LGEA Presentation

Ancora Psychiatric Hospital

March 18, 2025

New Jersey's
Clean Energy Program

Lighting the way to New Jersey's Clean Energy Future

INTRODUCTIONS

- *Ancora Psychiatric Hospital*
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- *NJBPU*
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  - Yulia Grinberg
- *NJ Clean Energy Program*
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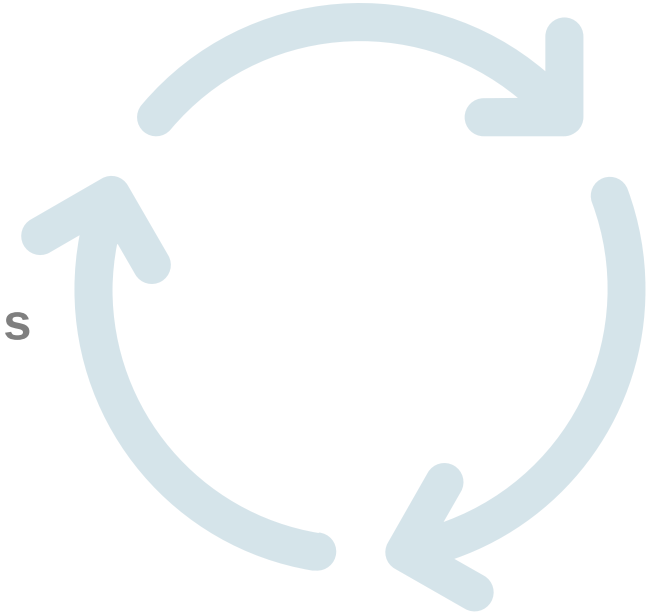
  - Moussa Traore – LGEA Technical Manager
  - Nick Nocco – LGEA Project Auditor
- *Utility Energy Efficiency Programs*
  - Alex Haver – ACE
  - Nathalie Roccatti – SJG
  - Kim Byk - SJG

AGENDA

- The audit process overview
- Energy use & existing conditions
- Review of **E**nergy **C**onservation **M**easures (ECMs) identified & other recommendations
- Energy Savings Improvement Program (ESIP)
- Energy Efficiency Incentive Programs
- Questions regarding the draft audit report
- Next steps for Ancora

LGEA Process

- Application Approval
- Initial Call
- Facility Interviews
- Audit
- Benchmarking & Analysis
- Draft Reports
- LGEA Presentation
- Final Reports



Site Visit & Utility Analysis

Overview of Systems, Baseline & Existing Conditions:

- Building Envelope
- Lighting System
- HVAC and Mechanical Systems
- Food Service & Refrigeration Equipment
- Process Equipment
- Plug Load Equipment
- Building Automation System (BAS)

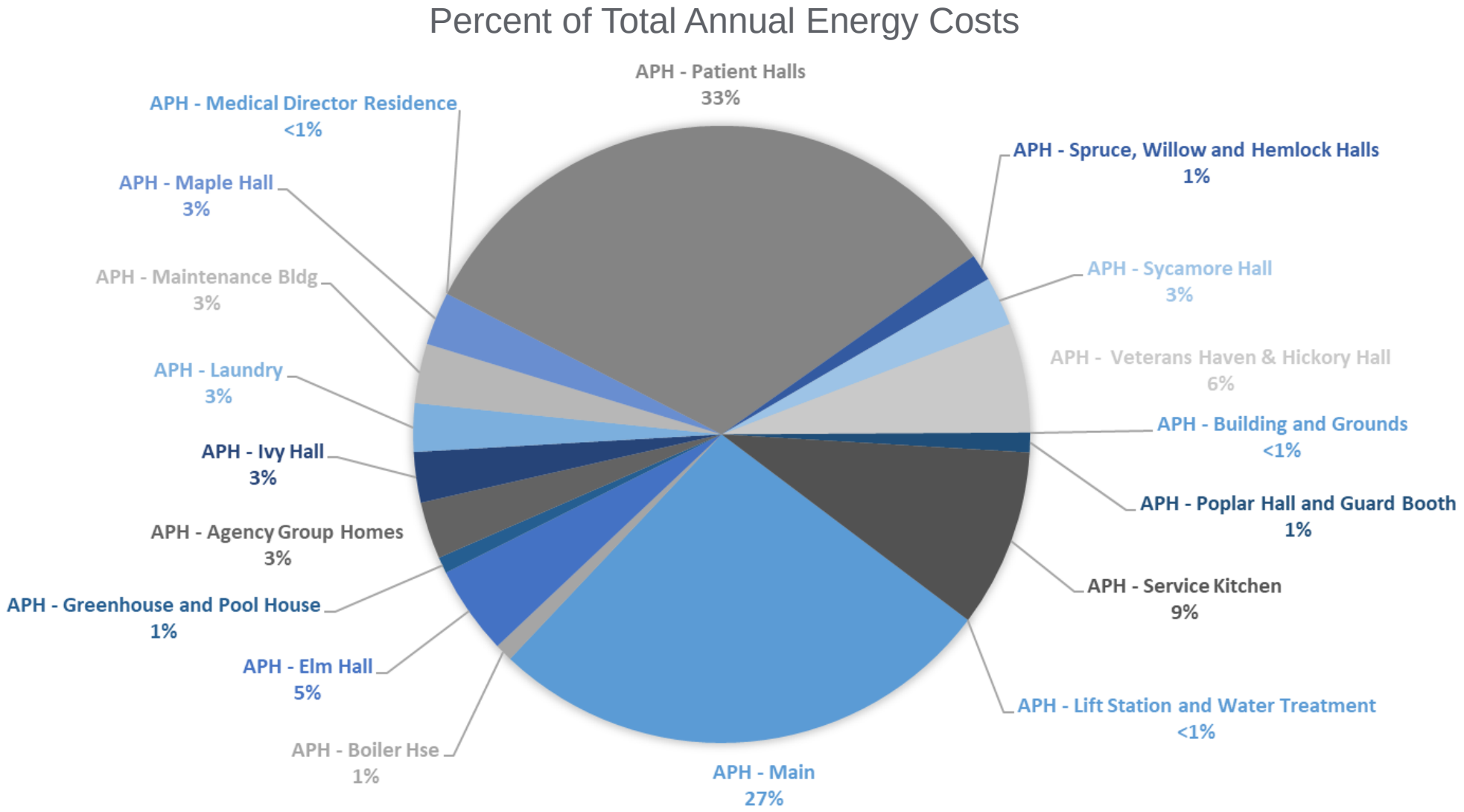
Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs
- Water Consumption and Costs

Sites Visited/Analyzed

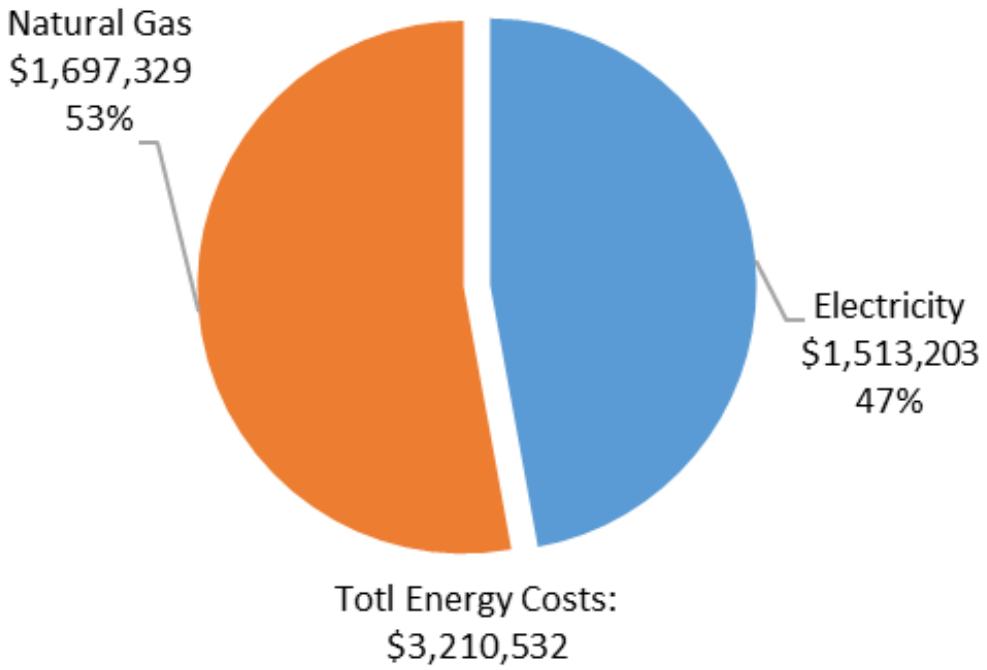
- APH Main & Oxygen Storage
- Laundry
- Service Kitchen
- Boiler House
- Medical Director Residence
- Ivy Hall
- Patient, Halls (Birch, Cedar, Holly Larch)
- Elm Hall
- B&G Support Bldgs (Potting Shed, Fire Houses 1&2, Volatile Storage, Implement Shed, Well Houses (1,6,7,8), Storage Bldg)
- Wastewater Treatment Plant & Lift Station
- Maple Hall
- Spruce, Willow, and Hemlock Halls
- Poplar Hall and Guard Booth
- Electric Service Blgs, Hickory Hall, Storage Garage Warehouse
- Green Houses (1-4) and Swimming Pool/Bath House
- Sycamore Hall
- Evergreen Hall
- Group Homes
- Maintenance Building

Utility Breakout (1 of 2)

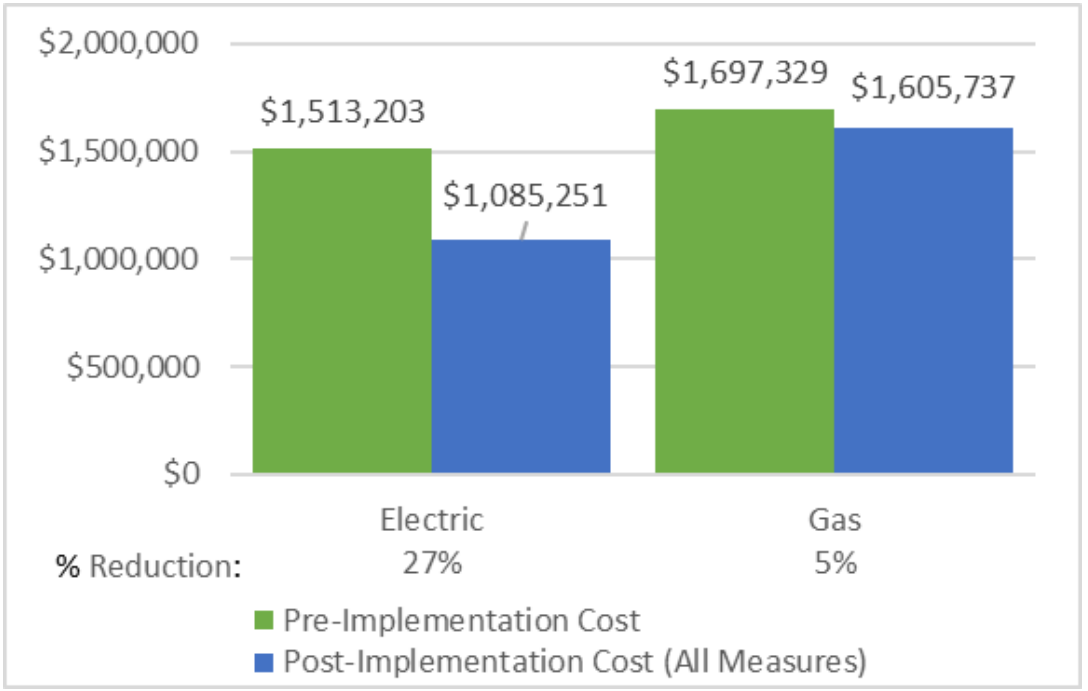


Utility Breakout

Total Annual Energy Costs



Pre & Post Implementation Cost



BENCHMARKING

ENERGY STAR® Statement of Energy Performance

LEARN MORE AT energystar.gov

N/A

ENERGY STAR® Score[1]

DHS - Ancora Psychiatric Hospital (APH Campus)

Primary Property Type: Other - Specialty Hospital
Gross Floor Area (ft²): 833,680
Built: 1953

For Year Ending: April 30, 2023
Date Generated: August 05, 2024

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

Property & Contact Information

Property Address	Property Owner	Primary Contact
DHS - Ancora Psychiatric Hospital (APH Campus) 301 Spring Garden Road Hammonton, New Jersey 08037	State of New Jersey 428 East State Street Trenton, NJ 08625 (609) 940-4129	New Jersey Board of Public Utilities State Energy Services 44 South Clinton Ave Trenton, NJ 08625 (609) 633-9666 BPU.EnergyServices@bpu.nj.gov

Property ID: 29865004
Unique Building Identifier (UBID): 87F7M4MQ+39R-448-488-439-512

Energy Consumption and Energy Use Intensity (EUI)

Site EUI
212.3 kBtu/ft²

Source EUI
270.2 kBtu/ft²

Annual Energy by Fuel

Natural Gas (kBtu)	154,445,594 (87%)
Electric - Grid (kBtu)	22,538,831 (13%)

National Median Comparison

National Median Site EUI (kBtu/ft²)	340.9
National Median Source EUI (kBtu/ft²)	433.9
% Diff from National Median Source EUI	-38%

Annual Emissions

Total (Location-Based) GHG Emissions (Metric Tons CO2e/year)	10,229

Signature & Stamp of Verifying Professional

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

LP Signature: _____ Date: _____

Licensed Professional

___ _____
,
(___)___-_____
_____

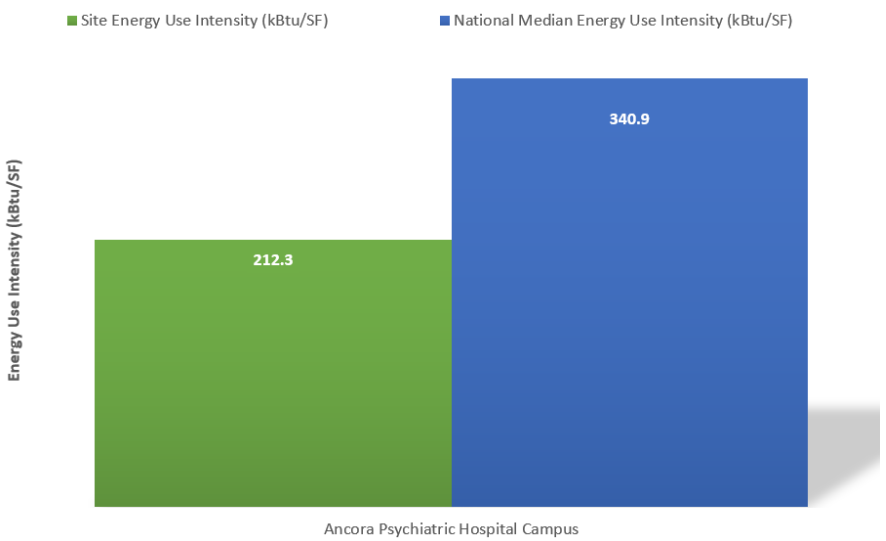
Professional Engineer or Registered Architect Stamp (if applicable)

Site EUI
212.3 kBtu/ft²

Source EUI
270.2 kBtu/ft²

National Median Comparison

National Median Site EUI (kBtu/ft²)	340.9
National Median Source EUI (kBtu/ft²)	433.9
% Diff from National Median Source EUI	-38%



ENERGY STAR® scores are percentile ranking from 1 (least efficient) to 100 (most efficient). It compares your building's energy performance to similar buildings nationwide.

All Opportunities

Savings Potential

ALL OPPORTUNITIES (1 OF 2)

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades		**982,511**	**144.6**	**-199.9**	**$147,172**	**$281,270**	**$47,820**	**$233,450**	**1.6**	**965,971**
ECM 1	Install LED Fixtures	102,563	11.1	-14.2	$16,579	$69,910	$6,140	$63,770	3.8	101,621
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	23,093	5.1	-4.9	$3,517	$7,770	$870	$6,900	2.0	22,682
ECM 3	Retrofit Fixtures with LED Lamps	856,855	128.3	-180.9	$127,076	$203,590	$40,810	$162,780	1.3	841,669
Lighting Control Measures		**400,984**	**58.6**	**-85.4**	**$60,385**	**$335,440**	**$77,990**	**$257,450**	**4.3**	**393,793**
ECM 4	Install Occupancy Sensor Lighting Controls	308,135	44.7	-65.6	$46,369	$253,000	$31,230	$221,770	4.8	302,611
ECM 5	Install Photocell Controls	308	0.0	0.0	$52	$240	$0	$240	4.6	310
ECM 6	Install High/Low Lighting Controls	92,541	13.8	-19.8	$13,963	$82,200	$46,760	$35,440	2.5	90,871
Motor Upgrades		**3,407**	**0.8**	**0.0**	**$510**	**$7,700**	**$0**	**$7,700**	**15.1**	**3,431**
ECM 7	Premium Efficiency Motors	3,407	0.8	0.0	$510	$7,700	$0	$7,700	15.1	3,431
Variable Frequency Drive (VFD) Measures		**583,417**	**107.3**	**32.9**	**$89,567**	**$427,000**	**$43,200**	**$383,800**	**4.3**	**591,347**
ECM 8	Install VFDs on Constant Volume (CV) Fans	519,720	101.5	0.0	$79,658	$300,600	$35,700	$264,900	3.3	523,354
ECM 9	Install VFDs on Heating Water Pumps	37,251	4.8	0.0	$5,580	$89,400	$5,200	$84,200	15.1	37,512
ECM 10	Install VFDs on Kitchen Hood Fan Motors	20,231	0.0	32.9	$3,399	$25,300	$500	$24,800	7.3	24,223
ECM 11	Install VFDs on Condensate Pumps	6,214	1.0	0.0	$931	$11,700	$1,800	$9,900	10.6	6,258
Unitary HVAC Measures		**286,292**	**105.0**	**13.4**	**$44,308**	**$1,028,000**	**$50,000**	**$978,000**	**22.1**	**289,862**
ECM 12	Install High Efficiency Air Conditioning Units	229,833	93.5	13.4	$35,851	$957,900	$50,000	$907,900	25.3	233,008
ECM 13	Install High Efficiency Heat Pumps	56,459	11.4	0.0	$8,457	$70,100	$0	$70,100	8.3	56,854

ALL OPPORTUNITIES (2 OF 2)

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Gas Heating (HVAC/Process) Replacement		**0**	**0.0**	**214.5**	**$2,365**	**$69,200**	**$4,600**	**$64,600**	**27.3**	**25,120**
ECM 14	Install High Efficiency Hot Water Boilers	0	0.0	131.7	$1,461	$62,200	$3,600	$58,600	40.1	15,423
ECM 15	Install High Efficiency Furnaces	0	0.0	82.8	$904	$7,000	$1,000	$6,000	6.6	9,697
HVAC System Improvements		**13,549**	**0.0**	**124.1**	**$3,651**	**$9,990**	**$510**	**$9,480**	**2.6**	**28,174**
ECM 16	Install Programmable Thermostats	12,378	0.0	0.4	$2,099	$5,670	$0	$5,670	2.7	12,513
ECM 17	Install Pipe Insulation	1,171	0.0	123.7	$1,551	$4,320	$510	$3,810	2.5	15,661
Domestic Water Heating Upgrade		**2,411**	**0.0**	**612.4**	**$7,277**	**$4,550**	**$2,150**	**$2,400**	**0.3**	**74,134**
ECM 18	Install Low-Flow DHW Devices	2,411	0.0	612.4	$7,277	$4,550	$2,150	$2,400	0.3	74,134
Food Service & Refrigeration Measures		**44,228**	**3.6**	**0.0**	**$6,733**	**$62,040**	**$3,570**	**$58,470**	**8.7**	**44,537**
ECM 19	Refrigerator/Freezer Case Electrically Commutated Motors	8,388	1.0	0.0	$1,256	$11,960	$1,280	$10,680	8.5	8,447
ECM 20	Refrigeration Controls	16,357	0.4	0.0	$2,450	$44,410	$1,790	$42,620	17.4	16,471
ECM 21	Vending Machine Control	19,483	2.2	0.0	$3,026	$5,670	$500	$5,170	1.7	19,619
Custom Measures		**383,279**	**0.0**	**8,950.7**	**$157,576**	**$4,451,900**	**$0**	**$4,451,900**	**28.3**	**1,434,009**
ECM 22	Retro-Commissioning Study	4,730	0.0	525.6	$6,591	$32,700	$0	$32,700	5.0	66,304
ECM 23	Installation of an Building Automation System (BAS)	366,744	0.0	6,670.1	$129,588	$1,444,600	$0	$1,444,600	11.1	1,150,295
ECM 24	Replace Electric Water Heater with Heat Pump Water Heater	12,080	0.0	0.0	$1,813	$24,600	$0	$24,600	13.6	12,164
ECM 25	Replace Gas Fired Water Heater with Heat Pump Water Heater	-275	0.0	3.0	-$28	$2,500	$0	$2,500	-89.3	74
ECM 26	Install High Efficiency Steam Boilers for Ancora Campus	0	0.0	1,752.0	$19,612	$2,947,500	$0	$2,947,500	150.3	205,171
TOTALS (ALL MEASURES)		**2,700,079**	**419.8**	**9,662.8**	**$519,544**	**$6,677,090**	**$229,840**	**$6,447,250**	**12.4**	**3,850,378**

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

Cost Effective Opportunities

Savings Potential

Cost Effective Opportunities

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades		**982,511**	**144.6**	**-199.9**	**$147,172**	**$281,270**	**$47,820**	**$233,450**	**1.6**	**965,971**
ECM 1	Install LED Fixtures	102,563	11.1	-14.2	$16,579	$69,910	$6,140	$63,770	3.8	101,621
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	23,093	5.1	-4.9	$3,517	$7,770	$870	$6,900	2.0	22,682
ECM 3	Retrofit Fixtures with LED Lamps	856,855	128.3	-180.9	$127,076	$203,590	$40,810	$162,780	1.3	841,669
Lighting Control Measures		**383,381**	**53.9**	**-81.7**	**$57,772**	**$298,910**	**$73,410**	**$225,500**	**3.9**	**376,497**
ECM 4	Install Occupancy Sensor Lighting Controls	290,532	40.0	-61.9	$43,756	$216,470	$26,650	$189,820	4.3	285,316
ECM 5	Install Photocell Controls	308	0.0	0.0	$52	$240	$0	$240	4.6	310
ECM 6	Install High/Low Lighting Controls	92,541	13.8	-19.8	$13,963	$82,200	$46,760	$35,440	2.5	90,871
Variable Frequency Drive (VFD) Measures		**552,485**	**102.0**	**32.9**	**$84,934**	**$337,100**	**$38,000**	**$299,100**	**3.5**	**560,199**
ECM 8	Install VFDs on Constant Volume (CV) Fans	515,144	100.2	0.0	$78,972	$291,200	$35,500	$255,700	3.2	518,746
ECM 9	Install VFDs on Heating Water Pumps	17,110	1.7	0.0	$2,563	$20,600	$2,000	$18,600	7.3	17,230
ECM 10	Install VFDs on Kitchen Hood Fan Motors	20,231	0.0	32.9	$3,399	$25,300	$500	$24,800	7.3	24,223
Unitary HVAC Measures		**54,699**	**10.8**	**0.0**	**$8,193**	**$64,800**	**$0**	**$64,800**	**7.9**	**55,081**
ECM 13	Install High Efficiency Heat Pumps	54,699	10.8	0.0	$8,193	$64,800	$0	$64,800	7.9	55,081
Gas Heating (HVAC/Process) Replacement		**0**	**0.0**	**82.8**	**$904**	**$7,000**	**$1,000**	**$6,000**	**6.6**	**9,697**
ECM 15	Install High Efficiency Furnaces	0	0.0	82.8	$904	$7,000	$1,000	$6,000	6.6	9,697
HVAC System Improvements		**13,345**	**0.0**	**123.4**	**$3,598**	**$9,500**	**$500**	**$9,000**	**2.5**	**27,887**
ECM 16	Install Programmable Thermostats	12,175	0.0	0.0	$2,050	$5,290	$0	$5,290	2.6	12,260
ECM 17	Install Pipe Insulation	1,171	0.0	123.4	$1,548	$4,210	$500	$3,710	2.4	15,627
Domestic Water Heating Upgrade		**2,411**	**0.0**	**612.4**	**$7,277**	**$4,550**	**$2,150**	**$2,400**	**0.3**	**74,134**
ECM 18	Install Low-Flow DHW Devices	2,411	0.0	612.4	$7,277	$4,550	$2,150	$2,400	0.3	74,134
Food Service & Refrigeration Measures		**27,871**	**3.3**	**0.0**	**$4,283**	**$17,630**	**$1,780**	**$15,850**	**3.7**	**28,066**
ECM 19	Refrigerator/Freezer Case Electrically Commutated Motors	8,388	1.0	0.0	$1,256	$11,960	$1,280	$10,680	8.5	8,447
ECM 21	Vending Machine Control	19,483	2.2	0.0	$3,026	$5,670	$500	$5,170	1.7	19,619
Custom Measures		**253,148**	**0.0**	**4,078.5**	**$83,566**	**$844,400**	**$0**	**$844,400**	**10.1**	**732,457**
ECM 22	Retro-Commissioning Study	4,730	0.0	525.6	$6,591	$32,700	$0	$32,700	5.0	66,304
ECM 23	Installation of an Building Automation System (BAS)	245,464	0.0	3,552.9	$76,533	$807,700	$0	$807,700	10.6	663,178
ECM 24	Replace Electric Water Heater with Heat Pump Water Heater	2,954	0.0	0.0	$442	$4,000	$0	$4,000	9.0	2,975
TOTALS		**2,269,851**	**314.5**	**4,648.4**	**$397,698**	**$1,865,160**	**$164,660**	**$1,700,500**	**4.3**	**2,829,989**

ANCORA PSYCH HOSPITAL (MAIN)

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**276,142**	**35.4**	**-57**	**$40,728**	**$61,810**	**$11,370**	**$50,440**	**1.2**	**271,436**
ECM 1	Install LED Fixtures	Yes	11,745	0.2	0	$1,755	$10,800	$1,000	$9,800	5.6	11,781
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	2,227	0.3	0	$328	$360	$40	$320	1.0	2,187
ECM 3	Retrofit Fixtures with LED Lamps	Yes	262,171	34.9	-56	$38,645	$50,650	$10,330	$40,320	1.0	257,469
Lighting Control Measures			**92,702**	**11.8**	**-20**	**$13,665**	**$72,050**	**$20,120**	**$51,930**	**3.8**	**91,038**
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	64,822	8.6	-14	$9,555	$52,080	$6,560	$45,520	4.8	63,659
ECM 5	Install High/Low Lighting Controls	Yes	27,879	3.2	-6	$4,110	$19,970	$13,560	$6,410	1.6	27,379
Variable Frequency Drive (VFD) Measures			**139,448**	**33.1**	**0**	**$20,888**	**$112,700**	**$14,300**	**$98,400**	**4.7**	**140,423**
ECM 6	Install VFDs on Constant Volume (CV) Fans	Yes	122,337	31.4	0	$18,325	$92,100	$12,300	$79,800	4.4	123,193
ECM 7	Install VFDs on Heating Water Pumps	Yes	17,110	1.7	0	$2,563	$20,600	$2,000	$18,600	7.3	17,230
Unitary HVAC Measures			**32,024**	**7.5**	**0**	**$4,797**	**$77,600**	**$3,300**	**$74,300**	**15.5**	**32,248**
ECM 8	Install High Efficiency Air Conditioning Units	No	14,996	4.6	0	$2,246	$58,400	$3,300	$55,100	24.5	15,100
ECM 9	Install High Efficiency Heat Pumps	Yes	17,028	2.9	0	$2,551	$19,200	$0	$19,200	7.5	17,147
HVAC System Improvements			**0**	**0.0**	**18**	**$200**	**$450**	**$50**	**$400**	**2.0**	**2,092**
ECM 10	Install Pipe Insulation	Yes	0	0.0	18	$200	$450	$50	$400	2.0	2,092
Domestic Water Heating Upgrade			**0**	**0.0**	**91**	**$1,020**	**$820**	**$390**	**$430**	**0.4**	**10,666**
ECM 11	Install Low-Flow DHW Devices	Yes	0	0.0	91	$1,020	$820	$390	$430	0.4	10,666
Food Service & Refrigeration Measures			**1,954**	**0.2**	**0**	**$293**	**$540**	**$50**	**$490**	**1.7**	**1,968**
ECM 12	Vending Machine Control	Yes	1,954	0.2	0	$293	$540	$50	$490	1.7	1,968
Custom Measures			**245,464**	**0.0**	**3,553**	**$76,533**	**$807,700**	**$0**	**$807,700**	**10.6**	**663,178**
ECM 13	Installation of an Energy Management System	Yes	245,464	0.0	3,553	$76,533	$807,700	$0	$807,700	10.6	663,178
TOTALS (COST EFFECTIVE MEASURES)			**772,738**	**83.4**	**3,585**	**$155,877**	**$1,075,270**	**$46,280**	**$1,028,990**	**6.6**	**1,197,949**
TOTALS (ALL MEASURES)			**787,733**	**87.9**	**3,585**	**$158,123**	**$1,133,670**	**$49,580**	**$1,084,090**	**6.9**	**1,213,050**

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

LAUNDRY

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**19,118**	**4.1**	**-4**	**$2,820**	**$11,580**	**$1,230**	**$10,350**	**3.7**	**18,798**
ECM 1	Install LED Fixtures	Yes	9,133	1.9	-2	$1,347	$6,450	$220	$6,230	4.6	8,975
ECM 2	Retrofit Fixtures with LED Lamps	Yes	9,985	2.1	-2	$1,474	$5,130	$1,010	$4,120	2.8	9,823
Lighting Control Measures			**4,142**	**1.0**	**-1**	**$610**	**$10,250**	**$1,280**	**$8,970**	**14.7**	**4,059**
ECM 3	Install Occupancy Sensor Lighting Controls	No	4,142	1.0	-1	$610	$10,250	$1,280	$8,970	14.7	4,059
Unitary HVAC Measures			**530**	**0.4**	**0**	**$79**	**$3,800**	**$0**	**$3,800**	**47.9**	**534**
ECM 4	Install High Efficiency Air Conditioning Units	No	530	0.4	0	$79	$3,800	$0	$3,800	47.9	534
Domestic Water Heating Upgrade			**0**	**0.0**	**3**	**$32**	**$60**	**$20**	**$40**	**1.3**	**333**
ECM 5	Install Low-Flow DHW Devices	Yes	0	0.0	3	$32	$60	$20	$40	1.3	333
TOTALS (COST EFFECTIVE MEASURES)			**19,118**	**4.1**	**-1**	**$2,852**	**$11,640**	**$1,250**	**$10,390**	**3.6**	**19,131**
TOTALS (ALL MEASURES)			**23,789**	**5.4**	**-2**	**$3,541**	**$25,690**	**$2,530**	**$23,160**	**6.5**	**23,724**

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

SERVICE KITCHEN

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**39,487**	**4.5**	**-8**	**$5,822**	**$7,700**	**$910**	**$6,790**	**1.2**	**38,789**
ECM 1	Install LED Fixtures	Yes	16,739	2.6	-3	$2,468	$4,450	$170	$4,280	1.7	16,447
ECM 2	Retrofit Fixtures with LED Lamps	Yes	22,748	2.0	-5	$3,353	$3,250	$740	$2,510	0.7	22,343
Lighting Control Measures			**30,253**	**3.5**	**-6**	**$4,459**	**$16,660**	**$2,100**	**$14,560**	**3.3**	**29,710**
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	29,773	3.4	-6	$4,389	$16,100	$1,960	$14,140	3.2	29,239
ECM 4	Install High/Low Lighting Controls	Yes	480	0.1	0	$71	$560	$140	$420	5.9	471
Variable Frequency Drive (VFD) Measures			**60,762**	**10.2**	**33**	**$9,470**	**$52,600**	**$4,600**	**$48,000**	**5.1**	**65,037**
ECM 5	Install VFDs on Constant Volume (CV) Fans	Yes	40,531	10.2	0	$6,071	$27,300	$4,100	$23,200	3.8	40,814
ECM 6	Install VFDs on Kitchen Hood Fan Motors	Yes	20,231	0.0	33	$3,399	$25,300	$500	$24,800	7.3	24,223
Unitary HVAC Measures			**13,713**	**7.5**	**13**	**$2,204**	**$87,800**	**$3,300**	**$84,500**	**38.3**	**15,376**
ECM 7	Install High Efficiency Air Conditioning Units	No	13,713	7.5	13	$2,204	$87,800	$3,300	$84,500	38.3	15,376
Domestic Water Heating Upgrade			**0**	**0.0**	**1**	**$16**	**$150**	**$70**	**$80**	**5.0**	**167**
ECM 8	Install Low-Flow DHW Devices	Yes	0	0.0	1	$16	$150	$70	$80	5.0	167
Food Service & Refrigeration Measures			**22,728**	**1.4**	**0**	**$3,404**	**$50,280**	**$2,710**	**$47,570**	**14.0**	**22,887**
ECM 9	Refrigerator/Freezer Case Electrically Commutated Motors	Yes	7,078	0.9	0	$1,060	$10,090	$1,080	$9,010	8.5	7,127
ECM 10	Refrigeration Controls	No	13,696	0.3	0	$2,052	$39,650	$1,580	$38,070	18.6	13,792
ECM 11	Vending Machine Control	Yes	1,954	0.2	0	$293	$540	$50	$490	1.7	1,968
TOTALS (COST EFFECTIVE MEASURES)			**139,534**	**19.3**	**20**	**$21,120**	**$87,740**	**$8,810**	**$78,930**	**3.7**	**142,799**
TOTALS (ALL MEASURES)			**166,943**	**27.1**	**33**	**$25,375**	**$215,190**	**$13,690**	**$201,500**	**7.9**	**171,967**

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

BOILER HOUSE

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**5,547**	**0.4**	**-1**	**$820**	**$2,120**	**$250**	**$1,870**	**2.3**	**5,471**
ECM 1	Install LED Fixtures	Yes	1,288	0.0	0	$193	$1,320	$100	$1,220	6.3	1,297
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	515	0.0	0	$76	$90	$10	$80	1.1	505
ECM 3	Retrofit Fixtures with LED Lamps	Yes	3,744	0.3	-1	$551	$710	$140	$570	1.0	3,669
Lighting Control Measures			**3,283**	**0.3**	**-1**	**$483**	**$1,650**	**$200**	**$1,450**	**3.0**	**3,218**
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	3,283	0.3	-1	$483	$1,650	$200	$1,450	3.0	3,218
Variable Frequency Drive (VFD) Measures			**6,214**	**1.0**	**0**	**$931**	**$11,700**	**$1,800**	**$9,900**	**10.6**	**6,258**
ECM 5	Install VFDs on Condensate Pumps	No	6,214	1.0	0	$931	$11,700	$1,800	$9,900	10.6	6,258
HVAC System Improvements			**347**	**0.0**	**0**	**$52**	**$110**	**$20**	**$90**	**1.7**	**349**
ECM 6	Install Pipe Insulation	Yes	347	0.0	0	$52	$110	$20	$90	1.7	349
Domestic Water Heating Upgrade			**305**	**0.0**	**0**	**$46**	**$120**	**$30**	**$90**	**2.0**	**307**
ECM 7	Install Low-Flow DHW Devices	Yes	305	0.0	0	$46	$120	$30	$90	2.0	307
Custom Measures			**2,082**	**0.0**	**0**	**$312**	**$2,500**	**$0**	**$2,500**	**8.0**	**2,097**
ECM 8	Replace Electric Water Heater with Heat Pump Water Heater	No	2,082	0.0	0	$312	$2,500	$0	$2,500	8.0	2,097
TOTALS (COST EFFECTIVE MEASURES)			**9,482**	**0.6**	**-2**	**$1,401**	**$4,000**	**$500**	**$3,500**	**2.5**	**9,345**
TOTALS (ALL MEASURES)			**17,778**	**1.6**	**-2**	**$2,644**	**$18,200**	**$2,300**	**$15,900**	**6.0**	**17,700**

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Gas Heating (HVAC/Process) Replacement			**0**	**0.0**	**1,752**	**$19,612**	**$2,947,500**	**$0**	**$2,947,500**	**150.3**	**205,171**
ECM 9	Install High Efficiency Steam Boilers	No	0	0.0	1,752	$19,612	$2,947,500	$0	$2,947,500	150.3	205,171
TOTALS (COST EFFECTIVE MEASURES)			**0**	**0.0**	**0**	**$0**	**$0**	**$0**	**$0**	**0.0**	**0**
TOTALS (ALL MEASURES)			**0**	**0.0**	**1,752**	**$19,612**	**$2,947,500**	**$0**	**$2,947,500**	**150.3**	**205,171**

MEDICAL DIRECTOR RESIDENCE

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**3,153**	**1.1**	**-1**	**$691**	**$1,500**	**$160**	**$1,340**	**1.9**	**3,096**
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	1,559	0.5	0	$342	$860	$90	$770	2.3	1,531
ECM 2	Retrofit Fixtures with LED Lamps	Yes	1,594	0.6	0	$349	$640	$70	$570	1.6	1,565
Lighting Control Measures			**245**	**0.1**	**0**	**$54**	**$810**	**$100**	**$710**	**13.2**	**240**
ECM 3	Install Occupancy Sensor Lighting Controls	No	245	0.1	0	$54	$810	$100	$710	13.2	240
Unitary HVAC Measures			**951**	**1.4**	**0**	**$211**	**$10,800**	**$500**	**$10,300**	**48.9**	**958**
ECM 4	Install High Efficiency Air Conditioning Units	No	951	1.4	0	$211	$10,800	$500	$10,300	48.9	958
HVAC System Improvements			**204**	**0.0**	**1**	**$53**	**$490**	**$10**	**$480**	**9.1**	**287**
ECM 5	Install Programmable Thermostats	No	204	0.0	0	$50	$380	$0	$380	7.6	253
ECM 6	Install Pipe Insulation	No	0	0.0	0	$3	$110	$10	$100	30.6	34
Custom Measures* **			**-275**	**0.0**	**3**	**-$28**	**$2,500**	**$0**	**$2,500**	**-89.3**	**74**
ECM 7	Replace Gas Fired Water Heater with Heat Pump Water Heater***	No	-275	0.0	3	-$28	$2,500	$0	$2,500	-89.3	74
TOTALS (COST EFFECTIVE MEASURES)			**3,153**	**1.1**	**-1**	**$691**	**$1,500**	**$160**	**$1,340**	**1.9**	**3,096**
TOTALS (ALL MEASURES)			**4,277**	**2.5**	**3**	**$980**	**$16,100**	**$770**	**$15,330**	**15.6**	**4,656**

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

*** - Negative payback explained in section 4.5

IVY HALL

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**7,484**	**1.4**	**-1**	**$1,105**	**$3,440**	**$580**	**$2,860**	**2.6**	**7,365**
ECM 1	Install LED Fixtures	Yes	324	0.0	0	$49	$270	$50	$220	4.5	326
ECM 2	Retrofit Fixtures with LED Lamps	Yes	7,159	1.4	-1	$1,056	$3,170	$530	$2,640	2.5	7,038
Lighting Control Measures			**8,117**	**1.6**	**-2**	**$1,196**	**$6,830**	**$1,440**	**$5,390**	**4.5**	**7,971**
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	7,028	1.4	-1	$1,036	$5,430	$660	$4,770	4.6	6,902
ECM 4	Install High/Low Lighting Controls	Yes	1,089	0.2	0	$160	$1,400	$780	$620	3.9	1,069
Variable Frequency Drive (VFD) Measures			**4,577**	**1.3**	**0**	**$686**	**$9,400**	**$200**	**$9,200**	**13.4**	**4,609**
ECM 5	Install VFDs on Constant Volume (CV) Fans	No	4,577	1.3	0	$686	$9,400	$200	$9,200	13.4	4,609
Unitary HVAC Measures			**7,802**	**5.1**	**0**	**$1,169**	**$36,000**	**$1,700**	**$34,300**	**29.4**	**7,856**
ECM 6	Install High Efficiency Air Conditioning Units	No	7,802	5.1	0	$1,169	$36,000	$1,700	$34,300	29.4	7,856
Domestic Water Heating Upgrade			**0**	**0.0**	**0**	**$5**	**$10**	**$0**	**$10**	**1.9**	**56**
ECM 7	Install Low-Flow DHW Devices	Yes	0	0.0	0	$5	$10	$0	$10	1.9	56
Food Service & Refrigeration Measures			**3,971**	**0.2**	**0**	**$595**	**$6,630**	**$410**	**$6,220**	**10.5**	**3,999**
ECM 8	Refrigerator/Freezer Case Electrically Commutated Motors	Yes	1,311	0.2	0	$196	$1,870	$200	$1,670	8.5	1,320
ECM 9	Refrigeration Controls	No	2,660	0.1	0	$398	$4,760	$210	$4,550	11.4	2,679
TOTALS (COST EFFECTIVE MEASURES)			**16,911**	**3.2**	**-3**	**$2,503**	**$12,150**	**$2,220**	**$9,930**	**4.0**	**16,711**
TOTALS (ALL MEASURES)			**31,950**	**9.6**	**-3**	**$4,755**	**$62,310**	**$4,330**	**$57,980**	**12.2**	**31,855**

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

PATIENT HALLS (BIRCH, CEDAR, HOLLY, LARCH

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**349,522**	**49.2**	**-74**	**$51,522**	**$81,710**	**$14,430**	**$67,280**	**1.3**	**343,284**
ECM 1	Install LED Fixtures	Yes	14,172	2.5	-3	$2,091	$19,190	$1,300	$17,890	8.6	13,942
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	7,793	2.7	-2	$1,149	$3,720	$420	$3,300	2.9	7,653
ECM 3	Retrofit Fixtures with LED Lamps	Yes	327,557	44.1	-70	$48,282	$58,800	$12,710	$46,090	1.0	321,689
Lighting Control Measures			**177,171**	**25.4**	**-38**	**$26,115**	**$135,120**	**$30,430**	**$104,690**	**4.0**	**173,992**
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	137,751	18.6	-29	$20,304	$99,000	$12,170	$86,830	4.3	135,280
ECM 5	Install High/Low Lighting Controls	Yes	39,420	6.9	-8	$5,810	$36,120	$18,260	$17,860	3.1	38,713
Motor Upgrades			**3,362**	**0.7**	**0**	**$504**	**$6,700**	**$0**	**$6,700**	**13.3**	**3,385**
ECM 6	Premium Efficiency Motors	No	3,362	0.7	0	$504	$6,700	$0	$6,700	13.3	3,385
Variable Frequency Drive (VFD) Measures			**320,223**	**52.3**	**0**	**$47,964**	**$189,900**	**$17,700**	**$172,200**	**3.6**	**322,462**
ECM 7	Install VFDs on Constant Volume (CV) Fans	Yes	308,635	51.1	0	$46,228	$149,700	$16,700	$133,000	2.9	310,793
ECM 8	Install VFDs on Heating Water Pumps	No	11,588	1.2	0	$1,736	$40,200	$1,000	$39,200	22.6	11,669
Unitary HVAC Measures			**149,326**	**47.1**	**0**	**$22,366**	**$507,700**	**$25,600**	**$482,100**	**21.6**	**150,370**
ECM 9	Install High Efficiency Air Conditioning Units	No	111,656	39.2	0	$16,724	$462,100	$25,600	$436,500	26.1	112,436
ECM 10	Install High Efficiency Heat Pumps	Yes	37,670	7.9	0	$5,642	$45,600	$0	$45,600	8.1	37,934
HVAC System Improvements			**0**	**0.0**	**47**	**$524**	**$1,390**	**$160**	**$1,230**	**2.3**	**5,480**
ECM 11	Install Pipe Insulation	Yes	0	0.0	47	$524	$1,390	$160	$1,230	2.3	5,480
Domestic Water Heating Upgrade			**0**	**0.0**	**421**	**$4,717**	**$2,120**	**$1,000**	**$1,120**	**0.2**	**49,352**
ECM 12	Install Low-Flow DHW Devices	Yes	0	0.0	421	$4,717	$2,120	$1,000	$1,120	0.2	49,352
Food Service & Refrigeration Measures			**7,817**	**0.9**	**0**	**$1,171**	**$2,160**	**$200**	**$1,960**	**1.7**	**7,872**
ECM 13	Vending Machine Control	Yes	7,817	0.9	0	$1,171	$2,160	$200	$1,960	1.7	7,872
Custom Measures			**121,281**	**0.0**	**3,117**	**$53,055**	**$636,900**	**$0**	**$636,900**	**12.0**	**487,117**
ECM 14	Installation of an Energy Management System	No	121,281	0.0	3,117	$53,055	$636,900	$0	$636,900	12.0	487,117
TOTALS (COST EFFECTIVE MEASURES)			**880,816**	**134.6**	**356**	**$135,920**	**$417,800**	**$62,920**	**$354,880**	**2.6**	**928,707**
TOTALS (ALL MEASURES)			**1,128,702**	**175.7**	**3,474**	**$207,938**	**$1,563,700**	**$89,520**	**$1,474,180**	**7.1**	**1,543,314**

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

ELM HALL

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**43,279**	**11.8**	**-8**	**$6,388**	**$20,880**	**$4,210**	**$16,670**	**2.6**	**42,587**
ECM 1	Install LED Fixtures	Yes	2,540	0.0	0	$381	$1,620	$400	$1,220	3.2	2,558
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	9,096	0.9	-2	$1,341	$1,400	$160	$1,240	0.9	8,937
ECM 3	Retrofit Fixtures with LED Lamps	Yes	31,643	10.9	-7	$4,666	$17,860	$3,650	$14,210	3.0	31,092
Lighting Control Measures			**9,469**	**2.9**	**-2**	**$1,396**	**$14,720**	**$4,010**	**$10,710**	**7.7**	**9,303**
ECM 4	Install Occupancy Sensor Lighting Controls	No	4,770	2.1	-1	$703	$9,960	$1,280	$8,680	12.3	4,687
ECM 5	Install High/Low Lighting Controls	Yes	4,699	0.8	-1	$693	$4,760	$2,730	$2,030	2.9	4,616
Variable Frequency Drive (VFD) Measures			**5,811**	**1.6**	**0**	**$870**	**$19,200**	**$2,000**	**$17,200**	**19.8**	**5,851**
ECM 6	Install VFDs on Heating Water Pumps	No	5,811	1.6	0	$870	$19,200	$2,000	$17,200	19.8	5,851
Unitary HVAC Measures			**10,768**	**15.4**	**0**	**$1,613**	**$115,700**	**$7,000**	**$108,700**	**67.4**	**10,843**
ECM 7	Install High Efficiency Air Conditioning Units	No	10,768	15.4	0	$1,613	$115,700	$7,000	$108,700	67.4	10,843
Domestic Water Heating Upgrade			**0**	**0.0**	**6**	**$67**	**$180**	**$80**	**$100**	**1.5**	**700**
ECM 8	Install Low-Flow DHW Devices	Yes	0	0.0	6	$67	$180	$80	$100	1.5	700
Food Service & Refrigeration Measures			**1,954**	**0.2**	**0**	**$293**	**$540**	**$50**	**$490**	**1.7**	**1,968**
ECM 9	Vending Machine Control	Yes	1,954	0.2	0	$293	$540	$50	$490	1.7	1,968
Custom Measures			**4,730**	**0.0**	**526**	**$6,591**	**$32,700**	**$0**	**$32,700**	**5.0**	**66,304**
ECM 10	Retro-Commissioning Study	Yes	4,730	0.0	526	$6,591	$32,700	$0	$32,700	5.0	66,304
TOTALS (COST EFFECTIVE MEASURES)			**54,663**	**12.8**	**522**	**$14,031**	**$59,060**	**$7,070**	**$51,990**	**3.7**	**116,175**
TOTALS (ALL MEASURES)			**76,011**	**31.8**	**521**	**$17,218**	**$203,920**	**$17,350**	**$186,570**	**10.8**	**137,556**

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

B&G Support Buildings

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**10,101**	**2.0**	**-2**	**$1,529**	**$6,360**	**$950**	**$5,410**	**3.5**	**9,974**
ECM 1	Install LED Fixtures	Yes	2,696	0.2	0	$412	$2,760	$300	$2,460	6.0	2,702
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	189	0.1	0	$28	$180	$20	$160	5.6	185
ECM 3	Retrofit Fixtures with LED Lamps	Yes	7,216	1.7	-2	$1,089	$3,420	$630	$2,790	2.6	7,087
Lighting Control Measures			**2,067**	**0.6**	**0**	**$311**	**$3,900**	**$480**	**$3,420**	**11.0**	**2,025**
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	2,067	0.6	0	$311	$3,900	$480	$3,420	11.0	2,025
Unitary HVAC Measures			**140**	**0.1**	**0**	**$21**	**$1,000**	**$0**	**$1,000**	**46.5**	**141**
ECM 5	Install High Efficiency Air Conditioning Units	No	140	0.1	0	$21	$1,000	$0	$1,000	46.5	141
Domestic Water Heating Upgrade			**167**	**0.0**	**0**	**$26**	**$40**	**$20**	**$20**	**0.8**	**168**
ECM 6	Install Low-Flow DHW Devices	Yes	167	0.0	0	$26	$40	$20	$20	0.8	168
Custom Measures			**1,092**	**0.0**	**0**	**$167**	**$5,400**	**$0**	**$5,400**	**32.3**	**1,100**
ECM 7	Replace Electric Water Heater with Heat Pump Water Heater	No	1,092	0.0	0	$167	$5,400	$0	$5,400	32.3	1,100
TOTALS (COST EFFECTIVE MEASURES)			**12,335**	**2.5**	**-2**	**$1,866**	**$10,300**	**$1,450**	**$8,850**	**4.7**	**12,167**
TOTALS (ALL MEASURES)			**13,567**	**2.6**	**-2**	**$2,055**	**$16,700**	**$1,450**	**$15,250**	**7.4**	**13,408**

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

WASTEWATER TREATMENT PLANT

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**3,609**	**0.5**	**0**	**$542**	**$1,580**	**$300**	**$1,280**	**2.4**	**3,634**
ECM 1	Install LED Fixtures	Yes	648	0.0	0	$97	$530	$100	$430	4.4	653
ECM 2	Retrofit Fixtures with LED Lamps	Yes	2,961	0.5	0	$444	$1,050	$200	$850	1.9	2,982
Lighting Control Measures			**691**	**0.1**	**0**	**$104**	**$1,650**	**$200**	**$1,450**	**14.0**	**696**
ECM 3	Install Occupancy Sensor Lighting Controls	No	691	0.1	0	$104	$1,650	$200	$1,450	14.0	696
Motor Upgrades			**45**	**0.1**	**0**	**$7**	**$1,000**	**$0**	**$1,000**	**146.8**	**46**
ECM 4	Premium Efficiency Motors	No	45	0.1	0	$7	$1,000	$0	$1,000	146.8	46
TOTALS (COST EFFECTIVE MEASURES)			**3,609**	**0.5**	**0**	**$542**	**$1,580**	**$300**	**$1,280**	**2.4**	**3,634**
TOTALS (ALL MEASURES)			**4,345**	**0.7**	**0**	**$652**	**$4,230**	**$500**	**$3,730**	**5.7**	**4,376**

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

MAPLE HALL

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**40,338**	**9.1**	**-8**	**$5,949**	**$19,110**	**$3,110**	**$16,000**	**2.7**	**39,650**
ECM 1	Install LED Fixtures	Yes	4,202	0.5	-1	$622	$4,090	$300	$3,790	6.1	4,158
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	787	0.3	0	$116	$450	$50	$400	3.4	773
ECM 3	Retrofit Fixtures with LED Lamps	Yes	35,349	8.3	-7	$5,211	$14,570	$2,760	$11,810	2.3	34,719
Lighting Control Measures			**9,382**	**2.2**	**-2**	**$1,383**	**$10,280**	**$1,770**	**$8,510**	**6.2**	**9,214**
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	8,111	2.0	-2	$1,196	$8,880	$1,030	$7,850	6.6	7,966
ECM 5	Install High/Low Lighting Controls	Yes	1,271	0.2	0	$187	$1,400	$740	$660	3.5	1,248
Variable Frequency Drive (VFD) Measures			**2,743**	**0.3**	**0**	**$411**	**$9,400**	**$200**	**$9,200**	**22.4**	**2,762**
ECM 6	Install VFDs on Heating Water Pumps	No	2,743	0.3	0	$411	$9,400	$200	$9,200	22.4	2,762
Unitary HVAC Measures			**15,042**	**7.5**	**0**	**$2,253**	**$48,900**	**$2,500**	**$46,400**	**20.6**	**15,147**
ECM 7	Install High Efficiency Air Conditioning Units	No	15,042	7.5	0	$2,253	$48,900	$2,500	$46,400	20.6	15,147
Domestic Water Heating Upgrade			**0**	**0.0**	**11**	**$122**	**$190**	**$90**	**$100**	**0.8**	**1,278**
ECM 8	Install Low-Flow DHW Devices	Yes	0	0.0	11	$122	$190	$90	$100	0.8	1,278
TOTALS (COST EFFECTIVE MEASURES)			**49,720**	**11.3**	**1**	**$7,454**	**$29,580**	**$4,970**	**$24,610**	**3.3**	**50,141**
TOTALS (ALL MEASURES)			**67,504**	**19.1**	**1**	**$10,118**	**$87,880**	**$7,670**	**$80,210**	**7.9**	**68,050**

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SPRUCE, WILLOW, AND HEMLOCK HALLS

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**41,457**	**5.3**	**-8**	**$6,117**	**$18,970**	**$3,340**	**$15,630**	**2.6**	**40,787**
ECM 1	Install LED Fixtures	Yes	5,808	0.0	0	$870	$4,550	$850	$3,700	4.3	5,848
ECM 2	Retrofit Fixtures with LED Lamps	Yes	35,649	5.3	-8	$5,248	$14,420	$2,490	$11,930	2.3	34,938
Lighting Control Measures			**8,895**	**1.2**	**-2**	**$1,309**	**$10,240**	**$4,820**	**$5,420**	**4.1**	**8,718**
ECM 3	Install Occupancy Sensor Lighting Controls	No	2,091	0.4	0	$308	$4,050	$500	$3,550	11.5	2,049
ECM 4	Install High/Low Lighting Controls	Yes	6,804	0.8	-2	$1,002	$6,190	$4,320	$1,870	1.9	6,669
Variable Frequency Drive (VFD) Measures			**11,935**	**3.1**	**0**	**$1,788**	**$11,800**	**$1,200**	**$10,600**	**5.9**	**12,018**
ECM 5	Install VFDs on Constant Volume (CV) Fans	Yes	11,935	3.1	0	$1,788	$11,800	$1,200	$10,600	5.9	12,018
HVAC System Improvements			**0**	**0.0**	**29**	**$324**	**$850**	**$80**	**$770**	**2.4**	**3,388**
ECM 6	Install Pipe Insulation	Yes	0	0.0	29	$324	$850	$80	$770	2.4	3,388
Domestic Water Heating Upgrade			**0**	**0.0**	**2**	**$21**	**$30**	**$20**	**$10**	**0.5**	**222**
ECM 7	Install Low-Flow DHW Devices	Yes	0	0.0	2	$21	$30	$20	$10	0.5	222
TOTALS (COST EFFECTIVE MEASURES)			**60,196**	**9.2**	**21**	**$9,252**	**$37,840**	**$8,960**	**$28,880**	**3.1**	**63,083**
TOTALS (ALL MEASURES)			**62,287**	**9.6**	**21**	**$9,559**	**$41,890**	**$9,460**	**$32,430**	**3.4**	**65,133**

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POPLAR HALL AND GUARD BOOTH

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**22,898**	**3.0**	**-4**	**$3,381**	**$6,890**	**$1,330**	**$5,560**	**1.6**	**22,556**
ECM 1	Install LED Fixtures	Yes	2,575	0.0	0	$386	$1,670	$300	$1,370	3.6	2,593
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	408	0.2	0	$60	$350	$40	$310	5.2	400
ECM 3	Retrofit Fixtures with LED Lamps	Yes	19,915	2.8	-4	$2,936	$4,870	$990	$3,880	1.3	19,562
Lighting Control Measures			**6,099**	**0.9**	**-1**	**$899**	**$6,700**	**$1,160**	**$5,540**	**6.2**	**5,989**
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	5,211	0.8	-1	$768	$5,580	$700	$4,880	6.4	5,117
ECM 5	Install High/Low Lighting Controls	Yes	888	0.1	0	$131	$1,120	$460	$660	5.0	872
Unitary HVAC Measures			**870**	**0.6**	**0**	**$130**	**$4,500**	**$0**	**$4,500**	**34.6**	**876**
ECM 6	Install High Efficiency Air Conditioning Units	No	870	0.6	0	$130	$4,500	$0	$4,500	34.6	876
Domestic Water Heating Upgrade			**500**	**0.0**	**0**	**$75**	**$80**	**$40**	**$40**	**0.5**	**504**
ECM 7	Install Low-Flow DHW Devices	Yes	500	0.0	0	$75	$80	$40	$40	0.5	504
Food Service & Refrigeration Measures			**1,954**	**0.2**	**0**	**$293**	**$540**	**$50**	**$490**	**1.7**	**1,968**
ECM 8	Vending Machine Control	Yes	1,954	0.2	0	$293	$540	$50	$490	1.7	1,968
Custom Measures			**1,416**	**0.0**	**0**	**$212**	**$2,900**	**$0**	**$2,900**	**13.7**	**1,426**
ECM 9	Replace Electric Water Heater with Heat Pump Water Heater	No	1,416	0.0	0	$212	$2,900	$0	$2,900	13.7	1,426
TOTALS (COST EFFECTIVE MEASURES)			**31,452**	**4.1**	**-6**	**$4,648**	**$14,210**	**$2,580**	**$11,630**	**2.5**	**31,017**
TOTALS (ALL MEASURES)			**33,738**	**4.7**	**-6**	**$4,990**	**$21,610**	**$2,580**	**$19,030**	**3.8**	**33,319**

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VETERANS HAVEN, HICKORY HALL, GARAGE WAREHOUSE

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**33,857**	**4.7**	**-7**	**$6,922**	**$8,570**	**$950**	**$7,620**	**1.1**	**33,283**
ECM 1	Install LED Fixtures	Yes	23,974	3.3	-5	$4,903	$6,450	$550	$5,900	1.2	23,575
ECM 2	Retrofit Fixtures with LED Lamps	Yes	9,883	1.4	-2	$2,020	$2,120	$400	$1,720	0.9	9,708
Lighting Control Measures			**21,917**	**3.2**	**-5**	**$4,479**	**$22,320**	**$5,810**	**$16,510**	**3.7**	**21,524**
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	16,232	2.1	-3	$3,317	$14,730	$1,790	$12,940	3.9	15,941
ECM 4	Install High/Low Lighting Controls	Yes	5,685	1.1	-1	$1,162	$7,590	$4,020	$3,570	3.1	5,583
Variable Frequency Drive (VFD) Measures			**31,706**	**4.4**	**0**	**$6,561**	**$10,300**	**$1,200**	**$9,100**	**1.4**	**31,927**
ECM 5	Install VFDs on Constant Volume (CV) Fans	Yes	31,706	4.4	0	$6,561	$10,300	$1,200	$9,100	1.4	31,927
Unitary HVAC Measures			**7,674**	**2.7**	**0**	**$1,588**	**$37,400**	**$1,900**	**$35,500**	**22.4**	**7,728**
ECM 6	Install High Efficiency Air Conditioning Units	No	7,674	2.7	0	$1,588	$37,400	$1,900	$35,500	22.4	7,728
Domestic Water Heating Upgrade			**0**	**0.0**	**68**	**$828**	**$200**	**$100**	**$100**	**0.1**	**8,000**
ECM 7	Install Low-Flow DHW Devices	Yes	0	0.0	68	$828	$200	$100	$100	0.1	8,000
Food Service & Refrigeration Measures			**1,894**	**0.2**	**0**	**$392**	**$810**	**$50**	**$760**	**1.9**	**1,907**
ECM 8	Vending Machine Control	Yes	1,894	0.2	0	$392	$810	$50	$760	1.9	1,907
TOTALS (COST EFFECTIVE MEASURES)			**89,374**	**12.5**	**57**	**$19,183**	**$42,200**	**$8,110**	**$34,090**	**1.8**	**96,642**
TOTALS (ALL MEASURES)			**97,048**	**15.2**	**57**	**$20,771**	**$79,600**	**$10,010**	**$69,590**	**3.4**	**104,370**

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GREENHOUSE AND POOL HOUSE

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**7,405**	**0.6**	**-1**	**$1,104**	**$4,770**	**$380**	**$4,390**	**4.0**	**7,398**
ECM 1	Install LED Fixtures	Yes	3,176	0.0	0	$476	$3,130	$100	$3,030	6.4	3,198
ECM 2	Retrofit Fixtures with LED Lamps	Yes	4,230	0.6	-1	$628	$1,640	$280	$1,360	2.2	4,201
Lighting Control Measures			**420**	**0.1**	**0**	**$62**	**$660**	**$80**	**$580**	**9.4**	**412**
ECM 3	Install Occupancy Sensor Lighting Controls	No	420	0.1	0	$62	$660	$80	$580	9.4	412
Gas Heating (HVAC/Process) Replacement			**0**	**0.0**	**83**	**$931**	**$54,000**	**$2,600**	**$51,400**	**55.2**	**9,740**
ECM 4	Install High Efficiency Hot Water Boilers	No	0	0.0	83	$931	$54,000	$2,600	$51,400	55.2	9,740
HVAC System Improvements			**331**	**0.0**	**0**	**$50**	**$50**	**$10**	**$40**	**0.8**	**333**
ECM 5	Install Pipe Insulation	Yes	331	0.0	0	$50	$50	$10	$40	0.8	333
Custom Measures			**2,426**	**0.0**	**0**	**$364**	**$5,800**	**$0**	**$5,800**	**15.9**	**2,443**
ECM 6	Replace Electric Water Heater with Heat Pump Water Heater	No	2,426	0.0	0	$364	$5,800	$0	$5,800	15.9	2,443
TOTALS (COST EFFECTIVE MEASURES)			**7,737**	**0.6**	**-1**	**$1,153**	**$4,820**	**$390**	**$4,430**	**3.8**	**7,732**
TOTALS (ALL MEASURES)			**10,583**	**0.6**	**83**	**$2,511**	**$65,280**	**$3,070**	**$62,210**	**24.8**	**20,327**

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EVERGREEN HALL

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**9,880**	**2.4**	**-2**	**$1,459**	**$3,960**	**$630**	**$3,330**	**2.3**	**9,733**
ECM 1	Install LED Fixtures	Yes	626	0.0	0	$94	$440	$50	$390	4.2	631
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	1,057	0.4	0	$156	$620	$70	$550	3.5	1,038
ECM 3	Retrofit Fixtures with LED Lamps	Yes	8,197	2.0	-2	$1,210	$2,900	$510	$2,390	2.0	8,064
Lighting Control Measures			**1,403**	**0.3**	**0**	**$207**	**$2,230**	**$990**	**$1,240**	**6.0**	**1,378**
ECM 4	Install Occupancy Sensor Lighting Controls	No	511	0.1	0	$75	$1,110	$140	$970	12.9	502
ECM 5	Install High/Low Lighting Controls	Yes	892	0.2	0	$131	$1,120	$850	$270	2.1	876
Unitary HVAC Measures			**1,368**	**0.7**	**0**	**$205**	**$10,100**	**$0**	**$10,100**	**49.3**	**1,378**
ECM 6	Install High Efficiency Air Conditioning Units	No	1,368	0.7	0	$205	$10,100	$0	$10,100	49.3	1,378
Domestic Water Heating Upgrade			**792**	**0.0**	**0**	**$119**	**$160**	**$80**	**$80**	**0.7**	**798**
ECM 7	Install Low-Flow DHW Devices	Yes	792	0.0	0	$119	$160	$80	$80	0.7	798
Custom Measures			**4,220**	**0.0**	**0**	**$632**	**$4,000**	**$0**	**$4,000**	**6.3**	**4,250**
ECM 8	Replace Electric Water Heater with Heat Pump Water Heater	Yes	4,220	0.0	0	$632	$4,000	$0	$4,000	6.3	4,250
TOTALS (COST EFFECTIVE MEASURES)			**15,783**	**2.6**	**-2**	**$2,341**	**$9,240**	**$1,560**	**$7,680**	**3.3**	**15,656**
TOTALS (ALL MEASURES)			**17,663**	**3.4**	**-2**	**$2,622**	**$20,450**	**$1,700**	**$18,750**	**7.2**	**17,537**

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** - Simple Payback Period is based on net measure costs (i.e. after incentives).

GROUP HOMES

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**2,860**	**0.4**	**0**	**$479**	**$1,130**	**$140**	**$990**	**2.1**	**2,856**
ECM 1	Retrofit Fixtures with LED Lamps	Yes	2,860	0.4	0	$479	$1,130	$140	$990	2.1	2,856
Lighting Control Measures			**308**	**0.0**	**0**	**$52**	**$240**	**$0**	**$240**	**4.6**	**310**
ECM 2	Install Photocell Controls	Yes	308	0.0	0	$52	$240	$0	$240	4.6	310
Unitary HVAC Measures			**41,359**	**7.1**	**0**	**$6,963**	**$72,200**	**$3,700**	**$68,500**	**9.8**	**41,649**
ECM 3	Install High Efficiency Air Conditioning Units	No	41,359	7.1	0	$6,963	$72,200	$3,700	$68,500	9.8	41,649
Gas Heating (HVAC/Process) Replacement			**0**	**0.0**	**131**	**$1,433**	**$15,200**	**$2,000**	**$13,200**	**9.2**	**15,380**
ECM 4	Install High Efficiency Hot Water Boilers	No	0	0.0	49	$530	$8,200	$1,000	$7,200	13.6	5,683
ECM 5	Install High Efficiency Furnaces	Yes	0	0.0	83	$904	$7,000	$1,000	$6,000	6.6	9,697
HVAC System Improvements			**12,175**	**0.0**	**30**	**$2,375**	**$6,450**	**$150**	**$6,300**	**2.7**	**15,749**
ECM 6	Install Programmable Thermostats	Yes	12,175	0.0	0	$2,050	$5,290	$0	$5,290	2.6	12,260
ECM 7	Install Pipe Insulation	Yes	0	0.0	30	$325	$1,160	$150	$1,010	3.1	3,490
Domestic Water Heating Upgrade			**0**	**0.0**	**8**	**$87**	**$210**	**$140**	**$70**	**0.8**	**933**
ECM 8	Install Low-Flow DHW Devices	Yes	0	0.0	8	$87	$210	$140	$70	0.8	933
TOTALS (COST EFFECTIVE MEASURES)			**15,343**	**0.4**	**120**	**$3,897**	**$15,030**	**$1,430**	**$13,600**	**3.5**	**29,546**
TOTALS (ALL MEASURES)			**56,703**	**7.5**	**169**	**$11,390**	**$95,430**	**$6,130**	**$89,300**	**7.8**	**76,878**

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

MAINTENANCE BUILDING

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades			**46,356**	**6.5**	**-9**	**$6,840**	**$14,020**	**$2,550**	**$11,470**	**1.7**	**45,593**
ECM 1	Install LED Fixtures	Yes	1,923	0.0	0	$288	$1,300	$150	$1,150	4.0	1,936
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	519	0.2	0	$77	$360	$40	$320	4.2	510
ECM 3	Retrofit Fixtures with LED Lamps	Yes	43,914	6.3	-9	$6,475	$12,360	$2,360	$10,000	1.5	43,146
Lighting Control Measures			**17,906**	**2.6**	**-4**	**$2,640**	**$9,970**	**$1,730**	**$8,240**	**3.1**	**17,593**
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	16,253	2.4	-3	$2,396	$9,120	$1,100	$8,020	3.3	15,969
ECM 5	Install High/Low Lighting Controls	Yes	1,653	0.2	0	$244	$850	$630	$220	0.9	1,624
Unitary HVAC Measures			**5,764**	**2.6**	**0**	**$863**	**$22,700**	**$500**	**$22,200**	**25.7**	**5,804**
ECM 6	Install High Efficiency Air Conditioning Units	No	4,004	2.0	0	$600	$17,400	$500	$16,900	28.2	4,032
ECM 7	Install High Efficiency Heat Pumps	No	1,760	0.6	0	$264	$5,300	$0	$5,300	20.1	1,772
Domestic Water Heating Upgrade			**556**	**0.0**	**0**	**$83**	**$40**	**$10**	**$30**	**0.4**	**560**
ECM 8	Install Low-Flow DHW Devices	Yes	556	0.0	0	$83	$40	$10	$30	0.4	560
Food Service & Refrigeration Measures			**1,954**	**0.2**	**0**	**$293**	**$540**	**$50**	**$490**	**1.7**	**1,968**
ECM 9	Vending Machine Control	Yes	1,954	0.2	0	$293	$540	$50	$490	1.7	1,968
Custom Measures			**2,110**	**0.0**	**0**	**$316**	**$4,000**	**$0**	**$4,000**	**12.7**	**2,125**
ECM 10	Replace Electric Water Heater with Heat Pump Water Heater	No	2,110	0.0	0	$316	$4,000	$0	$4,000	12.7	2,125
TOTALS (COST EFFECTIVE MEASURES)			**66,773**	**9.3**	**-13**	**$9,856**	**$24,570**	**$4,340**	**$20,230**	**2.1**	**65,714**
TOTALS (ALL MEASURES)			**74,647**	**11.9**	**-13**	**$11,035**	**$51,270**	**$4,840**	**$46,430**	**4.2**	**73,642**

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

ENERGY EFFICIENT BEST PRACTICES

- Reduce Air Leakage
- Close Doors and Windows
- Develop a Lighting Maintenance Schedule
- Ensure Lighting Controls Are Operating Properly
- Use Fans to Reduce Cooling Load
- Use Window Treatments/Coverings
- Clean and/or Replace HVAC filters
- Check and Seal Duct Leakage
- Perform Proper Boiler Maintenance
- Perform Proper Water Heater Maintenance
- Plug Load Controls
- Water Conservation

See individual reports for specific EE Best Practices by building

BPU New Jersey's cleanenergy program™

WATER BEST PRACTICES

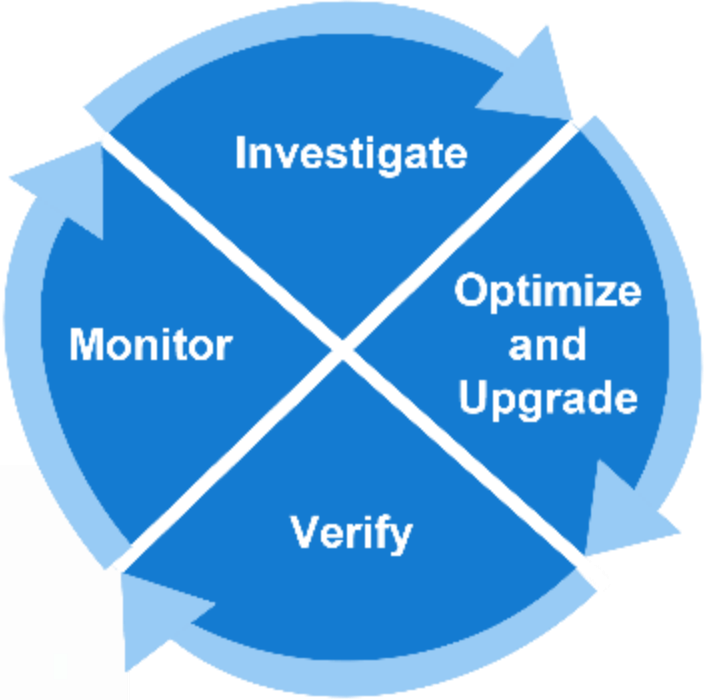
- Leak Detection and Repair
- Toilets and Urinals
- Faucets and Showerheads
- Commercial Kitchen Equipment
- Laundry Equipment
- Cooling Towners
- Steam Boiler System
- Pools and Spas
- Laboratory and Medical Equipment
- Water Metering and Submetering
- Vehicle Washing
- Single Pass Cooling System
- Landscaping and Irrigation
- On-Site Alternative Water Sources

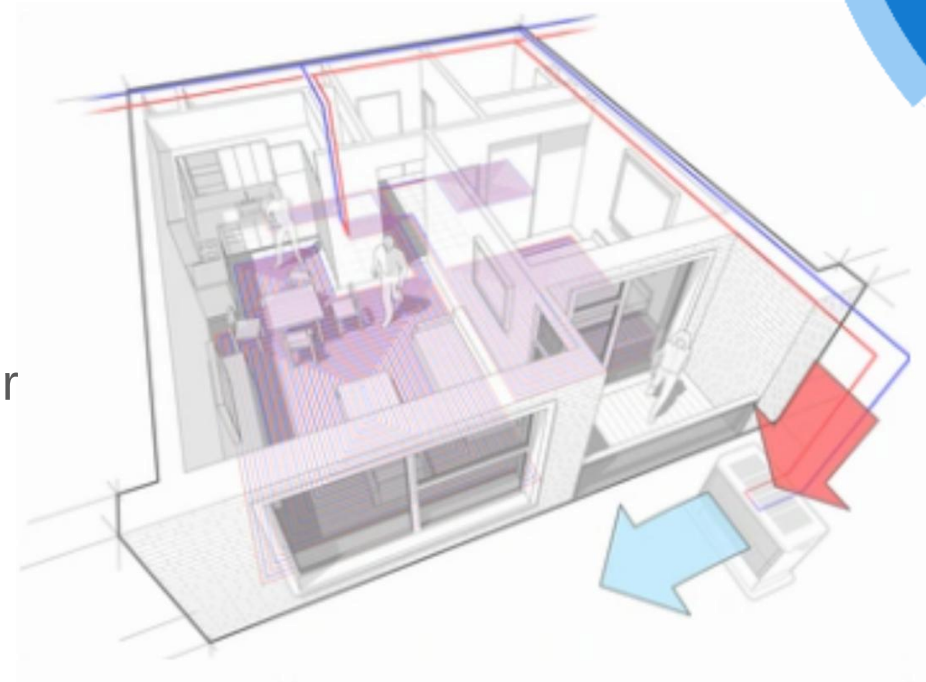
See individual reports for specific Water Best Practices by building

BPU New Jersey's cleanenergy program™

Measures for Future Consideration

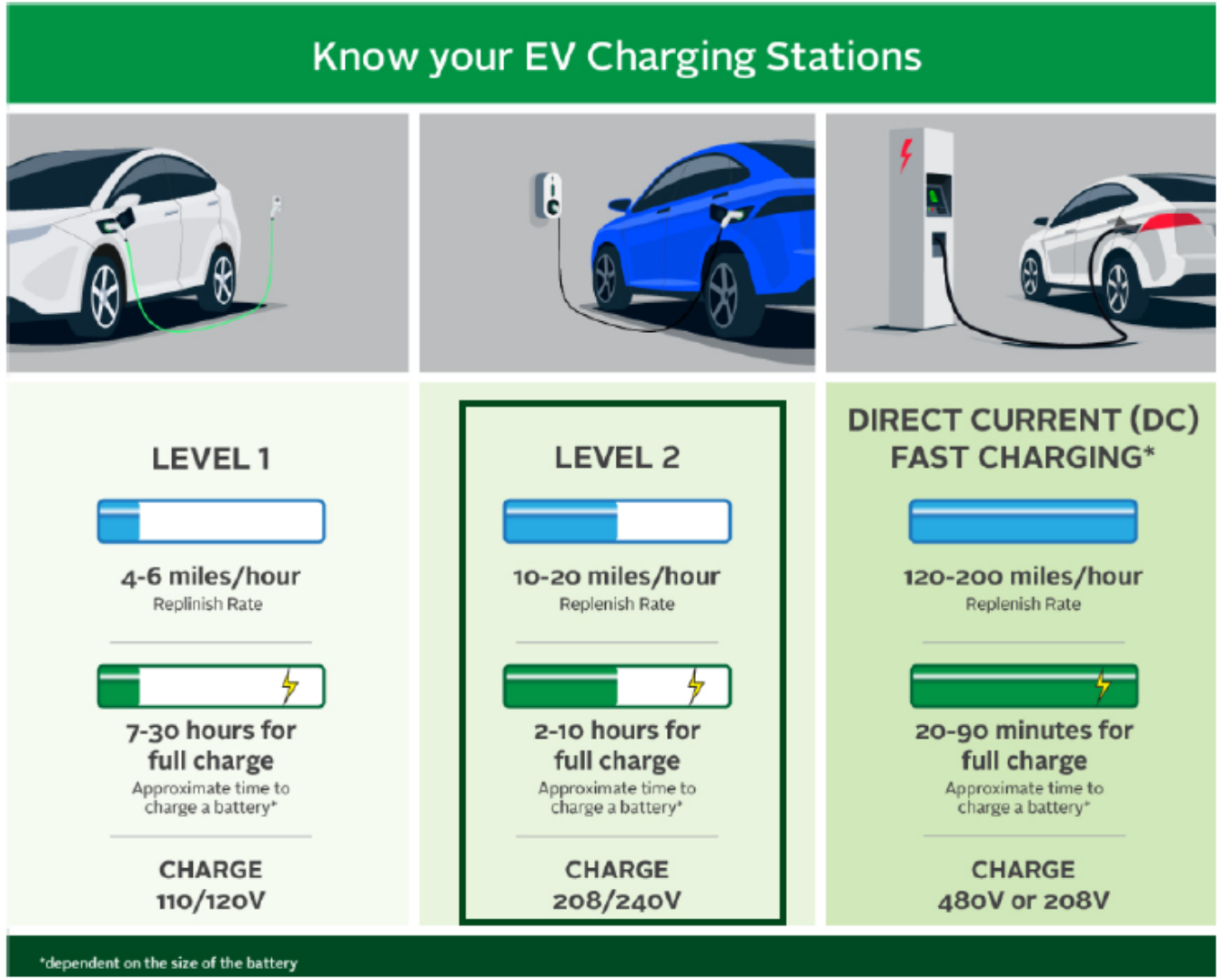
- Retro-Commissioning Study
- Installation of a Building Automation System
- Electric Submeter
- Ozone Laundry System
- Upgrade to a Heat Pump System
- VRF System
- Replace Water Cooled Condenser
- Replace Smooth V-Belts with Notched or Synchronous Belts





EV Charging Station Potential

NJCleanEnergy.com/EV



	DHS - Ancora
Potential:	**Medium (refer to individual reports)**

Solar Energy Generation Potential

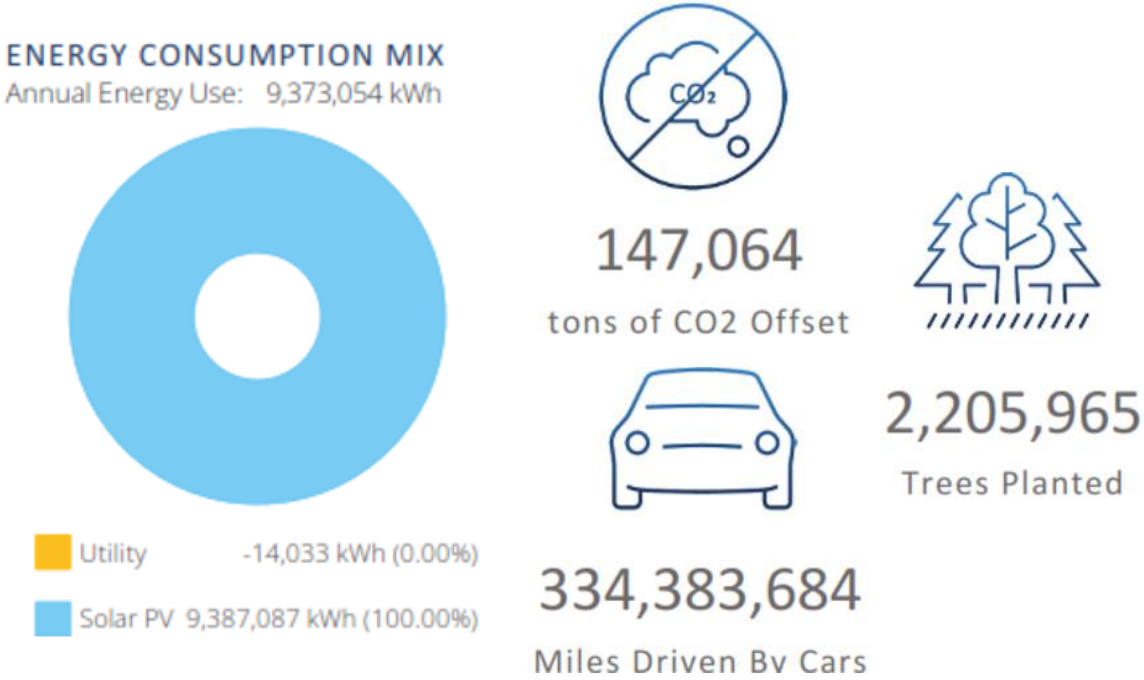
NJCleanEnergy.com/renewable-energy

Equipment	Estimated Max Demand Savings (kW)	Estimated Annual Energy Generation (kWh)	Estimated Annual GHG Reduction ($MT\text{-}CO_2e$)	Estimated Annual Cost Savings ($)	Estimated Gross Project Cost ($)	Total Incentives ($)	Net Project Cost ($)	Simple Payback Period[12] (yr.)
6.95 MW Solar PV	352	9,387,087	1,868	$736,002	$42,226,000	$23,224,300	$19,001,700	25.8

Project Summary Table

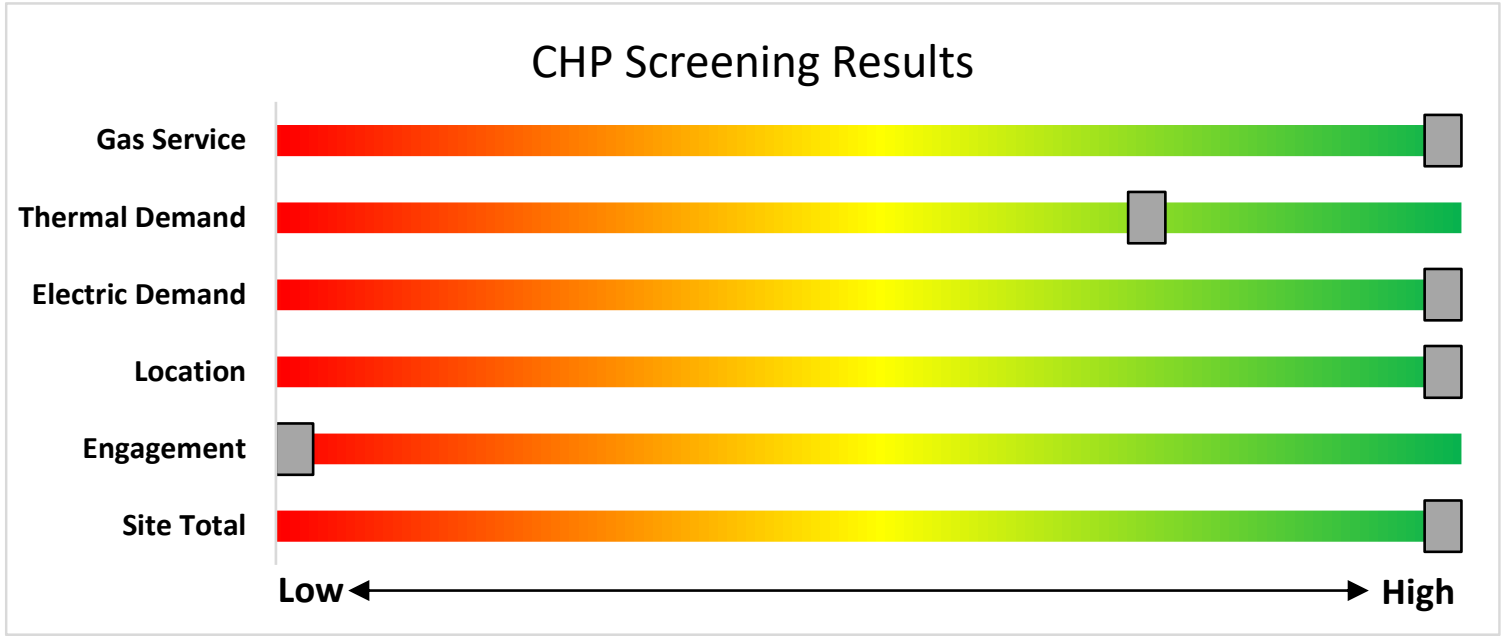
<u>6.95 MW carport and ground mount & Solar PV System:</u>

The carport and ground mount solar panels are strategically positioned to make the most efficient use of the open area and parking spaces, maximizing coverage of the solar energy generation. The projected solar PV system is expected to generate a total energy output of 9,387,000 kWh, accounting for 100% of the site's total electricity consumption for the year 2022-2023.



Combined Heat & Power Potential

	Ancora
Potential:	**HIGH**
System Type:	Gas Turbine
System Potential: (kW)	1,600
Electric Generation: (kWh per year)	13,025,132
Thermal Generation: (MBtu per year)	101,143,576
Displaced Cost: (per year)	$1,288,931



Financing Mechanism: ESIP

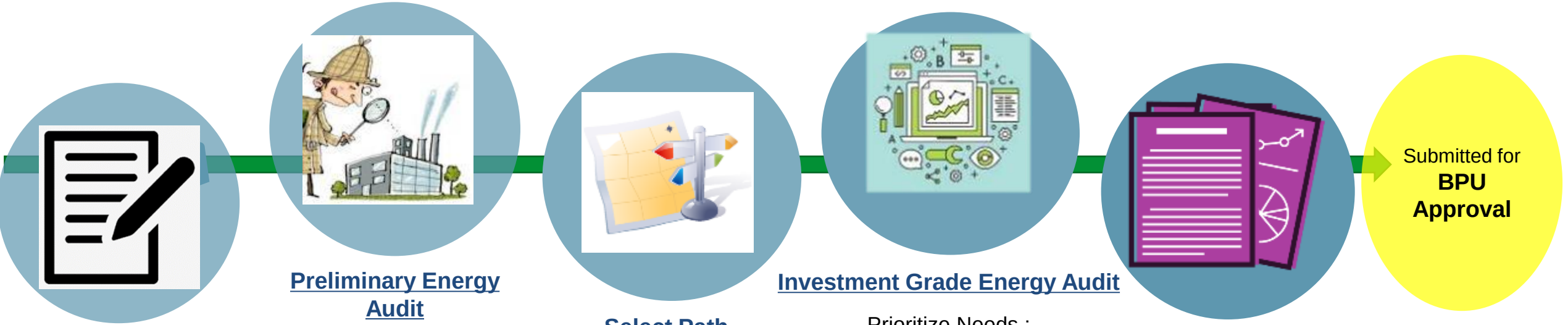
NJCleanEnergy.com/ESIP

ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

- Energy Performance Contracting = NJ ESIP Program
- A creative tool and financing mechanism that allows public entities to make energy efficiency improvements without impacting their budgets
- Administered by the NJBPU
- Project is paid for with the value of its own energy savings
- 2 Options: Lease Purchase Loan or Bond
- 15 or 20 year pay back term
- NJBPU Approved Incentive Programs
    - Utility or NJCEP
- Can be combined with Federal/State Grants
- No upfront capital expenses
- No referendum or impact to tax payers

Energy Savings Improvement Program

NJCleanEnergy.com/ESIP



ESIP Intake Form

Get informed;
Begin the process

Preliminary Energy Audit

Free LGEA
or
other ASHRAE Level II Audit

Select Path

ESCO, Hybrid or DIY Model;
Local Public Contract Law
Public School Contract Law
Compliance

Investment Grade Energy Audit

Prioritize Needs ;
Select Project's ECM's

Energy Savings Plan

Must be Cash Flow Positive;
Purchase Savings Guarantee?
Third Party Verification

Submitted for **BPU Approval**

New Jersey's cleanenergy program™

Energy Savings Improvement Program

NJCleanEnergy.com/ESIP

FOR MORE INFORMATION

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c: 609.915.0903

State Facilities Initiative (SFI)

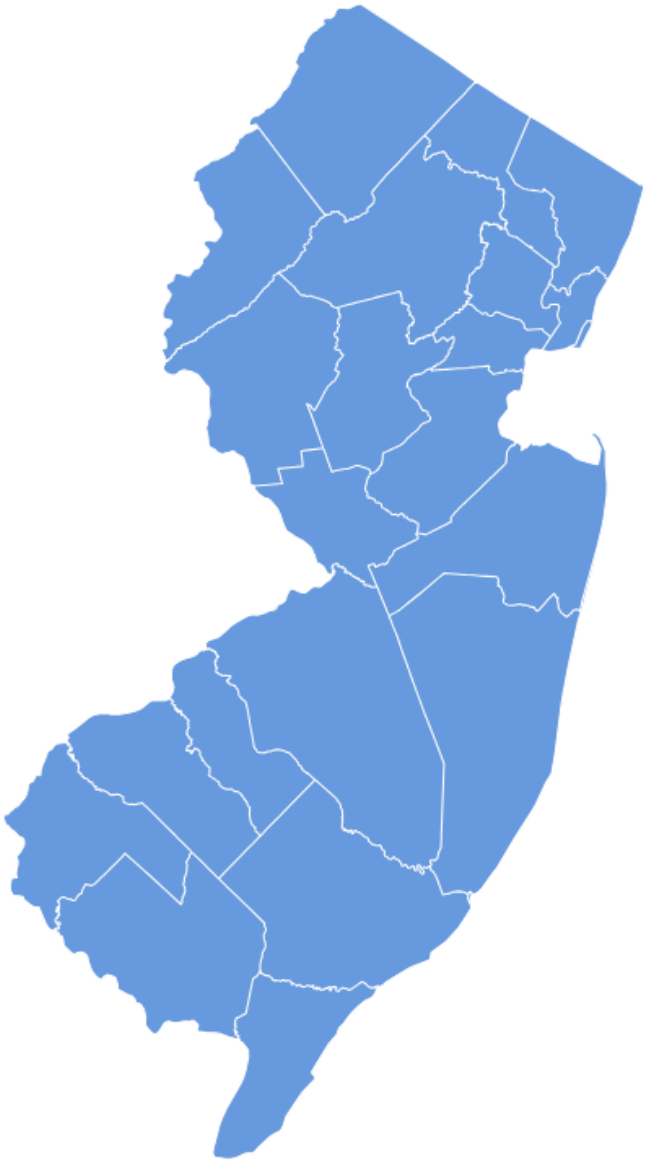
The State Facilities Initiative (SFI)

This program is for State-owned facilities.

The program identifies and implements Energy Efficiency projects in State-owned facilities or State-sponsored projects with the objective of producing energy and cost savings. The funding provided to the SFI is directly in line with EMP Goals 3.3.5 and 4.1.1.

EMP Goal 3.3.5 seeks to "[i]mprove energy efficiency in, and retrofit state buildings to, a high performance standard."

EMP Goal 4.1.1 addresses electrifying State facilities.



C&I Energy Efficiency Programs

NJCleanEnergy.com

LOCAL GOVERNMENT CUSTOMERS

COMMERCIAL & INSTITUTIONAL CUSTOMERS

LARGE ENERGY CUSTOMERS

EXISTING BUILDINGS

MEASUREMENT & AUDITS

FREE Energy Audits

RETROFITS

Prescriptive & Custom Rebates

Direct Install

Engineered Solutions

And more from your local utility!

Incentives up to $4 million for eligible projects

NEW CONSTRUCTION

Prescriptive & Custom Rebates for New Construction and Gut Rehabs

Pay for Performance incentives for buildings over 50,000 sq. ft.

DISTRIBUTED ENERGY RESOURCES

Combined Heat & Power and Fuel Cell Installation Incentives

Microgrid Development

Battery Storage

Muni EV Fleets

Key:

Programs run by investor-owned utility companies

Programs run by NJCEP

UTILITY RUN ENERGY EFFICIENCY PROGRAMS*

NJCleanEnergy.com/Transition

PRESCRIPTIVE & CUSTOM REBATES:

- Individual high efficiency equipment rebates for renovation, remodeling, and equipment replacement
- Flexibility to do a little or a lot
- No size requirement

DIRECT INSTALL:

- Turn-key retrofit program to replace outdated and inefficient equipment including, lighting, HVAC, refrigeration, etc.
- The facility must have an average electric peak demand <200kW in the previous year to qualify

ENERGY MANAGEMENT :

- Includes the Building Tune-up (BT), Retro-commissioning (RCx), and Strategic Energy Management (SEM) subprograms. These subprograms offer a comprehensive mix of custom energy-savings measures such as basic HVAC tune-ups, building systems tune-ups, controls' calibration, diagnostic testing, and installation of measures to enhance your building's energy performance and savings.

ENGINEERED SOLUTIONS:

- Comprehensive, whole-building approach to saving energy
- The facility must have an average electric peak demand >200kW in the previous year to qualify

****Other programs may be available to you. Check with your Utility Provider to see a full list of offering and what you may be qualified for.***

Utility Run Energy Efficiency Programs

Atlantic City Electric

Alex Haver – AHaver@trccompanies.com

South Jersey Gas

Kim Byk – KByk@appliedenergygroup.com
Nathalie Roccatti – NRoccatti@trccompanies.com

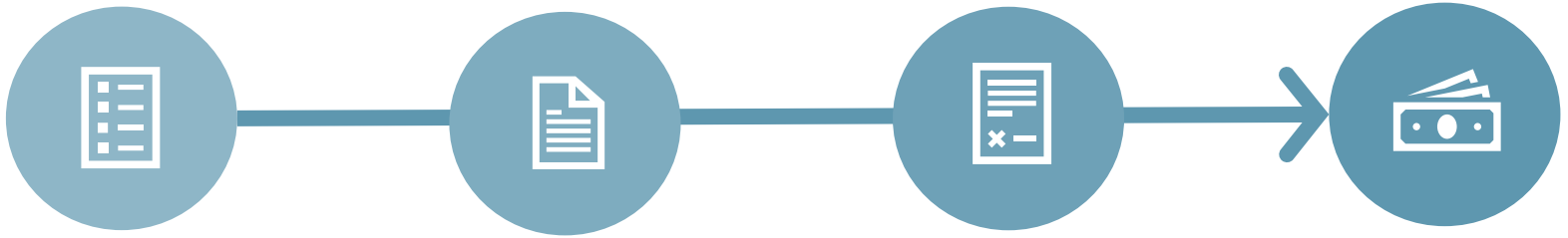
Large Energy Users

NJCleanEnergy.com/LEUP

WHO	Large C&I entities who have paid a minimum of $5,000,000 in the previous 12 months of utility bills
SIZE TO QUALIFY	The average peak demand of all facilities submitted ≥400kW and/or 4,000 DTh
ABOUT	• Encourages large C&I utility customers to self-invest in energy efficiency, combined heat & power, and fuel cell projects • Must have ability to "bank" funds for up to two fiscal years
INCENTIVE CAP	Maximum incentive per entity is the lesser of: • $4 million, • 75% of total project cost, or • 90% of NJCEP contribution or annual energy saving caps ($0.33/kWh and $3.75/therm)

Large Energy Users

NJCleanEnergy.com/LEUP



Program Enrollment

Submission and Approval of Application

Submission of Draft Energy Efficiency Plan

Reservation of Incentives (optional)

Submission of Final Energy Efficiency Plan

Commitment of Incentives

Confirmation of Installation

Incentives Paid

Combined Heat & Power - Fuel Cells

NJCleanEnergy.com/CHP

WHO	C&I customers that require on-site electric generation that either does or does not utilize waste heat
SIZE TO QUALIFY	N/A - Projects must pass a cost-effectiveness test and run 5,000 full load equivalent hours per year (3,500 for critical facilities)
ABOUT	• Combined Heat & Power (CHP) units generates electricity and recycle waste heat to provide heating or cooling • Resiliency with return on investment • Technology-neutral incentives • Fuel Cells (FC) with or without heat recovery (HR)
INCENTIVE LEVELS	• CHPs and FC with HR have a project cap of $2M - $3M • 25% bonus for critical facilities with black-start/islanding capabilities • Up to 30% incentive bonus for CHP using biofuel • FC without HR have a project cap of $1M

COMBINED HEAT & POWER - FUEL CELLS

NJCleanEnergy.com/CHP

Eligible Technology	Size (Installed Rated Capacity)	Incentive ($/Watt) [5]	% of Total Cost Cap per project	$ Cap per project
CHP powered by non-renewable or renewable fuel source, or a combination[4]: • Gas Internal Combustion Engine • Gas Combustion Turbine • Microturbine Fuel Cell with Heat Recovery (FCHR)	≤500 kW[1]	$2.00	30-40%[2]	$2 million
	>500 kW – 1 MW[1]	$1.00		
	>1 MW – 3 MW[1]	$0.55	30%	$3 million
	>3 MW[1]	$0.35		
Fuel Cell without Heat Recovery (FCwoHR)	Same as above[1]	Applicable amount above	30%	$1 million
Waste Heat to Power (WHP)[3] Powered by non-renewable fuel source. Heat recovery or other mechanical recovery from existing equipment utilizing new electric generation equipment (e.g. steam turbine)	≤1 MW[1]	$1.00	30%	$2 million
	>1 MW[1]	$0.50	30%	$3 million

+critical facility/blackstart bonus of 25%

New Jersey's cleanenergy program™

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THANK YOU