LGEA Presentation

NJ DEP – Monmouth Battlefield State Park

March 28, 2024

New Jersey's
Clean Energy Program

Lighting the way to New Jersey's Clean Energy Future

INTRODUCTIONS

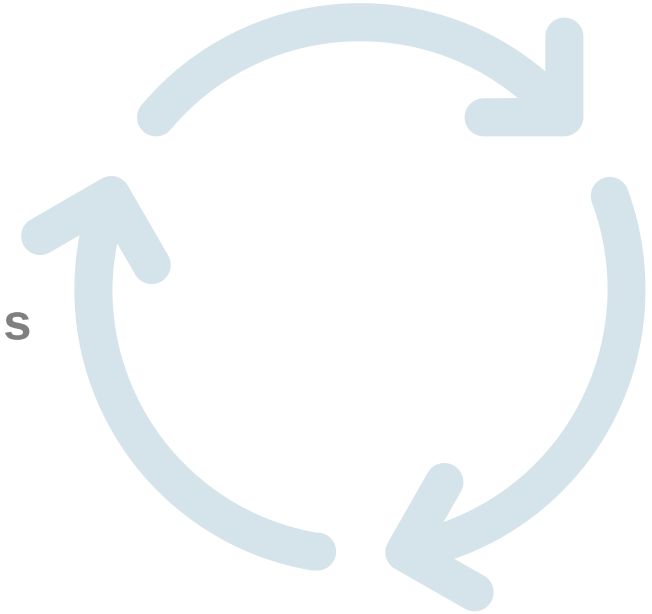
- *DEP – Monmouth Battlefield SP*
  - Jeffrey MacMullen
  - Laura Petrangeli
  - Inga Gabliks
  - Ken Genieczko
- *NJBPU*
  - Casey Shaw
  - Sara Bluhm Gibson
- *NJ Clean Energy Program*
  - Sarah Walters – LGEA Project Manager
  - Moussa Traore – LGEA Technical Manager
  - Juno Romanick – LGEA Project Auditor
- *Utility Energy Efficiency Programs*
  - Sirajuddin Shaikh – JCP&L
  - Andrew Doss – JCP&L

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 State of NJ – DEP Monmouth Battlefield State Park

LGEA Process

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



New Jersey's cleanenergy program™

Site Visit & Utility Analysis

Overview of Systems, Baseline & Existing Conditions:

- Building Envelope
- Lighting System
- HVAC and Mechanical Systems
- Plug Load Equipment
- Process Equipment

Utility Consumption:

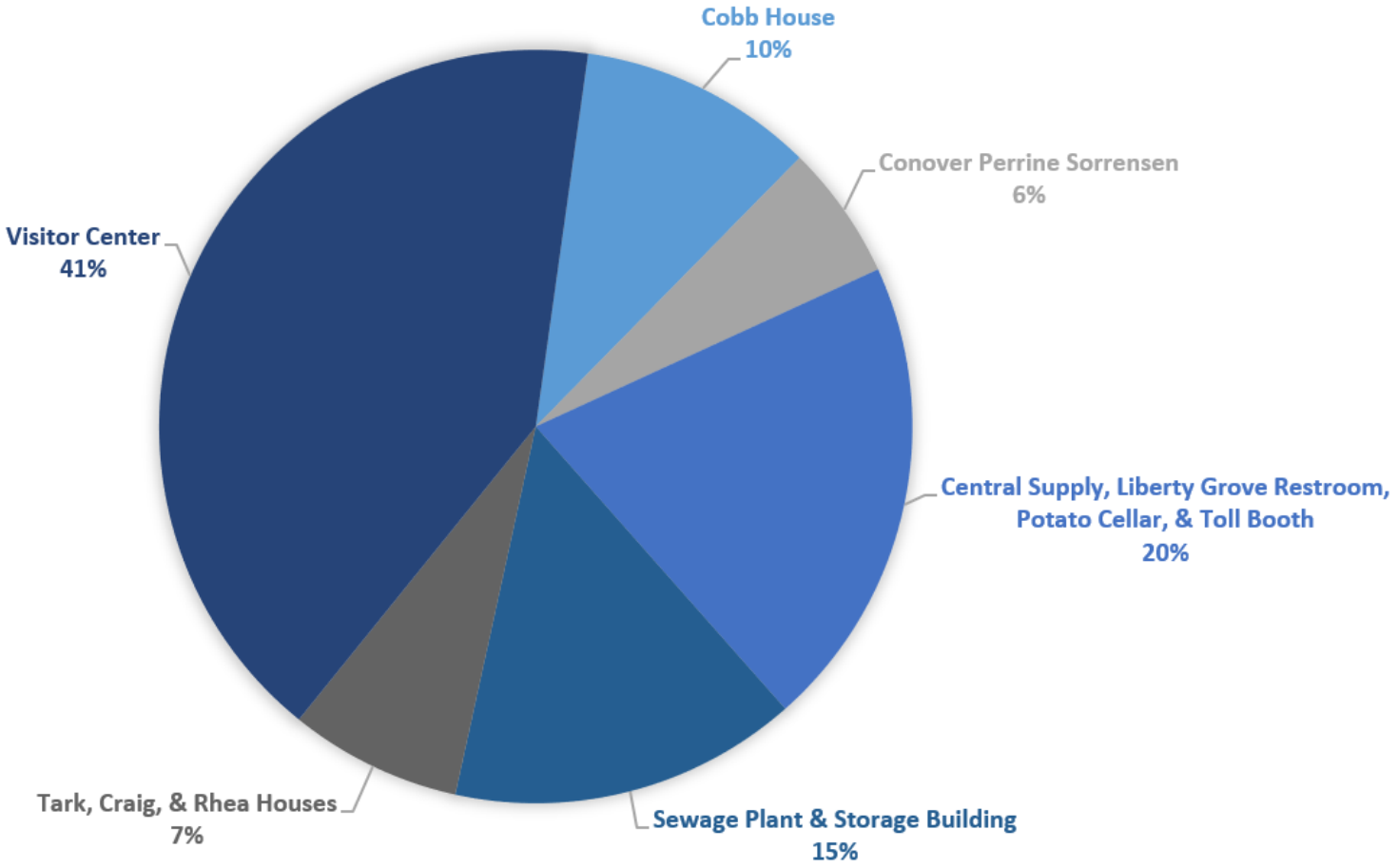
- Electric Consumption and Costs
- Fuel Oil No. 2 & Propane Consumption and Costs
- Water Consumption and Costs

Sites Visited/Analyzed

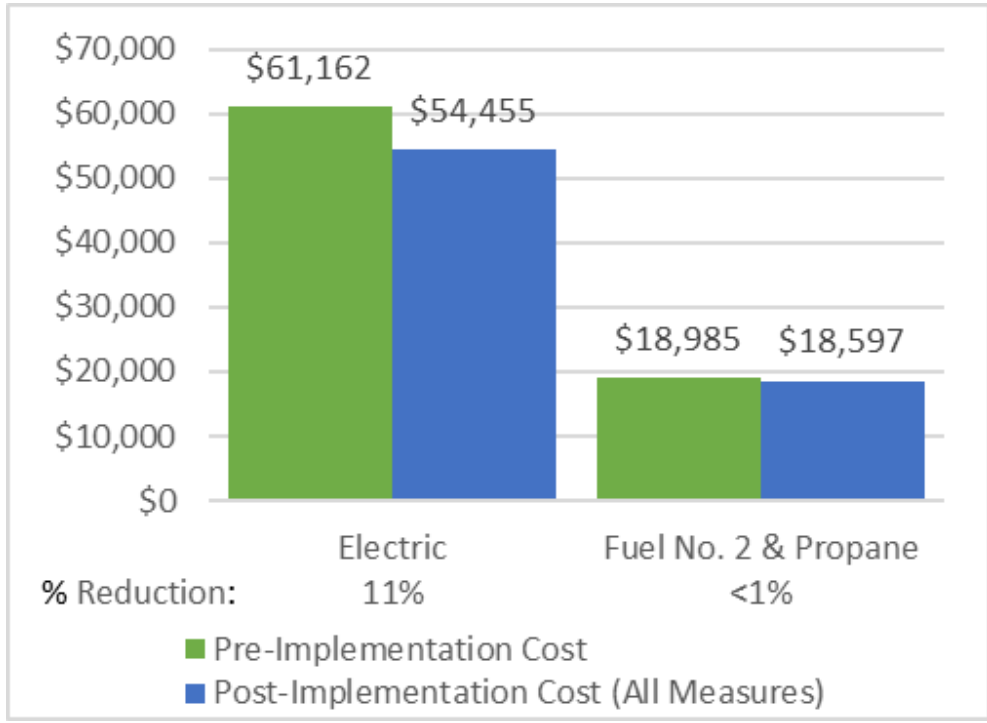
- Visitor Center
- Sewage Plant
- Storage Building
- Toll Booths
- Liberty Grove Bathrooms
- Central Supply (Barn & Canopy)
- Tark House
- Craig House
- Cobb House
- Rhea Applegate House
- Potato Cellar

Utility Breakout

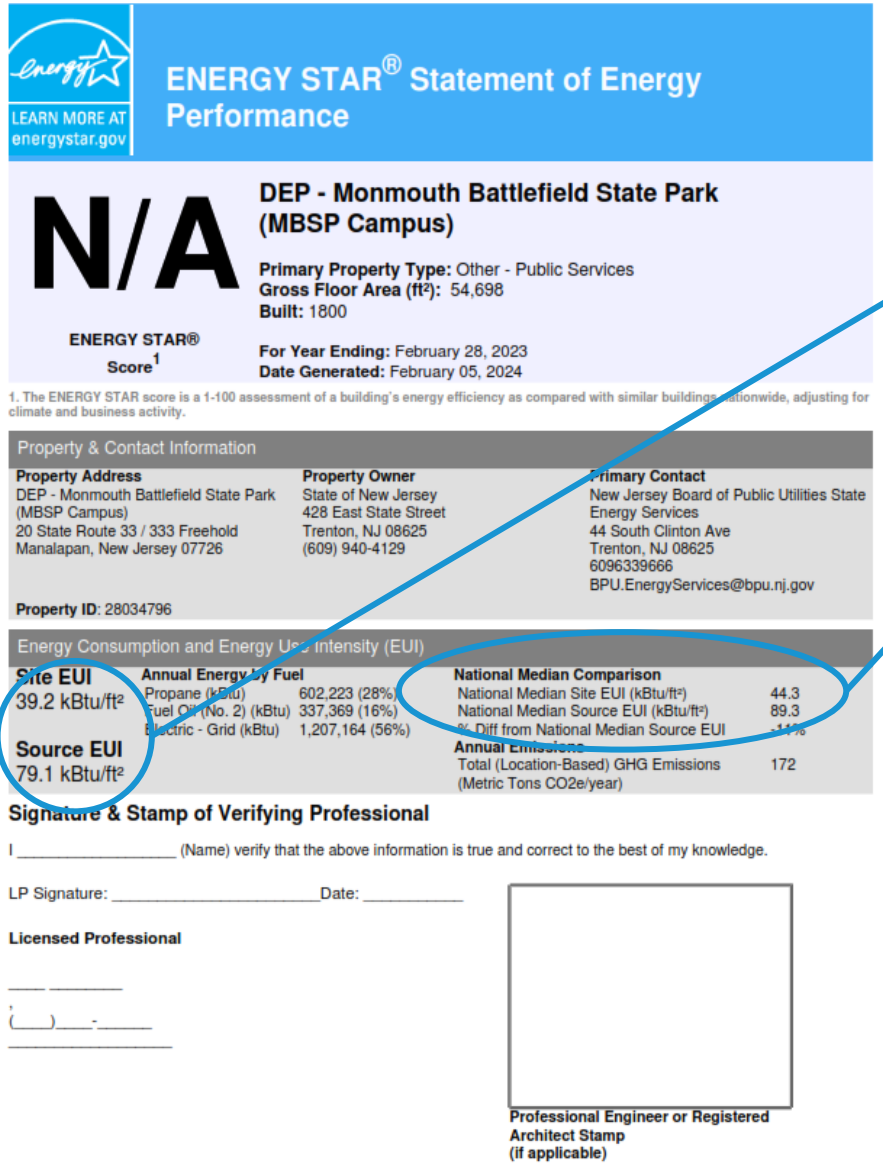
Percent of Total Annual Energy Costs



Pre & Post Implementation Cost



BENCHMARKING



ENERGY STAR® Statement of Energy Performance

LEARN MORE AT energystar.gov

N/A

ENERGY STAR® Score[1]

DEP - Monmouth Battlefield State Park (MBSP Campus)

Primary Property Type: Other - Public Services
Gross Floor Area (ft²): 54,698
Built: 1800

For Year Ending: February 28, 2023
Date Generated: February 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
DEP - Monmouth Battlefield State Park (MBSP Campus) 20 State Route 33 / 333 Freehold Manalapan, New Jersey 07726	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 6096339666 BPU.EnergyServices@bpu.nj.gov

Property ID: 28034796

Energy Consumption and Energy Use Intensity (EUI)

Site EUI
39.2 kBtu/ft²

Source EUI
79.1 kBtu/ft²

Annual Energy by Fuel

Propane (kBtu)	602,223 (28%)	
Fuel Oil (No. 2) (kBtu)	337,369 (16%)	
Electric - Grid (kBtu)	1,207,164 (56%)	

National Median Comparison

National Median Site EUI (kBtu/ft²)	44.3
National Median Source EUI (kBtu/ft²)	89.3
% Diff from National Median Source EUI	-11%

Annual Emissions

Total (Location-Based) GHG Emissions (Metric Tons CO2e/year)	172

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
39.2 kBtu/ft²

Source EUI
79.1 kBtu/ft²

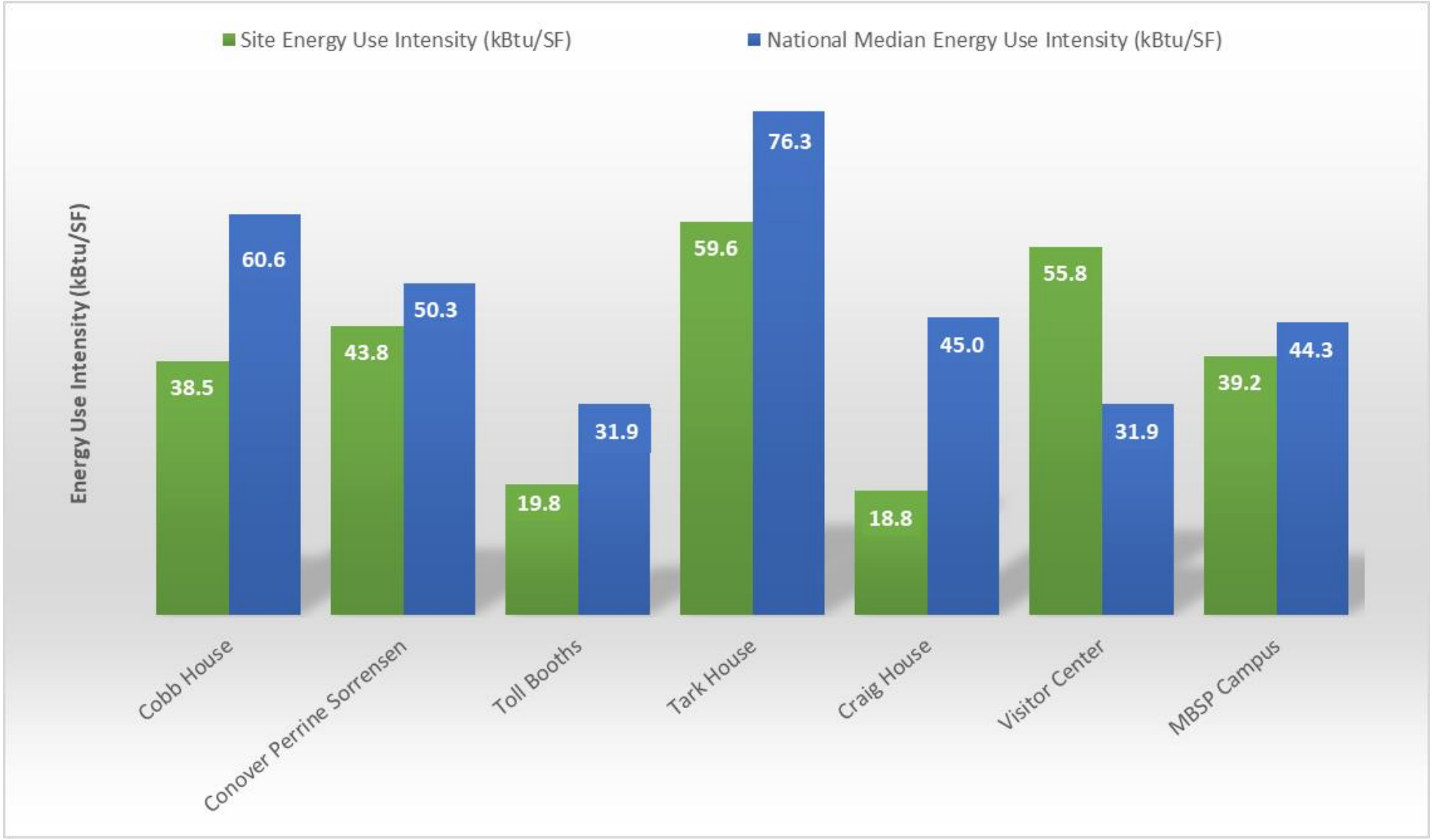
National Median Comparison

National Median Site EUI (kBtu/ft²)	44.3
National Median Source EUI (kBtu/ft²)	89.3
% Diff from National Median Source EUI	-11%

Site Name	ENERGY STAR® Score
All Buildings/Campus	N/A

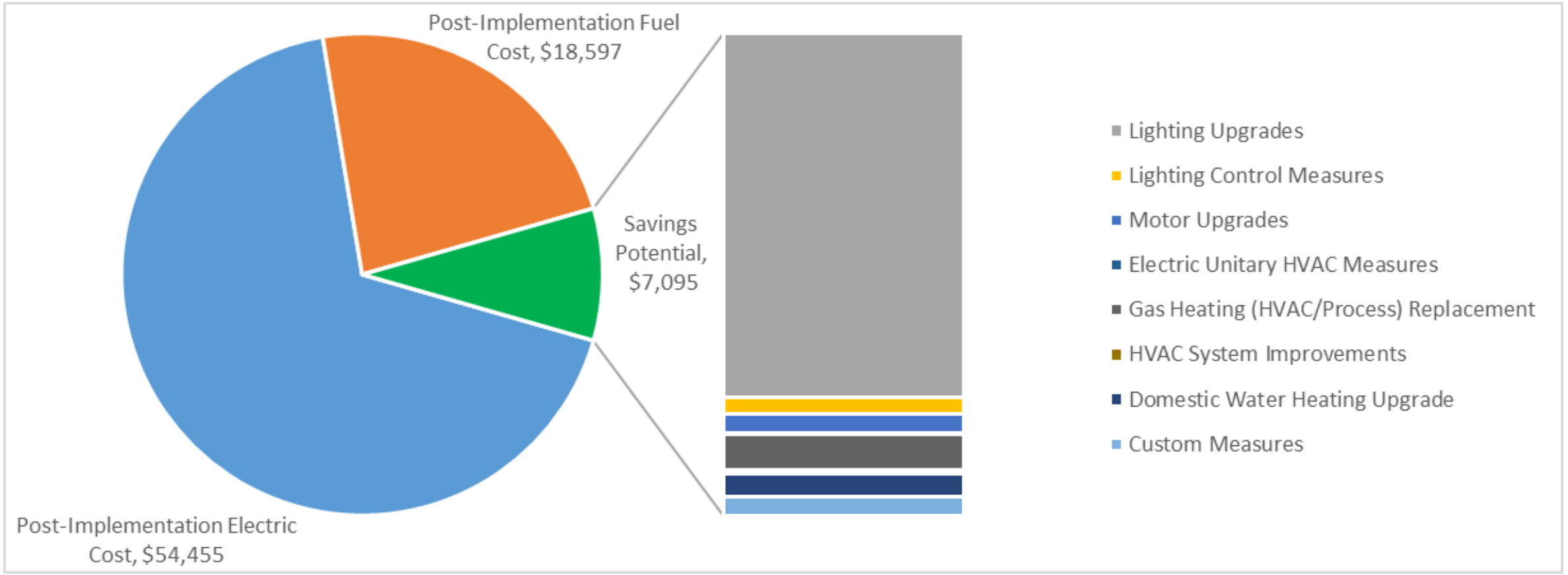
ENERGY STAR® scores are percentile ranking from 1 (least efficient) to 100 (most efficient). It compares your building's energy performance to similar buildings nationwide.

BENCHMARKING



All Opportunities

Savings Potential



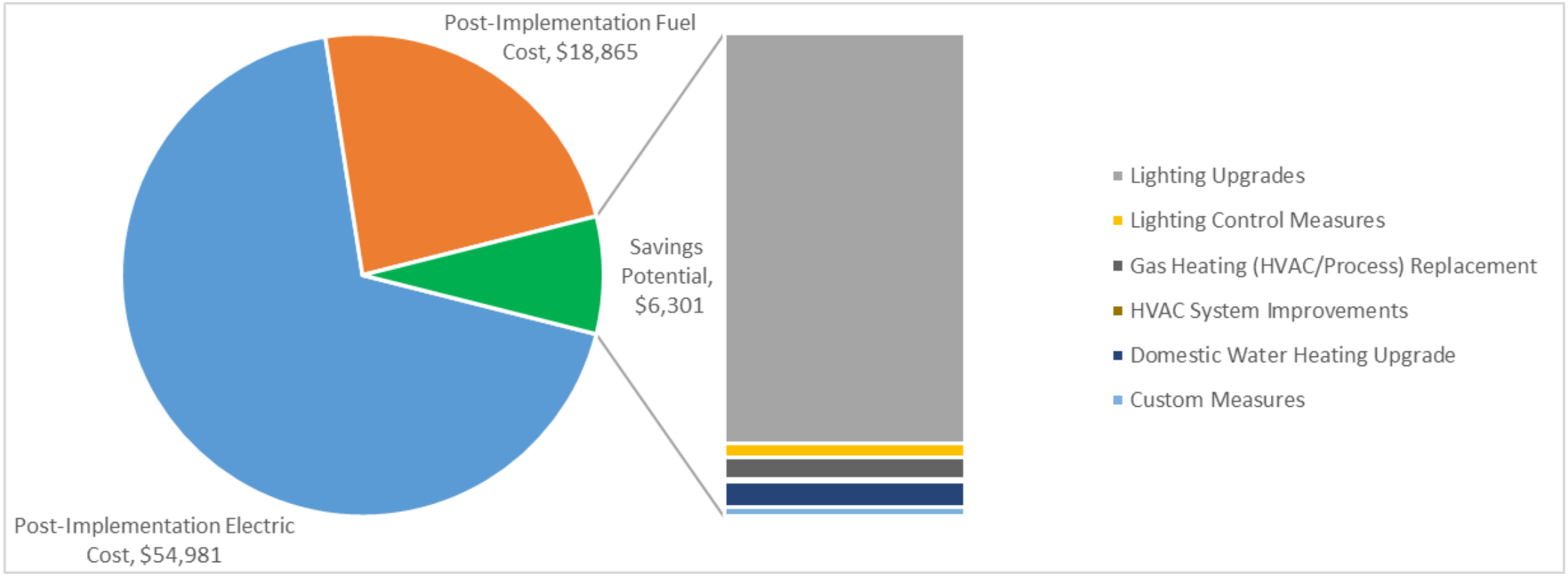
ALL OPPORTUNITIES

#	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		**32,344**	**16.2**	**-5.3**	**$5,356**	**$25,160**	**$3,560**	**$21,600**	**4.0**	**31,761**
ECM 1	Install LED Fixtures	293	0.0	0.0	$52	$780	$150	$630	12.2	295
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	10,940	6.5	-2.7	$1,801	$11,430	$1,800	$9,630	5.3	10,598
ECM 3	Retrofit Fixtures with LED Lamps	21,111	9.6	-2.6	$3,503	$12,950	$1,610	$11,340	3.2	20,869
Lighting Control Measures		**1,465**	**0.5**	**-0.4**	**$241**	**$6,310**	**$1,020**	**$5,290**	**21.9**	**1,414**
ECM 4	Install Occupancy Sensor Lighting Controls	1,412	0.5	-0.4	$233	$5,850	$880	$4,970	21.4	1,364
ECM 5	Install High/Low Lighting Controls	53	0.0	0.0	$9	$460	$140	$320	37.2	50
Motor Upgrades		**1,716**	**0.5**	**0.0**	**$293**	**$7,200**	**$0**	**$7,200**	**24.6**	**1,728**
ECM 6	Premium Efficiency Motors	1,716	0.5	0.0	$293	$7,200	$0	$7,200	24.6	1,728
Unitary HVAC Measures		**120**	**0.2**	**0.0**	**$21**	**$1,100**	**$0**	**$1,100**	**52.1**	**121**
ECM 7	Install High Efficiency Air Conditioning Units	120	0.2	0.0	$21	$1,100	$0	$1,100	52.1	121
Gas Heating (HVAC/Process) Replacement		**0**	**0.0**	**24.8**	**$521**	**$13,600**	**$900**	**$12,700**	**24.4**	**3,769**
ECM 8	Install High Efficiency Hot Water Boilers	0	0.0	13.5	$237	$10,200	$400	$9,800	41.4	1,906
ECM 9	Install High Efficiency Furnaces	0	0.0	11.4	$284	$3,400	$500	$2,900	10.2	1,863
HVAC System Improvements		**342**	**0.0**	**0.0**	**$59**	**$1,660**	**$280**	**$1,380**	**23.3**	**344**
ECM 10	Install Pipe Insulation	342	0.0	0.0	$59	$1,660	$280	$1,380	23.3	344
Domestic Water Heating Upgrade		**1,938**	**0.0**	**0.0**	**$332**	**$200**	**$50**	**$150**	**0.5**	**1,952**
ECM 11	Install Low-Flow DHW Devices	1,938	0.0	0.0	$332	$200	$50	$150	0.5	1,952
Custom Measures		**1,657**	**0.0**	**0.0**	**$272**	**$6,900**	**$0**	**$6,900**	**25.4**	**1,669**
ECM 12	Replace Electric Water Heater with Heat Pump Water Heater	1,657	0.0	0.0	$272	$6,900	$0	$6,900	25.4	1,669
TOTALS (ALL MEASURES)		**39,581**	**17.4**	**19.2**	**$7,095**	**$62,130**	**$5,810**	**$56,320**	**7.9**	**42,757**

* - 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



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		**32,338**	**16.1**	**-5.3**	**$5,354**	**$25,020**	**$3,540**	**$21,480**	**4.0**	**31,756**
ECM 1	Install LED Fixtures	293	0.0	0.0	$52	$780	$150	$630	12.2	295
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	10,935	6.5	-2.7	$1,800	$11,290	$1,780	$9,510	5.3	10,593
ECM 3	Retrofit Fixtures with LED Lamps	21,111	9.6	-2.6	$3,503	$12,950	$1,610	$11,340	3.2	20,869
Lighting Control Measures		**1,098**	**0.4**	**-0.2**	**$182**	**$3,600**	**$540**	**$3,060**	**16.8**	**1,067**
ECM 4	Install Occupancy Sensor Lighting Controls	1,098	0.4	-0.2	$182	$3,600	$540	$3,060	16.8	1,067
Gas Heating (HVAC/Process) Replacement		**0**	**0.0**	**11.4**	**$284**	**$3,400**	**$500**	**$2,900**	**10.2**	**1,863**
ECM 9	Install High Efficiency Furnaces	0	0.0	11.4	$284	$3,400	$500	$2,900	10.2	1,863
HVAC System Improvements		**128**	**0.0**	**0.0**	**$23**	**$240**	**$40**	**$200**	**8.9**	**129**
ECM 10	Install Pipe Insulation	128	0.0	0.0	$23	$240	$40	$200	8.9	129
Domestic Water Heating Upgrade		**1,938**	**0.0**	**0.0**	**$332**	**$200**	**$50**	**$150**	**0.5**	**1,952**
ECM 11	Install Low-Flow DHW Devices	1,938	0.0	0.0	$332	$200	$50	$150	0.5	1,952
Custom Measures		**739**	**0.0**	**0.0**	**$125**	**$2,100**	**$0**	**$2,100**	**16.8**	**744**
ECM 12	Replace Electric Water Heater with Heat Pump Water Heater	739	0.0	0.0	$125	$2,100	$0	$2,100	16.8	744
TOTALS		**36,241**	**16.5**	**5.9**	**$6,301**	**$34,560**	**$4,670**	**$29,890**	**4.7**	**37,511**

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VISITOR CENTER

#	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			**14,997**	**5.9**	**0**	**$2,513**	**$9,060**	**$1,230**	**$7,830**	**3.1**	**15,102**
ECM 1	Retrofit Fixtures with LED Lamps	Yes	14,997	5.9	0	$2,513	$9,060	$1,230	$7,830	3.1	15,102
Lighting Control Measures			**586**	**0.2**	**0**	**$98**	**$1,860**	**$280**	**$1,580**	**16.1**	**591**
ECM 2	Install Occupancy Sensor Lighting Controls	Yes	586	0.2	0	$98	$1,860	$280	$1,580	16.1	591
Motor Upgrades			**1,288**	**0.4**	**0**	**$216**	**$4,400**	**$0**	**$4,400**	**20.4**	**1,297**
ECM 3	Premium Efficiency Motors	No	1,288	0.4	0	$216	$4,400	$0	$4,400	20.4	1,297
Domestic Water Heating Upgrade			**630**	**0.0**	**0**	**$106**	**$60**	**$30**	**$30**	**0.3**	**634**
ECM 4	Install Low-Flow DHW Devices	Yes	630	0.0	0	$106	$60	$30	$30	0.3	634
TOTALS (COST EFFECTIVE MEASURES)			**16,213**	**6.1**	**0**	**$2,717**	**$10,980**	**$1,540**	**$9,440**	**3.5**	**16,326**
TOTALS (ALL MEASURES)			**17,501**	**6.5**	**0**	**$2,933**	**$15,380**	**$1,540**	**$13,840**	**4.7**	**17,623**

* - 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.

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SEWAGE PLANT & STORAGE 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			**4,988**	**3.3**	**0**	**$863**	**$5,380**	**$870**	**$4,510**	**5.2**	**5,022**
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	4,820	3.3	0	$834	$5,080	$840	$4,240	5.1	4,854
ECM 2	Retrofit Fixtures with LED Lamps	Yes	168	0.0	0	$29	$300	$30	$270	9.3	169
Motor Upgrades			**333**	**0.1**	**0**	**$58**	**$1,600**	**$0**	**$1,600**	**27.8**	**335**
ECM 3	Premium Efficiency Motors	No	333	0.1	0	$58	$1,600	$0	$1,600	27.8	335
TOTALS (COST EFFECTIVE MEASURES)			**4,988**	**3.3**	**0**	**$863**	**$5,380**	**$870**	**$4,510**	**5.2**	**5,022**
TOTALS (ALL MEASURES)			**5,321**	**3.4**	**0**	**$921**	**$6,980**	**$870**	**$6,110**	**6.6**	**5,358**

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Central Supply, Toll Booths, Liberty Grove Bathrooms, Potato Cellar

#	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			**5,907**	**4.1**	**-3**	**$976**	**$7,480**	**$1,070**	**$6,410**	**6.6**	**5,532**
ECM 1	Install LED Fixtures	Yes	293	0.0	0	$51	$780	$150	$630	12.2	295
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	3,415	2.0	-2	$562	$4,410	$670	$3,740	6.7	3,182
ECM 3	Retrofit Fixtures with LED Lamps	Yes	2,199	2.1	-1	$363	$2,290	$250	$2,040	5.6	2,055
Lighting Control Measures			**525**	**0.2**	**0**	**$86**	**$1,970**	**$330**	**$1,640**	**19.0**	**489**
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	511	0.2	0	$84	$1,740	$260	$1,480	17.6	476
ECM 5	Install High/Low Lighting Controls	No	14	0.0	0	$2	$230	$70	$160	69.7	13
Unitary HVAC Measures			**120**	**0.2**	**0**	**$21**	**$1,100**	**$0**	**$1,100**	**52.1**	**121**
ECM 6	Install High Efficiency Air Conditioning Units	No	120	0.2	0	$21	$1,100	$0	$1,100	52.1	121
HVAC System Improvements			**128**	**0.0**	**0**	**$23**	**$240**	**$40**	**$200**	**8.9**	**129**
ECM 7	Install Pipe Insulation	Yes	128	0.0	0	$23	$240	$40	$200	8.9	129
Domestic Water Heating Upgrade			**646**	**0.0**	**0**	**$114**	**$50**	**$20**	**$30**	**0.3**	**651**
ECM 8	Install Low-Flow DHW Devices	Yes	646	0.0	0	$114	$50	$20	$30	0.3	651
TOTALS (COST EFFECTIVE MEASURES)			**7,192**	**4.3**	**-3**	**$1,197**	**$9,510**	**$1,390**	**$8,120**	**6.8**	**6,788**
TOTALS (ALL MEASURES)			**7,326**	**4.4**	**-3**	**$1,220**	**$10,840**	**$1,460**	**$9,380**	**7.7**	**6,922**

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TARK, CRAIG, RHEA APPLEGATE HOUSES

#	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			**358**	**0.5**	**0**	**$69**	**$460**	**$30**	**$430**	**6.3**	**333**
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	No	6	0.1	0	$1	$140	$20	$120	106.2	5
ECM 2	Retrofit Fixtures with LED Lamps	Yes	352	0.4	0	$67	$320	$10	$310	4.6	328
Lighting Control Measures			**17**	**0.0**	**0**	**$3**	**$270**	**$40**	**$230**	**71.7**	**16**
ECM 3	Install Occupancy Sensor Lighting Controls	No	17	0.0	0	$3	$270	$40	$230	71.7	16
Motor Upgrades			**95**	**0.0**	**0**	**$19**	**$1,200**	**$0**	**$1,200**	**62.1**	**96**
ECM 4	Premium Efficiency Motors	No	95	0.0	0	$19	$1,200	$0	$1,200	62.1	96
Gas Heating (HVAC/Process) Replacement			**0**	**0.0**	**11**	**$284**	**$3,400**	**$500**	**$2,900**	**10.2**	**1,863**
ECM 5	Install High Efficiency Furnaces	Yes	0	0.0	11	$284	$3,400	$500	$2,900	10.2	1,863
HVAC System Improvements			**101**	**0.0**	**0**	**$21**	**$700**	**$120**	**$580**	**28.3**	**102**
ECM 6	Install Pipe Insulation	No	101	0.0	0	$21	$700	$120	$580	28.3	102
Domestic Water Heating Upgrade			**188**	**0.0**	**0**	**$38**	**$30**	**$0**	**$30**	**0.8**	**189**
ECM 7	Install Low-Flow DHW Devices	Yes	188	0.0	0	$38	$30	$0	$30	0.8	189
Custom Measures			**243**	**0.0**	**0**	**$49**	**$2,400**	**$0**	**$2,400**	**49.0**	**245**
ECM 8	Replace Electric Water Heater with Heat Pump Water Heater	No	243	0.0	0	$49	$2,400	$0	$2,400	49.0	245
TOTALS (COST EFFECTIVE MEASURES)			**540**	**0.4**	**11**	**$390**	**$3,750**	**$510**	**$3,240**	**8.3**	**2,380**
TOTALS (ALL MEASURES)			**1,002**	**0.5**	**11**	**$483**	**$8,460**	**$690**	**$7,770**	**16.1**	**2,844**

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COBB 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			**3,932**	**1.7**	**-2**	**$638**	**$1,980**	**$270**	**$1,710**	**2.7**	**3,723**
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	1,349	0.7	-1	$219	$1,240	$190	$1,050	4.8	1,277
ECM 2	Retrofit Fixtures with LED Lamps	Yes	2,583	0.9	-1	$419	$740	$80	$660	1.6	2,445
Lighting Control Measures			**284**	**0.1**	**0**	**$46**	**$1,280**	**$230**	**$1,050**	**22.8**	**268**
ECM 3	Install Occupancy Sensor Lighting Controls	No	245	0.1	0	$40	$1,050	$160	$890	22.4	232
ECM 4	Install High/Low Lighting Controls	No	39	0.0	0	$6	$230	$70	$160	25.4	37
Gas Heating (HVAC/Process) Replacement			**0**	**0.0**	**13**	**$237**	**$10,200**	**$400**	**$9,800**	**41.4**	**1,906**
ECM 5	Install High Efficiency Hot Water Boilers	No	0	0.0	13	$237	$10,200	$400	$9,800	41.4	1,906
Domestic Water Heating Upgrade			**237**	**0.0**	**0**	**$40**	**$30**	**$0**	**$30**	**0.7**	**239**
ECM 6	Install Low-Flow DHW Devices	Yes	237	0.0	0	$40	$30	$0	$30	0.7	239
Custom Measures			**739**	**0.0**	**0**	**$125**	**$2,100**	**$0**	**$2,100**	**16.8**	**744**
ECM 7	Replace Electric Water Heater with Heat Pump Water Heater	Yes	739	0.0	0	$125	$2,100	$0	$2,100	16.8	744
TOTALS (COST EFFECTIVE MEASURES)			**4,909**	**1.7**	**-2**	**$803**	**$4,110**	**$270**	**$3,840**	**4.8**	**4,706**
TOTALS (ALL MEASURES)			**5,192**	**1.8**	**12**	**$1,086**	**$15,590**	**$900**	**$14,690**	**13.5**	**6,880**

* - 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).

CONOVER/PERRINE/SORRENSEN 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			**2,162**	**0.8**	**-1**	**$296**	**$800**	**$90**	**$710**	**2.4**	**2,049**
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	1,350	0.4	-1	$185	$560	$80	$480	2.6	1,279
ECM 2	Retrofit Fixtures with LED Lamps	Yes	812	0.4	0	$111	$240	$10	$230	2.1	770
Lighting Control Measures			**53**	**0.0**	**0**	**$7**	**$930**	**$140**	**$790**	**109.5**	**50**
ECM 3	Install Occupancy Sensor Lighting Controls	No	53	0.0	0	$7	$930	$140	$790	109.5	50
HVAC System Improvements			**113**	**0.0**	**0**	**$16**	**$720**	**$120**	**$600**	**36.9**	**113**
ECM 4	Install Pipe Insulation	No	113	0.0	0	$16	$720	$120	$600	36.9	113
Domestic Water Heating Upgrade			**237**	**0.0**	**0**	**$34**	**$30**	**$0**	**$30**	**0.9**	**239**
ECM 5	Install Low-Flow DHW Devices	Yes	237	0.0	0	$34	$30	$0	$30	0.9	239
Custom Measures			**675**	**0.0**	**0**	**$98**	**$2,400**	**$0**	**$2,400**	**24.5**	**680**
ECM 6	Replace Electric Water Heater with Heat Pump Water Heater	No	675	0.0	0	$98	$2,400	$0	$2,400	24.5	680
TOTALS (COST EFFECTIVE MEASURES)			**2,399**	**0.8**	**-1**	**$330**	**$830**	**$90**	**$740**	**2.2**	**2,288**
TOTALS (ALL MEASURES)			**3,240**	**0.9**	**-1**	**$452**	**$4,880**	**$350**	**$4,530**	**10.0**	**3,131**

* - 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

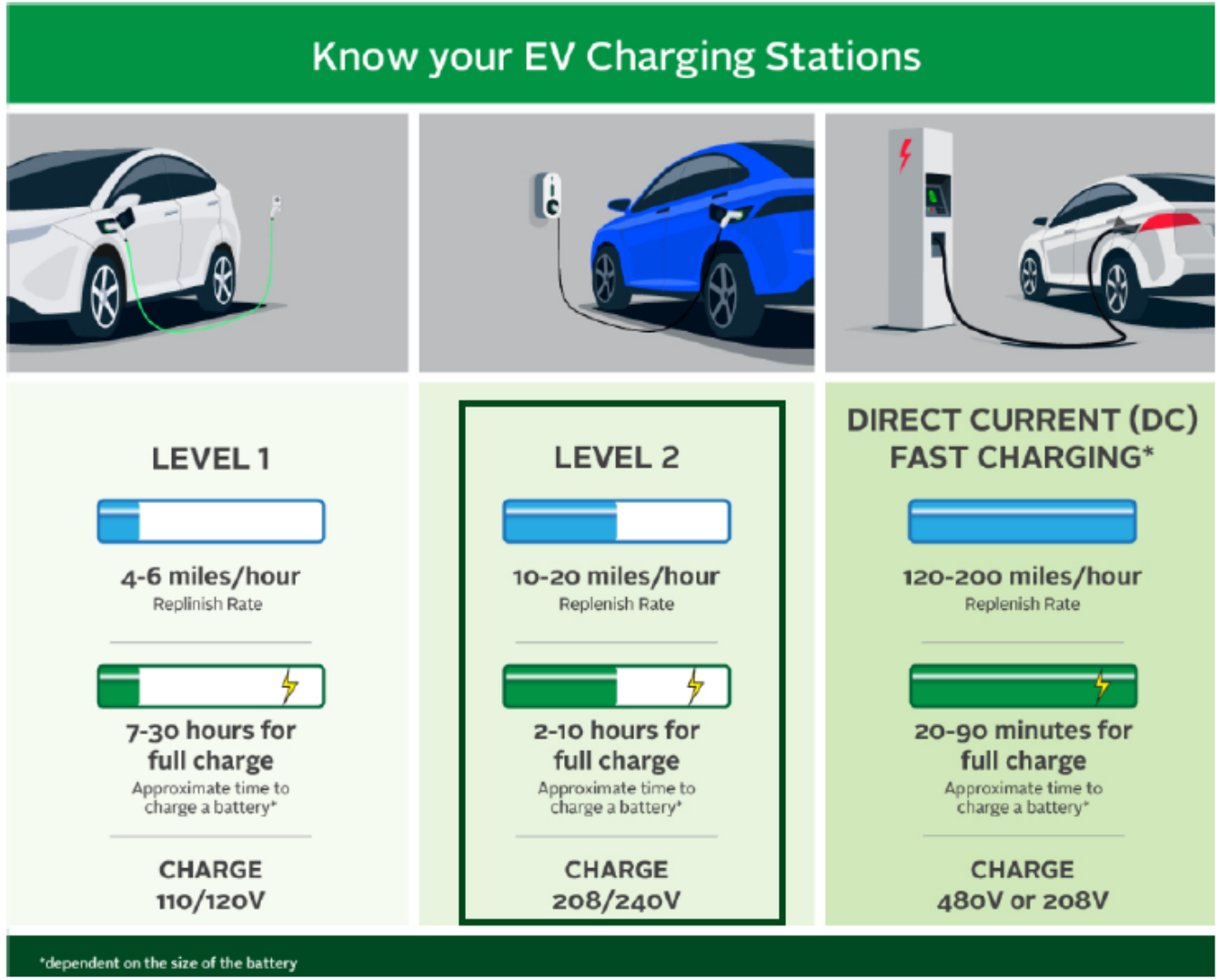
BPU New Jersey's cleanenergy program™

Measures for Future Consideration

- Upgrade to a Heat Pump System

EV Charging Station Potential

NJCleanEnergy.com/EV



	Monmouth Battlefield State Park
Potential:	**Medium**

Solar Energy Generation Potential

NJCleanEnergy.com/renewable-energy

	Visitor Center
Potential:	**HIGH**
System Potential: (kW)	69
Electric Generation: (kWh per year)	51,919
Displaced Cost: (per year)	$8,700

FINANCING MECHANISM: ESIP

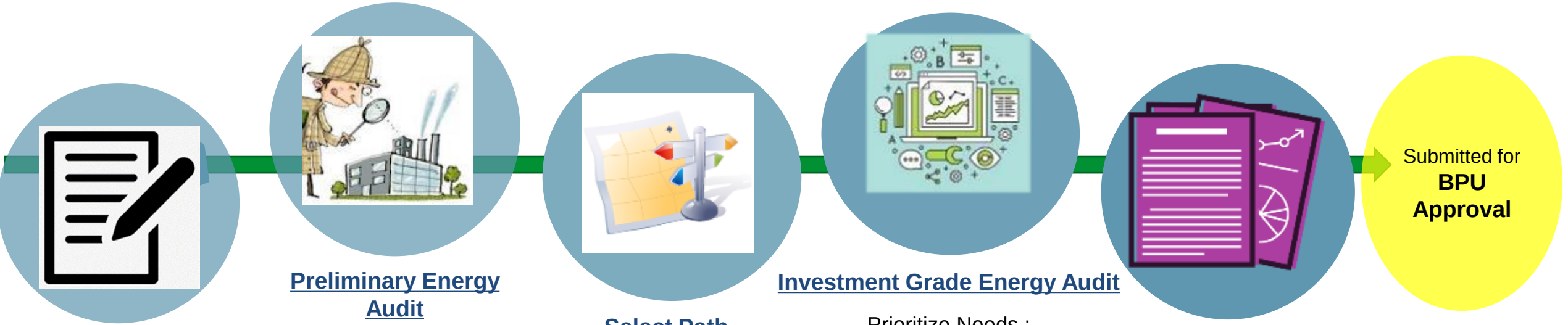
NJCleanEnergy.com/ESIP

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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ESIP Coordinator

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State Facilities Initiative (SFI)

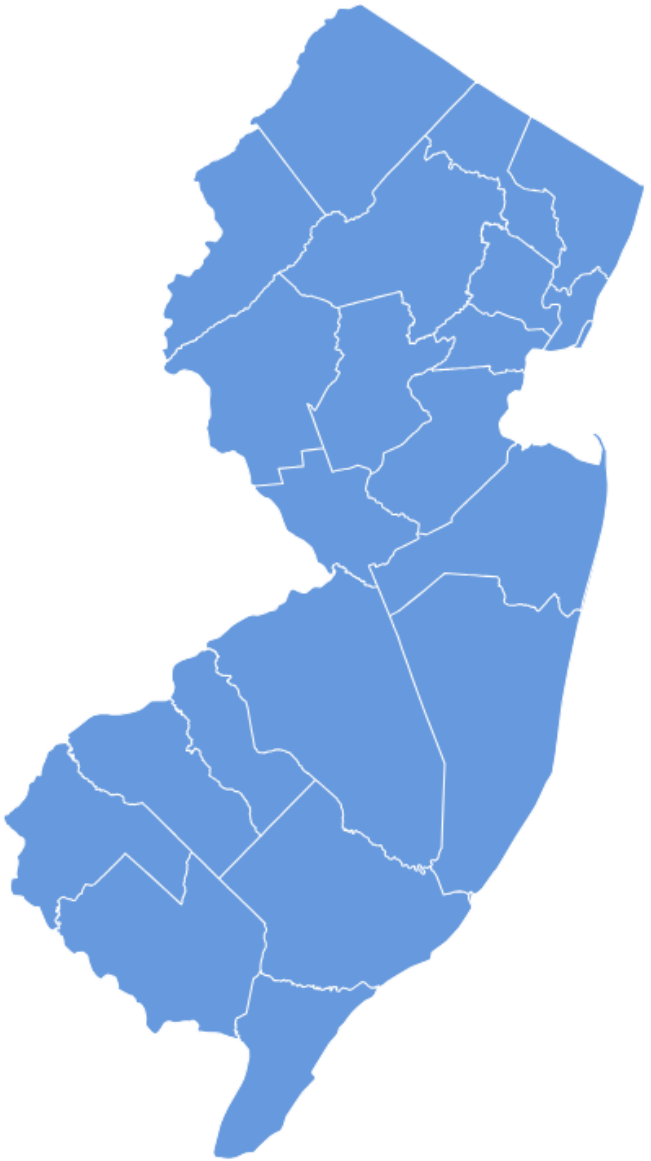
The State Facilities Initiative (SFI)

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

	EXISTING BUILDINGS		NEW CONSTRUCTION	DISTRIBUTED ENERGY RESOURCES
	MEASUREMENT & AUDITS	RETROFITS		
LOCAL GOVERNMENT CUSTOMERS	FREE Energy Audits	Prescriptive & Custom Rebates Direct Install Engineered Solutions **And more from your local utility!**	Prescriptive & Custom Rebates for New Construction and Gut Rehabs Pay for Performance incentives for buildings over 50,000 sq. ft.	Combined Heat & Power and Fuel Cell Installation Incentives Microgrid Development Battery Storage Muni EV Fleets
COMMERCIAL & INSTITUTIONAL CUSTOMERS				
LARGE ENERGY CUSTOMERS		Incentives up to $4 million for eligible projects		

BPU New Jersey's cleanenergy program™

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

JCP&L
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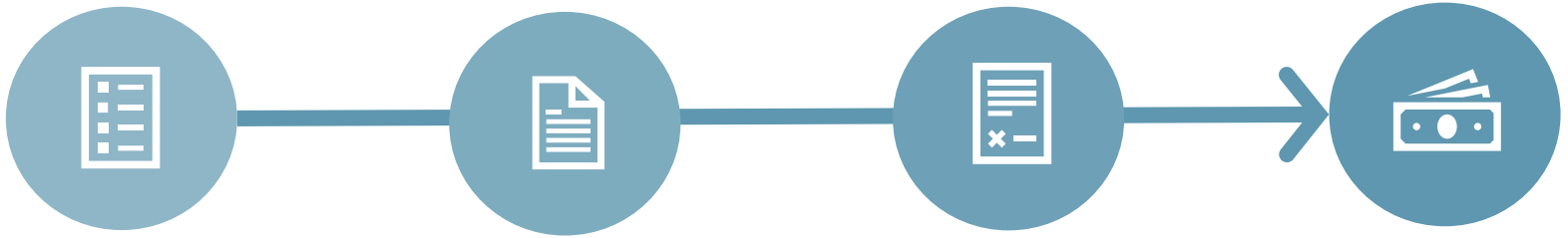
Large Energy Users

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

For More Information

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THANK YOU