


# *LGEA Presentation Township of Montclair*

February 22, 2024



## New Jersey's Clean Energy Program

*Lighting the way to New Jersey's Clean Energy Future*

# INTRODUCTIONS

- *Township of Montclair*
  - Lisa Johnson – Environmental Affairs Coordinator
  - Janet Torsney – Library Director
  - Selwa Shamy – Asst. Library Director
  - Tim Flowers – Head of Facilities and Security
- *NJ Clean Energy Program*
  - Sarah Walters – LGEA Project Manager
  - Moussa Traore – LGEA Technical Manager
  - Ryan Knippenberg – LGEA Project Auditor
  - Dan Krasowsky – LGEA Account Manager

# 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 Township of Montclair

# 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
- Plug Load Equipment

## Utility Consumption:

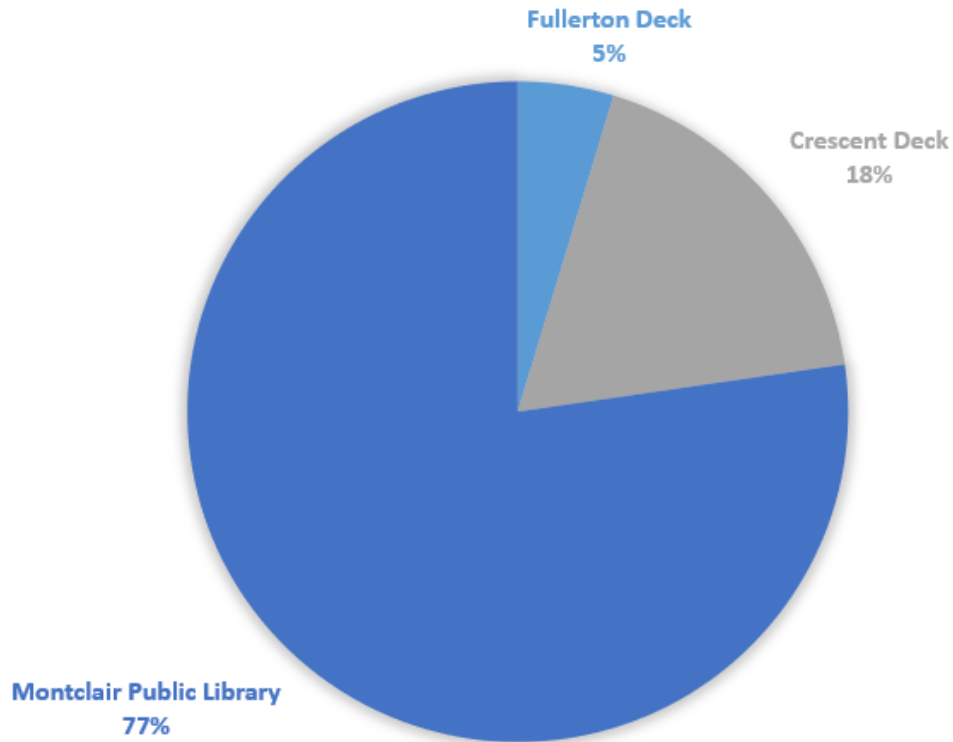
- Electric Consumption and Costs
- Natural Gas Consumption and Costs

## Sites Visited/Analyzed

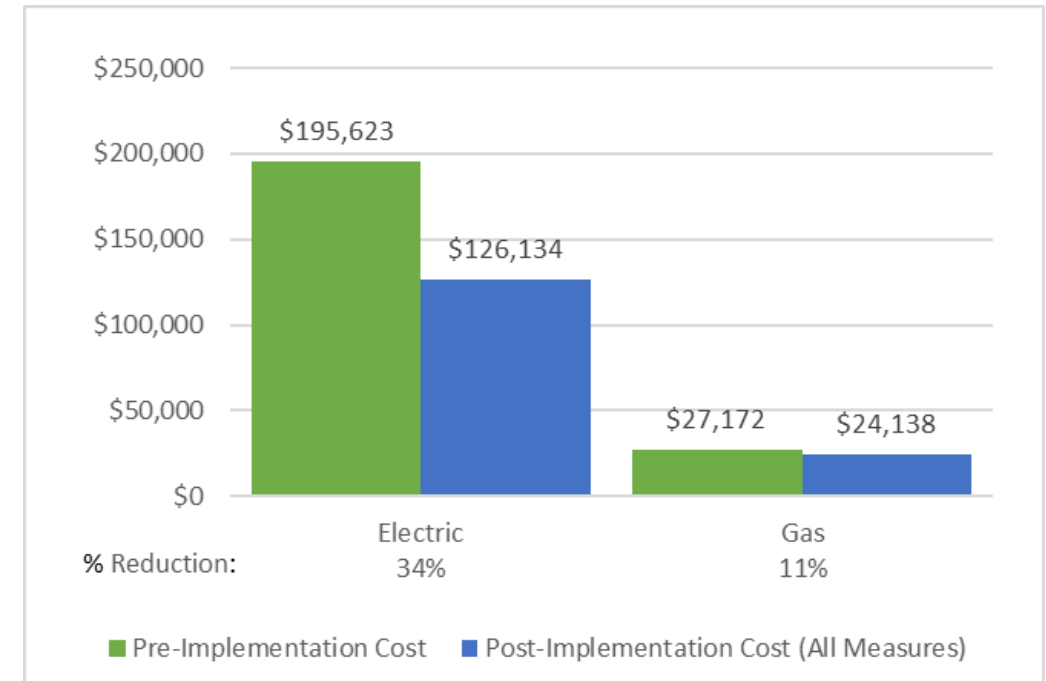
- Fullerton Deck
- Crescent Deck
- Main Library

# UTILITY BREAKOUT


Percent of Total Annual Energy Costs



Pre & Post Implementation Cost



# BENCHMARKING



ENERGY STAR® Statement of Energy Performance

LEARN MORE AT [energystar.gov](http://energystar.gov)

N/A

Montclair Public Library (Main Library)

Primary Property Type: Library  
Gross Floor Area (ft²): 70,667  
Built: 1955

For Year Ending: March 31, 2023  
Date Generated: November 29, 2023

ENERGY STAR® Score¹

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		
<b>Property Address</b> Montclair Public Library (Main Library) 50 S. Fullerton Street Montclair, New Jersey 07042	<b>Property Owner</b> Montclair Township 205 Claremont Avenue Montclair, NJ 07042 (973) 509-5721	<b>Primary Contact</b> Lisa Johnson 205 Claremont Avenue Montclair, NJ 07042 (973) 509-5721 <a href="mailto:ljohnson@montclairnjusa.org">ljohnson@montclairnjusa.org</a>
Property ID: 29770199		

Energy Consumption and Energy Use Intensity (EUI)		
<b>Site EUI</b> 80.9 kBtu/ft²	<b>Annual Energy by Fuel</b> Natural Gas (kBtu) 2,538,797 (14%) Electricity (kBtu) 3,175,908 (56%)	<b>National Median Comparison</b> National Median Site EUI (kBtu/ft²) 71 National Median Source EUI (kBtu/ft²) 143.6 % Diff from National Median Source EUI 14%
<b>Source EUI</b> 163.6 kBtu/ft²	<b>Annual Emissions</b> Total (Location-Based) GHG Emissions (Metric Tons CO2e/year) 420	

**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  
80.9 kBtu/ft²

Source EUI  
163.6 kBtu/ft²

**National Median Comparison**

National Median Site EUI (kBtu/ft²)	71
National Median Source EUI (kBtu/ft²)	143.6
% Diff from National Median Source EUI	14%

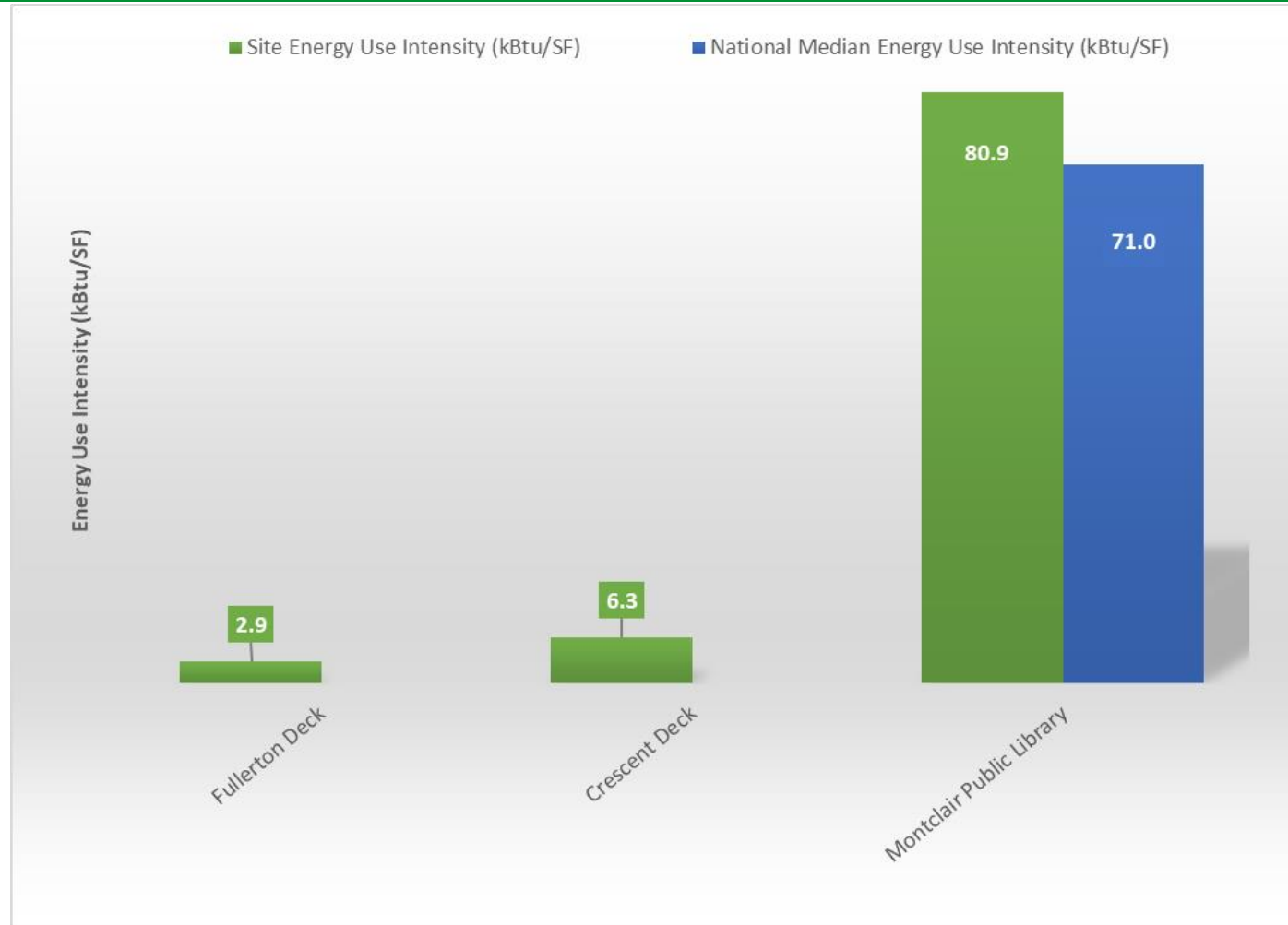
**Annual Emissions**

Total (Location-Based) GHG Emissions (Metric Tons CO2e/year)	420
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Site Name	ENERGY STAR® Score
Fullerton Deck	N/A
Crescent Deck	N/A
Main Library	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.

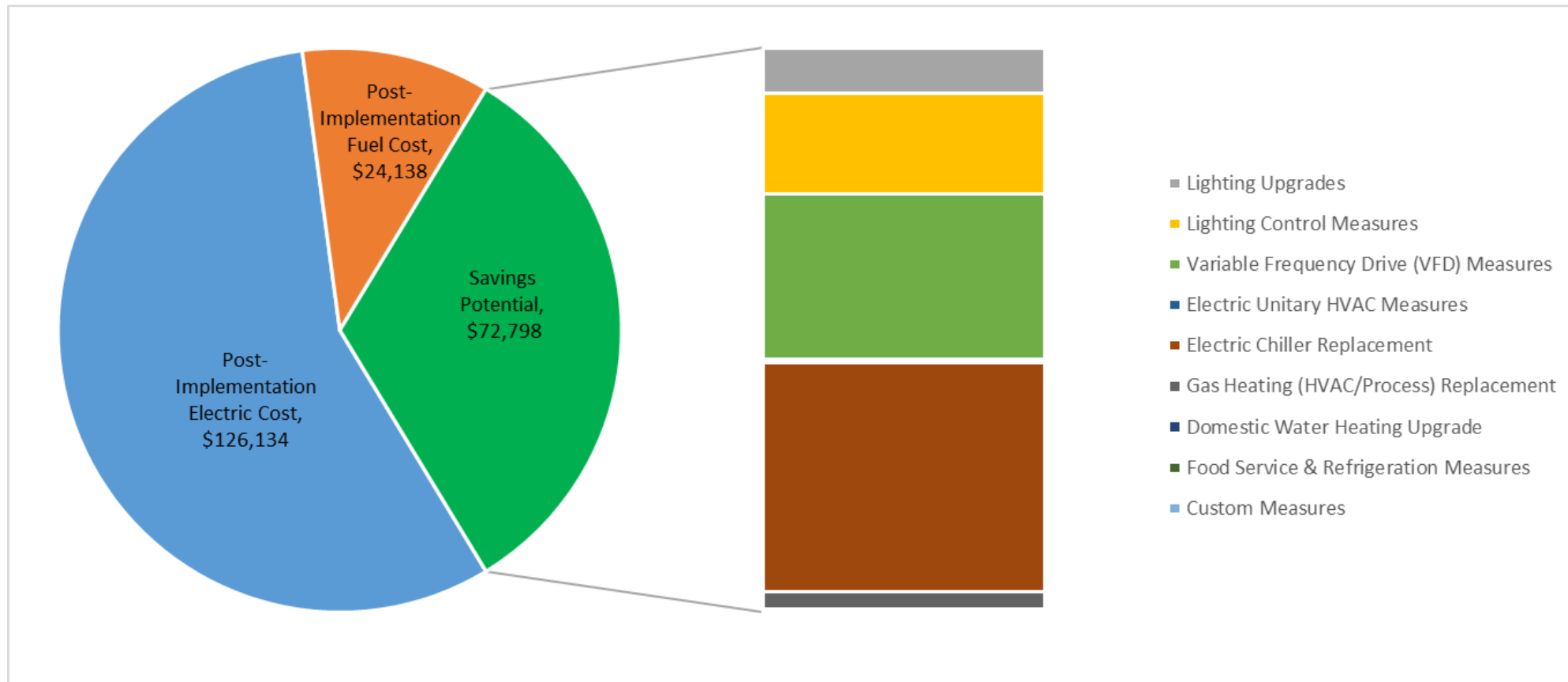
# BENCHMARKING





# 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 <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>40,100</b>	<b>7.7</b>	<b>-5.2</b>	<b>\$5,833</b>	<b>\$22,890</b>	<b>\$2,590</b>	<b>\$20,300</b>	<b>3.5</b>	<b>39,772</b>
ECM 1	Install LED Fixtures	14,710	1.3	-0.3	\$2,010	\$10,430	\$660	\$9,770	4.9	14,776
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	1,806	0.6	-0.4	\$275	\$1,410	\$160	\$1,250	4.5	1,773
ECM 3	Retrofit Fixtures with LED Lamps	23,585	5.8	-4.5	\$3,547	\$11,050	\$1,770	\$9,280	2.6	23,223
<b>Lighting Control Measures</b>		<b>90,606</b>	<b>14.7</b>	<b>-10.0</b>	<b>\$13,014</b>	<b>\$60,460</b>	<b>\$16,230</b>	<b>\$44,230</b>	<b>3.4</b>	<b>90,070</b>
ECM 4	Install Occupancy Sensor Lighting Controls	46,106	10.8	-9.5	\$6,997	\$35,950	\$4,030	\$31,920	4.6	45,312
ECM 5	Install Daylight Dimming/Photocell Controls	7,008	0.0	0.0	\$888	\$980	\$0	\$980	1.1	7,057
ECM 6	Install High/Low Lighting Controls	37,493	3.9	-0.5	\$5,128	\$23,530	\$12,200	\$11,330	2.2	37,701
<b>Variable Frequency Drive (VFD) Measures</b>		<b>137,670</b>	<b>29.0</b>	<b>0.0</b>	<b>\$21,313</b>	<b>\$85,400</b>	<b>\$9,400</b>	<b>\$76,000</b>	<b>3.6</b>	<b>138,633</b>
ECM 7	Install VFDs on Constant Volume (CV) Fans	83,277	19.4	0.0	\$12,892	\$43,000	\$4,800	\$38,200	3.0	83,859
ECM 8	Install VFDs on Chilled Water Pumps	38,318	7.8	0.0	\$5,932	\$27,600	\$2,600	\$25,000	4.2	38,586
ECM 9	Install VFDs on Heating Water Pumps	16,075	1.9	0.0	\$2,489	\$14,800	\$2,000	\$12,800	5.1	16,188
<b>Unitary HVAC Measures</b>		<b>2,700</b>	<b>1.1</b>	<b>0.0</b>	<b>\$418</b>	<b>\$10,800</b>	<b>\$500</b>	<b>\$10,300</b>	<b>24.6</b>	<b>2,719</b>
ECM 10	Install High Efficiency Air Conditioning Units	2,700	1.1	0.0	\$418	\$10,800	\$500	\$10,300	24.6	2,719

# ALL OPPORTUNITIES (CONT.)

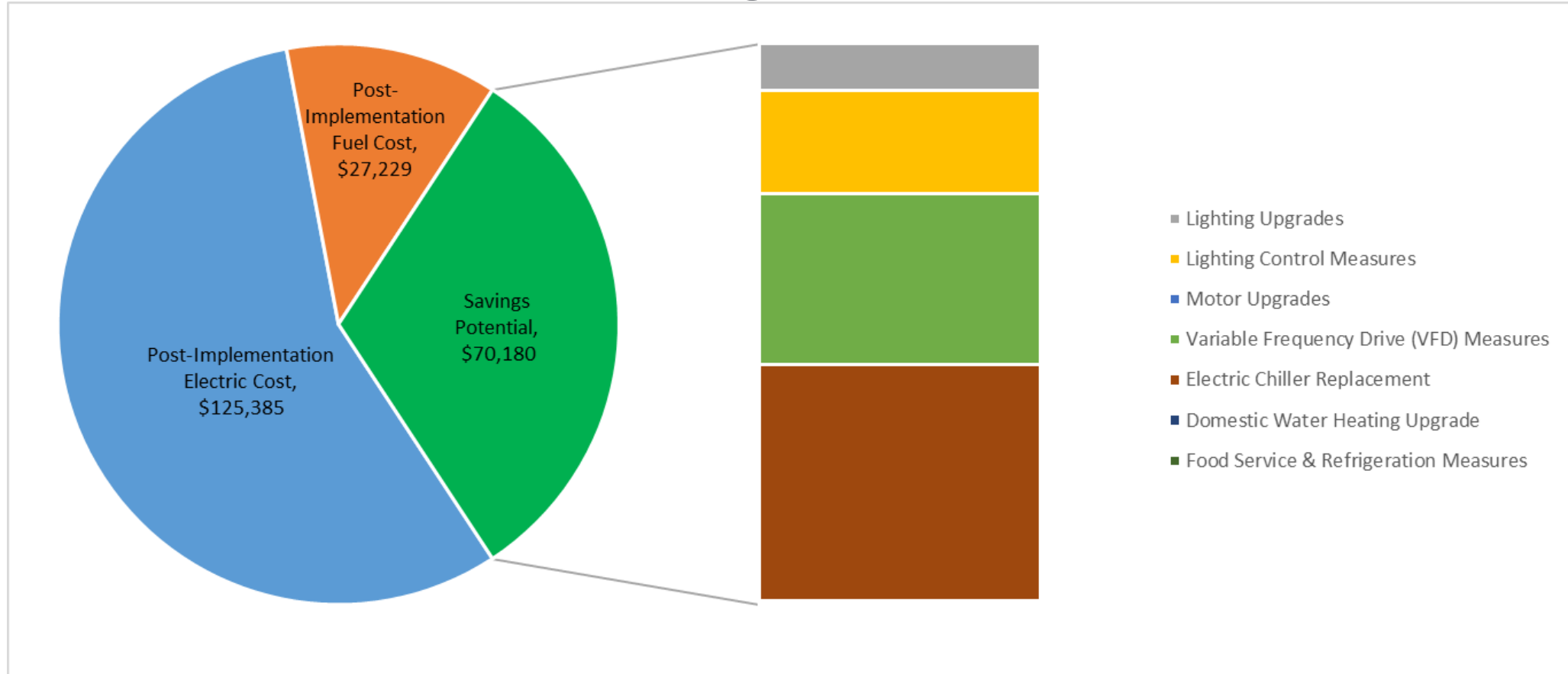
#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated M&L Cost (\$)	Estimated Incentive (\$) *	Estimated Net M&L Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Electric Chiller Replacement</b>		<b>191,256</b>	<b>10.9</b>	<b>0.0</b>	<b>\$29,609</b>	<b>\$156,800</b>	<b>\$13,800</b>	<b>\$143,000</b>	<b>4.8</b>	<b>192,593</b>
ECM 11	Install High Efficiency Chillers	191,256	10.9	0.0	\$29,609	\$156,800	\$13,800	\$143,000	4.8	192,593
<b>Gas Heating (HVAC/Process) Replacement</b>		<b>0</b>	<b>0.0</b>	<b>198.9</b>	<b>\$2,153</b>	<b>\$79,900</b>	<b>\$4,200</b>	<b>\$75,700</b>	<b>35.2</b>	<b>23,290</b>
ECM 12	Install High Efficiency Hot Water Boilers	0	0.0	198.9	\$2,153	\$79,900	\$4,200	\$75,700	35.2	23,290
<b>Domestic Water Heating Upgrade</b>		<b>0</b>	<b>0.0</b>	<b>14.4</b>	<b>\$156</b>	<b>\$3,160</b>	<b>\$270</b>	<b>\$2,890</b>	<b>18.5</b>	<b>1,687</b>
ECM 13	Install High Efficiency Gas-Fired Water Heater	0	0.0	4.4	\$47	\$3,000	\$200	\$2,800	59.3	511
ECM 14	Install Low-Flow DHW Devices	0	0.0	10.0	\$109	\$160	\$70	\$90	0.8	1,176
<b>Food Service &amp; Refrigeration Measures</b>		<b>1,954</b>	<b>0.2</b>	<b>0.0</b>	<b>\$303</b>	<b>\$540</b>	<b>\$50</b>	<b>\$490</b>	<b>1.6</b>	<b>1,968</b>
ECM 15	Vending Machine Control	1,954	0.2	0.0	\$303	\$540	\$50	\$490	1.6	1,968
<b>Custom Measures</b>		<b>-6,952</b>	<b>0.0</b>	<b>74.0</b>	<b>-\$275</b>	<b>\$2,800</b>	<b>\$0</b>	<b>\$2,800</b>	<b>-10.2</b>	<b>1,664</b>
ECM 16	Replace Gas Fired Water Heater with Heat Pump Water Heater	-6,952	0.0	74.0	-\$275	\$2,800	\$0	\$2,800	-10.2	1,664
<b>TOTALS (ALL MEASURES)</b>		<b>457,335</b>	<b>63.7</b>	<b>272.1</b>	<b>\$72,523</b>	<b>\$422,750</b>	<b>\$47,040</b>	<b>\$375,710</b>	<b>5.2</b>	<b>492,396</b>

\* - 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 <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>40,100</b>	<b>7.7</b>	<b>-5.2</b>	<b>\$5,833</b>	<b>\$22,890</b>	<b>\$2,590</b>	<b>\$20,300</b>	<b>3.5</b>	<b>39,772</b>
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<b>Variable Frequency Drive (VFD) Measures</b>		<b>137,670</b>	<b>29.0</b>	<b>0.0</b>	<b>\$21,313</b>	<b>\$85,400</b>	<b>\$9,400</b>	<b>\$76,000</b>	<b>3.6</b>	<b>138,633</b>
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ECM 9	Install VFDs on Heating Water Pumps	16,075	1.9	0.0	\$2,489	\$14,800	\$2,000	\$12,800	5.1	16,188
<b>Electric Chiller Replacement</b>		<b>191,256</b>	<b>10.9</b>	<b>0.0</b>	<b>\$29,609</b>	<b>\$156,800</b>	<b>\$13,800</b>	<b>\$143,000</b>	<b>4.8</b>	<b>192,593</b>
ECM 11	Install High Efficiency Chillers	191,256	10.9	0.0	\$29,609	\$156,800	\$13,800	\$143,000	4.8	192,593
<b>Domestic Water Heating Upgrade</b>		<b>0</b>	<b>0.0</b>	<b>10.0</b>	<b>\$109</b>	<b>\$160</b>	<b>\$70</b>	<b>\$90</b>	<b>0.8</b>	<b>1,176</b>
ECM 14	Install Low-Flow DHW Devices	0	0.0	10.0	\$109	\$160	\$70	\$90	0.8	1,176
<b>Food Service &amp; Refrigeration Measures</b>		<b>1,954</b>	<b>0.2</b>	<b>0.0</b>	<b>\$303</b>	<b>\$540</b>	<b>\$50</b>	<b>\$490</b>	<b>1.6</b>	<b>1,968</b>
ECM 15	Vending Machine Control	1,954	0.2	0.0	\$303	\$540	\$50	\$490	1.6	1,968
<b>TOTALS</b>		<b>461,587</b>	<b>62.6</b>	<b>-5.1</b>	<b>\$70,180</b>	<b>\$326,250</b>	<b>\$42,140</b>	<b>\$284,110</b>	<b>4.0</b>	<b>464,213</b>

\* - All incentives presented in this table are included as placeholders 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).

# FULLERTON DECK

#	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 <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>			<b>624</b>	<b>0.1</b>	<b>0</b>	<b>\$89</b>	<b>\$100</b>	<b>\$20</b>	<b>\$80</b>	<b>0.9</b>	<b>629</b>
ECM 1	Retrofit Fixtures with LED Lamps	Yes	624	0.1	0	\$89	\$100	\$20	\$80	0.9	629
<b>Lighting Control Measures</b>			<b>19,371</b>	<b>1.8</b>	<b>0</b>	<b>\$2,776</b>	<b>\$8,450</b>	<b>\$4,230</b>	<b>\$4,220</b>	<b>1.5</b>	<b>19,507</b>
ECM 2	Install High/Low Lighting Controls	Yes	19,371	1.8	0	\$2,776	\$8,450	\$4,230	\$4,220	1.5	19,507
<b>TOTALS (COST EFFECTIVE MEASURES)</b>			<b>19,996</b>	<b>1.9</b>	<b>0</b>	<b>\$2,865</b>	<b>\$8,550</b>	<b>\$4,250</b>	<b>\$4,300</b>	<b>1.5</b>	<b>20,136</b>
<b>TOTALS (ALL MEASURES)</b>			<b>19,996</b>	<b>1.9</b>	<b>0</b>	<b>\$2,865</b>	<b>\$8,550</b>	<b>\$4,250</b>	<b>\$4,300</b>	<b>1.5</b>	<b>20,136</b>

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# CRESCENT DECK

#	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 <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>			<b>11,111</b>	<b>1.1</b>	<b>0</b>	<b>\$1,409</b>	<b>\$4,200</b>	<b>\$140</b>	<b>\$4,060</b>	<b>2.9</b>	<b>11,189</b>
ECM 1	Install LED Fixtures	Yes	9,399	1.0	0	\$1,192	\$3,800	\$60	\$3,740	3.1	9,465
ECM 2	Retrofit Fixtures with LED Lamps	Yes	1,711	0.2	0	\$217	\$400	\$80	\$320	1.5	1,723
<b>Lighting Control Measures</b>			<b>24,313</b>	<b>1.8</b>	<b>0</b>	<b>\$3,082</b>	<b>\$13,110</b>	<b>\$6,200</b>	<b>\$6,910</b>	<b>2.2</b>	<b>24,483</b>
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	1,331	0.1	0	\$169	\$1,140	\$100	\$1,040	6.2	1,341
ECM 4	Install Photocell Controls	Yes	7,008	0.0	0	\$888	\$980	\$0	\$980	1.1	7,057
ECM 5	Install High/Low Lighting Controls	Yes	15,974	1.6	0	\$2,025	\$10,990	\$6,100	\$4,890	2.4	16,086
<b>TOTALS (COST EFFECTIVE MEASURES)</b>			<b>35,424</b>	<b>2.9</b>	<b>0</b>	<b>\$4,491</b>	<b>\$17,310</b>	<b>\$6,340</b>	<b>\$10,970</b>	<b>2.4</b>	<b>35,672</b>
<b>TOTALS (ALL MEASURES)</b>			<b>35,424</b>	<b>2.9</b>	<b>0</b>	<b>\$4,491</b>	<b>\$17,310</b>	<b>\$6,340</b>	<b>\$10,970</b>	<b>2.4</b>	<b>35,672</b>

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# MAIN LIBRARY

#	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 <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>			<b>28,365</b>	<b>6.5</b>	<b>-5</b>	<b>\$4,335</b>	<b>\$18,590</b>	<b>\$2,430</b>	<b>\$16,160</b>	<b>3.7</b>	<b>27,955</b>
ECM 1	Install LED Fixtures	Yes	5,310	0.3	0	\$819	\$6,630	\$600	\$6,030	7.4	5,311
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	1,806	0.6	0	\$275	\$1,410	\$160	\$1,250	4.5	1,773
ECM 3	Retrofit Fixtures with LED Lamps	Yes	21,249	5.6	-4	\$3,241	\$10,550	\$1,670	\$8,880	2.7	20,871
<b>Lighting Control Measures</b>			<b>46,922</b>	<b>11.2</b>	<b>-10</b>	<b>\$7,156</b>	<b>\$38,900</b>	<b>\$5,800</b>	<b>\$33,100</b>	<b>4.6</b>	<b>46,080</b>
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	44,774	10.7	-10	\$6,828	\$34,810	\$3,930	\$30,880	4.5	43,971
ECM 5	Install High/Low Lighting Controls	Yes	2,147	0.5	0	\$327	\$4,090	\$1,870	\$2,220	6.8	2,109
<b>Variable Frequency Drive (VFD) Measures</b>			<b>137,670</b>	<b>29.0</b>	<b>0</b>	<b>\$21,313</b>	<b>\$85,400</b>	<b>\$9,400</b>	<b>\$76,000</b>	<b>3.6</b>	<b>138,633</b>
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<b>Unitary HVAC Measures</b>			<b>2,700</b>	<b>1.1</b>	<b>0</b>	<b>\$418</b>	<b>\$10,800</b>	<b>\$500</b>	<b>\$10,300</b>	<b>24.6</b>	<b>2,719</b>
ECM 9	Install High Efficiency Air Conditioning Units	No	2,700	1.1	0	\$418	\$10,800	\$500	\$10,300	24.6	2,719
<b>Electric Chiller Replacement</b>			<b>191,256</b>	<b>10.9</b>	<b>0</b>	<b>\$29,609</b>	<b>\$156,800</b>	<b>\$13,800</b>	<b>\$143,000</b>	<b>4.8</b>	<b>192,593</b>
ECM 10	Install High Efficiency Chillers	Yes	191,256	10.9	0	\$29,609	\$156,800	\$13,800	\$143,000	4.8	192,593



# MAIN LIBRARY (CONT.)

#	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 <sub>2</sub> e Emissions Reduction (lbs)
<b>Gas Heating (HVAC/Process) Replacement</b>			<b>0</b>	<b>0.0</b>	<b>199</b>	<b>\$2,153</b>	<b>\$79,900</b>	<b>\$4,200</b>	<b>\$75,700</b>	<b>35.2</b>	<b>23,290</b>
ECM 11	Install High Efficiency Hot Water Boilers	No	0	0.0	199	\$2,153	\$79,900	\$4,200	\$75,700	35.2	23,290
<b>Domestic Water Heating Upgrade</b>			<b>0</b>	<b>0.0</b>	<b>14</b>	<b>\$156</b>	<b>\$3,160</b>	<b>\$270</b>	<b>\$2,890</b>	<b>18.5</b>	<b>1,687</b>
ECM 12	Install High Efficiency Gas-Fired Water Heater	No	0	0.0	4	\$47	\$3,000	\$200	\$2,800	59.3	511
ECM 13	Install Low-Flow DHW Devices ***	Yes	0	0.0	10	\$109	\$160	\$70	\$90	0.8	1,176
<b>Food Service &amp; Refrigeration Measures</b>			<b>1,954</b>	<b>0.2</b>	<b>0</b>	<b>\$303</b>	<b>\$540</b>	<b>\$50</b>	<b>\$490</b>	<b>1.6</b>	<b>1,968</b>
ECM 14	Vending Machine Control	Yes	1,954	0.2	0	\$303	\$540	\$50	\$490	1.6	1,968
<b>Custom Measures****</b>			<b>-6,952</b>	<b>0.0</b>	<b>74</b>	<b>-\$275</b>	<b>\$2,800</b>	<b>\$0</b>	<b>\$2,800</b>	<b>-10.2</b>	<b>1,664</b>
ECM 15	Replace Gas Fired Water Heater with Heat Pump Water Heater****	No	-6,952	0.0	74	-\$275	\$2,800	\$0	\$2,800	-10.2	1,664
<b>TOTALS (COST EFFECTIVE MEASURES)</b>			<b>406,167</b>	<b>57.9</b>	<b>-5</b>	<b>\$62,824</b>	<b>\$300,390</b>	<b>\$31,550</b>	<b>\$268,840</b>	<b>4.3</b>	<b>408,405</b>
<b>TOTALS (ALL MEASURES)</b>			<b>401,915</b>	<b>59.0</b>	<b>272</b>	<b>\$65,167</b>	<b>\$396,890</b>	<b>\$36,450</b>	<b>\$360,440</b>	<b>5.5</b>	<b>436,589</b>

\* - 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 4.9

# 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***

# WATER BEST PRACTICES



- Leak Detection and Repair
- Toilets and Urinals
- Faucets and Showerheads
- Commercial Kitchen Equipment
- Laundry Equipment
- Cooling Towers
- 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***

# EV CHARGING STATION POTENTIAL

NJCleanEnergy.com/EV

## Know your EV Charging Stations



<b>LEVEL 1</b>  <b>4-6 miles/hour</b> Replenish Rate   <b>7-30 hours for full charge</b> Approximate time to charge a battery*  <b>CHARGE</b> <b>110/120V</b>	<b>LEVEL 2</b>  <b>10-20 miles/hour</b> Replenish Rate   <b>2-10 hours for full charge</b> Approximate time to charge a battery*  <b>CHARGE</b> <b>208/240V</b>	<b>DIRECT CURRENT (DC) FAST CHARGING*</b>  <b>120-200 miles/hour</b> Replenish Rate   <b>20-90 minutes for full charge</b> Approximate time to charge a battery*  <b>CHARGE</b> <b>480V or 208V</b>
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\*dependent on the size of the battery

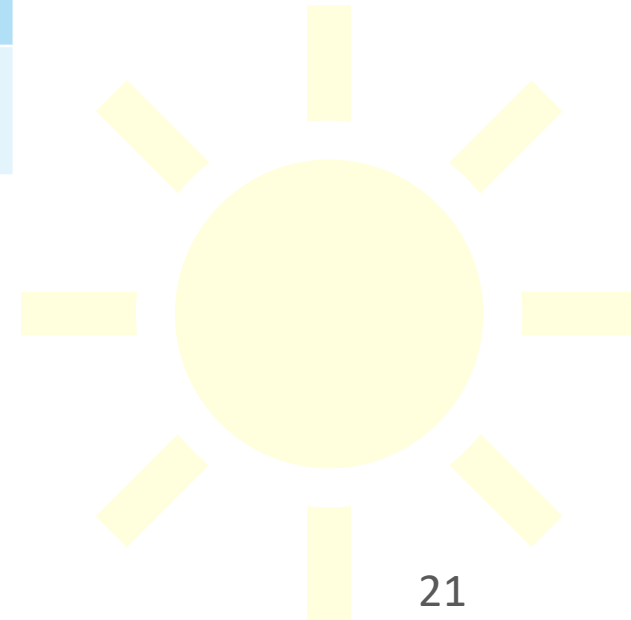
	Township of Montclair
Potential:	Medium



# SOLAR ENERGY GENERATION POTENTIAL

[NJCleanEnergy.com/renewable-energy](http://NJCleanEnergy.com/renewable-energy)

	Crescent Deck	Main Library
<i>Potential:</i>	<b>MEDIUM</b>	<b>MEDIUM</b>
<i>System Potential: (kW)</i>	89	75
<i>Electric Generation: (kWh per year)</i>	106,032	56,434
<i>Displaced Cost: (per year)</i>	\$13,440	\$8,740



# FINANCING MECHANISM: ESIP

[NJCleanEnergy.com/ESIP](http://NJCleanEnergy.com/ESIP)

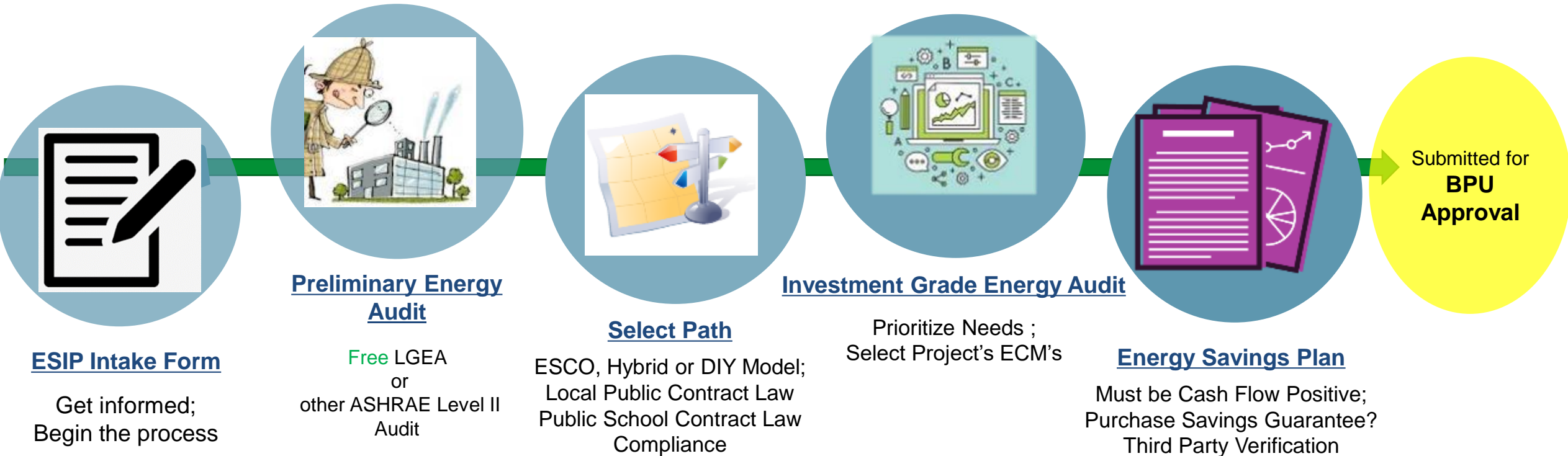
## ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

- 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



# ENERGY SAVINGS IMPROVEMENT PROGRAM

[NJCleanEnergy.com/ESIP](http://NJCleanEnergy.com/ESIP)

## FOR MORE INFORMATION

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# 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

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THANK YOU

