Is this audit funded by NJ BPU (Y/N)	Yes

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

Board of Public Utilites (BPU)

	Annual Utilities	
	kWh	Therms
Existing Cost (from utility)	\$563,179	\$136,617
Existing Usage (from utility)	4,167,528	138,747
Proposed Savings	1,214,503	34,780
Existing Total MMBtus	28,098	
Proposed Savings MMBtus	7,623	
% Energy Reduction	27.1%	
Proposed Annual Savings	\$199,438	

	Min (Savings = 15%)		Increase (Savings > 15%)		Max Incentive		Achieved Incentive	
	\$/kWh	\$/therm	\$/kWh	\$/therm	\$/kWh	\$/therm	\$/kWh	\$/therm
Incentive #2	\$0.09	\$0.90	\$0.005	\$0.05	\$0.11	\$1.25	\$0.11	\$1.25
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	\$6,750
Incentive #2	\$133,595	\$43,475	\$177,070
Incentive #3	\$133,595	\$43,475	\$177,070
Total All Incentives	\$267,191	\$86,950	\$360,890

Total Project Cost	\$1,708,551
--------------------	-------------

	Allowable Incentive	
% Incentives #1 of Utility Cost*	1.0%	\$6,750
% Incentives #2 of Project Cost**	10.4%	\$177,070
% Incentives #3 of Project Cost**	10.4%	\$177,070
Total Eligible Incentives***	\$360,890	
Project Cost w/ Incentives	\$1,347,661	

Project Payback (years)	
w/o Incentives	w/ Incentives
8.6	6.8

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

EXISTING CONDITIONS										RETROFIT CONDITIONS										COST & SAVINGS ANALYSIS									
Field Code	Area Description Unique description of the location - Room number/Room name: Floor number (if applicable)	No. of Fixtures before the retrofit	Standard Fixture Code "Lighting Fixture Code" Example R F01 = 2'x2' Troffit 4 w Recess, Floor 2 Lamps U shape	Fixture Code Code from Table of Standard Fixture Wattages	Watts per Fixture Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fix) * (Fix No.)	Exist Control Pre-inst. control device	Estimated daily hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	No. of fixtures after the retrofit	Standard Fixture Code "Lighting Fixture Code" Example R F01 = 2'x2' Troffit 4 w Recess, Floor 2 lamps U shape	Fixture Code Code from Table of Standard Fixture Wattages	Watts per Fixture Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fix) * (Number of Fixtures)	Retrofit control device	Annual Hours Estimated annual hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kW Saved (Original Annual kW) - (Retrofit Annual kW)	Annual \$ Saved (kWh Saved) * (\$/kWh)	Retrofit Cost Cost for renovations to lighting system	NJ Smart Start Lighting Incentive Prescriptive Lighting Measures	Simple Payback With Out Incentive Length of time for renovations cost to be recovered	Simple Payback Length of time for renovations cost to be recovered					
198LED	ICU Patient Room 1	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	SW	4,368	218	52	0.0	\$	7.41	\$	405.00		54.7	54.7			
21BLED	ICU Patient Room 1	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x4	45	0.1	SW	4,368	393	393	0.1	\$	55.54	\$	644.00	\$100	11.6	9.8			
96	ICU Patient Room 1-Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	SW	1,800	59	-	0.0	\$	-	\$	-		#DIV/0!				
133	ICU Patient Room 1-Bathroom	1	CF 26	CFQ26x-L	27	0.0	SW	1800	49	1	CF 26	CFQ26x-L	27	0.0	SW	1,800	49	-	0.0	\$	-	\$	-		#DIV/0!				
198LED	ICU Patient Room 2	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	SW	4,368	218	52	0.0	\$	7.41	\$	405.00		54.7	54.7			
21BLED	ICU Patient Room 2	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x4	45	0.1	SW	4,368	393	393	0.1	\$	55.54	\$	644.00	\$100	11.6	9.8			
247LED	ICU Patient 2/3 Washroom	1	T 40 R F 3 (MAG)	F43SE	136	0.1	SW	1800	245	1	T 59 R LED	RTLLED38	38	0.0	SW	1,800	68	176	0.1	\$	30.65	\$	236.25		7.7	7.7			
198LED	ICU Patient Room 3	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	SW	4,368	218	52	0.0	\$	7.41	\$	405.00		54.7	54.7			
21BLED	ICU Patient Room 3	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x4	45	0.1	SW	4,368	393	393	0.1	\$	55.54	\$	644.00	\$100	11.6	9.8			
198LED	ICU Patient Room 4	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	SW	4,368	218	52	0.0	\$	7.41	\$	405.00		54.7	54.7			
21BLED	ICU Patient Room 4	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x4	45	0.1	SW	4,368	393	393	0.1	\$	55.54	\$	644.00	\$100	11.6	9.8			
198LED	ICU Patient Room 5	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	SW	4,368	218	52	0.0	\$	7.41	\$	405.00		54.7	54.7			
21BLED	ICU Patient Room 5	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x4	45	0.1	SW	4,368	393	393	0.1	\$	55.54	\$	644.00	\$100	11.6	9.8			
198LED	ICU Patient Room 6	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	SW	4,368	218	52	0.0	\$	7.41	\$	405.00		54.7	54.7			
21BLED	ICU Patient Room 6	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x4	45	0.1	SW	4,368	393	393	0.1	\$	55.54	\$	644.00	\$100	11.6	9.8			
198LED	ICU Patient Room 7	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	SW	4,368	218	52	0.0	\$	7.41	\$	405.00		54.7	54.7			
21BLED	ICU Patient Room 7	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x4	45	0.1	SW	4,368	393	393	0.1	\$	55.54	\$	644.00	\$100	11.6	9.8			
220	ICU Nursing Station	5	S 17 C F 1 (ELE)	F21LLL	20	0.1	SW	5840	584	5	S 17 C F 1 (ELE)	F21LLL	20	0.1	SW	5,840	584	0.0	\$	-	\$	-		#DIV/0!					
40LED	ICU Nursing Station	15	T 32 R F 2 (ELE)	F42LL	60	0.9	SW	5840	5280	15	T 38 R LED	RTLLED38	38	0.6	SW	5,840	3,329	1,927	0.3	\$	261.24	\$	3,543.75		13.6	13.6			
40LED	Nurse's Lounge	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1456	175	1	T 38 R LED	RTLLED38	38	0.1	SW	1,456	55	11.97	0.0	\$	11.97	\$	472.50		39.5	39.5			
40LED	Clean Utility	4	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1456	349	4	T 38 R LED	RTLLED38	38	0.2	SW	1,456	221	128	0.1	\$	23.93	\$	945.00		39.5	39.5			
40LED	Bedroom	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	3120	374	2	T 38 R LED	RTLLED38	38	0.1	SW	3,120	237	137	0.0	\$	20.64	\$	472.50		22.9	22.9			
40LED	Solied Utility	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1456	175	2	T 38 R LED	RTLLED38	38	0.1	SW	1,456	55	11.97	0.0	\$	11.97	\$	472.50		39.5	39.5			
40LED	Closet	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1456	87	1	T 38 R LED	RTLLED38	38	0.0	SW	1,456	55	32	0.0	\$	5.98	\$	236.25		39.5	39.5			
40LED	Closet	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1456	87	1	T 38 R LED	RTLLED38	38	0.0	SW	1,456	55	32	0.0	\$	5.98	\$	236.25		39.5	39.5			
196LED	Elevator Hallway	2	W 32 C F 4 (ELE)	F44LL	112	0.2	Breaker	8760	1,962	2	T 74 R LED	RTLLED50	50	0.1	Breaker	8,760	876	1,086	0.1	\$	141.08	\$	472.50		3.3	3.3			
196LED	Storage	2	W 32 C F 4 (ELE)	F44LL	112	0.2	SW	1040	233	2	T 74 R LED	RTLLED50	50	0.1	SW	1,040	104	129	0.1	\$	27.61	\$	472.50		17.1	17.1			
196LED	Anesthesia	1	W 32 C F 4 (ELE)	F44LL	112	0.1	SW	2600	528	1	T 74 R LED	RTLLED50	50	0.1	SW	2,600	130	161	0.1	\$	25.27	\$	236.25		9.3	9.3			
196LED	Men's Bathroom	1	W 32 C F 4 (ELE)	F44LL	112	0.1	SW	3120	349	1	T 74 R LED	RTLLED50	50	0.1	SW	3,120	156	193	0.1	\$	29.09	\$	236.25		8.1	8.1			
135	Men's Bathroom	1	SP 13 R C F 1	CFQ13x-L	15	0.0	SW	3120	47	1	SP 13 R C F 1	CFQ13x-L	15	0.0	SW	3,120	47	-	0.0	\$	-	\$	-		#DIV/0!				
196LED	Women's Bathroom	1	W 32 C F 4 (ELE)	F44LL	112	0.1	SW	3120	349	1	T 74 R LED	RTLLED50	50	0.1	SW	3,120	156	193	0.1	\$	29.09	\$	236.25		8.1	8.1			
135	Women's Bathroom	1	SP 13 R C F 1	CFQ13x-L	15	0.0	SW	3120	47	1	SP 13 R C F 1	CFQ13x-L	15	0.0	SW	3,120	47	-	0.0	\$	-	\$	-		#DIV/0!				
135	Closet	2	SP 13 R C F 1	CFQ13x-L	15	0.0	SW	1456	44	2	SP 13 R C F 1	CFQ13x-L	15	0.0	SW	1,456	44	-	0.0	\$	-	\$	-		#DIV/0!				
196LED	Office	2	W 32 C F 4 (ELE)	F44LL	112	0.2	SW	2600	582	2	T 74 R LED	RTLLED50	50	0.1	SW	2,600	260	322	0.1	\$	50.54	\$	472.50		9.3	9.3			
40LED	Bedroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	3120	187	1	T 38 R LED	RTLLED38	38	0.0	SW	3,120	119	69	0.0	\$	10.32	\$	236.25		22.9	22.9			
196LED	Office	2	W 32 C F 4 (ELE)	F44LL	112	0.2	SW	2600	582	2	T 74 R LED	RTLLED50	50	0.1	SW	2,600	260	322	0.1	\$	50.54	\$	472.50		9.3	9.3			

Field Code		Area Description Unique description of the location - Room number/Room Name: Floor number (if applicable)	No. of Fixtures before the retrofit	EXISTING CONDITIONS										RETROFIT CONDITIONS										COST & SAVINGS ANALYSIS									
				Standard Fixture Code "Lighting Fixture Code" Example R F01 = 2'x2' Troff 40 w Recess, Floor 2 lamps U shape	Fixture Code Code from Table of Standard Fixture Wattages	Watts per Fixture Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fix) * (Fix No.)	Exist Control Pre-inst. control device	Estimated daily hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	Number of Fixtures after the retrofit	Standard Fixture Code "Lighting Fixture Code" Example 2T 40 R F01 = 2'x2' Troff 40 w Recess, Floor 2 lamps U shape	Fixture Code Code from Table of Standard Fixture Wattages	Watts per Fixture Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fix) * (Number of Fixtures)	Retrofit Control device	Estimated annual hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kW Saved (Original Annual kW) - (Retrofit Annual kW)	Annual \$ Saved (KWh Saved) * (\$/KWh)	Retrofit Cost Cost for renovations to lighting system	N3 Smart Start Lighting Incentive Prescriptive Lighting Measures	Simple Payback Length of time for renovations cost to be recovered	Simple Payback Length of time for renovations cost to be recovered								
198LED		Patient Room 243	2	2T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T 25 R LED	2RTLED	25	0.1	SW	4,368	218	52	0.0	\$ 7.41	\$ 405.00	54.7	54.7									
218LED		Patient Room 243	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x3	45	0.1	SW	4,368	393	393	0.1	\$ 55.54	\$ 644.00	11.6	9.8									
96		Patient Room 243 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	SW	1,800	59	-	0.0	\$ -	\$ -	-	-									
133		Patient Room 243 Bathroom	1	CF 26	CFQ26/L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L	27	0.0	SW	1,800	49	-	0.0	\$ -	\$ -	-	-									
198LED		Patient Room 244	2	2T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T 25 R LED	2RTLED	25	0.1	SW	4,368	218	52	0.0	\$ 7.41	\$ 405.00	54.7	54.7									
218LED		Patient Room 244	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x3	45	0.1	SW	4,368	393	393	0.1	\$ 55.54	\$ 644.00	11.6	9.8									
96		Patient Room 244 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	SW	1,800	59	-	0.0	\$ -	\$ -	-	-									
133		Patient Room 244 Bathroom	1	CF 26	CFQ26/L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L	27	0.0	SW	1,800	49	-	0.0	\$ -	\$ -	-	-									
198LED		Patient Room 245	2	2T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T 25 R LED	2RTLED	25	0.1	SW	4,368	218	52	0.0	\$ 7.41	\$ 405.00	54.7	54.7									
218LED		Patient Room 245	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x3	45	0.1	SW	4,368	393	393	0.1	\$ 55.54	\$ 644.00	11.6	9.8									
96		Patient Room 245 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	SW	1,800	59	-	0.0	\$ -	\$ -	-	-									
133		Patient Room 245 Bathroom	1	CF 26	CFQ26/L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L	27	0.0	SW	1,800	49	-	0.0	\$ -	\$ -	-	-									
40LED		Closet	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1456	87	1	T 38 R LED	RTLED38	38	0.0	SW	1,456	55	32	0.0	\$ 5.98	\$ 236.25	39.5	39.5									
198LED		Patient Room 246	2	2T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T 25 R LED	2RTLED	25	0.1	SW	4,368	218	52	0.0	\$ 7.41	\$ 405.00	54.7	54.7									
218LED		Patient Room 246	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x3	45	0.1	SW	4,368	393	393	0.1	\$ 55.54	\$ 644.00	11.6	9.8									
96		Patient Room 246 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	SW	1,800	59	-	0.0	\$ -	\$ -	-	-									
133		Patient Room 246 Bathroom	1	CF 26	CFQ26/L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L	27	0.0	SW	1,800	49	-	0.0	\$ -	\$ -	-	-									
198LED		Patient Room 247	2	2T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T 25 R LED	2RTLED	25	0.1	SW	4,368	218	52	0.0	\$ 7.41	\$ 405.00	54.7	54.7									
218LED		Patient Room 247	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x3	45	0.1	SW	4,368	393	393	0.1	\$ 55.54	\$ 644.00	11.6	9.8									
96		Patient Room 247 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	SW	1,800	59	-	0.0	\$ -	\$ -	-	-									
133		Patient Room 247 Bathroom	1	CF 26	CFQ26/L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L	27	0.0	SW	1,800	49	-	0.0	\$ -	\$ -	-	-									
40LED		East Wing Staff Lounge	4	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	524	2	T 38 R LED	RTLED38	38	0.1	SW	4,368	332	192	0.0	\$ 27.15	\$ 472.50	17.4	17.4									
96		East Wing Staff Lounge Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	3120	103	1	W 17 C F 2	F22LL	33	0.0	SW	3,120	103	-	0.0	\$ -	\$ -	-	-									
254LED		East Wing Staff Lounge Bathroom	1	CFQ26/L	CFQ26/L	66	0.1	SW	3120	206	1	EW SOLARIUM	EW SOLARIUM	84	0.1	SW	3,120	122	84	0.0	\$ 12.67	\$ 438.75	34.6	34.6									
133		East Wing Solarium Bathroom	4	CF 26	CFQ26/L	27	0.1	SW	4368	472	4	CF 26	CFQ26/L	27	0.1	SW	4,368	472	-	0.0	\$ -	\$ -	-	-									
96		East Wing Solarium Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	3120	103	1	W 17 C F 2	F22LL	33	0.0	SW	3,120	103	-	0.0	\$ -	\$ -	-	-									
254LED		East Wing Solarium Bathroom	1	CFQ26/L	CFQ26/L	66	0.1	SW	3120	206	1	EW SOLARIUM	EW SOLARIUM	84	0.1	SW	3,120	122	84	0.0	\$ 12.67	\$ 438.75	34.6	34.6									
198LED		Patient Room 248	2	2T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T 25 R LED	2RTLED	25	0.1	SW	4,368	218	52	0.0	\$ 7.41	\$ 405.00	54.7	54.7									
218LED		Patient Room 248	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x3	45	0.1	SW	4,368	393	393	0.1	\$ 55.54	\$ 644.00	11.6	9.8									
96		Patient Room 248 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	SW	1,800	59	-	0.0	\$ -	\$ -	-	-									
133		Patient Room 248 Bathroom	1	CF 26	CFQ26/L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L	27	0.0	SW	1,800	49	-	0.0	\$ -	\$ -	-	-									
198LED		Patient Room 249	2	2T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T 25 R LED	2RTLED	25	0.1	SW	4,368	218	52	0.0	\$ 7.41	\$ 405.00	54.7	54.7									
218LED		Patient Room 249	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x3	45	0.1	SW	4,368	393	393	0.1	\$ 55.54	\$ 644.00	11.6	9.8									
96		Patient Room 249 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	SW	1,800	59	-	0.0	\$ -	\$ -	-	-									
133		Patient Room 249 Bathroom	1	CF 26	CFQ26/L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L	27	0.0	SW	1,800	49	-	0.0	\$ -	\$ -	-	-									
198LED		Patient Room 250	2	2T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T 25 R LED	2RTLED	25	0.1	SW	4,368	218	52	0.0	\$ 7.41	\$ 405.00	54.7	54.7									
218LED		Patient Room 250	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4368	786	2	4 R LED Tube	200732x3	45	0.1	SW	4,368	393	393	0.1	\$ 55.54	\$ 644.00	11.6	9.8									
96		Patient Room 250 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	SW	1,800	59	-	0.0	\$ -	\$ -	-	-									
133		Patient Room 250 Bathroom	1	CF 26	CFQ26/L	27	0																										

EXISTING CONDITIONS										RETROFIT CONDITIONS										COST & SAVINGS ANALYSIS									
Field Code	Area Description Unique description of the location - Room number/Room name: Floor number (if applicable)	No. of Fixtures before the retrofit	Lighting Fixture Code* Example T 40 R F 3 (MAG) = 2'x40" Troff 40 w Recess, Floor 2 lamps U shape	Fixture Code Code from Table of Standard Fixture Wattages	Watts per Fixture Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fix) * (Fix No.)	Exist Control device	Annual Hours Estimated daily hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	No. of fixtures after the retrofit	Lighting Fixture Code* Example T 40 R F 3 (MAG) = 2'x40" Troff 40 w Recess, Floor 2 lamps U shape	Fixture Code Code from Table of Standard Fixture Wattages	Watts per Fixture Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fix) * (Number of Fixtures)	Retrofit control device	Annual Hours Estimated annual hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kW Saved (Original Annual kW) - (Retrofit Annual kW)	Annual \$ Saved (kWh Saved) * (\$/kWh)	Retrofit Cost Cost for renovations to lighting system	N3 Smart Start Lighting Incentive Prescriptive Lighting Measures	Simple Payback Length of time for renovations cost to be recovered	Simple Payback Length of time for renovations cost to be recovered					
135	Reception	5	SP 13 R C F 1	CFQ13/L	15	0.1	SW	2600	195	5	SP 13 R C F 1	CFQ13/L	15	0.1	SW	2,600	195	- 0.0	\$ -	\$ -	\$ -								
247LED	Reception	1	T 40 R F 3 (MAG)	F43SE	136	0.1	SW	2600	354	1	T 59 R LED	RTLED38	38	0.0	SW	2,600	99	255.0	\$	39.94	\$	236.25	80	5.9	5.9				
240LED	Reception	2	S 17 C F 1 (ELE)	F21ILL	20	0.0	SW	2600	104	2	S 17 C F 1 (ELE)	RTLED38	38	0.0	SW	2,600	104	0.0	\$	0.00	\$	0.00	80						
254LED	Bathroom	1	CFQ26/L	CFQ26/L	66	0.1	SW	3120	206	1	EVO35/L	RTLED38	38	0.0	SW	3,120	122	84.0	\$	12.67	\$	438.75	80	34.6	34.6				
40LED	Phone Closet	1	T 32 R F 2 (ELE)	F42LL	87	0.1	SW	1456	87	1	T 38 R LED	RTLED38	38	0.0	SW	1,456	55	32.00	\$	5.98	\$	236.25	80	39.5	39.5				
247LED	Hallway	5	T 40 R F 3 (MAG)	F43SE	136	0.7	SW	8760	5,957	5	T 59 R LED	RTLED38	38	0.2	SW	8,760	1,664	4,292.0	\$	557.50	\$	1,181.25	80	2.1	2.1				
276	Hyperbatic Wing	9	2T 25 R LED	2RTLED	25	0.2	3 SW	2600	585	9	2T 25 R LED	2RTLED	25	0.2	3 SW	2,600	585	0.0	\$	0.00	\$	0.00	80						
276	Hallway	4	2T 25 R LED	2RTLED	25	0.1	SW	8760	876	4	2T 25 R LED	2RTLED	25	0.1	SW	8,760	876	- 0.0	\$	0.00	\$	0.00	80						
276	Director's Office	2	2T 25 R LED	2RTLED	25	0.1	C-OCC	2600	130	2	2T 25 R LED	2RTLED	25	0.1	C-OCC	2,600	130	- 0.0	\$	0.00	\$	0.00	80						
276	Treatment	3	2T 25 R LED	2RTLED	25	0.1	C-OCC	4368	328	3	2T 25 R LED	2RTLED	25	0.1	C-OCC	4,368	328	- 0.0	\$	0.00	\$	0.00	80						
89	Closet	1	CF 13 2 LAMP	CFQ13/L	28	0.0	C-OCC	1040	29	1	CF 13 2 LAMP	CFQ13/L	28	0.0	C-OCC	1,040	29	- 0.0	\$	0.00	\$	0.00	80						
135	Bathroom	2	SP 13 R C F 1	CFQ13/L	15	0.0	SW	3120	94	2	SP 13 R C F 1	CFQ13/L	15	0.0	SW	3,120	94	- 0.0	\$	0.00	\$	0.00	80						
276	Bathroom	1	2T 25 R LED	2RTLED	25	0.0	SW	3120	78	1	2T 25 R LED	2RTLED	25	0.0	SW	3,120	78	- 0.0	\$	0.00	\$	0.00	80						
57	Hallway	7	S 34 C F 1 (MAG)	F41EE	43	0.3	SW	8760	2,637	7	S 28 C F 1	F41SILL	26	0.2	SW	8,760	1,594	1,042.0	\$	135.39	\$	992.25	80	7.3	7.3				
40LED	Radiology WR	4	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	2600	624	4	T 38 R LED	RTLED38	38	0.2	SW	2,600	395	229.0	\$	35.87	\$	945.00	80	26.3	26.3				
135	Waiting Room	3	SP 13 R C F 1	CFQ13/L	15	0.0	SW	5824	262	3	SP 13 R C F 1	CFQ13/L	15	0.0	SW	5,824	262	0.0	\$	0.00	\$	0.00	80						
57	Hallway	10	S 34 C F 1 (MAG)	F41EE	43	0.4	SW	8760	3,767	10	S 28 C F 1	F41SILL	26	0.3	SW	8,760	2,278	1,489.0	\$	193.42	\$	1,417.50	80	7.3	7.3				
40LED	Reception	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2600	312	2	T 38 R LED	RTLED38	38	0.1	SW	2,600	198	114.0	\$	17.93	\$	472.50	80	26.3	26.3				
40LED	Radiology	1	S 34 C F 1 (MAG)	F41EE	43	0.0	SW	2600	112	1	S 28 C F 1	F41SILL	26	0.0	SW	2,600	68	44.0	\$	6.93	\$	141.75	80	20.5	20.5				
89	Soiled Utility	1	CF 13 2 LAMP	CFQ13/L	28	0.0	SW	1456	41	1	CF 13 2 LAMP	CFQ13/L	28	0.0	SW	1,456	41	- 0.0	\$	0.00	\$	0.00	80						
40LED	Changing Room	2	T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	8736	1,048	2	T 38 R LED	RTLED38	38	0.1	C-OCC	8,736	664	384.0	\$	49.94	\$	472.50	80	9.5	9.5				
40LED	X-Ray	5	T 32 R F 2 (ELE)	F42LL	60	0.3	SW	4368	1,310	5	T 38 R LED	RTLED38	38	0.2	SW	4,368	412	906.0	\$	67.89	\$	1,181.25	80	17.4	17.4				
40LED	X-Ray	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	262	1	T 38 R LED	RTLED38	38	0.0	SW	4,368	166	96.0	\$	13.58	\$	236.25	80	17.4	17.4				
40LED	Hallway	5	T 32 R F 2 (ELE)	F42LL	60	0.3	SW	8760	2,628	5	T 38 R LED	RTLED38	38	0.2	SW	8,760	1,664	964.0	\$	125.15	\$	1,181.25	80	9.4	9.4				
40LED	File Room	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1040	187	3	T 38 R LED	RTLED38	38	0.1	SW	1,040	69	149.0	\$	14.69	\$	708.75	80	48.2	48.2				
40LED	Hallway	4	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	8760	2,102	4	T 38 R LED	RTLED38	38	0.2	SW	8,760	1,332	771.0	\$	100.12	\$	945.00	80	9.4	9.4				
40LED	Office	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2600	312	2	T 38 R LED	RTLED38	38	0.1	SW	2,600	198	114.0	\$	17.93	\$	472.50	80	26.3	26.3				
40LED	Exam Cat Scan	4	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	4368	1,048	4	T 38 R LED	RTLED38	38	0.2	SW	4,368	384	664.0	\$	54.31	\$	945.00	80	17.4	17.4				
135	Cat Scan Office	4	SP 13 R C F 1	CFQ13/L	15	0.1	SW	2600	156	4	SP 13 R C F 1	CFQ13/L	15	0.1	SW	2,600	156	- 0.0	\$	0.00	\$	0.00	80						
40LED	Mammogram	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	524	2	T 38 R LED	RTLED38	38	0.1	SW	4,368	332	192.0	\$	27.15	\$	472.50	80	17.4	17.4				
196LED	Bathroom	1	2T 17 R F 2 (ELE)	F22LL	31	0.0	SW	3120	97	1	2T 25 R LED	2RTLED	25	0.0	SW	3,120	78	19.0	\$	2.82	\$	202.50	80	71.9	71.9				
196LED	File Storage	6	W 32 C F 4 (ELE)	F44ILL	112	0.7	SW	1040	699	6	T 74 R LED	RTLED50	50	0.3	SW	1,040	312	387.0	\$	82.82	\$	1,417.50	80	17.1	17.1				
40LED	X-Ray 2	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	524	2	T 38 R LED	RTLED38	38	0.1	SW	4,368	332	192.0	\$	27.15	\$	472.50	80	17.4	17.4				
40LED	X-Ray 3	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	524	2	T 38 R LED	RTLED38	38	0.1	SW	4,368	332	192.0	\$	27.15	\$	472.50	80	17.4	17.4				
40LED	Office	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2600	156	1	T 38 R LED	RTLED38	38	0.0	SW	2,600	99	57.0	\$	8.97	\$	236.25	80	26.3	26.3				
40LED	Corridor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	8760	1,051	2	T 38 R LED	RTLED38	38	0.1	SW	8,760	666	389.0	\$	50.06	\$	472.50	80	9.4	9.4				
40LED	Nuclear Medicine	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2600	156	1	T 38 R LED	RTLED38	38	0.0	SW	2,600	99	57.0	\$	8.97	\$	236.25	80	2					

EXISTING CONDITIONS										RETROFIT CONDITIONS										COST & SAVINGS ANALYSIS									
Field Code	Area Description Unique description of the location - Room number/Room name: Floor number (if applicable)	No. of Fixtures before the retrofit	Standard Fixture Code "Lighting Fixture Code" Example 2'x2' Troff 40 w Recess, Floor 2 lamps U shape	21 40	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fix) * (Fixt No.)	Watts per Fixture	kW/Space	Pre-inst. control device	Annual Hours Estimated daily hours for the usage group	Annual kWh (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/Fix) * (Number of Fixtures)	Retrofit control device	Annual Hours Estimated annual hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kW Saved (Original Annual kW) - (Retrofit Annual kW)	Annual \$ Saved (kWh Saved) * (\$/kWh)	Retrofit cost Cost for renovations to lighting system	N3 Smart Start Lighting Incentive Prescriptive Lighting Measures	Simple Payback Length of time for renovations cost to be recovered	Simple Payback Length of time for renovations cost to be recovered		
196LED	Hallway	5	W 32 C F 4 (ELE)		F44LL	112	0.6	SW	8760		4,906	5	T 74 R LED	RTLED90	50	0.3	SW	8,760	2,190	2,716	0.3	\$	352.71	\$ 1,181.25	\$0	3.3	3.3		
135	Cafeteria	4	SP 13 R C F 1		CFQ13/1-L	15	0.1	SW	3640		218	4	SP 13 R C F 1	CFQ13/1-L	15	0.1	SW	3,640	218	0.0	\$	\$	\$ -	\$0		#DIV/0!			
7LED	Cafeteria	15	2T 32 R F 2 (U)		FU2LL	60	0.9	SW	3640		3,276	15	2T 25 R LED	2RTLED	25	0.4	SW	3,640	1,365	1,911	0.5	\$	278.69	\$ 3,037.50	\$0	10.9	10.9		
196LED	Cafeteria	3	W 32 C F 4 (ELE)		F44LL	112	0.3	SW	3640		1,223	3	T 74 R LED	RTLED90	50	0.2	SW	3,640	546	677	0.2	\$	89.74	\$ 708.75	\$0	7.2	7.2		
169LED	Exterior	5	WP 250 MH		MH250/1	295	1.5	PHC	4732		6,980	5	FXLED78/1	FXLED78/1	78	0.4	PHC	4,732	1,845	5,134	1.1	\$	716.41	\$ 4,220.98	\$875	5.9	4.7		
143LED	Single Pole	8	HPS 100 POLE		HPS100/1	138	1.1	PHC	4732		5,224	8	ALED52	ALED52	60	0.5	PHC	4,732	2,271	2,953	0.6	\$	412.02	\$ 6,177.80	\$1,400	15.0	11.6		
146LED	Double Pole	9	HPS 150 POLE		HPS150/1	188	1.7	PHC	4732		8,007	9	ALED52	ALED52	60	0.5	PHC	4,732	2,655	5,351	1.2	\$	760.65	\$ 9,977.80	\$1,575	7.9	3.8		
231LED	Exterior	1	WP400MH1		MH400/1	458	0.5	PHC	4732		2,167	1	WPLED27/8	WPLED27/8	91	0.1	PHC	4,732	431	1,737	0.4	\$	242.32	\$ 1,024.19	\$100	4.2	3.8		
133	Exterior	1	CF 26		CFQ26/1-L	27	0.0	PHC	4732		128	1	CF 26	CFQ26/1-L	27	0.0	PHC	4,732	128	0.0	\$	\$	\$0		#DIV/0!				
227LED	Exterior - Back of House	13	70 W MH Wall Pack		MH70/1	95	1.2	PHC	4732		5,844	13	FXLED18/1	FXLED18/1	18	0.2	PHC	4,732	1,107	4,737	1.0	\$	660.95	\$ 5,501.93	\$1,300	8.3	3.4		
277	Exterior - Central Plant	4	WPLED20		WPLED20	20	0.1	PHC	4732		379	4	WPLED20	WPLED20	22	0.1	PHC	4,732	416	(38)(0.0)	\$	(6.28)	\$	\$0		#DIV/0!			
143LED	Exterior	2	HPS 100 POLE		HPS100/1	138	0.3	PHC	4732		1,306	2	ALED52	ALED52	60	0.1	PHC	4,732	568	738	0.2	\$	103.00	\$ 1,544.40	\$350	15.0	11.6		
133	Overhang Lighting	10	CF 26		CFQ26/1-L	27	0.3	PHC	4732		2,178	10	CF 26	CFQ26/1-L	27	0.3	PHC	4,732	1,278	0.0	\$	\$	\$0		#DIV/0!				
133	Overhang Lighting	8	CF 26		CFQ26/1-L	27	0.2	PHC	4732		1,022	8	CF 26	CFQ26/1-L	27	0.2	PHC	4,732	1,022	0.0	\$	\$	\$0		#DIV/0!				
41LED	Basement - Kitchen Storage	9	1B 40 R F 2 (MAG)		F42SS	94	0.8	SW	1040		880	9	4 R LED Tube	200732/2	30	0.3	SW	1,040	281	599	0.6	\$	128.24	\$ 2,103.30	\$0	16.4	16.4		
40LED	Basement - Kitchen Storage	4	T 32 R F 2 (ELE)		F42LL	60	0.2	SW	1040		250	4	T 38 R LED	RTLED38	38	0.2	SW	1,040	156	92	0.1	\$	19.59	\$ 945.00	\$0	48.2	48.2		
40LED	Maternity Hallway	7	T 32 R F 2 (ELE)		F42LL	60	0.4	SW	8760		3,679	7	T 38 R LED	RTLED38	38	0.3	SW	8,760	2,330	1,349	0.2	\$	175.22	\$ 1,653.75	\$0	9.4	9.4		
40LED	Electrical Closet	4	T 32 R F 2 (ELE)		F42LL	60	0.2	SW	1456		349	4	T 38 R LED	RTLED38	38	0.2	SW	1,456	221	128	0.1	\$	23.93	\$ 945.00	\$0	39.5	39.5		
40LED	Staff Lounge	2	T 32 R F 2 (ELE)		F42LL	60	0.1	SW	4368		524	2	T 38 R LED	RTLED38	38	0.1	SW	4,368	332	192	0.0	\$	27.15	\$ 1,272.50	\$0	17.4	17.4		
40LED	Sleep Rooms	1	T 32 R F 2 (ELE)		F42LL	60	0.1	SW	4368		262	1	T 38 R LED	RTLED38	38	0.0	SW	4,368	166	96	0.0	\$	13.58	\$ 236.25	\$0	17.4	17.4		
40LED	Sleep Rooms	1	T 32 R F 2 (ELE)		F42LL	60	0.1	SW	4368		262	1	T 38 R LED	RTLED38	38	0.0	SW	4,368	166	96	0.0	\$	13.58	\$ 236.25	\$0	17.4	17.4		
40LED	Bedroom	1	T 32 R F 2 (ELE)		F42LL	60	0.1	SW	3120		187	1	T 38 R LED	RTLED38	38	0.1	SW	3,120	69	10	0.0	\$	10.32	\$ 236.25	\$0	22.9	22.9		
57	Closet	1	S 34 C F 1 (MAG)		F41EE	43	0.0	SW	1040		45	1	S 28 C F 1	F41SSILL	26	0.0	SW	1,040	27	18	0.0	\$	3.78	\$ 141.75	\$0	37.5	37.5		
40LED	Equipment Storage	7	T 32 R F 2 (ELE)		F42LL	60	0.4	SW	1040		437	7	T 38 R LED	RTLED38	38	0.3	SW	1,040	277	160	0.2	\$	34.29	\$ 1,653.75	\$0	48.2	48.2		
40LED	Hallway	19	W 32 C F 3 (ELE)		F43LL/2	90	0.7	SW	8760		3,986	19	T 38 R LED	RTLED38	38	0.7	SW	8,760	6,162	4,488	1.4	\$	54.76	\$ 4,488.75	\$0	9.4	9.4		
133	Wall Scoones	11	CF 26		CFQ26/1-L	27	0.3	SW	8760		2,602	11	CF 26	CFQ26/1-L	27	0.3	SW	8,760	2,602	0.0	\$	\$	\$0		#DIV/0!				
218LED	Managers Office	2	W 32 C F 3 (ELE)		F43LL/2	90	0.2	SW	2600		468	2	4 R LED Tube	200732/3	45	0.1	SW	2,600	234	234	0.1	\$	36.68	\$ 644.40	\$100	17.6	14.8		
218LED	Storage	2	W 32 C F 3 (ELE)		F43LL/2	90	0.2	SW	1040		187	2	4 R LED Tube	200732/3	45	0.1	SW	1,040	94	20	0.0	\$	20.04	\$ 644.40	\$100	32.2	27.2		
40LED	Bedroom	1	T 32 R F 2 (ELE)		F42LL	60	0.1	SW	3120		187	1	T 38 R LED	RTLED38	38	0.0	SW	3,120	119	69	0.0	\$	10.32	\$ 236.25	\$0	22.9	22.9		
218LED	Conference Room	2	W 32 C F 3 (ELE)		F43LL/2	90	0.2	SW	4000		720	2	4 R LED Tube	200732/3	45	0.1	SW	4,000	360	360	0.1	\$	51.62	\$ 644.40	\$100	12.5	10.5		
218LED	Waiting Room	2	W 32 C F 3 (ELE)		F43LL/2	90	0.2	SW	5824		1,048	2	4 R LED Tube	200732/3	45	0.1	SW	5,824	524	524	0.1	\$	71.84	\$ 644.40	\$100	9.1	7.4		
40LED	Bedroom	1	T 32 R F 2 (ELE)		F42LL	60	0.1	SW	3120		187	1	T 38 R LED	RTLED38	38	0.0	SW	3,120	119	69	0.0	\$	10.32	\$ 236.25	\$0	22.9	22.9		
40LED	Emergency Exit	2	T 32 R F 2 (ELE)		F42LL	60	0.1	SW	8760		1,051	2	T 38 R LED	RTLED38	38	0.1	SW	8,760	666	385	0.0	\$	50.06	\$ 472.50	\$0	9.4	9.4		
40LED	Corridor	2	T 32 R F 2 (ELE)		F42LL	60	0.1	SW	2600		312	2	T 38 R LED	RTLED38	38	0.1	SW	2,600	112	160	0.0	\$	17.60	\$ 172.50	\$0	26.3	26.3		
218LED	Meds Closet	1	W 32 C F 3 (ELE)		F43LL/2	90	0.1	SW	5840		100	1	4 R LED Tube	200732/3	45	0.0	SW	5,840	263	263	0.0	\$	35.62	\$ 322.20	\$50	9.0	7.6		
218LED	Pantry	1	W 32 C F 3 (ELE)		F43LL/2	90	0.1	SW	1040		94	1	4 R LED Tube	200732/3	45	0.0	SW	1,040	47	47	0.0	\$	10.02	\$ 322.20	\$50	32.2	27.2		
261	Patient 101	2	H100/1		H100/1	100	0.2	SW	4368		872	2	PAR 38 SP	H100/1	100	0.2	SW	4,368	872	0.0	\$	\$	\$0		#DIV/0!				
274LED	Patient 101	9	I 100		I100/1	100	0.9	SW	4368		3,931	9</																	

Field Code	Area Description Unique description of the location - Room number/Room name: Floor number (if applicable)	EXISTING CONDITIONS					RETROFIT CONDITIONS					COST & SAVINGS ANALYSIS						
		No. of Fixtures before the retrofit	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space (Watts/Fix) * (Fix No.)	kW/Space (Watts/Fix) * (Number of Fixtures)	Retrofit Control device	Annual Hours Estimated annual hours for the usage group	Annual kWh (kW/Space) (Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual \$ Saved (kW Saved) * (\$/kWh)	Retrofit Cost Cost for renovations to lighting system	NJ Smart Start Lighting Incentive	Simple Payback With Incentive Length of time for renovations cost to be recovered	Simple Payback Length of time for renovations cost to be recovered	
19BLED	ICU Patient Room 1	2	T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
21BLED	ICU Patient Room 1	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
96	ICU Patient Room 1-Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
133	ICU Patient Room 1-Bathroom	1	CF 26	CFQ26/L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
19BLED	ICU Patient Room 2	2	T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
21BLED	ICU Patient Room 2	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
247LED	ICU Patient 2/3 Washroom	1	T 40 R F 3 (MAG)	F43SE	136	0.1	0.1	NONE	1800	244.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
19BLED	ICU Patient Room 3	2	T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
21BLED	ICU Patient Room 3	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
19BLED	ICU Patient Room 4	2	T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
21BLED	ICU Patient Room 4	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
19BLED	ICU Patient Room 5	2	T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
21BLED	ICU Patient Room 5	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
19BLED	ICU Patient Room 6	2	T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
21BLED	ICU Patient Room 6	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
19BLED	ICU Patient Room 7	2	T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
220	ICU Nursing Station	5	S 17 C F 1 (ELE)	F21LL	20	0.1	0.1	NONE	5840	584.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
40LED	ICU Nursing Station	15	T 32 R F 2 (ELE)	F42LL	60	0.9	0.9	NONE	5840	5,256.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
40LED	Nurse's Lounge	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	5840	350.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
40LED	Clean Utility	4	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	NONE	1456	349.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
40LED	Bathroom	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	C-OCOC	2184	218.4	112.3	0.0	\$15.31	\$270.00	\$35.00	29.3	17.7	
40LED	Soiled Utility	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	1456	174.7	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
40LED	Closet	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	C-OCOC	500	30.0	57.4	0.0	\$6.80	\$270.00	\$35.00	39.7	34.5	
40LED	Closet	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	C-OCOC	500	30.0	57.4	0.0	\$6.80	\$270.00	\$35.00	39.7	34.5	
40LED	Closet	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	C-OCOC	500	30.0	57.4	0.0	\$6.80	\$270.00	\$35.00	39.7	34.5	
196LED	Elevator Hallway	2	W 32 C F 4 (ELE)	F44ILL	112	0.2	0.2	NONE	8760	1,362.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
196LED	Storage	2	W 32 C F 4 (ELE)	F44ILL	112	0.2	0.2	NONE	1040	233.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
196LED	Anesthesia	1	W 32 C F 4 (ELE)	F44ILL	112	0.1	0.1	NONE	2600	291.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
196LED	Men's Bathroom	1	W 32 C F 4 (ELE)	F44ILL	112	0.1	0.1	NONE	3120	349.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
135	Men's Bathroom	1	SP 13 R F C 1	CFQ13/L	15	0.0	0.0	NONE	3120	46.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
196LED	Women's Bathroom	1	W 32 C F 4 (ELE)	F44ILL	112	0.1	0.1	NONE	3120	349.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
135	Women's Bathroom	1	SP 13 R F C 1	CFQ13/L	15	0.0	0.0	NONE	3120	46.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
135	Closet	2	SP 13 R F C 1	CFQ13/L	15	0.0	0.0	NONE	1456	43.7	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
196LED	Office	2	W 32 C F 4 (ELE)	F44ILL	112	0.2	0.2	C-OCOC	1950	436.8	145.6	0.0	\$17.26	\$270.00	\$35.00	15.6	13.6	
40LED	Bathroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3120	187.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
196LED	Office	2	W 32 C F 4 (ELE)	F44ILL	112	0.2	0.2	C-OCOC	1950	436.8	145.6	0.0	\$17.26	\$270.00	\$35.00	15.6	13.6	
40LED	Case Worker Office	3	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	C-OCOC	1950	351.0	117.0	0.0	\$13.87	\$270.00	\$35.00	19.5	16.9	
40LED	Bathroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3120	187.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
247LED	Administration Conference Room	9	T 40 R F 3 (MAG)	F43SE	136	1.2	1.2	C-OCOC	3200	3,516.8	0.0	0.0	\$116.07	\$270.00	\$35.00	2.3	1.9	
254LED	Administration Conference Room	2	CFQ26/L	CFQ26/L	66	0.1	0.1	C-OCOC	3200	422.4	105.6	0.0	\$12.52	\$270.00	\$35.00	21.6	18.8	
196LED	Clinical Office 1	2	W 32 C F 4 (ELE)	F44ILL	112	0.2	0.2	C-OCOC	1950	436.8	145.6	0.0	\$17.26	\$270.00	\$35.00	15.6	13.6	
196LED	Clinical Office 2	2	W 32 C F 4 (ELE)	F44ILL	112	0.2	0.2	C-OCOC	1950	436.8	145.6	0.0	\$17.26	\$270.00	\$35.00	15.6	13.6	
196LED	Office	6	W 32 C F 4 (ELE)	F44ILL	112	0.7	0.7	C-OCOC	1950	1,310.4	436.8	0.0	\$51.78	\$270.00	\$35.00	5.2	4.5	
196LED	Administration Office	6	W 32 C F 4 (ELE)	F44ILL	112	0.7	0.7	C-OCOC	1950	1,310.4	436.8	0.0	\$51.78	\$270.00	\$35.00	5.2	4.5	
196LED	Administration Office	6	W 32 C F 4 (ELE)	F44ILL	112	0.7	0.7	C-OCOC	1950	1,310.4	436.8	0.0	\$51.78	\$270.00	\$35.00	5.2	4.5	
40LED	Copy Room	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	C-OCOC	1875	112.5	37.5	0.0	\$4.45	\$270.00	\$35.00	60.7	52.9	
40LED	Case Worker Office	3	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	C-OCOC	1950	351.0	117.0	0.0	\$13.87	\$270.00	\$35.00	19.5	16.9	
196LED	Patient Relations Office	3	W 32 C F 4 (ELE)	F44ILL	112	0.3	0.3	C-OCOC	1950	555.2	195.2	0.0	\$25.89	\$270.00	\$35.00	10.4	9.1	
196LED	Case Management Office	4	W 32 C F 4 (ELE)	F44ILL	112	0.4	0.4	C-OCOC	1950	873.6	291.2	0.0	\$34.52	\$270.00	\$35.00	7.8	6.8	
196LED	Conference Room A	3	W 32 C F 4 (ELE)	F44ILL	112	0.3	0.3	C-OCOC	3200	1,075.2	288.8	0.0	\$31.86	\$270.00	\$35.00	8.5	7.4	
196LED	Conference Room B	3	W 32 C F 4 (ELE)	F44ILL	112	0.3	0.3	C-OCOC	3200	1,075.2	288.8	0.0	\$31.86	\$270.00	\$35.00	8.5	7.4	
196LED	Nurse's Office	2	W 32 C F 4 (ELE)	F44ILL	112	0.2	0.2	C-OCOC	1950	436.8	145.6	0.0	\$17.26	\$270.00	\$35.00	15.6	13.6	
196LED	Community Room	12	W 32 C F 4 (ELE)	F44ILL	112	1.3	1.3	C-OCOC	3200	4,300.8	1,075.2	0.0	\$127.45	\$270.00	\$35.00	2.1	1.8	
196LED	Staff Lounge	3	W 32 C F 4 (ELE)	F44ILL	112	0.3	0.3	C-OCOC	3200	1,075.2	288.8	0.0	\$31.86	\$270.00	\$35.00	8.5	7.4	
196LED	Locker Room	3	W 32 C F 4 (ELE)	F44ILL	112	0.3	0.3	NONE	8736	2,935.3	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
40LED	Bathroom	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3120	374.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
196LED	Solatrium	4	W 32 C F 4 (ELE)	F44ILL	112	0.4	0.4	NONE	1040	455.9	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
196LED	Storage	5	W 32 C F 4 (ELE)	F44ILL	112	0.6	0.6	NONE	1040	582.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
21BLED	Patient Room 200	1	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
96	Patient Room 200 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
50LED	Hallway	1	W 32 W F 2 (ELE)	F42LL	60	0.1	0.1	NONE	8760	525.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
21BLED	Patient Room 201	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
96	Patient Room 201 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
133	Patient Room 201 Bathroom	1	CF 26	CFQ26/L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
21BLED	Patient Room 202	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
96	Patient Room 202 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
133	Patient Room 202 Bathroom	1	CF 26	CFQ26/L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
21BLED	Patient Room 203	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
96	Patient Room 203 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
133	Patient Room 203 Bathroom	1	CF 26	CFQ26/L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
21BLED	Patient Room 204	4	W 32 C F 3 (ELE)	F43ILL/2	90	0.4	0.4	NONE	4368	1,572.5	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
96	Patient Room 204 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
133	Patient Room 204 Bathroom	1	CF 26	CFQ26/L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
21BLED	Patient Room 205	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!	
96	Patient Room 205 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0	

Field Code	Area Description Unique description of the location - Room number/Room name: Floor number (if applicable)	No. of Fixtures before the retrofit	EXISTING CONDITIONS					RETROFIT CONDITIONS					COST & SAVINGS ANALYSIS					NJ Smart Start Lighting Incentive	Simple Payback With Out Incentive	Simple Payback Length of time for renovations cost to be recovered	Simple Payback Length of time for renovations cost to be recovered
			Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space (Watts/Fix) * (Fixt No.)	kW/Space (Watts/Fix) * (Number of Fixtures)	Retrofit Control device	Annual Hours Estimated Annual hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual \$ Saved (kWh Saved) * (\$/kWh)	Retrofit Cost Cost for renovations to lighting system							
19BLED	Patient Room 243	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
21BLED	Patient Room 243	2	W 32 C F 3 (ELE)	F43ILL/L2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	Patient Room 243 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	Patient Room 243 Bathroom	1	CF 26	CFQ269-L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
19BLED	Patient Room 244	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
21BLED	Patient Room 244	2	W 32 C F 3 (ELE)	F43ILL/L2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	Patient Room 244 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	Patient Room 244 Bathroom	1	CF 26	CFQ269-L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
19BLED	Patient Room 245	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
21BLED	Patient Room 245	2	W 32 C F 3 (ELE)	F43ILL/L2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	Patient Room 245 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	Patient Room 245 Bathroom	1	CF 26	CFQ269-L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
40LED	Closet	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	1456	87.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
19BLED	Patient Room 246	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
21BLED	Patient Room 246	2	W 32 C F 3 (ELE)	F43ILL/L2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	Patient Room 246 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	Patient Room 246 Bathroom	1	CF 26	CFQ269-L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
19BLED	Patient Room 247	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
21BLED	Patient Room 247	2	W 32 C F 3 (ELE)	F43ILL/L2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	Patient Room 247 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	Patient Room 247 Bathroom	1	CF 26	CFQ269-L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
40LED	East Wing Staff Lounge	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	471.7	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	East Wing Staff Lounge Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	3120	103.0	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
254LED	East Wing Staff Lounge Bathroom	1	CFQ269	CFQ269	66	0.1	0.1	NONE	3120	205.9	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	East Wing Solarium	4	CF 26	CFQ269-L	27	0.1	0.1	NONE	4368	471.7	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	East Wing Solarium Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	3120	103.0	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
254LED	East Wing Solarium Bathroom	1	CFQ269	CFQ269	66	0.1	0.1	NONE	3120	205.9	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
19BLED	Patient Room 248	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
21BLED	Patient Room 248	2	W 32 C F 3 (ELE)	F43ILL/L2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	Patient Room 248 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	Patient Room 248 Bathroom	1	CF 26	CFQ269-L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
19BLED	Patient Room 249	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
21BLED	Patient Room 249	2	W 32 C F 3 (ELE)	F43ILL/L2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	Patient Room 249 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	Patient Room 249 Bathroom	1	CF 26	CFQ269-L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
19BLED	Patient Room 250	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
21BLED	Patient Room 250	2	W 32 C F 3 (ELE)	F43ILL/L2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	Patient Room 250 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	Patient Room 250 Bathroom	1	CF 26	CFQ269-L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
19BLED	Patient Room 251	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
21BLED	Patient Room 251	2	W 32 C F 3 (ELE)	F43ILL/L2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	Patient Room 251 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	Patient Room 251 Bathroom	1	CF 26	CFQ269-L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
19BLED	Patient Room 252	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
21BLED	Patient Room 252	2	W 32 C F 3 (ELE)	F43ILL/L2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	Patient Room 252 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	Patient Room 252 Bathroom	1	CF 26	CFQ269-L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
19BLED	Patient Room 253	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
21BLED	Patient Room 253	2	W 32 C F 3 (ELE)	F43ILL/L2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	Patient Room 253 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	Patient Room 253 Bathroom	1	CF 26	CFQ269-L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
19BLED	Patient Room 254	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
21BLED	Patient Room 254	2	W 32 C F 3 (ELE)	F43ILL/L2	90	0.2	0.2	NONE	4368	786.2	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
96	Patient Room 254 Bathroom	1	W 17 C F 2	F22LL	33	0.0	0.0	NONE	1800	59.4	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
133	Patient Room 254 Bathroom	1	CF 26	CFQ269-L	27	0.0	0.0	NONE	1800	48.6	0.0	0.0	\$0.00	\$0.00	\$0.00				#DIV/0!		
19BLED	Patient Room 255	2	2 T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	4368	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00</						

Field Code	Area Description Unique description of the location - Room number/Room name: Floor number (if applicable)	EXISTING CONDITIONS					RETROFIT CONDITIONS					COST & SAVINGS ANALYSIS					NJ Smart Start Lighting Incentive	Simple Payback Length of time for renovations cost to be recovered	Simple Payback Length of time for renovations cost to be recovered
		No. of Fixtures before the retrofit	Standard Fixture Code	Fixture Code Code from Table of Standard Fixture Wattages	Watts per Fixture Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fix) * (Fixt No.)	kW/Space (Watts/Fix) * (Number of Fixtures)	Retrofit Control device	Annual Hours Estimated Annual hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kWh Saved (kW Saved) * (kWh)	Retrofit Cost Cost for renovations to lighting system						
135	Reception	5	SP 13 R C F 1	CFQ13R-L	15	0.1	0.1	NONE	2600	195.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
247LED	Reception	1	T 40 R F 3 (MAG)	F43SE	136	0.1	0.1	NONE	2600	353.6	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
220	Reception	2	S 17 C F 1(ELE)	F21ILL	20	0.0	0.0	NONE	2600	104.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
246LED	Bathroom	1	CFQ26R	CFQ26R	66	0.1	0.1	NONE	3120	255.9	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Phone Closet	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	1456	87.4	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
247LED	Hallway	5	T 40 R F 3 (MAG)	F43SE	136	0.7	0.7	NONE	8760	5,956.8	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
276	Hyperbaric Wing	9	T 25 R LED	2RTLED	25	0.2	0.2	NONE	2600	585.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
276	Hallway	4	T 25 R LED	2RTLED	25	0.1	0.1	NONE	8760	876.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
276	Director's Office	2	T 25 R LED	2RTLED	25	0.1	0.1	NONE	2600	130.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
276	Treatment	3	T 25 R LED	2RTLED	25	0.1	0.1	NONE	4368	327.6	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
89	Closet	1	CF 13 2 LAMP	CFQ13R-L	28	0.0	0.0	NONE	1040	29.1	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
135	Bathroom	2	SP 13 R C F 1	CFQ13R-L	15	0.0	0.0	NONE	3120	93.6	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
276	Bathroom	1	T 25 R LED	2RTLED	25	0.0	0.0	NONE	3120	78.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
57	Hallway	7	S 34 C F 1 (MAG)	F41EE	43	0.3	0.3	NONE	8760	2,636.8	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Radiology WR	4	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	NONE	2600	624.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
135	Waiting Room	3	SP 13 R C F 1	CFQ13R-L	15	0.0	0.0	NONE	5824	262.1	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
57	Hallway	10	S 34 C F 1 (MAG)	F41EE	43	0.4	0.4	NONE	8760	3,766.8	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Reception	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	2600	312.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
57	Radiology	1	S 34 C F 1 (MAG)	F41EE	43	0.0	0.0	NONE	2600	111.8	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
89	Soiled Utility	1	CF 13 2 LAMP	CFQ13R-L	28	0.0	0.0	NONE	1456	40.8	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Changing Room	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	8736	1,048.3	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	X-Ray	5	T 32 R F 2 (ELE)	F42LL	60	0.3	0.3	NONE	4368	1,310.4	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	X-Ray	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	262.1	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Hallway	5	T 32 R F 2 (ELE)	F42LL	60	0.3	0.3	NONE	8760	2,628.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	File Room	3	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	NONE	1040	187.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Hallway	4	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	NONE	8760	2,102.4	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Office	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	2600	312.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Exam Cat Scan	4	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	NONE	4368	1,048.3	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
135	Cat Scan Office	4	SP 13 R C F 1	CFQ13R-L	15	0.1	0.1	NONE	2600	156.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Mammogram	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	524.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Bathroom	1	T 17 R F 2 (ELE)	F22LL	31	0.0	0.0	NONE	3120	96.7	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	File Storage	6	W 32 C F 4 (ELE)	F44ILL	112	0.7	0.7	NONE	1040	698.9	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	X-Ray 2	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	524.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	X-Ray 3	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	524.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Office	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	2600	156.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Corridor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	8760	1,051.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Nuclear Medicine	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	2600	156.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Nuclear Medicine	3	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	NONE	2600	468.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
247LED	Exam	6	T 40 R F 3 (MAG)	F43SE	136	0.8	0.8	NONE	4368	3,564.3	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
71	Exam	1	I60	I60	60	0.1	0.1	NONE	4368	262.1	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Bathroom	1	T 17 R F 2 (ELE)	F22LL	31	0.0	0.0	NONE	3120	96.7	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Ultrasound	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	262.1	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Lobby	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	8760	1,051.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Cardiopulmonary Waiting Room	4	W 32 C F 4 (ELE)	F44ILL	112	0.4	0.4	NONE	5824	2,609.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Cardiopulmonary Reception	1	W 32 C F 4 (ELE)	F44ILL	112	0.3	0.3	NONE	8760	2,943.4	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Cardiopulmonary Lab	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3000	180.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Cardiopulmonary Director	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	2600	156.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Hallway	5	T 32 R F 2 (ELE)	F42LL	60	0.3	0.3	NONE	8760	2,628.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Storage	2	T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	1040	64.5	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Blood Gas Lab	1	T 17 R F 2 (ELE)	F22LL	31	0.0	0.0	NONE	3000	93.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Storage	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	1040	62.4	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Storage	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	1040	62.4	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	EEG	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3000	180.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	EEG	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3000	180.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	EEG	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3000	180.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Echo Lab 1	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3000	360.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Stress EFG 2	6	T 32 R F 2 (ELE)	F42LL	60	0.4	0.4	NONE	3000	1,080.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Physician Office	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	2600	312.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Physician Office	1	T 17 R F 2 (ELE)	F22LL	31	0.0	0.0	NONE	2600	80.6	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Rehab Waiting Room	2	W 32 C F 4 (ELE)	F44ILL	112	0.2	0.2	NONE	5824	1,304.6	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Rehab Waiting Room	1	F44ILL	F44ILL	112	0.1	0.1	NONE	5824	652.3	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	EMG	2	W 32 C F 4 (ELE)	F44ILL	112	0.2	0.2	NONE	3276	733.8	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Workout Area	11	T 32 R F 2 (ELE)	F42LL	60	0.7	0.7	NONE	3276	2,162.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Workout Area	4	T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	3276	406.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Locker Room	4	T 17 R F 2 (ELE)	F22LL	31	0.1	0.1	NONE	8736	1,083.3	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Locker Room	1	T 17 R F 2 (ELE)	F22LL	31	0.0	0.0	NONE	8736	270.8	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Bathroom	1	T 17 R F 2 (ELE)	F22LL	31	0.0	0.0	NONE	3120	96.7	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Bathroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3120	187.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Bathroom	1	T 17 R F 2 (ELE)	F22LL	31	0.0	0.0	NONE	3120	96.7	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Bathroom	1	T 17 R F 2 (ELE)	F22LL	31	0.0	0.0	NONE	3120	96.7	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Bathroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3120	187.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
196LED	Bathroom	1	T 17 R F 2 (ELE)	F22LL	31	0.0	0.0	NONE	3120	96.7	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Bathroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3120	187.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Records	6	T 32 R F 2 (ELE)	F42LL	60	0.4	0.4	NONE	3120	1,123.2	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Office	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	2600	156.0	0.0	0.0	\$0.00	\$0.00	\$0.00			#DIV/0!	
40LED	Records	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	2600	2									

Field Code	Area Description Unique description of the location - Room number/Room name: Floor number (if applicable)	EXISTING CONDITIONS					RETROFIT CONDITIONS					COST & SAVINGS ANALYSIS					
		No. of Fixtures before the retrofit	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	kW/Space	Retrofit Control device	Annual Hours Estimated annual hours for the usage group	Annual kWh (kWh/Space) * (Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual \$ Saved (\$/kWh)	Retrofit Cost Cost for renovations to lighting system	NJ Smart Start Lighting Incentive	Simple Payback With Incentive Length of time for renovations cost to be recovered	Simple Payback Length of time for renovations cost to be recovered
196LED	Hallway	5	W 32 C F 4 (ELE)	F44ILL	112	0.6	0.6	NONE	8760	4,905.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
135	Cafeteria	4	SP 13 R C F 1	CFQ13/1-L	15	0.1	0.1	NONE	3640	218.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
7LED	Cafeteria	15	2T 32 R F 2 (U)	FU2LL	60	0.9	0.9	NONE	3640	3,276.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
196LED	Cafeteria	3	W 32 C F 4 (ELE)	F44ILL	112	0.3	0.3	NONE	3640	1,223.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
169LED	Exterior	5	WP 250 MH	MH250/1	295	1.5	1.5	NONE	4732	6,979.7	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
143LED	Single Pole	8	HPS 100 POLE	HPS100/1	138	1.1	1.1	NONE	4732	5,224.1	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
146LED	Double Pole	9	HPS 150 POLE	HPS150/1	188	1.7	1.7	NONE	4732	8,006.5	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
231LED	Exterior	1	WP400MH1	MH400/1	458	0.5	0.5	NONE	4732	2,187.3	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
133	Exterior	1	CF 26	CFQ26/1-L	27	0.0	0.0	NONE	4732	127.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
227LED	Exterior - Back of House	13	70 W MH Wall Pack	MH70/1	95	1.2	1.2	NONE	4732	5,844.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
277	Exterior - Central Plant	4	WPLED20	WPLED20	20	0.1	0.1	NONE	4732	378.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
143LED	Exterior	2	HPS 100 POLE	HPS100/1	138	0.3	0.3	NONE	4732	1,306.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
133	Overhang Lighting	10	CF 26	CFQ26/1-L	27	0.3	0.3	NONE	4732	1,277.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
133	Overhang Lighting	8	CF 26	CFQ26/1-L	27	0.2	0.2	NONE	4732	1,022.1	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
41LED	Basement - Kitchen Storage	9	1B 40 R F 2 (MAG)	F42SS	94	0.8	0.8	NONE	1040	879.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Basement - Kitchen Storage	4	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	NONE	1040	249.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Maternity Hallway	7	T 32 R F 2 (ELE)	F42LL	60	0.4	0.4	NONE	8760	3,879.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Electrical Closet	4	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	NONE	1456	349.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Staff Lounge	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	524.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Sleep Rooms	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	262.1	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Sleep Rooms	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	262.1	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Bedroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3120	187.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
57	Closet	1	S 34 C F 1 (MAG)	F41EE	43	0.0	0.0	NONE	1040	44.7	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Equipment Storage	7	T 32 R F 2 (ELE)	F42LL	60	0.4	0.4	NONE	1040	436.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Hallway	19	T 32 R F 2 (ELE)	F42LL	60	1.1	1.1	NONE	8760	9,886.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
133	Wall Scones	11	CF 26	CFQ26/1-L	27	0.3	0.3	NONE	8760	2,601.7	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
218LED	Managers Office	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	2600	468.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
218LED	Storage	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	1040	187.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Bedroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3120	187.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
218LED	Conference Room	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	C-COCC	3200	576.0	144.0	0.0	\$17.07	\$270.00	\$35.00	15.8	13.8
218LED	Waiting Room	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	5824	1,048.3	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Bedroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3120	187.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Emergency Exit	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	8760	1,051.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Consultation	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	2600	312.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
218LED	Meds Closet	1	W 32 C F 3 (ELE)	F43ILL/2	90	0.1	0.1	NONE	5840	525.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
218LED	Pantry	1	W 32 C F 3 (ELE)	F43ILL/2	90	0.1	0.1	NONE	1040	93.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
261	Patient 101	2	PAR 38 SP	H100/1	100	0.2	0.2	NONE	4368	873.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
274LED	Patient 101	9	I 100	I100/1	100	0.9	0.9	NONE	4368	3,931.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
50LED	Patient 101	1	W 32 W F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	262.1	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
15LED	Patient 101 Bathroom	1	S 32 C F 2 (ELE)	F42LL	60	0.1	0.1	NONE	1800	108.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
261	Patient 102	2	PAR 38 SP	H100/1	100	0.2	0.2	NONE	4368	873.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
274LED	Patient 102	9	I 100	I100/1	100	0.9	0.9	NONE	4368	3,931.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
50LED	Patient 102	1	W 32 W F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	262.1	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
15LED	Patient 102 Bathroom	1	S 32 C F 2 (ELE)	F42LL	60	0.1	0.1	NONE	1800	108.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
261	Patient 103	2	PAR 38 SP	H100/1	100	0.2	0.2	NONE	4368	873.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
274LED	Patient 103	9	I 100	I100/1	100	0.9	0.9	NONE	4368	3,931.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
50LED	Patient 103	1	W 32 W F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	262.1	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
15LED	Patient 103 Bathroom	1	S 32 C F 2 (ELE)	F42LL	60	0.1	0.1	NONE	1800	108.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
261	Patient 104	2	PAR 38 SP	H100/1	100	0.2	0.2	NONE	4368	873.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
274LED	Patient 104	9	I 100	I100/1	100	0.9	0.9	NONE	4368	3,931.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
50LED	Patient 104	1	W 32 W F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	262.1	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
15LED	Patient 104 Bathroom	1	S 32 C F 2 (ELE)	F42LL	60	0.1	0.1	NONE	1800	108.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
261	Patient 105	2	PAR 38 SP	H100/1	100	0.2	0.2	NONE	4368	873.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
274LED	Patient 105	9	I 100	I100/1	100	0.9	0.9	NONE	4368	3,931.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
50LED	Patient 105	1	W 32 W F 2 (ELE)	F42LL	60	0.1	0.1	NONE	4368	262.1	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
15LED	Patient 105 Bathroom	1	S 32 C F 2 (ELE)	F42LL	60	0.1	0.1	NONE	1800	108.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Bedroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	3120	187.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
218LED	Clean Storage	2	W 32 C F 3 (ELE)	F43ILL/2	90	0.2	0.2	NONE	1040	187.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
249	Nursery	8	F 48 R F 2 (ELE)	F41GL	32	0.3	0.3	NONE	5824	1,490.9	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
261	Nursery	1	PAR 38 SP	H100/1	100	0.8	0.8	NONE	5824	4,659.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
218LED	Nursery	1	W 32 C F 3 (ELE)	F43ILL/2	90	0.1	0.1	NONE	5824	524.2	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
57	Isolation	4	S 34 C F 1 (MAG)	F41EE	43	0.2	0.2	NONE	4368	751.3	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
261	Isolation	1	PAR 38 SP	H100/1	100	0.1	0.1	NONE	4368	436.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
218LED	Isolation	1	W 32 C F 3 (ELE)	F43ILL/2	90	0.1	0.1	NONE	4368	393.1	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
218LED	Nurses Station	1	W 32 C F 3 (ELE)	F43ILL/2	90	0.1	0.1	NONE	5840	525.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
218LED	Suited Utility	3	W 32 C F 3 (ELE)	F43ILL/2	90	0.3	0.3	NONE	1456	393.1	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Mechanical	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	8760	1,048.3	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Office	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	2600	312.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Storage	6	T 32 R F 2 (ELE)	F42LL	60	0.4	0.4	NONE	1040	374.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Women's Locker	4	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	NONE	8736	2,096.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Men's Locker	4	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	NONE	8736	2,096.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Storage	4	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	NONE	1040	249.6	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
196LED	Endoscopy	2	W 32 C F 4 (ELE)	F44ILL	112	0.2	0.2	NONE	4368	979.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Endoscopy Exam	4	T 32 R F 2 (ELE)	F42LL	60	0.2	0.2	NONE	4368	1,048.3	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Lounge	5	T 32 R F 2 (ELE)	F42LL	60	0.3	0.3	NONE	4368	1,310.4	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Anesthesia Work Room	2	T 32 R F 2 (ELE)	F42LL	60	0.1	0.1	NONE	5840	700.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
196LED	OR1	10	W 32 C F 4 (ELE)	F44ILL	112	1.1	1.1	NONE	5000	5,600.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
196LED	OR2	10	W 32 C F 4 (ELE)	F44ILL	112	1.1	1.1</										

EXISTING CONDITIONS										RETROFIT CONDITIONS										COST & SAVINGS ANALYSIS									
Field Code	Area Description Unique description of the location - Room number/Room Name: Floor number (if applicable)	No. of Fixtures before the retrofit	Standard Fixture Code	Fixture Code	Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fix)* (Fixt No.)	Pre-inst. control device	Annual Hours Estimated daily hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	Number of Fixtures after the retrofit	Standard Fixture Code	Fixture Code	Value from Table of Standard Fixture Wattages	kW/Space (Watts/Fix)* (Number of Fixtures)	Retrofit control device	Estimated annual hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kW Saved (Original Annual kW) - (Retrofit Annual kW)	Annual \$ Saved (kW/Space) * (Annual Hours)	Retrofit cost Cost for renovations to lighting system	NJ Smart Start Lighting Incentive Prescriptive Lighting Measures	Simple Payback With Out Incentive Length of time for renovations cost to be recovered	Simple Payback Length of time for renovations cost to be recovered					
198LED	ICU Patient Room 1	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	ICU Patient Room 1	2	W 32 C F 3 (ELE)	F43ILLZ	90	0.2	SW	4368	786	2	4 R LED Tube	2007323Z	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ -	11.6	9.8					
96	ICU Patient Room 1-Bathroom	1	W 17 C F 2	F22LLL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LLL	33	0.0	NONE	1,800	59	-	0.0	\$ -	\$ -	\$ -	-	-					
133	ICU Patient Room 1-Bathroom	1	CF 26	CFQ26/L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L	27	0.0	NONE	1,800	49	-	0.0	\$ -	\$ -	\$ -	-	-					
198LED	ICU Patient Room 2	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	ICU Patient Room 2	2	W 32 C F 3 (ELE)	F43ILLZ	90	0.2	SW	4368	786	2	4 R LED Tube	2007323Z	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ -	11.6	9.8					
1347LED	ICU Patient 2/5 Washroom	1	T 40 R F 3 (MAG)	F43SE	136	0.1	SW	1800	245	1	T 59 R LED	RTLED38	38	0.0	NONE	1,800	69	176	0.1	\$ 30.65	\$ 536.25	\$ -	7.7	7.7					
198LED	ICU Patient Room 3	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	ICU Patient Room 3	2	W 32 C F 3 (ELE)	F43ILLZ	90	0.2	SW	4368	786	2	4 R LED Tube	2007323Z	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ -	11.6	9.8					
198LED	ICU Patient Room 4	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	ICU Patient Room 4	2	W 32 C F 3 (ELE)	F43ILLZ	90	0.2	SW	4368	786	2	4 R LED Tube	2007323Z	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ -	11.6	9.8					
198LED	ICU Patient Room 5	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	ICU Patient Room 5	2	W 32 C F 3 (ELE)	F43ILLZ	90	0.2	SW	4368	786	2	4 R LED Tube	2007323Z	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ -	11.6	9.8					
198LED	ICU Patient Room 6	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	ICU Patient Room 6	2	W 32 C F 3 (ELE)	F43ILLZ	90	0.2	SW	4368	786	2	4 R LED Tube	2007323Z	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ -	11.6	9.8					
198LED	ICU Patient Room 7	2	T 17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	T 25 R LED	2RTLLED	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	ICU Patient Room 7	2	W 32 C F 3 (ELE)	F43ILLZ	90	0.2	SW	4368	786	2	4 R LED Tube	2007323Z	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ -	11.6	9.8					
220	ICU Nursing Station	5	S 17 C F 1 (ELE)	F22LLL	20	0.1	SW	5840	584	5	S 17 C F 1 (ELE)	F22LLL	20	0.1	NONE	5,840	584	-	0.0	\$ -	\$ -	\$ -	-	-					
40LED	ICU Nursing Station	15	T 32 R F 2 (ELE)	F42LL	60	0.9	SW	5,596	8,421	15	T 38 R LED	RTLED38	38	0.0	NONE	5,840	3,329	1,927	0.3	\$ 261.24	\$ 3,543.75	\$ -	13.6	13.6					
40LED	Nurse's Lounge	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	5840	350	1	T 38 R LED	RTLED38	38	0.0	NONE	5,840	222	128	0.0	\$ 17.42	\$ 236.25	\$ -	13.6	13.6					
40LED	Clean Utility	4	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1,456	349	4	T 38 R LED	RTLED38	38	0.2	NONE	1,456	221	128	0.1	\$ 23.93	\$ 945.00	\$ -	39.5	39.5					
40LED	Bathroom	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1,456	87	2	T 38 R LED	RTLED38	38	0.1	C-COCC	1,456	166	208	0.0	\$ 29.08	\$ 1,742.50	\$ -	35	29.5					
40LED	Solied Utility	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1,456	175	2	T 38 R LED	RTLED38	38	0.1	NONE	1,456	111	68	0.0	\$ 11.97	\$ 472.50	\$ -	39.5	39.5					
40LED	Closet	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1,456	87	1	T 38 R LED	RTLED38	38	0.0	C-COCC	500	19	68	0.0	\$ 10.29	\$ 506.25	\$ 35	49.2	45.8					
40LED	Closet	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1,456	87	1	T 38 R LED	RTLED38	38	0.0	C-COCC	500	19	68	0.0	\$ 10.29	\$ 506.25	\$ 35	49.2	45.8					
196LED	Elevator Hallway	2	W 32 C F 4 (ELE)	F44LLL	112	0.2	Breaker	8,760	1,962	2	T 74 R LED	RTLED50	50	0.1	NONE	8,760	876	1,086	0.1	\$ 141.08	\$ 472.50	\$ -	3.3	3.3					
196LED	Storage	2	W 32 C F 4 (ELE)	F44LLL	112	0.2	SW	1,040	243	2	T 74 R LED	RTLED50	50	0.1	NONE	1,040	129	121	0.1	\$ 27.61	\$ 1,472.50	\$ -	17.1	9.5					
196LED	Anesthesia	1	W 32 C F 4 (ELE)	F44LLL	112	0.1	SW	2,600	249	1	T 74 R LED	RTLED50	50	0.1	NONE	2,600	130	161	0.1	\$ 25.27	\$ 236.25	\$ -	9.3	9.3					
196LED	Men's Bathroom	1	W 32 C F 4 (ELE)	F44LLL	112	0.1	SW	3,120	349	1	T 74 R LED	RTLED50	50	0.1	NONE	3,120	156	193	0.1	\$ 29.09	\$ 236.25	\$ -	8.1	8.1					
135	Women's Bathroom	1	SP 13 R C F 1	CFQ13/L	15	0.0	SW	3,120	47	1	SP 13 R C F 1	CFQ13/L	15	0.0	NONE	3,120	156	-	0.0	\$ -	\$ -	\$ -	-	-					
135	Closet	1	SP 13 R C F 1	CFQ13/L	15	0.0	SW	1,456	44	1	SP 13 R C F 1	CFQ13/L	15	0.0	NONE	1,456	15	-	0.0	\$ -	\$ -	\$ -	-	-					
196LED	Office	2	W 32 C F 4 (ELE)	F44LLL	112	0.2	SW	2,600	582	2	T 74 R LED	RTLED50	50	0.1	C-COCC	1,950	195	387	0.1	\$ 58.24	\$ 742.50	\$ 35	12.7	12.1					
40LED	Bathroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	3,120	187	1	T 38 R LED	RTLED38	38	0.0	NONE	3,120	119	69	0.0	\$ 10.32	\$ 236.25	\$ -	22.9	22.9					
196LED	Office	2	W 32 C F 4 (ELE)	F44LLL	112	0.1	SW	2,600	582	2	T 74 R LED	RTLED50	50	0.1	C-COCC	1,950	195	387	0.1	\$ 58.24	\$ 742.50	\$ 35	12.7	12.1					
40LED	Case Worker Office	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	2,600	468	3	T 38 R LED	RTLED38	38	0.1	C-COCC	1,950	222	246	0.1	\$ 38.37	\$ 978.75	\$ 35	27.4	26.4					
40LED	Bathroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	3,120	187	1	T 38 R LED	RTLED38	38	0.0	NONE	3,120	119	69	0.0	\$ 10.32	\$ 236.25	\$ -	22.9	22.9					
247LED	Administration Conference Room	9	T 40 R F 3 (MAG)	F43SE	136	1.2	SW	4,896	4,982	9	T 59 R LED	RTLED38	38	0.3	C-COCC	1,396	139	3,802	0.3	\$ 238.25	\$ 1,396.25	\$ 35	4.3	4.3					
254																													

EXISTING CONDITIONS										RETROFIT CONDITIONS										COST & SAVINGS ANALYSIS									
Field Code	Area Description	No. of Fixtures before the retrofit	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space * (Fixt No.)	Pre-Inst. control device	Estimated daily hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	Number of Fixtures after the retrofit	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space * (Number of Fixtures)	Retrofit control device	Estimated annual hours for the usage group	Annual kWh (kW/Space) * (Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kW Saved (Annual kW Saved) * (kWh)	Retrofit cost	Cost for renovations to lighting system	NJ Smart Start Incentive	Simple Payback Incentive	Simple Payback Length of time for renovations cost to be recovered					
198LED	Patient Room 243	2	2T17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T25 R LED	2RTL	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	Patient Room 243	2	W 32 C F 3 (ELE)	F43LL/2	90	0.2	SW	4368	786	2	4 R LED Tube	200732k3	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ 100	11.6	9.8					
96	Patient Room 243 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	NONE	1,800	59	-	0.0	\$ -	\$ -	\$ -	-	-					
133	Patient Room 243 Bathroom	1	CF 26	CFQ26/L-L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L-L	27	0.0	NONE	1,800	49	-	0.0	\$ -	\$ -	\$ -	-	-					
198LED	Patient Room 244	2	2T17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T25 R LED	2RTL	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	Patient Room 244	2	W 32 C F 3 (ELE)	F43LL/2	90	0.2	SW	4368	786	2	4 R LED Tube	200732k3	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ 100	11.6	9.8					
96	Patient Room 244 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	NONE	1,800	59	-	0.0	\$ -	\$ -	\$ -	-	-					
133	Patient Room 244 Bathroom	1	CF 26	CFQ26/L-L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L-L	27	0.0	NONE	1,800	49	-	0.0	\$ -	\$ -	\$ -	-	-					
198LED	Patient Room 245	2	2T17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T25 R LED	2RTL	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	Patient Room 245	2	W 32 C F 3 (ELE)	F43LL/2	90	0.2	SW	4368	786	2	4 R LED Tube	200732k3	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ 100	11.6	9.8					
96	Patient Room 245 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	NONE	1,800	59	-	0.0	\$ -	\$ -	\$ -	-	-					
133	Patient Room 245 Bathroom	1	CF 26	CFQ26/L-L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L-L	27	0.0	NONE	1,800	49	-	0.0	\$ -	\$ -	\$ -	-	-					
40LED	Closet	1	T32 R F 2 (ELE)	F42LL	60	0.1	SW	1456	87	1	T38 R LED	RTL	38	0.0	NONE	1,456	58	-	0.0	\$ -	\$ -	\$ -	-	-					
198LED	Patient Room 246	2	2T17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T25 R LED	2RTL	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	Patient Room 246	2	W 32 C F 3 (ELE)	F43LL/2	90	0.2	SW	4368	786	2	4 R LED Tube	200732k3	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ 100	11.6	9.8					
96	Patient Room 246 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	NONE	1,800	59	-	0.0	\$ -	\$ -	\$ -	-	-					
133	Patient Room 246 Bathroom	1	CF 26	CFQ26/L-L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L-L	27	0.0	NONE	1,800	49	-	0.0	\$ -	\$ -	\$ -	-	-					
198LED	Patient Room 247	2	2T17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T25 R LED	2RTL	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	Patient Room 247	2	W 32 C F 3 (ELE)	F43LL/2	90	0.2	SW	4368	786	2	4 R LED Tube	200732k3	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ 100	11.6	9.8					
96	Patient Room 247 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	NONE	1,800	59	-	0.0	\$ -	\$ -	\$ -	-	-					
133	Patient Room 247 Bathroom	1	CF 26	CFQ26/L-L	27	0.1	SW	4368	472	4	CF 26	CFQ26/L-L	27	0.1	NONE	4,368	472	-	0.0	\$ -	\$ -	\$ -	-	-					
40LED	East Wing Staff Lounge	4	T32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	524	2	T38 R LED	RTL	38	0.1	NONE	4,368	332	192	0.0	\$ 27.15	\$ 472.50	\$ -	17.4	17.4					
96	East Wing Staff Lounge Bathroom	3	W 17 C F 2	F22LL	33	0.0	SW	1800	103	1	W 17 C F 2	F22LL	33	0.0	NONE	1,800	103	-	0.0	\$ -	\$ -	\$ -	-	-					
254LED	East Wing Staff Lounge Bathroom	1	CFQ26/2	CFQ26/2	66	0.1	SW	3120	206	1	EW308/10	EW308/10	33	0.0	NONE	3,120	122	84	-	\$ 12.67	\$ 438.75	\$ -	34.6	34.6					
133	East Wing Solarium	4	CF 26	CFQ26/L-L	27	0.1	SW	4368	472	4	CF 26	CFQ26/L-L	27	0.1	NONE	4,368	472	-	0.0	\$ -	\$ -	\$ -	-	-					
96	East Wing Solarium Bathroom	3	W 17 C F 2	F22LL	33	0.0	SW	1800	103	1	W 17 C F 2	F22LL	33	0.0	NONE	1,800	103	-	0.0	\$ -	\$ -	\$ -	-	-					
254LED	East Wing Solarium Bathroom	1	CFQ26/2	CFQ26/2	66	0.1	SW	3120	206	1	EW308/10	EW308/10	33	0.0	NONE	3,120	122	84	-	\$ 12.67	\$ 438.75	\$ -	34.6	34.6					
198LED	Patient Room 248	2	2T17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T25 R LED	2RTL	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	Patient Room 248	2	W 32 C F 3 (ELE)	F43LL/2	90	0.2	SW	4368	786	2	4 R LED Tube	200732k3	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ 100	11.6	9.8					
96	Patient Room 248 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	NONE	1,800	59	-	0.0	\$ -	\$ -	\$ -	-	-					
133	Patient Room 248 Bathroom	1	CF 26	CFQ26/L-L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L-L	27	0.0	NONE	1,800	49	-	0.0	\$ -	\$ -	\$ -	-	-					
198LED	Patient Room 249	2	2T17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T25 R LED	2RTL	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	Patient Room 249	2	W 32 C F 3 (ELE)	F43LL/2	90	0.2	SW	4368	786	2	4 R LED Tube	200732k3	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ 100	11.6	9.8					
96	Patient Room 249 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	NONE	1,800	59	-	0.0	\$ -	\$ -	\$ -	-	-					
133	Patient Room 249 Bathroom	1	CF 26	CFQ26/L-L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L-L	27	0.0	NONE	1,800	49	-	0.0	\$ -	\$ -	\$ -	-	-					
198LED	Patient Room 250	2	2T17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T25 R LED	2RTL	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	Patient Room 250	2	W 32 C F 3 (ELE)	F43LL/2	90	0.2	SW	4368	786	2	4 R LED Tube	200732k3	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ 100	11.6	9.8					
96	Patient Room 250 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1800	59	1	W 17 C F 2	F22LL	33	0.0	NONE	1,800	59	-	0.0	\$ -	\$ -	\$ -	-	-					
133	Patient Room 250 Bathroom	1	CF 26	CFQ26/L-L	27	0.0	SW	1800	49	1	CF 26	CFQ26/L-L	27	0.0	NONE	1,800	49	-	0.0	\$ -	\$ -	\$ -	-	-					
198LED	Patient Room 251	2	2T17 R F 2 (ELE)	F22LL	31	0.1	SW	4368	271	2	2T25 R LED	2RTL	25	0.1	NONE	4,368	218	52	0.0	\$ 7.41	\$ 405.00	\$ -	54.7	54.7					
218LED	Patient Room 251	2	W 32 C F 3 (ELE)	F43LL/2	90	0.2	SW	4368	786	2	4 R LED Tube	200732k3	45	0.1	NONE	4,368	393	393	0.1	\$ 55.54	\$ 644.40	\$ 100	11.6	9.8					
96	Patient Room 251 Bathroom	1	W 17 C F 2	F22LL	33	0.0	SW	1																					

EXISTING CONDITIONS										RETROFIT CONDITIONS										COST & SAVINGS ANALYSIS									
Field Code	Area Description Unique description of the location - Room number/Room Name: Floor number (if applicable)	No. of Fixtures before the retrofit	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space * (Fixt No.)	Pre-inst. control device	Estimated daily hours for the usage group	Annual kWh (kW/Space * Annual Hours)	Number of Fixtures after the retrofit	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space * (Number of Fixtures)	Retrofit control device	Estimated Annual hours for the usage group	Annual kWh (kW/Space * Annual Hours)	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual kWh Saved (Annual kWh Saved) (kW/Space * (kWh))	Retrofit Cost for renovations to lighting system	NJ Smart Start Lighting Incentive	Simple Payback Incentive	Simple Payback Length of time for renovations cost to be recovered						
247LED	Reception	5	SP 13 R C F 1	CFQ13/L	15	0.1	SW	2600	195	5	SP 13 R C F 1	CFQ13/L	15	0.1	NONE	2,600	195	-	0.0	\$ -	\$ -	-	-						
135LED	Reception	1	T 40 R F 3 (MAG)	F43SE	136	0.1	SW	2600	354	1	T 59 R LED	RTLED38	38	0.0	NONE	2,600	99	255	0.1	\$ 39.94	\$ 236.25	-	5.9						
224LED	Reception	2	S 17 C F 1 (ELE)	F21LL	20	0.0	SW	2600	104	2	S 17 C F 1 (ELE)	RTLED38	38	0.0	NONE	2,600	104	0.0	0.0	\$ -	\$ -	-	-						
254LED	Phone Closet	1	CFQ26/L	CFQ26/L	66	0.1	SW	3120	206	1	EVQ30/L	RTLED38	38	0.0	NONE	3,120	122	84	0.0	\$ 12.67	\$ 438.75	-	34.6						
40LED	Hallway	5	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1456	87	2	T 38 R LED	RTLED38	38	0.0	NONE	1,456	55	32	0.0	\$ 5.98	\$ 236.25	-	39.5						
247LED	Hallway	5	T 40 R F 3 (MAG)	F43SE	136	0.7	SW	8760	5,957	5	T 59 R LED	RTLED38	38	0.2	NONE	8,760	1,664	4,292	0.5	\$ 557.50	\$ 1,181.25	-	2.1						
276	Hyperbatic Wing	9	2T 25 R LED	2RTLED	25	0.2	3 SW	2600	585	9	2T 25 R LED	2RTLED	25	0.2	NONE	2,600	585	0.0	0.0	\$ -	\$ -	-	-						
276	Hallway	4	2T 25 R LED	2RTLED	25	0.1	SW	8760	876	4	2T 25 R LED	2RTLED	25	0.1	NONE	8,760	876	0.0	0.0	\$ -	\$ -	-	-						
276	Director's Office	2	2T 25 R LED	2RTLED	25	0.1	C-OCC	2600	130	2	2T 25 R LED	2RTLED	25	0.1	NONE	2,600	130	0.0	0.0	\$ -	\$ -	-	-						
276	Treatment	3	2T 25 R LED	2RTLED	25	0.1	C-OCC	4368	328	3	2T 25 R LED	2RTLED	25	0.1	NONE	4,368	328	0.0	0.0	\$ -	\$ -	-	-						
89	Closet	1	CF 13 2 LAMP	CFQ13/L	28	0.0	C-OCC	1040	29	1	CF 13 2 LAMP	CFQ13/L	28	0.0	NONE	1,040	29	0.0	0.0	\$ -	\$ -	-	-						
135	Bathroom	2	SP 13 R C F 1	CFQ13/L	15	0.0	SW	3120	94	2	SP 13 R C F 1	CFQ13/L	15	0.0	NONE	3,120	94	0.0	0.0	\$ -	\$ -	-	-						
276	Bathroom	1	12T 25 R LED	2RTLED	25	0.0	SW	3120	78	1	2T 25 R LED	2RTLED	25	0.0	NONE	3,120	78	0.0	0.0	\$ -	\$ -	-	-						
57	Hallway	7	S 34 C F 1 (MAG)	F41EE	43	0.3	SW	8760	2,637	7	S 28 C F 1	F41SSILL	26	0.2	NONE	8,760	1,594	1,042	0.1	\$ 135.39	\$ 992.25	-	7.3						
40LED	Radiology WR	4	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	2600	624	4	T 38 R LED	RTLED38	38	0.2	NONE	2,600	395	229	0.1	\$ 35.87	\$ 945.00	-	26.3						
135	Waiting Room	3	SP 13 R C F 1	CFQ13/L	15	0.0	SW	3824	262	3	SP 13 R C F 1	CFQ13/L	15	0.0	NONE	5,824	262	0.0	0.0	\$ -	\$ -	-	-						
57	Hallway	10	S 34 C F 1 (MAG)	F41EE	43	0.4	SW	8760	3,767	10	S 28 C F 1	F41SSILL	26	0.3	NONE	8,760	2,278	1,489	0.2	\$ 193.42	\$ 1,417.50	-	7.3						
40LED	Reception	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2600	312	2	T 38 R LED	RTLED38	38	0.1	NONE	2,600	198	114	0.0	\$ 17.93	\$ 472.50	-	26.3						
57	Radiology	1	S 34 C F 1 (MAG)	F41EE	43	0.0	SW	2600	112	1	S 28 C F 1	F41SSILL	26	0.0	NONE	2,600	68	44	0.0	\$ 6.93	\$ 141.75	-	20.5						
89	Soiled Utility	1	CF 13 2 LAMP	CFQ13/L	28	0.0	SW	1456	41	1	CF 13 2 LAMP	CFQ13/L	28	0.0	NONE	1,456	41	0.0	0.0	\$ -	\$ -	-	-						
40LED	Changing Room	2	T 32 R F 2 (ELE)	F42LL	60	0.1	C-OCC	8736	1,048	2	T 38 R LED	RTLED38	38	0.1	NONE	8,736	664	384	0.1	\$ 49.94	\$ 472.50	-	9.5						
40LED	X-Ray	5	T 32 R F 2 (ELE)	F42LL	60	0.3	SW	8760	2,528	5	T 38 R LED	RTLED38	38	0.2	NONE	8,760	1,664	96	0.1	\$ 125.15	\$ 1,181.25	-	17.4						
40LED	X-Ray	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	262	1	T 38 R LED	RTLED38	38	0.0	NONE	4,368	166	96	0.0	\$ 13.58	\$ 236.25	-	17.4						
40LED	Hallway	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2600	156	1	T 38 R LED	RTLED38	38	0.0	NONE	2,600	99	57	0.0	\$ 8.97	\$ 236.25	-	26.3						
40LED	File Room	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1040	187	3	T 38 R LED	RTLED38	38	0.1	NONE	3,120	104	119	0.0	\$ 14.99	\$ 708.75	-	48.2						
40LED	Hallway	4	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	8760	2,102	4	T 38 R LED	RTLED38	38	0.2	NONE	8,760	1,332	771	0.1	\$ 100.12	\$ 945.00	-	9.4						
40LED	Office	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2600	312	2	T 38 R LED	RTLED38	38	0.1	NONE	2,600	198	114	0.0	\$ 17.93	\$ 472.50	-	26.3						
40LED	Exam Cat Scan	4	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	4368	1,048	4	T 38 R LED	RTLED38	38	0.2	NONE	4,368	664	384	0.1	\$ 51.31	\$ 945.00	-	17.4						
135	Cat Scan Office	4	SP 13 R C F 1	CFQ13/L	15	0.1	SW	2600	156	4	SP 13 R C F 1	CFQ13/L	15	0.1	NONE	2,600	156	0.0	0.0	\$ -	\$ -	-	-						
40LED	Mammogram	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	524	2	T 38 R LED	RTLED38	38	0.1	NONE	4,368	332	192	0.0	\$ 27.15	\$ 472.50	-	17.4						
196LED	Bathroom	1	2T 17 R F 2 (ELE)	F22LL	31	0.0	SW	3120	97	1	2T 17 R F 2 (ELE)	RTLED50	50	0.0	NONE	3,120	78	19	0.0	\$ 2.82	\$ 202.50	-	71.9						
196LED	File Storage	6	W 32 C F 4 (ELE)	F44LL	112	0.7	SW	1040	699	6	T 74 R LED	RTLED50	50	0.3	NONE	1,040	312	387	0.4	\$ 82.82	\$ 1,417.50	-	17.1						
40LED	X-Ray 2	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	524	2	T 38 R LED	RTLED38	38	0.1	NONE	4,368	332	192	0.0	\$ 27.15	\$ 472.50	-	17.4						
40LED	X-Ray 3	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	524	2	T 38 R LED	RTLED38	38	0.1	NONE	4,368	332	192	0.0	\$ 27.15	\$ 472.50	-	17.4						
40LED	Office	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2600	156	1	T 38 R LED	RTLED38	38	0.0	NONE	2,600	99	57	0.0	\$ 8.97	\$ 236.25	-	26.3						
40LED	Corridor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	8760	1,051	2	T 38 R LED	RTLED38	38	0.1	NONE	8,760	666	389	0.0	\$ 50.06	\$ 472.50	-	9.4						
40LED	Nuclear Medicine	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	2600	156	1	T 38 R LED	RTLED38	38	0.0	NONE	2,600	99	57	0.0	\$ 8.97	\$ 236.25	-	26.3						
40LED	Nuclear Medicine	3	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	8760	468	3	T 38 R LED	RTLED38	38	0.1	NONE	8,760	996	2,568	0.6	\$ 352.88	\$ 1,417.50	-	3.9						
247LED	Exam	6	T 40 R F 3 (MAG)	F43SE	136	0.8	SW	2600	3,564	6	T 59 R LED	RTLED38	38	0.2	NONE	4,368	996	2,568	0.6	\$ 352.88	\$ 1,417.50	-	3.9						
1	Exam	1	I60/1	I60/1	60	0.1	SW	4368	262	1	I60/1	CFQ26/L	27	0.0	NONE	4,368	144	0.0	0.0	\$ -	\$ -	-	-						
196LED	Bathroom	1	2T 17 R F 2 (ELE)	F22LL	31	0.0	SW	3120	97	1	2T 25 R LED	2RTLED	25	0.0	NONE														

EXISTING CONDITIONS										RETROFIT CONDITIONS										COST & SAVINGS ANALYSIS									
Field Code	Area Description Unique description of the location - Room number/Room name: Floor number (if applicable)	No. of Fixtures before the retrofit	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Watts/Fixt * (Fixt No.)	Pre-inst. control device	Annual Hours	Annual kWh	Watts/Fixt * (Number of Fixtures)	Watts per Fixture	kW/Space	Retrofit Control device	Annual Hours	Annual kWh	Annual kWh Saved (Original Annual kWh) - (Retrofit Annual kWh)	Annual \$ Saved (kWh Saved) * (\$/kWh)	Retrofit Cost for renovations to lighting system	NJ Smart Start Light Incentive	Simple Payback Length of time for renovations cost to be recovered	Simple Payback Length of time for renovations cost to be recovered							
196LED	Hallway	5	W 32 C F 4 (ELE)	F44LL	112	0.6	SW	8760	4,906	5	T 74 R LED	RTLED090	50	0.3	NONE	8,760	2,190	2,716	0.3	\$ 352.71	\$ 1,181.25	-	3.3	3.3					
135	Cafeteria	4	SP 13 R C F 1	CFQ13/R-L	15	0.1	SW	3640	218	4	SP 13 R C F 1	CFQ13/R-L	15	0.1	NONE	3,640	218	0	0	\$ -	\$ -	-	-	-					
7LED	Cafeteria	15	2T 32 R F 2 (U)	FU2LL	60	0.9	SW	3640	3,276	15	2T 25 R LED	2RTL2ED	25	0.4	NONE	3,640	1,365	1,911	0.5	\$ 278.69	\$ 3,037.50	-	10.9	10.9					
196LED	Cafeteria	3	W 32 C F 4 (ELE)	F44LL	112	0.3	SW	3640	1,223	3	T 74 R LED	RTLED090	50	0.2	NONE	3,640	546	677	0.2	\$ 89.74	\$ 708.75	-	7.2	7.2					
169LED	Exterior	5	WP 250 MH	MH250/L	295	1.5	PHC	4732	6,980	5	FXLED78	FXLED78/L	78	0.4	NONE	4,732	1,845	5,134	1.1	\$ 716.41	\$ 4,220.98	\$ 875	5.9	4.7					
143LED	Single Pole	8	HPS 100 POLE	HPS100/L	138	1.1	PHC	4732	5,224	8	ALED52	ALED52	80	0.5	NONE	4,732	2,271	2,953	0.6	\$ 412.02	\$ 6,177.60	\$ 1,400	15.0	11.6					
146LED	Double Pole	9	HPS 150 POLE	HPS150/L	188	1.7	PHC	9,007	9,007	9	ALED52	ALED52	80	0.5	NONE	4,732	2,055	5,451	1.2	\$ 760.65	\$ 5,977.80	\$ 1,575	7.9	5.8					
231LED	Exterior	1	WP400MH/L	MH400/L	458	0.5	PHC	4732	2,167	1	WPLED278	WPLED278	91	0.1	NONE	4,732	431	1,737	0.4	\$ 242.32	\$ 1,024.19	\$ 100	4.2	3.8					
193	Exterior	1	CF 26	CFQ26/L-L	27	0.0	PHC	4732	128	1	CF 26	CFQ26/L-L	27	0.0	NONE	4,732	128	0	0	\$ -	\$ -	-	-	-					
227LED	Exterior - Back of House	13	W 30 MH Wall Pack	MH70/L	95	1.2	PHC	4732	5,844	13	FXLED18	FXLED18/L	18	0.2	NONE	4,732	1,107	4,737	1.0	\$ 660.95	\$ 5,501.93	\$ 1,300	8.3	6.4					
277	Exterior - Central Plant	4	WPLED20	WPLED20	20	0.1	PHC	4732	379	4	WPLED20	WPLED20	22	0.1	NONE	4,732	416	(38)(0.0)	\$ -	\$ -	\$ -	-	-						
143LED	Exterior	2	HPS 100 POLE	HPS100/L	138	0.3	PHC	4732	1,306	2	ALED52	ALED52	80	0.1	NONE	4,732	568	738	0.2	\$ 103.00	\$ 1,544.40	\$ 350	15.0	11.6					
133	Overhang Lighting	10	CF 26	CFQ26/L-L	27	0.3	PHC	4732	1,278	10	CFQ26/L-L	CFQ26/L-L	27	0.3	NONE	4,732	1,278	0	0	\$ -	\$ -	-	-	-					
133	Overhang Lighting	8	CF 26	CFQ26/L-L	27	0.2	PHC	4732	1,022	8	CF 26	CFQ26/L-L	27	0.2	NONE	4,732	1,022	0	0	\$ -	\$ -	-	-	-					
41LED	Basement - Kitchen Storage	9	1B 40 R F 2 (MAG)	F42SS	94	0.8	SW	1040	880	9	4 R LED Tube	RTLED038	30	0.3	NONE	1,040	281	599	0.6	\$ 128.24	\$ 2,103.30	-	16.4	16.4					
40LED	Basement - Kitchen Storage	4	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1040	250	4	T 38 R LED	RTLED038	38	0.2	NONE	1,040	156	92	0.1	\$ 19.59	\$ 945.00	-	48.2	48.2					
40LED	Maternity Hallway	7	T 32 R F 2 (ELE)	F42LL	60	0.4	SW	8760	3,679	7	T 38 R LED	RTLED038	38	0.3	NONE	8,760	2,330	1,349	0.2	\$ 175.22	\$ 1,653.75	-	9.4	9.4					
40LED	Electrical Closet	4	T 32 R F 2 (ELE)	F42LL	60	0.2	SW	1456	349	4	T 38 R LED	RTLED038	38	0.2	NONE	1,456	221	128	0.1	\$ 23.93	\$ 945.00	-	39.5	39.5					
40LED	Staff Lounge	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	524	2	T 38 R LED	RTLED038	38	0.1	NONE	4,368	332	192	0.0	\$ 27.15	\$ 472.50	-	17.4	17.4					
40LED	Sleep Rooms	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	262	1	T 38 R LED	RTLED038	38	0.0	NONE	4,368	166	96	0.0	\$ 13.58	\$ 236.25	-	17.4	17.4					
40LED	Sleep Rooms	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	262	1	T 38 R LED	RTLED038	38	0.0	NONE	4,368	166	96	0.0	\$ 13.58	\$ 236.25	-	17.4	17.4					
40LED	Sleep Rooms	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	4368	262	1	T 38 R LED	RTLED038	38	0.0	NONE	4,368	166	96	0.0	\$ 13.58	\$ 236.25	-	22.9	22.9					
57	Closet	1	S 34 C F 1 (MAG)	F41EE	43	0.0	SW	1040	45	1	S 28 C F 1	F41SSILL	26	0.0	NONE	1,040	27	18	0.0	\$ 3.78	\$ 141.75	-	37.5	37.5					
40LED	Equipment Storage	7	T 32 R F 2 (ELE)	F42LL	60	0.4	SW	1040	437	7	T 38 R LED	RTLED038	38	0.3	NONE	1,040	277	160	0.2	\$ 34.29	\$ 1,653.75	-	48.2	48.2					
40LED	Hallway	19	T 32 R F 2 (ELE)	F42LL	60	1.1	SW	8760	9,966	19	T 38 R LED	RTLED038	38	0.7	NONE	8,760	3,777	6,183	0.7	\$ 478.17	\$ 4,488.75	-	9.4	9.4					
133	Wall Scoones	11	CF 26	CFQ26/L-L	27	0.3	SW	8760	2,602	11	CF 26	CFQ26/L-L	27	0.3	NONE	8,760	2,602	0	0	\$ -	\$ -	-	-	-					
218LED	Managers Office	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	2600	468	2	4 R LED Tube	200732/L	45	0.1	NONE	2,600	234	234	0.1	\$ 36.68	\$ 644.40	\$ 100	17.4	14.8					
218LED	Storage	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	1040	187	2	4 R LED Tube	200732/L	45	0.1	NONE	1,040	94	20	0.1	\$ 20.04	\$ 644.40	\$ 100	32.2	29.2					
40LED	Bathroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	3120	187	1	T 38 R LED	RTLED038	38	0.0	NONE	3,120	119	69	0.0	\$ 10.32	\$ 236.25	-	22.9	22.9					
218LED	Conference Room	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	4000	720	2	4 R LED Tube	200732/L	45	0.1	C/OCC	3,200	288	432	0.1	\$ 60.15	\$ 914.40	\$ 135	15.2	13.0					
218LED	Waiting Room	2	W 32 C F 3 (ELE)	F43LL/L2	90	0.2	SW	1,048	2	2	4 R LED Tube	200732/L	45	0.1	NONE	1,108	524	1	0.1	\$ 71.98	\$ 644.40	\$ 100	9.1	7.7					
40LED	Bathroom	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	3120	187	1	T 38 R LED	RTLED038	38	0.0	NONE	3,120	119	69	0.0	\$ 10.32	\$ 236.25	-	22.9	22.9					
40LED	Emergency Exit	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	8760	1,051	2	T 38 R LED	RTLED038	38	0.1	NONE	8,760	666	385	0.0	\$ 50.06	\$ 472.50	-	9.4	9.4					
40LED	Corridor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	312	312	2	T 38 R LED	RTLED038	38	0.1	NONE	3,120	114	172	0.0	\$ 17.60	\$ 236.25	-	29.3	29.3					
218LED	Medis Closet	1	W 32 C F 3 (ELE)	F43LL/L2	90	0.1	SW	5840	5840	1	4 R LED Tube	200732/L	45	0.0	NONE	5,840	263	263	0.0	\$ 35.62	\$ 322.20	\$ 50	9.0	7.6					
218LED	Pantry	1	W 32 C F 3 (ELE)	F43LL/L2	90	0.1	SW	1040	94	1	4 R LED Tube	200732/L	45	0.0	NONE	1,040	47	47	0.0	\$ 10.02	\$ 322.20	\$ 50	32.2	27.2					
261	Patient 101	2	PAR 38 SP	H100/L	100	0.2	SW	4368	874	2	PAR 38 SP	H100/L	100	0.2	NONE	4,368	874	0	0	\$ -	\$ -	-	-	-					
274LED	Patient 101	9	I 100	I100/L	100	0.9	SW	4368	3,931	9	A19 LED	A19 LED	13.5	0.1	NONE	4,368	531	3,400	0.8	\$ 480.44	\$ 413.10	-	0.9	0.9					
50LED	Patient 101	1	W 32 W F 2 (ELE)	F42LL	60	0.1	SW	4368	262	1	4 R LED Tube	200732/L	45	0.0	NONE	4,368	131	131	0.0	\$ 18.51	\$ 163.35	-	8.8	8.8					
151LED	Patient 101 Bathroom	1	S 32 C F 2 (ELE)	F41LL	108	0.1	SW	1040	108	1	STLED4	STLED4	40	0.0	NONE	1,040	72	36	0.0	\$ 8.25	\$ 356.70	\$ 45	57.0	49.8					
261	Patient 102	2	PAR 38 SP	H100/L	100	0.2	SW	4368	874	2	PAR 38 SP	H100/L	100	0.2	NONE	4,368	874	0	0	\$ -	\$ -	-	-	-					

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



Your Power to Save

At Home, for Business, and for the Future

[About Us](#) | [Press Room](#) | [Library](#)

HOME

RESIDENTIAL

COMMERCIAL, INDUSTRIAL
AND LOCAL GOVERNMENT



[Home](#) » [Commercial & Industrial](#) » [Programs](#)

NJ SmartStart Buildings

Program Overview

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



With New Jersey SmartStart Buildings ...

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

Special Notice

Enhanced incentives are available for NJ SmartStart Building upgrades in buildings impacted by Hurricane Sandy. Eligible projects receive an additional 50% and new incentives have been 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 — for 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. To receive an incentive, you must submit an application form (and applicable worksheets) and receive an approval letter from the program before any equipment is installed (click here for complete Terms and Conditions). Upon receipt of an approval letter, you may proceed to install the equipment listed on your approved application. Equipment installed prior to the date of the approval letter is not eligible for an incentive. **Any customer and/or agent who purchases equipment prior to the receipt of an 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 construction project 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 or plan to install. The application should be accompanied by a related worksheet, where applicable, manufacturer's specification sheet (refer to the specific program requirements on the background application for specs needed for your project) for the equipment you are planning to install. (Program representatives will review your application package and approve it, reject it, or 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 for energy-efficiency measures that are not on the prescriptive equipment Incentive list, but are project/facility specific.

Incentives for Qualifying Equipment and Projects

Financial incentives are available for large and small projects. These incentives offset some or maybe even all! — of the added cost to purchase qualifying energy-efficient equipment, and provides significant long-term energy savings. Ranges of incentives are available for qualifying 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 incentives for equipment not listed here, contact a program representative. Fiscal year financial incentives will be limited to a maximum of \$500,000 per customer utility account and are available as long as permits are obtained.

[Home](#) | [Residential](#) | [Commercial & Industrial](#) | [Renewable Energy](#)
[About Us](#) | [Press Room](#) | [Library](#) | [FAQs](#) | [Calendar](#) | [Newsletters](#) | [Contact Us](#) | [Site](#)



Your Power to Save

At Home, for Business, and for the Future

[About Us](#) | [Press Room](#) | [Library](#)

HOME

RESIDENTIAL

COMMERCIAL, INDUSTRIAL
AND LOCAL GOVERNMENT



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 impacted by Hurricane Sandy. Eligible projects receive an additional 50% and new incentives have been 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 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 specific information needed for your project) and a current utility bill(s).

In order to be eligible to receive financial incentives under this Program, Applicants must receive electric and/or gas service from one of 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.



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 Measure)
 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 discontinued effective March 1, 2013 except for buildings impacted by Hurricane Sandy. Approved applications will have the standard timeframe from the program commitment date to complete the installation.**)

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/freezer case)

Prescriptive Lighting

New Linear Fluorescent

T-12, HID and Incandescent to T-5 and T-8 (\$25 - \$200 per 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 per 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 Space
Linear panels (\$50 per fixture)

Fuel pump canopy (\$100 per fixture)

LED retrofit kits (custom measures)

New Pulse-Start Metal Halide (\$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. Approved applications will have the standard timeframe of one year from the project 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 fixture for office applications only)

Occupancy controlled hi-low fluorescent controls (\$25 per fixture 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 (\$100 per door)

Aluminum Night Curtains for open refrigerated cases (\$3.50 per 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 program incentive threshold, currently 5% more energy efficient than ASHRAE 2007 for New Construction only.)

Custom electric and gas equipment incentives (not prescriptive)

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

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

II. DIRECT INSTALL



Your Power to Save

At Home, for Business, and for the Future

[About Us](#) | [Press Room](#) | [Library](#)

HOME

RESIDENTIAL

COMMERCIAL, INDUSTRIAL
AND LOCAL GOVERNMENT

Home » Commercial & Industrial » Programs

Direct Install

COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT

HURRICANE SANDY

PROGRAMS

NJ SMARTSTART BUILDINGS

PAY FOR PERFORMANCE

COMBINED HEAT & POWER AND
FUEL CELLSLOCAL 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

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 to and how to get through the process. Created specifically for existing small to medium facilities, Direct Install is a turnkey solution that makes it easy and affordable to upgrade high efficiency equipment. Direct Install is designed to cut your facility's energy costs replacing lighting, HVAC and other outdated operational equipment with energy efficient alternatives. The program pays up to 70% of retrofit costs, dramatically improving your payback on the project. There is a \$125,000 incentive cap on each project.

ELIGIBILITY



Existing small to mid-sized commercial and industrial facilities with a peak electric demand that did not exceed 200 kW in any of the preceding 12 months are eligible to participate in Direct Install. Applicants will submit the last 12 months of electric utility bills indicating that they are below the demand threshold and have occupied the building during that time. Buildings must be located in New Jersey and served by the state's public, regulated electric or natural gas utility 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, types and capacities. Boilers may not exceed 500,000 Btuh and furnaces may not exceed 140,000 Btuh.

III. PAY FOR PERFORMANCE (P4P)



Your Power to Save

At Home, for Business, and for the Future

[About Us](#) | [Press Room](#) | [Library](#)

HOME

RESIDENTIAL

COMMERCIAL, INDUSTRIAL
AND LOCAL GOVERNMENT



COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT

HURRICANE SANDY

PROGRAMS

NJ SMARTSTART BUILDINGS

PAY FOR PERFORMANCE

EXISTING BUILDINGS

PARTICIPATION STEPS

APPLICATIONS AND
FORMS

APPROVED PARTNERS

NEW CONSTRUCTION

FAQS

BECOME A PARTNER

COMBINED HEAT & POWER AND
FUEL CELLS

LOCAL GOVERNMENT ENERGY
AUDIT

LARGE ENERGY USERS PROGRAM

ENERGY SAVINGS IMPROVEMENT
PROGRAM

DIRECT INSTALL

ENERGY BENCHMARKING

[Home](#) » [Commercial & Industrial](#) » [Programs](#) » [Pay for Performance](#)

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 facility. Earn incentives that are directly linked to your savings. Pay for Performance relies on a



program partners who provide technical services under direct contract to you. Acting as your energy expert, your partner will develop a whole-building energy reduction plan for each project with a whole-building technical component of a traditional energy audit, a financial plan for full implementation of energy efficient measures and a construction schedule for installation.

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 buildings, family buildings, supermarkets, manufacturing facilities, schools, shopping malls and restaurants. Buildings that fall into the following customer classes are not required to meet the 100 kW demand threshold to participate in the program: hospitals, public colleges and universities, 501(c)(3) non-profit organizations, affordable multifamily housing, and local governmental entities. Your energy reduction plan must 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, manufacturing, water treatment and datacenter building types whose annual energy consumption is heavily weighted on process loads. Details are available in the high energy intensity section of this 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 in your facilities and comparing it to similar buildings. That can be a big help in locating opportunities for cost-justified energy efficiency upgrades. And, based on our findings, you may be invited to participate in the Building Performance with ENERGY STAR initiative and receive special recognition as an industry leader in energy efficiency.

Incentives

**OIL, PROPANE & MUNICIPAL
ELECTRIC CUSTOMERS**

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

EDA PROGRAMS

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.

SBC CREDIT PROGRAM

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.

PAST PROGRAMS

TOOLS AND RESOURCES

Incentive #3 - Completion of Post-Construction Benchmarking Report - A completed report verifying energy reductions based on one year of post-

PROGRAM UPDATES

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.

CONTACT US

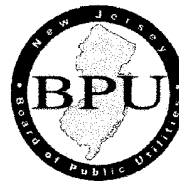


A detailed Incentive Structure document is available on the applications and form

Steps to Participation

[Click here](#) for a step-by-step description of the program.

[Home](#) | [Residential](#) | [Commercial & Industrial](#) | [Renewable Energy](#)
[About Us](#) | [Press Room](#) | [Library](#) | [FAQs](#) | [Calendar](#) | [Newsletters](#) | [Contact Us](#) | [Site](#)



PAY FOR PERFORMANCE APPLICATION FORM

July 1, 2014 – June 30, 2015

Utility Serving Applicant:

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

Instructions

1. Read the program material to determine project qualification.
2. Read the Participation Agreement and sign where indicated.
3. Fill out all applicable spaces on this form.
4. Provide a copy of the customer's company W-9 form.
5. Provide the most recent consecutive 12 month period of utility bills for the project for all accounts, organized in chronological order and separated by account. Utilize Utility Tool for applications with multiple accounts to organize data.

6. Provide brief description of facility, noting any special or unusual circumstances and/or site conditions.
7. Partner must submit the application package via e-mail, mail or fax DIRECTLY to the Market Manager – see back of this form.

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

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

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

Partner Information

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

Project Information

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

Funding

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

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

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

Additional Project information

Additional Utility Account(s)

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

Additional Comments:

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

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

Phone: 866-657-6278 • Fax: 732-855-0422

E-mail: P4P@NJCleanEnergy.com

Visit our website: NJCleanEnergy.com/P4P

New Jersey SmartStart Buildings[®] is a registered trademark. Use of the mark without the permission of the New Jersey Board of Public Utilities, Office of Clean Energy is prohibited.

*Incentives/Requirements subject to change.

001-FY15-07/14

Pay For Performance-Existing Buildings

Participation Agreement

Definitions:

ADMINISTRATOR – New Jersey Board of Public Utilities (NJBPU)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

CUSTOMER'S SIGNATURE

PARTNER SIGNATURE

By signing, I certify that I have read, understand and agree to the Participation Agreement listed above.

IV. ENERGY SAVINGS IMPROVEMENT PLAN (ESIP)



Your Power to Save

At Home, for Business, and for the Future

[About Us](#) | [Press Room](#) | [Library](#)

HOME

RESIDENTIAL

COMMERCIAL, INDUSTRIAL
AND LOCAL GOVERNMENT

COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT

HURRICANE SANDY

PROGRAMS

NJ SMARTSTART BUILDINGS

PAY FOR PERFORMANCE

COMBINED HEAT & POWER AND
FUEL CELLSLOCAL 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 their facilities and pay for the costs using the value of energy savings that result from the improvements. 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 make energy related improvements to their facilities and pay for the costs using the value of energy savings that result from the improvements. The ESIP provides all government agencies in New Jersey with a flexible tool to make energy related improvements to their facilities and pay for the costs using the value of energy savings that result from the improvements.

This Local Finance Notice outlines how local governments can develop and implement an ESIP for 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 efficiency improvements. Local units should carefully consider all alternatives to develop an approach that best meets their needs. Local units considering an ESIP should carefully review the Local Finance Notice, the law, and consult with qualified professionals to determine how they should approach the task.

The NJ Board of Public Utilities sponsored Sustainable Jersey in the creation of an ESIP Guidebook that explains how to implement the program. The guidebook also includes a list 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 energy audit 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, please email it 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

Photovoltaic (PV) Solar Power Generation - Screening Assessment

Inspira Health Network Elmer Hospital

Cost of Electricity	\$0.135	/kWh
Electricity Usage	4,167,528	kWh/yr
System Unit Cost	\$4,000	/kW

Photovoltaic (PV) Solar Power Generation - Screening Assessment

Budgetary	Annual Utility Savings				Estimated	Total		New Jersey	Payback	Payback
Cost					Maintenance	Savings	Federal Tax	Renewable	(without	(with
					Savings		Credit	** SREC	incentive)	incentive)
\$	kW	kWh	therms	\$	\$	\$	\$	\$	Years	Years
\$320,000	80.0	107,389	0	\$14,512	0	\$14,512	\$0	\$24,699	22.1	8.2

** Estimated Solar Renewable Energy Certificate Program (SREC) SREC for 15 Years= \$230 /1000kwh

Area Output*

1,716 m²
18,471 ft²

Perimeter Output*

174 m
571 ft

Available Roof Space for PV:

(Area Output - 10 ft x Perimeter) x 85%
10,848 ft²

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

8 watt/ft²
86,783 DC watts
80 kW Enter into PV Watts

PV Watts Inputs***

Enter into PV Watts (always 20 if flat, if
Array Tilt Angle 20 pitched - enter estimated roof angle)
Array Azimuth 180 Enter into PV Watts (default)
Zip Code 08318 Enter into PV Watts
DC/AC Derate Factor 0.83 Enter into PV Watts



PV Watts Output

107,389 annual kWh calculated in PV Watts program

% Offset Calc

Usage 4,167,528 (from utilities)
PV Generation 107,389 (generated using PV Watts)
% offset 3%

* <http://www.freemaptools.com/area-calculator.htm>

** <http://www.flettexchange.com>

*** http://gisatnrel.nrel.gov/PVWatts_View/index.html



Caution: Photovoltaic system performance predictions calculated by PVWatts® include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at <http://sam.nrel.gov>) that allow for more precise and complex modeling of PV systems.

Disclaimer: The PVWatts® Model ("Model") is provided by the National Renewable Energy Laboratory ("NREL"), which is operated by the Alliance for Sustainable Energy, LLC ("Alliance") for the U.S. Department Of Energy ("DOE") and may be used for any purpose whatsoever.

The names DOE/NREL/ALLIANCE shall not be used in any representation, advertising, publicity or other manner whatsoever to endorse or promote any entity that adopts or uses the Model. DOE/NREL/ALLIANCE shall not provide

any support, consulting, training or assistance of any kind with regard to the use of the Model or any updates, revisions or new versions of the Model.

YOU AGREE TO INDEMNIFY DOE/NREL/ALLIANCE, AND ITS AFFILIATES, OFFICERS, AGENTS, AND EMPLOYEES AGAINST ANY CLAIM OR DEMAND, INCLUDING REASONABLE ATTORNEYS' FEES, RELATED TO YOUR USE, RELIANCE, OR ADOPTION OF THE MODEL FOR ANY PURPOSE WHATSOEVER. THE MODEL IS PROVIDED BY DOE/NREL/ALLIANCE "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. IN NO EVENT SHALL DOE/NREL/ALLIANCE BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO CLAIMS ASSOCIATED WITH THE LOSS OF DATA OR PROFITS, WHICH MAY RESULT FROM ANY ACTION IN CONTRACT, NEGLIGENCE OR OTHER TORTIOUS CLAIM THAT ARISES OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE MODEL.

RESULTS

107,389 kWh per Year *

Month	Solar Radiation (kWh / m ² / day)	AC Energy (kWh)	Energy Value (\$)
January	3.00	6,490	876
February	3.71	7,190	971
March	4.57	9,443	1,275
April	5.33	10,377	1,401
May	5.84	11,512	1,554
June	6.04	11,095	1,498
July	6.01	11,286	1,524
August	5.62	10,641	1,437
September	5.10	9,497	1,282
October	4.15	8,191	1,106
November	3.05	6,118	826
December	2.62	5,550	749
Annual	4.59	107,390	\$ 14,499

Location and Station Identification

Requested Location	501 front st elmer nj
Weather Data Source	(TMY2) ATLANTIC CITY, NJ 34 mi
Latitude	39.45° N
Longitude	74.57° W

PV System Specifications *(Commercial)*

DC System Size	80 kW
Module Type	Standard
Array Type	Fixed (open rack)
Array Tilt	20°
Array Azimuth	180°
System Losses	14%
Inverter Efficiency	96%
DC to AC Size Ratio	1.1

Initial Economic Comparison

Average Cost of Electricity Purchased from Utility	0.14 \$/kWh
Initial Cost	2.60 \$/Wdc
Cost of Electricity Generated by System	0.12 \$/kWh

These values can be compared to get an idea of the cost-effectiveness of this system. However, system costs, system financing options (including 3rd party ownership) and complex utility rates can significantly change the relative value of the PV system.

APPENDIX F

Photos

APPENDIX F – PHOTOS



1. Second story windows to be replaced



2. Existing rooftop air handling units



3. Existing absorption chiller



4. Existing centrifugal chiller



5. Steam boiler in utilities building (typical of 3)



6. Existing centrifugal chiller



7. Cooling tower behind utilities building



8. Air cooled condenser for space cooling

APPENDIX G

EPA Benchmarking Report



ENERGY STAR® Statement of Energy Performance

88

ENERGY STAR®
Score¹

Inspira Health Center Elmer

Primary Property Function: Hospital (General Medical & Surgical)
Gross Floor Area (ft²): 135,000
Built: 1950

For Year Ending: February 28, 2015
Date Generated: July 08, 2015

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

Inspira Health Center Elmer
501 Front St
Elmer, New Jersey 08318

Property Owner

Inspira Health Network
333 Irving Ave
Bridgeton, NJ 08302
() -

Primary Contact

,
() -

Property ID: 4462976

Energy Consumption and Energy Use Intensity (EUI)

Site EUI

211.9 kBtu/ft²

Annual Energy by Fuel

Natural Gas (kBtu)	14,288,758 (50%)
Electric - Grid (kBtu)	14,322,958 (50%)

National Median Comparison

National Median Site EUI (kBtu/ft²)	273.8
National Median Source EUI (kBtu/ft²)	574
% Diff from National Median Source EUI	-23%

Source EUI

444.3 kBtu/ft²

Annual Emissions

Greenhouse Gas Emissions (Metric Tons CO2e/year)	2,676
--	-------

Signature & Stamp of Verifying Professional

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

Signature: _____ Date: _____

Licensed Professional

,
() -



Professional Engineer Stamp
(if applicable)