

New Jersey's Clean Energy Program

LGEA Presentation

Parsippany-Troy Hills Township

June 29, 2020

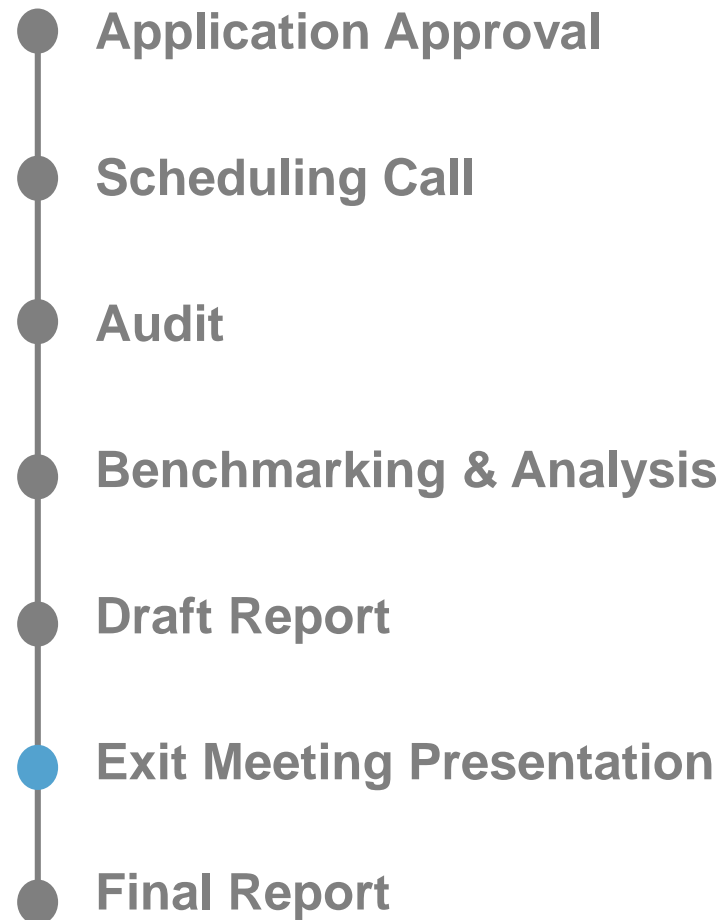
INTRODUCTIONS

- *Parsippany-Troy Hills Township*
 - Matt Clarkin – Chief of Staff
 - Julie Colasuonno – Purchasing Assistant
 - Matt Kavanagh – Township Green Team Representative
- *NJ Clean Energy Program*
 - Aimee Lalonde – TRC Program Manager
 - Moussa Traore – TRC Auditor
 - Sarah Walters – TRC Account Manager
 - Mike Mandzik – TRC Outreach Manager
 - Michelle Rossi – ESIP Coordinator (BPU)
 - Arif Welcher – Government/Business Manager (BPU)

AGENDA

- The audit process overview
- Energy use & existing conditions
- Review of **E**nergy **C**onservation **M**easures (ECMs) identified
- Questions regarding the draft audit report
- Overview of NJCEP equipment incentives
- Next steps for Parsippany-Troy Hills Township

LGEA PROCESS



SITE VISIT & UTILITY ANALYSIS

Overview of Systems, Baseline & Existing Conditions:

- Lighting System
- HVAC and Mechanical Systems
- Plug Load Equipment

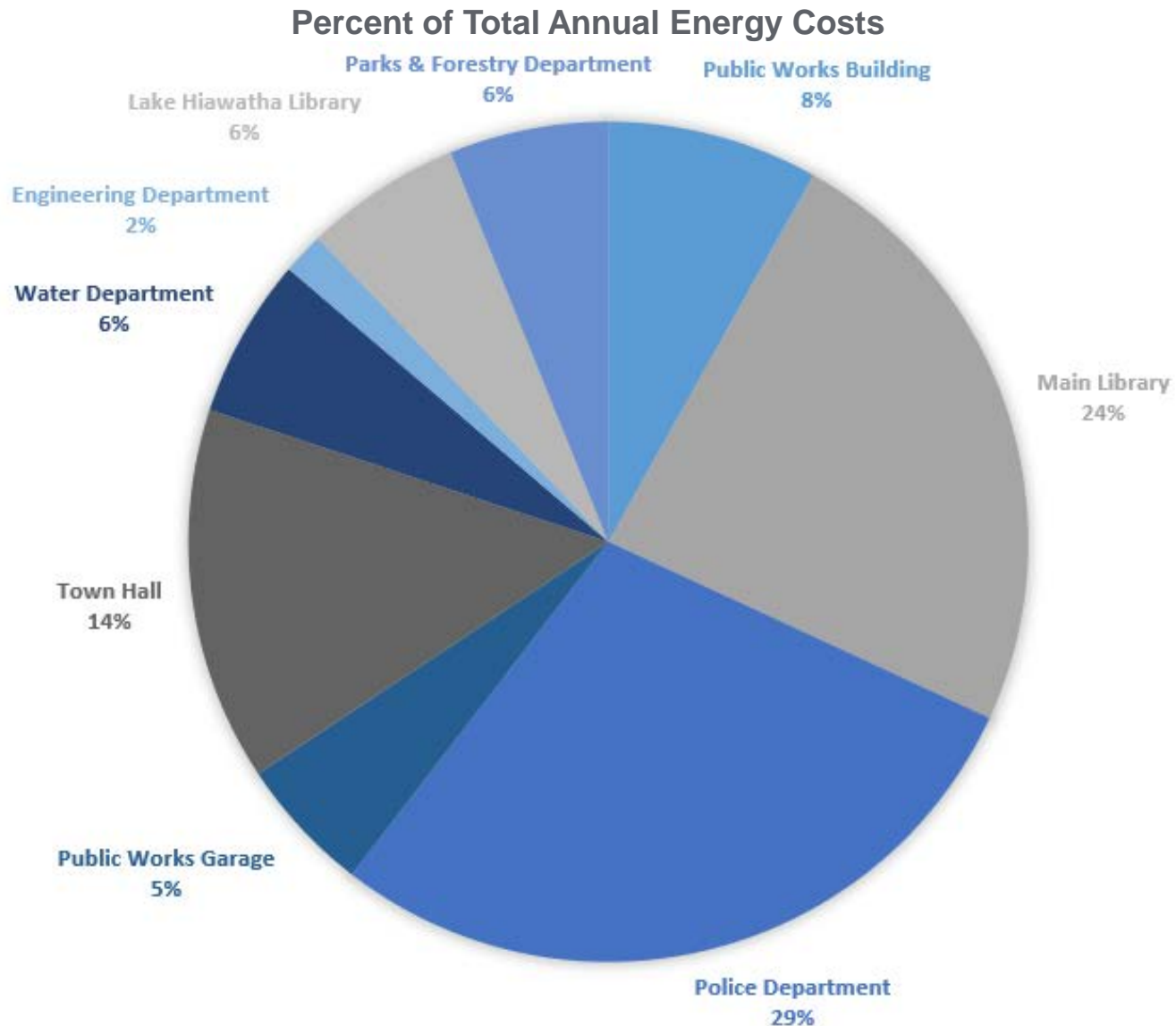
Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs

Sites Visited/Analyzed

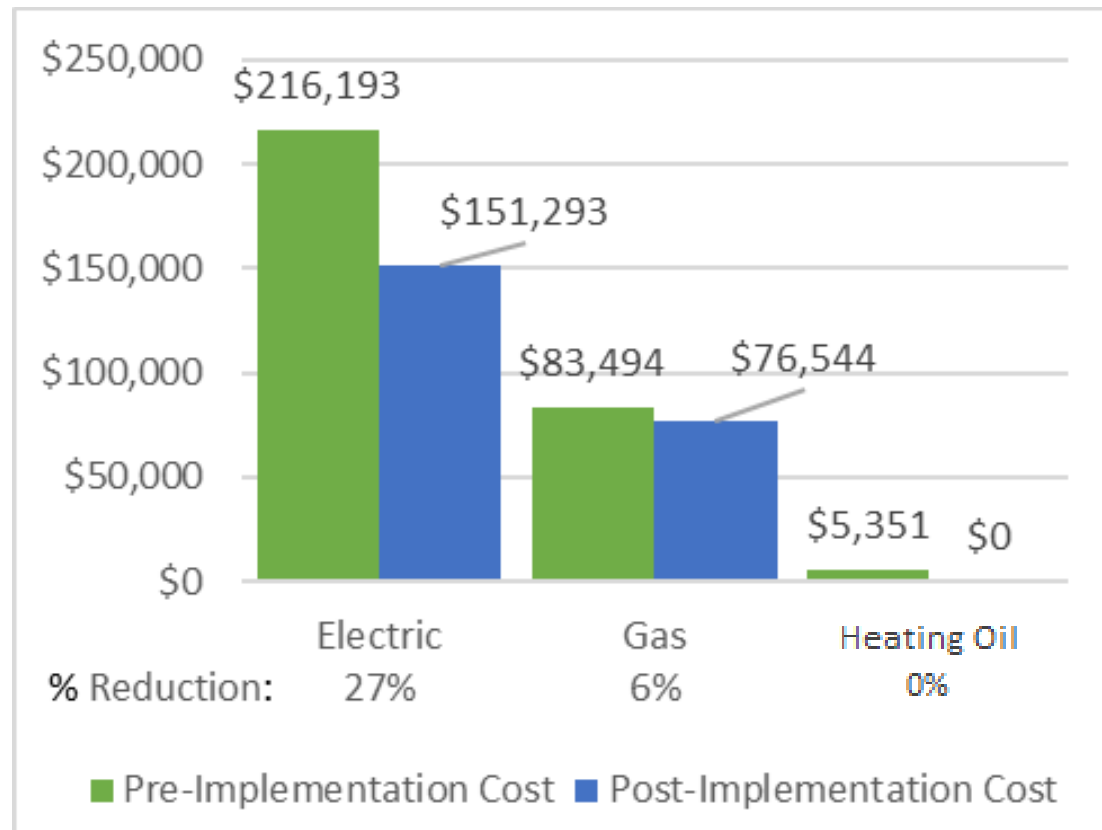
- Main Library
- Police Department
- Public Works Garage
- Water Department
- Town Hall
- Engineering Department
- Parks & Forestry Department
- Lake Hiawatha Library

UTILITY BREAKOUT




UTILITY BREAKOUT

Pre & Post Implementation Cost



BENCHMARKING



ENERGY STAR® Statement of Energy Performance

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ENERGY STAR® Score 1

Parsippany-Troy Hills Town Hall

Primary Property Type: Office
Gross Floor Area (ft²): 16,936
Built: 1940

For Year Ending: February 28, 2019
Date Generated: March 31, 2020

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 Parsippany-Troy Hills Town Hall 1001 Parsippany Boulevard Parsippany, New Jersey 07054	Property Owner Township of Parsippany-Troy Hills 1001 Parsippany Boulevard Parsippany, NJ 07054 973-263-4391	Primary Contact Karin Kazmark 1001 Parsippany Boulevard Parsippany, NJ 07054 973-263-4391 kkazmark@parsippany.net
Property ID: 9002223		

Energy Consumption and Energy Use Intensity (EUI)		
Site EUI 112.9 kBtu/ft²	Annual Energy by Fuel Natural Gas (kBtu) 867,623 (51%) Electric - Grid (kBtu) 943,830 (49%)	National Median Comparison National Median Site EUI (kBtu/ft²) 83.3 National Median Source EUI (kBtu/ft²) 159.4 % Diff from National Median Source EUI 36% Annual Emissions Greenhouse Gas Emissions (Metric Tons CO2e/year) 447
Source EUI 216 kBtu/ft²		


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
112.9 kBtu/ft²

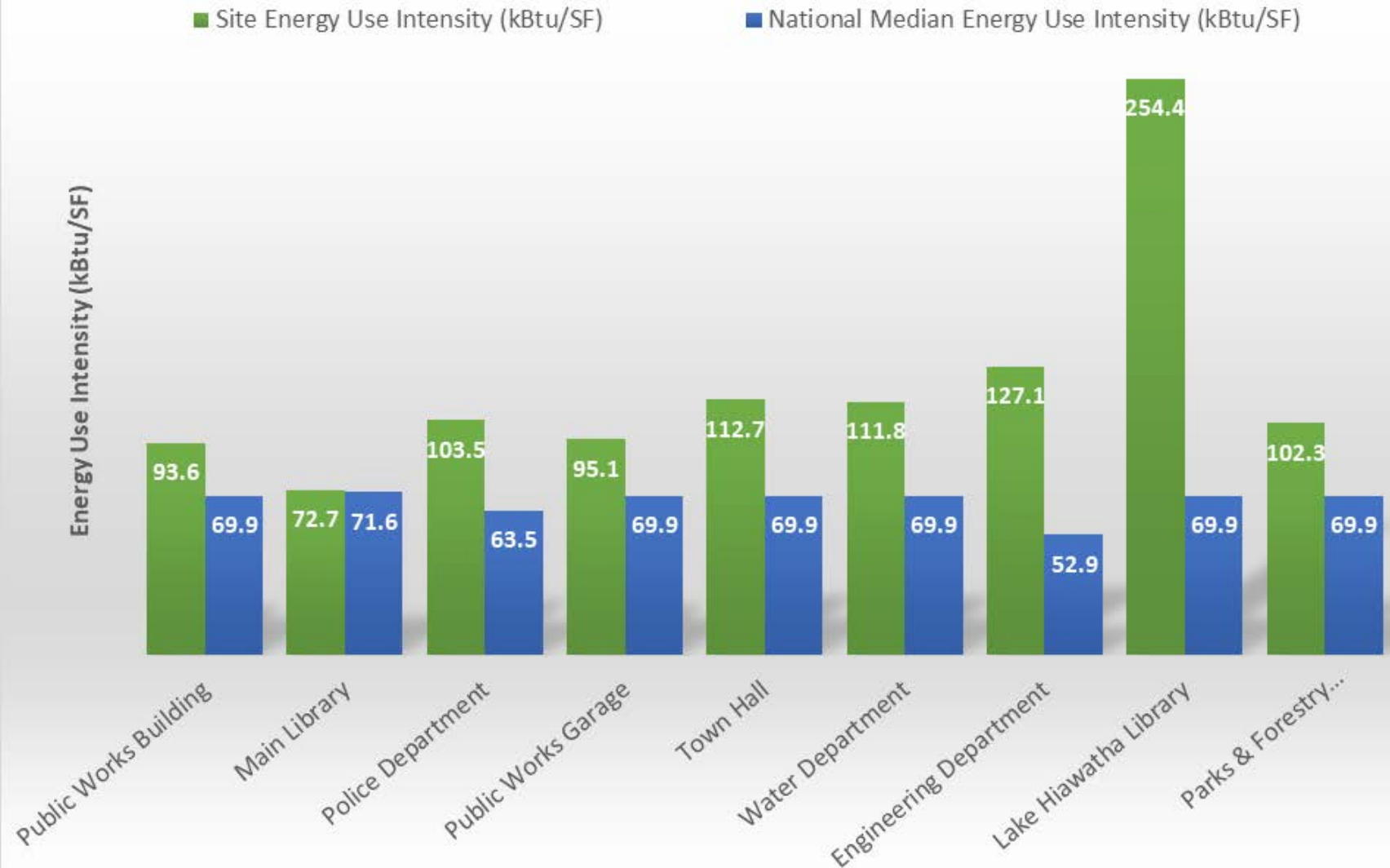
Source EUI
216 kBtu/ft²

National Median Comparison

National Median Site EUI (kBtu/ft²)	83.3
National Median Source EUI (kBtu/ft²)	159.4
% Diff from National Median Source EUI	36%

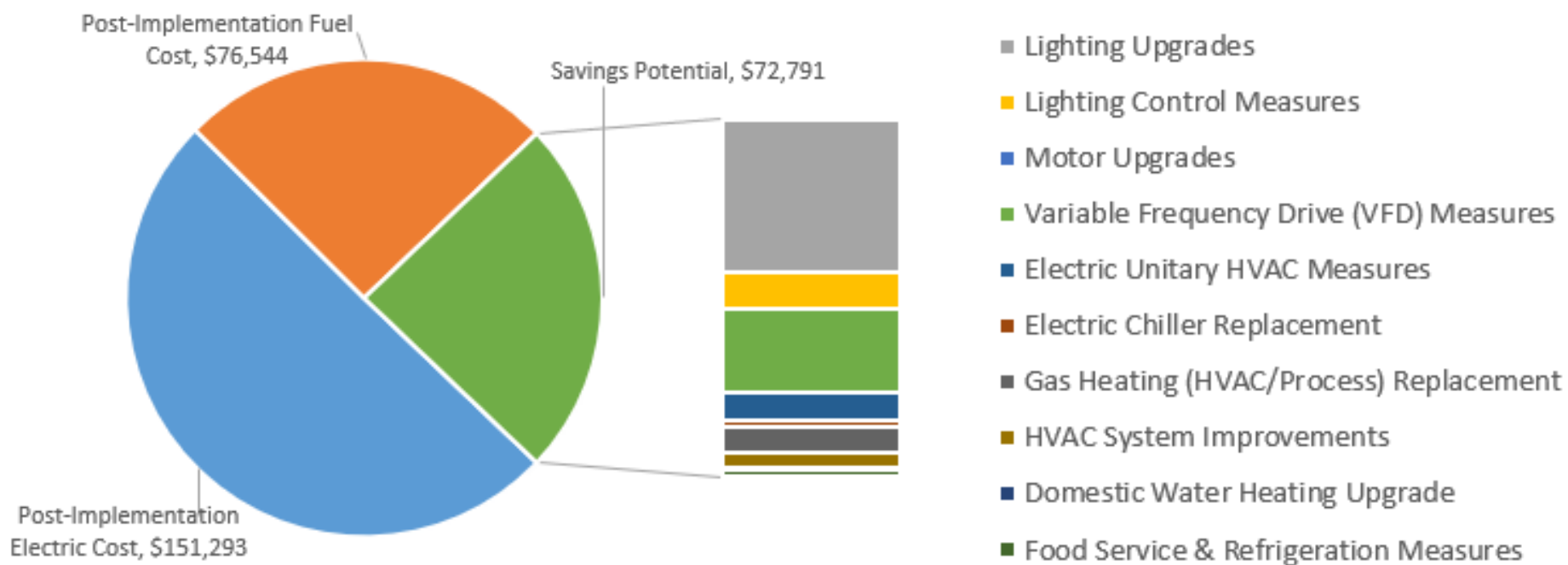
Site Name	ENERGY STAR® Score
Main Library	N/A
Police Department	N/A
Public Works Building	34
Public Works Garage	N/A
Water Department	38
Town Hall	26
Engineering Department	31
Parks & Forestry Department	N/A
Lake Hiawatha	N/A
Sewer Department Plant	N/A

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 Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades		258,021	47.3	-46.3	\$31,379	\$121,047	\$40,200	\$80,848	2.6	253,953
ECM 1	Install LED Fixtures	58,938	0.7	-0.4	\$6,971	\$59,260	\$16,786	\$42,474	6.1	59,303
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	13,253	4.6	-4.4	\$1,682	\$6,935	\$1,960	\$4,975	3.0	12,692
ECM 3	Retrofit Fixtures with LED Lamps	185,662	41.9	-41.4	\$22,704	\$54,636	\$21,454	\$33,182	1.5	181,794
ECM 4	Install LED Exit Signs	168	0.0	0.0	\$21	\$217	\$0	\$217	10.3	165
Lighting Control Measures		58,736	13.0	-13.6	\$7,197	\$55,942	\$18,985	\$36,957	5.1	57,453
ECM 5	Install Occupancy Sensor Lighting Controls	50,377	11.3	-11.7	\$6,182	\$46,942	\$11,300	\$35,642	5.8	49,273
ECM 6	Install High/Low Lighting Controls	8,359	1.7	-1.9	\$1,015	\$9,000	\$7,685	\$1,315	1.3	8,179
Motor Upgrades		1,822	0.5	0.0	\$209	\$2,308	\$0	\$2,308	11.1	1,834
ECM 7	Premium Efficiency Motors	1,822	0.5	0.0	\$209	\$2,308	\$0	\$2,308	11.1	1,834
Variable Frequency Drive (VFD) Measures		140,020	34.5	0.0	\$16,962	\$162,067	\$26,450	\$135,617	8.0	140,999
ECM 8	Install VFD on Variable Air Volume (VAV) Fans	65,331	12.2	0.0	\$7,558	\$80,504	\$6,050	\$74,454	9.9	65,788
ECM 9	Install VFDs on Constant Volume (CV) Fans	60,736	19.6	0.0	\$7,654	\$54,129	\$18,200	\$35,929	4.7	61,160
ECM 10	Install VFDs on Chilled Water Pumps	11,299	2.4	0.0	\$1,400	\$15,393	\$1,600	\$13,793	9.9	11,378
ECM 11	Install VFDs on Heating Water Pumps	2,654	0.4	0.0	\$351	\$12,041	\$600	\$11,441	32.6	2,673
ECM 0	Install VFDs on Cooling Tower Fans	0	0.0	0.0	\$0	\$0	\$0	\$0	0.0	0
Electric Unitary HVAC Measures		43,980	26.7	0.0	\$5,490	\$348,244	\$33,643	\$314,600	57.3	44,287
ECM 12	Install High Efficiency Air Conditioning Units	31,578	22.3	0.0	\$3,899	\$337,424	\$32,705	\$304,719	78.1	31,799
ECM 13	Install High Efficiency Heat Pumps	12,402	4.5	0.0	\$1,590	\$10,819	\$938	\$9,881	6.2	12,488
Electric Chiller Replacement		8,497	11.0	0.0	\$1,122	\$42,659	\$9,000	\$33,659	30.0	8,557
ECM 14	Install High Efficiency Chillers	8,497	11.0	0.0	\$1,122	\$42,659	\$9,000	\$33,659	30.0	8,557

ALL OPPORTUNITIES

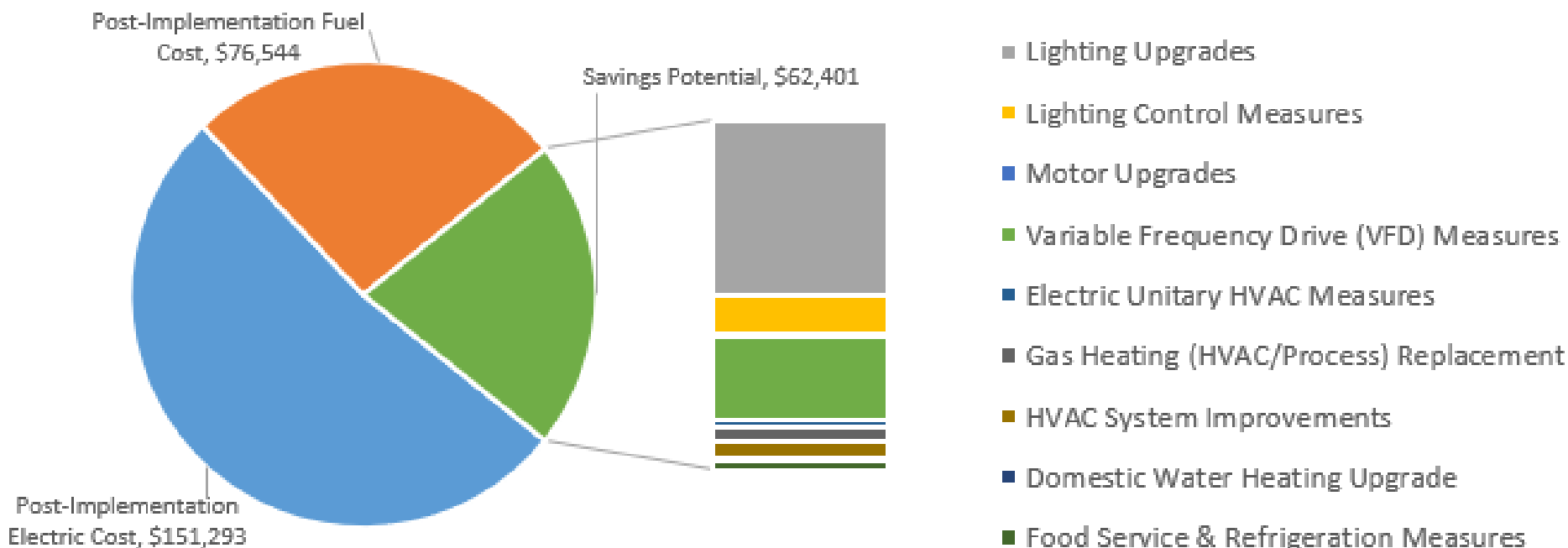
#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Gas Heating (HVAC/Process) Replacement		0	0.0	452.3	\$5,335	\$160,623	\$41,820	\$118,804	22.3	53,959
ECM 15	Install High Efficiency Hot Water Boilers	0	0.0	152.5	\$1,942	\$71,342	\$15,020	\$56,323	29.0	18,858
ECM 16	Install High Efficiency Furnaces	0	0.0	83.8	\$970	\$47,739	\$8,800	\$38,939	40.1	9,810
ECM 17	Install Infrared Heaters	0	0.0	216.0	\$2,423	\$41,542	\$18,000	\$23,542	9.7	25,291
HVAC System Improvements		4,193	0.0	195.5	\$3,025	\$2,889	\$1,198	\$1,691	0.6	27,496
ECM 18	Install Programmable Thermostats	0	0.0	50.9	\$575	\$660	\$0	\$660	1.1	5,964
ECM 19	Install Occupancy-Controlled Thermostats	1,911	0.0	21.3	\$468	\$239	\$150	\$89	0.2	4,414
ECM 20	Install Pipe Insulation	2,283	0.0	123.3	\$1,982	\$1,991	\$1,048	\$943	0.5	17,118
Domestic Water Heating Upgrade		695	0.0	38.0	\$530	\$11,689	\$405	\$11,284	21.3	5,150
ECM 21	Install High Efficiency Gas-Fired Water Heater	0	0.0	15.8	\$179	\$11,424	\$140	\$11,284	62.9	1,856
ECM 22	Install Low-Flow DHW Devices	695	0.0	22.2	\$350	\$265	\$265	\$0	0.0	3,295
Food Service & Refrigeration Measures		12,310	1.4	0.0	\$1,543	\$2,300	\$700	\$1,600	1.0	12,397
ECM 23	Vending Machine Control	12,310	1.4	0.0	\$1,543	\$2,300	\$700	\$1,600	1.0	12,397
TOTALS		528,275	134.3	625.9	\$72,791	\$909,768	\$172,401	\$737,367	10.1	606,085

* - All incentives presented in this table are based on NJ Smart Start Building equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

** - 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 Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades		258,021	47.3	-46.3	\$31,379	\$121,047	\$40,200	\$80,848	2.6	253,953
ECM 1	Install LED Fixtures	58,938	0.7	-0.4	\$6,971	\$59,260	\$16,786	\$42,474	6.1	59,303
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	13,253	4.6	-4.4	\$1,682	\$6,935	\$1,960	\$4,975	3.0	12,692
ECM 3	Retrofit Fixtures with LED Lamps	185,662	41.9	-41.4	\$22,704	\$54,636	\$21,454	\$33,182	1.5	181,794
ECM 4	Install LED Exit Signs	168	0.0	0.0	\$21	\$217	\$0	\$217	10.3	165
Lighting Control Measures		55,796	12.0	-13.0	\$6,823	\$49,240	\$17,625	\$31,615	4.6	54,568
ECM 5	Install Occupancy Sensor Lighting Controls	47,547	10.4	-11.1	\$5,822	\$40,690	\$10,150	\$30,540	5.2	46,497
ECM 6	Install High/Low Lighting Controls	8,249	1.6	-1.9	\$1,001	\$8,550	\$7,475	\$1,075	1.1	8,071
Motor Upgrades		1,822	0.5	0.0	\$209	\$2,308	\$0	\$2,308	11.1	1,834
ECM 7	Premium Efficiency Motors	1,822	0.5	0.0	\$209	\$2,308	\$0	\$2,308	11.1	1,834
Variable Frequency Drive (VFD) Measures		126,067	31.7	0.0	\$15,212	\$134,634	\$24,250	\$110,384	7.3	126,948
ECM 8	Install VFD on Variable Air Volume (VAV) Fans	65,331	12.2	0.0	\$7,558	\$80,504	\$6,050	\$74,454	9.9	65,788
ECM 9	Install VFDs on Constant Volume (CV) Fans	60,736	19.6	0.0	\$7,654	\$54,129	\$18,200	\$35,929	4.7	61,160
ECM 10	Install VFDs on Chilled Water Pumps	0	0.0	0.0	\$0	\$0	\$0	\$0	0.0	0
ECM 11	Install VFDs on Heating Water Pumps	0	0.0	0.0	\$0	\$0	\$0	\$0	0.0	0
Electric Unitary HVAC Measures		8,641	3.6	0.0	\$1,160	\$3,382	\$368	\$3,014	2.6	8,702
ECM 12	Install High Efficiency Air Conditioning Units	0	0.0	0.0	\$0	\$0	\$0	\$0	0.0	0
ECM 13	Install High Efficiency Heat Pumps	8,641	3.6	0.0	\$1,160	\$3,382	\$368	\$3,014	2.6	8,702

COST EFFECTIVE OPPORTUNITIES

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Gas Heating (HVAC/Process) Replacement		0	0.0	240.5	\$2,701	\$44,261	\$19,600	\$24,661	9.1	28,165
ECM 15	Install High Efficiency Hot Water Boilers	0	0.0	0.0	\$0	\$0	\$0	\$0	0.0	0
ECM 16	Install High Efficiency Furnaces	0	0.0	24.5	\$278	\$2,719	\$1,600	\$1,119	4.0	2,874
ECM 17	Install Infrared Heaters	0	0.0	216.0	\$2,423	\$41,542	\$18,000	\$23,542	9.7	25,291
HVAC System Improvements		4,193	0.0	195.5	\$3,025	\$2,889	\$1,198	\$1,691	0.6	27,496
ECM 18	Install Programmable Thermostats	0	0.0	50.9	\$575	\$660	\$0	\$660	1.1	5,964
ECM 19	Install Occupancy-Controlled Thermostats	1,911	0.0	21.3	\$468	\$239	\$150	\$89	0.2	4,414
ECM 20	Install Pipe Insulation	2,283	0.0	123.3	\$1,982	\$1,991	\$1,048	\$943	0.5	17,118
Domestic Water Heating Upgrade		695	0.0	22.2	\$350	\$265	\$265	\$0	0.0	3,295
ECM 21	Install High Efficiency Gas-Fired Water Heater	0	0.0	0.0	\$0	\$0	\$0	\$0	0.0	0
ECM 22	Install Low-Flow DHW Devices	695	0.0	22.2	\$350	\$265	\$265	\$0	0.0	3,295
Food Service & Refrigeration Measures		12,310	1.4	0.0	\$1,543	\$2,300	\$700	\$1,600	1.0	12,397
ECM 23	Vending Machine Control	12,310	1.4	0.0	\$1,543	\$2,300	\$700	\$1,600	1.0	12,397
TOTALS		467,545	96.4	399.0	\$62,401	\$360,326	\$104,206	\$256,120	4.1	517,357

* - All incentives presented in this table are based on NJ Smart Start Building equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

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

MAIN LIBRARY

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			68,854	16.6	-13	\$8,942	\$26,503	\$9,018	\$17,485	2.0	67,832
ECM 1	Install LED Fixtures	Yes	3,811	0.0	0	\$503	\$3,477	\$1,200	\$2,277	4.5	3,837
ECM 2	Retrofit Fixtures with LED Lamps	Yes	65,044	16.6	-13	\$8,439	\$23,025	\$7,818	\$15,207	1.8	63,995
Lighting Control Measures			21,970	5.6	-5	\$2,846	\$17,152	\$6,565	\$10,587	3.7	21,576
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	19,227	4.9	-4	\$2,491	\$14,002	\$3,430	\$10,572	4.2	18,882
ECM 4	Install High/Low Lighting Controls	Yes	2,742	0.6	-1	\$355	\$3,150	\$3,135	\$15	0.0	2,693
Variable Frequency Drive (VFD) Measures			36,390	14.6	0	\$4,806	\$59,967	\$12,350	\$47,617	9.9	36,645
ECM 5	Install VFD on Variable Air Volume (VAV) Fans	Yes	4,438	1.9	0	\$586	\$7,577	\$1,950	\$5,627	9.6	4,469
ECM 6	Install VFDs on Constant Volume (CV) Fans	Yes	25,524	11.2	0	\$3,371	\$32,581	\$9,000	\$23,581	7.0	25,703
ECM 7	Install VFDs on Chilled Water Pumps	No	3,774	1.1	0	\$498	\$7,768	\$800	\$6,968	14.0	3,800
ECM 8	Install VFDs on Heating Water Pumps	No	2,654	0.4	0	\$351	\$12,041	\$600	\$11,441	32.6	2,673
Electric Unitary HVAC Measures			11,679	11.2	0	\$1,543	\$185,711	\$17,681	\$168,030	108.9	11,760
ECM 9	Install High Efficiency Air Conditioning Units	No	11,679	11.2	0	\$1,543	\$185,711	\$17,681	\$168,030	108.9	11,760
Electric Chiller Replacement			8,497	11.0	0	\$1,122	\$42,659	\$9,000	\$33,659	30.0	8,557
ECM 10	Install High Efficiency Chillers	No	8,497	11.0	0	\$1,122	\$42,659	\$9,000	\$33,659	30.0	8,557
Gas Heating (HVAC/Process) Replacement			0	0.0	76	\$902	\$69,431	\$13,506	\$55,925	62.0	8,906
ECM 11	Install High Efficiency Hot Water Boilers	No	0	0.0	29	\$342	\$30,845	\$7,106	\$23,739	69.3	3,381
ECM 12	Install High Efficiency Furnaces	No	0	0.0	47	\$560	\$38,585	\$6,400	\$32,185	57.5	5,525
HVAC System Improvements			2,283	0.0	16	\$489	\$423	\$208	\$215	0.4	4,151
ECM 13	Install Pipe Insulation	Yes	2,283	0.0	16	\$489	\$423	\$208	\$215	0.4	4,151
Food Service & Refrigeration Measures			3,566	0.4	0	\$471	\$690	\$200	\$490	1.0	3,591
ECM 14	Vending Machine Control	Yes	3,566	0.4	0	\$471	\$690	\$200	\$490	1.0	3,591
TOTALS (COST EFFECTIVE MEASURES)			126,635	35.6	-2	\$16,706	\$84,925	\$26,941	\$57,984	3.5	127,322
TOTALS (ALL MEASURES)			153,240	59.3	74	\$21,122	\$402,535	\$68,528	\$334,007	15.8	163,018

* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

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

POLICE DEPARTMENT

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			97,430	6.9	-12	\$11,017	\$48,866	\$13,364	\$35,502	3.2	96,663
ECM 1	Install LED Fixtures	Yes	39,318	0.0	0	\$4,502	\$38,768	\$9,546	\$29,223	6.5	39,593
ECM 2	Retrofit Fixtures with LED Lamps	Yes	58,112	6.9	-12	\$6,515	\$10,098	\$3,818	\$6,280	1.0	57,069
Lighting Control Measures			16,074	1.6	-3	\$1,802	\$5,696	\$2,215	\$3,481	1.9	15,786
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	13,740	1.4	-3	\$1,541	\$3,896	\$840	\$3,056	2.0	13,494
ECM 4	Install High/Low Lighting Controls	Yes	2,334	0.2	0	\$262	\$1,800	\$1,375	\$425	1.6	2,292
Motor Upgrades			1,822	0.5	0	\$209	\$2,308	\$0	\$2,308	11.1	1,834
ECM 5	Premium Efficiency Motors	Yes	1,822	0.5	0	\$209	\$2,308	\$0	\$2,308	11.1	1,834
Variable Frequency Drive (VFD) Measures			60,893	10.2	0	\$6,972	\$72,927	\$4,100	\$68,827	9.9	61,318
ECM 6	Install VFD on Variable Air Volume (VAV) Fans	Yes	60,893	10.2	0	\$6,972	\$72,927	\$4,100	\$68,827	9.9	61,318
Electric Unitary HVAC Measures			17,425	7.9	0	\$1,995	\$115,445	\$11,393	\$104,051	52.2	17,546
ECM 7	Install High Efficiency Air Conditioning Units & retrofitting Indoor Air Handling Unit Cooling Coils	No	13,664	7.0	0	\$1,564	\$108,007	\$10,823	\$97,184	62.1	13,760
ECM 8	Install High Efficiency Heat Pumps	No	3,760	0.9	0	\$431	\$7,437	\$570	\$6,867	16.0	3,787
Domestic Water Heating Upgrade			0	0.0	9	\$106	\$72	\$72	\$0	0.0	1,111
ECM 9	Install Low-Flow DHW Devices	Yes	0	0.0	9	\$106	\$72	\$72	\$0	0.0	1,111
TOTALS (COST EFFECTIVE MEASURES)			176,219	19.2	-6	\$20,105	\$129,868	\$19,750	\$110,118	5.5	176,712
TOTALS (ALL MEASURES)			193,644	27.0	-6	\$22,100	\$245,313	\$31,144	\$214,169	9.7	194,259

* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

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PUBLIC WORKS BUILDING

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			25,260	5.8	-4	\$3,143	\$11,723	\$3,842	\$7,881	2.5	24,951
ECM 1	Install LED Fixtures	Yes	5,848	0.1	0	\$738	\$5,292	\$1,210	\$4,082	5.5	5,878
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	202	0.2	0	\$25	\$206	\$60	\$146	5.8	199
ECM 3	Retrofit Fixtures with LED Lamps	Yes	19,094	5.5	-4	\$2,366	\$6,081	\$2,572	\$3,509	1.5	18,760
ECM 4	Install LED Exit Signs	Yes	116	0.0	0	\$14	\$145	\$0	\$145	10.1	114
Lighting Control Measures			6,350	1.9	-1	\$787	\$11,777	\$3,780	\$7,997	10.2	6,239
ECM 5	Install Occupancy Sensor Lighting Controls	Yes	5,805	1.7	-1	\$719	\$11,102	\$3,190	\$7,912	11.0	5,704
ECM 6	Install High/Low Lighting Controls	Yes	544	0.2	0	\$67	\$675	\$590	\$85	1.3	535
Electric Unitary HVAC Measures			1,224	0.6	0	\$155	\$5,985	\$736	\$5,249	33.9	1,233
ECM 7	Install High Efficiency Air Conditioning Units	No	1,224	0.6	0	\$155	\$5,985	\$736	\$5,249	33.9	1,233
Gas Heating (HVAC/Process) Replacement			0	0.0	48	\$560	\$9,415	\$4,000	\$5,415	9.7	5,620
ECM 8	Install Infrared Heaters	Yes	0	0.0	48	\$560	\$9,415	\$4,000	\$5,415	9.7	5,620
HVAC System Improvements			0	0.0	13	\$152	\$238	\$112	\$126	0.8	1,527
ECM 9	Install Pipe Insulation	Yes	0	0.0	13	\$152	\$238	\$112	\$126	0.8	1,527
Domestic Water Heating Upgrade			0	0.0	1	\$11	\$14	\$14	\$0	0.0	111
ECM 10	Install Low-Flow DHW Devices	Yes	0	0.0	1	\$11	\$14	\$14	\$0	0.0	111
Food Service & Refrigeration Measures			1,954	0.2	0	\$247	\$460	\$100	\$360	1.5	1,968
ECM 11	Vending Machine Control	Yes	1,954	0.2	0	\$247	\$460	\$100	\$360	1.5	1,968
TOTALS (COST EFFECTIVE MEASURES)			33,565	7.9	57	\$4,900	\$33,627	\$11,848	\$21,779	4.4	40,416
TOTALS (ALL MEASURES)			34,789	8.5	57	\$5,054	\$39,612	\$12,584	\$27,027	5.3	41,649

* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

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

PUBLIC WORKS GARAGE

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			8,551	2.6	-2	\$1,101	\$4,283	\$1,690	\$2,593	2.4	8,381
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	4,250	1.3	-1	\$547	\$2,091	\$700	\$1,391	2.5	4,165
ECM 2	Retrofit Fixtures with LED Lamps	Yes	4,249	1.2	-1	\$547	\$2,120	\$990	\$1,130	2.1	4,164
ECM 3	Install LED Exit Signs	Yes	53	0.0	0	\$7	\$72	\$0	\$72	10.7	52
Lighting Control Measures			1,476	0.4	0	\$190	\$2,816	\$490	\$2,326	12.2	1,447
ECM 4	Install Occupancy Sensor Lighting Controls	No	1,476	0.4	0	\$190	\$2,816	\$490	\$2,326	12.2	1,447
Gas Heating (HVAC/Process) Replacement			0	0.0	12	\$135	\$2,354	\$1,000	\$1,354	10.0	1,405
ECM 5	Install Infrared Heaters	Yes	0	0.0	12	\$135	\$2,354	\$1,000	\$1,354	10.0	1,405
HVAC System Improvements			0	0.0	64	\$723	\$840	\$100	\$740	1.0	7,503
ECM 6	Install Programmable Thermostats	Yes	0	0.0	51	\$575	\$660	\$0	\$660	1.1	5,964
ECM 7	Install Pipe Insulation	Yes	0	0.0	13	\$148	\$180	\$100	\$80	0.5	1,539
Domestic Water Heating Upgrade			695	0.0	0	\$91	\$36	\$36	\$0	0.0	700
ECM 8	Install Low-Flow DHW Devices	Yes	695	0.0	0	\$91	\$36	\$36	\$0	0.0	700
TOTALS (COST EFFECTIVE MEASURES)			9,246	2.6	74	\$2,051	\$7,513	\$2,826	\$4,687	2.3	17,988
TOTALS (ALL MEASURES)			10,722	3.0	74	\$2,241	\$10,329	\$3,316	\$7,013	3.1	19,435

* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

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

WATER DEPARTMENT

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$) *	Estimated Net Cost (\$)	Simple Payback Period (yrs) **	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			14,841	5.1	-3	\$1,815	\$4,799	\$2,044	\$2,755	1.5	14,582
ECM 1	Install LED Fixtures	Yes	1,510	0.6	0	\$185	\$759	\$50	\$709	3.8	1,484
ECM 2	Retrofit Fixtures with LED Lamps	Yes	13,331	4.5	-3	\$1,630	\$4,040	\$1,994	\$2,046	1.3	13,098
Lighting Control Measures			1,912	0.5	0	\$234	\$3,723	\$1,065	\$2,658	11.4	1,878
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	1,414	0.4	0	\$173	\$3,048	\$490	\$2,558	14.8	1,389
ECM 4	Install High/Low Lighting Controls	Yes	498	0.1	0	\$61	\$675	\$575	\$100	1.6	489
Electric Unitary HVAC Measures			1,792	0.7	0	\$223	\$13,366	\$1,095	\$12,271	54.9	1,805
ECM 5	Install High Efficiency Air Conditioning Units	No	1,792	0.7	0	\$223	\$13,366	\$1,095	\$12,271	54.9	1,805
Gas Heating (HVAC/Process) Replacement			0	0.0	91	\$1,020	\$18,711	\$6,600	\$12,111	11.9	10,689
ECM 6	Install High Efficiency Hot Water Boilers	No	0	0.0	18	\$203	\$6,036	\$800	\$5,236	25.8	2,125
ECM 7	Install High Efficiency Furnaces	Yes	0	0.0	13	\$147	\$906	\$800	\$106	0.7	1,540
ECM 8	Install Infrared Heaters	Yes	0	0.0	60	\$670	\$11,768	\$5,000	\$6,768	10.1	7,025
HVAC System Improvements			0	0.0	29	\$321	\$385	\$180	\$205	0.6	3,369
ECM 9	Install Pipe Insulation	Yes	0	0.0	29	\$321	\$385	\$180	\$205	0.6	3,369
Domestic Water Heating Upgrade			0	0.0	2	\$26	\$36	\$36	\$0	0.0	278
ECM 10	Install Low-Flow DHW Devices	Yes	0	0.0	2	\$26	\$36	\$36	\$0	0.0	278
Food Service & Refrigeration Measures			1,612	0.2	0	\$201	\$230	\$100	\$130	0.6	1,623
ECM 11	Vending Machine Control	Yes	1,612	0.2	0	\$201	\$230	\$100	\$130	0.6	1,623
TOTALS (COST EFFECTIVE MEASURES)			18,365	5.8	101	\$3,415	\$21,848	\$9,225	\$12,623	3.7	30,294
TOTALS (ALL MEASURES)			20,157	6.5	119	\$3,841	\$41,250	\$11,120	\$30,130	7.8	34,224

* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

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

TOWN HALL

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			6,767	0.9	-1	\$801	\$2,979	\$750	\$2,229	2.8	6,718
ECM 1	Install LED Fixtures	Yes	1,404	0.0	0	\$168	\$966	\$200	\$766	4.6	1,414
ECM 2	Retrofit Fixtures with LED Lamps	Yes	5,363	0.9	-1	\$633	\$2,013	\$550	\$1,463	2.3	5,304
Lighting Control Measures			4,267	1.0	-1	\$500	\$3,377	\$955	\$2,422	4.8	4,182
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	3,017	0.7	-1	\$353	\$2,702	\$730	\$1,972	5.6	2,957
ECM 4	Install High/Low Lighting Controls	Yes	1,250	0.3	0	\$146	\$675	\$225	\$450	3.1	1,225
Variable Frequency Drive (VFD) Measures			38,173	8.2	0	\$4,571	\$24,976	\$8,200	\$16,776	3.7	38,439
ECM 5	Install VFDs on Constant Volume (CV) Fans	Yes	30,647	6.9	0	\$3,670	\$17,351	\$7,400	\$9,951	2.7	30,861
ECM 6	Install VFDs on Chilled Water Pumps	No	7,525	1.3	0	\$901	\$7,625	\$800	\$6,825	7.6	7,578
Gas Heating (HVAC/Process) Replacement			0	0.0	79	\$896	\$16,595	\$4,000	\$12,595	14.1	9,200
ECM 7	Install High Efficiency Hot Water Boilers	No	0	0.0	79	\$896	\$16,595	\$4,000	\$12,595	14.1	9,200
HVAC System Improvements			0	0.0	27	\$312	\$403	\$240	\$163	0.5	3,209
ECM 8	Install Pipe Insulation	Yes	0	0.0	27	\$312	\$403	\$240	\$163	0.5	3,209
Domestic Water Heating Upgrade			0	0.0	18	\$206	\$9,437	\$43	\$9,394	45.7	2,112
ECM 9	Install High Efficiency Gas-Fired Water Heater	No	0	0.0	12	\$141	\$9,394	\$0	\$9,394	66.7	1,446
ECM 10	Install Low-Flow DHW Devices	Yes	0	0.0	6	\$65	\$43	\$43	\$0	0.0	667
Food Service & Refrigeration Measures			3,566	0.4	0	\$427	\$690	\$200	\$490	1.1	3,591
ECM 11	Vending Machine Control	Yes	3,566	0.4	0	\$427	\$690	\$200	\$490	1.1	3,591
TOTALS (COST EFFECTIVE MEASURES)			45,247	9.2	31	\$5,775	\$24,844	\$9,588	\$15,256	2.6	49,228
TOTALS (ALL MEASURES)			52,772	10.5	122	\$7,713	\$58,457	\$14,388	\$44,069	5.7	67,451

* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

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

ENGINEERING DEPARTMENT

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			5,150	2.1	-1	\$662	\$2,100	\$818	\$1,282	1.9	5,064
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	1,755	0.7	0	\$226	\$894	\$260	\$634	2.8	1,724
ECM 2	Retrofit Fixtures with LED Lamps	Yes	3,395	1.4	-1	\$437	\$1,206	\$558	\$648	1.5	3,339
Lighting Control Measures			905	0.4	0	\$116	\$2,264	\$420	\$1,844	15.9	889
ECM 3	Install Occupancy Sensor Lighting Controls	No	795	0.3	0	\$102	\$1,814	\$210	\$1,604	15.7	781
ECM 4	Install High/Low Lighting Controls	No	110	0.0	0	\$14	\$450	\$210	\$240	17.0	108
Gas Heating (HVAC/Process) Replacement			0	0.0	17	\$193	\$4,849	\$1,600	\$3,249	16.8	1,967
ECM 5	Install High Efficiency Hot Water Boilers	No	0	0.0	5	\$62	\$3,036	\$800	\$2,236	36.1	633
ECM 6	Install High Efficiency Furnaces	Yes	0	0.0	11	\$131	\$1,813	\$800	\$1,013	7.7	1,334
HVAC System Improvements			0	0.0	10	\$116	\$158	\$88	\$70	0.6	1,182
ECM 7	Install Pipe Insulation	Yes	0	0.0	10	\$116	\$158	\$88	\$70	0.6	1,182
Domestic Water Heating Upgrade			0	0.0	1	\$16	\$22	\$22	\$0	0.0	167
ECM 8	Install Low-Flow DHW Devices	Yes	0	0.0	1	\$16	\$22	\$22	\$0	0.0	167
TOTALS (COST EFFECTIVE MEASURES)			5,150	2.1	22	\$925	\$4,092	\$1,728	\$2,365	2.6	7,747
TOTALS (ALL MEASURES)			6,055	2.5	27	\$1,104	\$9,393	\$2,948	\$6,445	5.8	9,268

* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

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

PARKS & FORESTRY DEPT.

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			7,212	0.3	0	\$881	\$9,233	\$4,000	\$5,233	5.9	7,239
ECM 1	Install LED Fixtures	Yes	6,006	0.0	0	\$736	\$8,631	\$3,780	\$4,851	6.6	6,048
ECM 2	Retrofit Fixtures with LED Lamps	Yes	1,206	0.3	0	\$145	\$602	\$220	\$382	2.6	1,191
Lighting Control Measures			817	0.3	0	\$98	\$2,297	\$1,125	\$1,172	11.9	802
ECM 3	Install Occupancy Sensor Lighting Controls	No	559	0.2	0	\$67	\$1,622	\$450	\$1,172	17.5	549
ECM 4	Install High/Low Lighting Controls	Yes	259	0.1	0	\$31	\$675	\$675	\$0	0.0	254
Electric Unitary HVAC Measures			1,513	1.9	0	\$185	\$21,634	\$2,370	\$19,264	104.0	1,523
ECM 5	Install High Efficiency Air Conditioning Units	No	1,513	1.9	0	\$185	\$21,634	\$2,370	\$19,264	104.0	1,523
Gas Heating (HVAC/Process) Replacement			0	0.0	108	\$1,190	\$24,440	\$8,800	\$15,640	13.1	12,651
ECM 6	Install High Efficiency Furnaces	No	0	0.0	12	\$133	\$6,435	\$800	\$5,635	42.5	1,411
ECM 7	Install Infrared Heaters	Yes	0	0.0	96	\$1,057	\$18,005	\$8,000	\$10,005	9.5	11,240
HVAC System Improvements			1,911	0.0	21	\$468	\$239	\$150	\$89	0.2	4,414
ECM 8	Install Occupancy-Controlled Thermostats	Yes	1,911	0.0	21	\$468	\$239	\$150	\$89	0.2	4,414
Domestic Water Heating Upgrade			0	0.0	5	\$59	\$2,059	\$169	\$1,890	31.8	632
ECM 9	Install High Efficiency Gas-Fired Water Heater	No	0	0.0	4	\$39	\$2,030	\$140	\$1,890	49.0	410
ECM 10	Install Low-Flow DHW Devices	Yes	0	0.0	2	\$21	\$29	\$29	\$0	0.0	222
Food Service & Refrigeration Measures			1,612	0.2	0	\$197	\$230	\$100	\$130	0.7	1,623
ECM 11	Vending Machine Control	Yes	1,612	0.2	0	\$197	\$230	\$100	\$130	0.7	1,623
TOTALS (COST EFFECTIVE MEASURES)			10,993	0.6	119	\$2,656	\$28,411	\$12,954	\$15,458	5.8	24,992
TOTALS (ALL MEASURES)			13,065	2.6	134	\$3,080	\$60,131	\$16,714	\$43,418	14.1	28,885

* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

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

LAKE HIAWATHA LIBRARY

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			23,954	6.9	-10	\$3,016	\$10,561	\$4,674	\$5,887	2.0	22,525
ECM 1	Install LED Fixtures	Yes	1,041	0.0	0	\$140	\$1,366	\$800	\$566	4.1	1,048
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	7,046	2.4	-3	\$884	\$3,743	\$940	\$2,803	3.2	6,604
ECM 3	Retrofit Fixtures with LED Lamps	Yes	15,868	4.5	-7	\$1,992	\$5,452	\$2,934	\$2,518	1.3	14,873
Lighting Control Measures			4,965	1.4	-2	\$623	\$6,840	\$2,370	\$4,470	7.2	4,654
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	4,343	1.3	-2	\$545	\$5,940	\$1,470	\$4,470	8.2	4,071
ECM 5	Install High/Low Lighting Controls	Yes	622	0.2	0	\$78	\$900	\$900	\$0	0.0	583
Variable Frequency Drive (VFD) Measures			4,565	1.5	0	\$613	\$4,197	\$1,800	\$2,397	3.9	4,596
ECM 6	Install VFDs on Constant Volume (CV) Fans	Yes	4,565	1.5	0	\$613	\$4,197	\$1,800	\$2,397	3.9	4,596
Electric Unitary HVAC Measures			10,347	4.5	0	\$1,389	\$6,104	\$368	\$5,736	4.1	10,419
ECM 7	Install High Efficiency Air Conditioning Units	No	1,706	0.9	0	\$229	\$2,722	\$0	\$2,722	11.9	1,718
ECM 8	Install High Efficiency Heat Pumps	Yes	8,641	3.6	0	\$1,160	\$3,382	\$368	\$3,014	2.6	8,702
Gas Heating (HVAC/Process) Replacement			0	0.0	22	\$440	\$14,830	\$2,314	\$12,516	28.5	3,520
ECM 9	Install High Efficiency Hot Water Boilers	No	0	0.0	22	\$440	\$14,830	\$2,314	\$12,516	28.5	3,520
HVAC System Improvements			0	0.0	15	\$443	\$203	\$120	\$83	0.2	2,142
ECM 10	Install Pipe Insulation	Yes	0	0.0	15	\$443	\$203	\$120	\$83	0.2	2,142
Domestic Water Heating Upgrade			0	0.0	0	\$13	\$14	\$14	\$0	0.0	39
ECM 11	Install Low-Flow DHW Devices	Yes	0	0.0	0	\$13	\$14	\$14	\$0	0.0	39
TOTALS (COST EFFECTIVE MEASURES)			42,125	13.4	4	\$5,868	\$25,198	\$9,346	\$15,851	2.7	42,658
TOTALS (ALL MEASURES)			43,830	14.3	25	\$6,537	\$42,749	\$11,660	\$31,089	4.8	47,896

* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

** - 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 practices by building

MEASURES FOR FUTURE CONSIDERATION

- **Retro-Commissioning Study**
- **Upgrade/Replace Energy Management System**
- Installation of an Energy Management System
- Electric Submeter
- Ozone Laundry System
- Pool Heating System Upgrades
- Eliminate Oversized Domestic Hot Water Heating Systems
- Heating System Conversion from Steam to Hot Water
- Upgrade to a Heat Pump System
- Vestibule Revolving Doors
- Window Replacements
- Disaggregate Boiler System

CLEAN ENERGY PROGRAM PORTFOLIO

ELIGIBLE SECTORS

Commercial, Industrial, Government, Non-Profit, Institutional and Multifamily

INCENTIVE PROGRAMS

Equipment Rebates:

- **SmartStart**
- **Customer Tailored Energy Efficiency Pilot (CTEEP)**
- **Direct Install**
- Large Energy Users

Whole Buildings:

- Pay for Performance

Energy Generation:

- Combined Heat and Power – Fuel Cells

OTHER PROGRAMS

Renewable Energy Generation:

- **Transition Incentive (TI) Program**
- **Community Solar**

SOLAR ENERGY GENERATION POTENTIAL

	Main Library	Police Department	Town Hall
<i>Potential:</i>	HIGH	HIGH	HIGH
<i>System Potential: (kW)</i>	107	96	70
<i>Electric Generation: (kWh per year)</i>	127,477	114,371	83,396
<i>Displaced Cost: (per year)</i>	\$16,840	\$13,090	\$9,990

Transition Incentive (TI) Program:

<https://www.njcleanenergy.com/renewable-energy/programs/transition-incentive-program>

Community Solar Energy Pilot Program:

<http://www.NJCleanEnergy.com/CommunitySolar>

RECOMMENDED NJCEP INCENTIVES PER BUILDING

Entity Name	Direct Install	SmartStart	CTEEP
Main Library	X	X	X
Police Department	X	X	X
Public Works Building	X	X	X
Public Works Garage	X	X	X
Water Department	X	X	X
Town Hall	X	X	X
Engineering Department	X	X	X
Parks & Forestry Department	X	X	X
Lake Hiawatha Library	X	X	X

DIRECT INSTALL

NJCleanEnergy.com/DI



What is DI: Turn-key retrofit program to replace outdated and inefficient equipment, including lighting, HVAC, refrigeration, etc.

Qualifications: Average electric peak demand <200 kW in the previous 12 months

About:

- Pre-approved participating contractors provide support and process paperwork
- Incentives paid directly to the contractor
- Fast project turnaround time (4-6 months)

Incentives:

- \$125,000 incentive funding per project/building (\$250K UEZ/OZ/[Local Govt.](#)/K-12 Public Schools), or
- \$250,000 entity cap (\$4MM UEZ/OZ/[Local Govt.](#)/K-12 Public Schools)

DIRECT INSTALL

NJCleanEnergy.com/DI

Facilities in Urban Enterprise Zones (UEZ), Opportunity Zones (OZ), Local Governments, and K-12 public schools:

INCENTIVE FUNDING

Up to **80%** of installed cost is paid directly to the contractor

CUSTOMER

20% of installed cost

All other eligible facilities:

INCENTIVE FUNDING

Up to **70%** of installed cost is paid directly to the contractor

CUSTOMER

30% of installed cost



DIRECT INSTALL

NJCleanEnergy.com/DI

Participating Contractor

Donnelly Energy

Justin Avallone

845-401-6253

javallone@donnellyenergy.com



SMARTSTART

NJCleanEnergy.com/SSB

What is SSB: Individual high efficiency equipment rebates for new construction, renovation, remodeling, equipment replacement

Qualifications: • All C&I customer types contributing into the Societal Benefits Charge (SBC)

About:

- Prescriptive and custom designed measures
- Pre-approval required only for lighting projects with incentives >\$100,000 and all custom projects
- For measures not requiring pre-approval, applications must be submitted to the program within one year of purchase.

Incentives:

- Prescriptive: \$500,000 cap for each electric or gas account
- Custom, lesser of the following:
 - \$0.16/kWh and/or \$1.60/Therm saved annually
 - 50% of incremental installed cost
 - Buy-down to 1 year payback based on incremental cost and savings



SMARTSTART

NJCleanEnergy.com/SSB

Prescriptive Incentives

- Lighting & Lighting Controls
- Packaged HVAC
- Boilers & Water Heaters
- Chillers
- VFD's
- Food Service
- Refrigeration

Prescriptive Only:

**DOUBLE
INCENTIVES FOR
OZ/UEZ/ LOCAL
GOVT./K-12 PUBLIC
SCHOOLS**

Custom Incentives

- New or innovative technologies proven to be cost-effective and not listed as prescriptive
- Projects must have a minimum first year energy savings of 75,000 kWh or 1,500 therms
- Project pre and post inspection required



CUSTOMER TAILORED ENERGY EFFICIENCY PILOT

NJCleanEnergy.com/CTEEP

What is CTEEP: A streamlined/single application process for participants submitting multiple different technology types.

Qualifications:

- All C&I customer types contributing into the Societal Benefits Charge (SBC)

About:

- On site assistance available
- Additional technical incentive available to offset soft costs associated with developing and planning custom projects

Incentives:

- \$250,000 fiscal year entity cap
- Technical assistance incentives for custom project evaluation (up to \$10K)

**SAME INCENTIVE
VALUES AS
SMARTSTART**

DI, SMARTSTART, & CTEEP: FINANCING OPTION

- NJNG provides 0% financing options that will cover up to \$130,000 per year.
- 10 year term-repayments made on regular monthly gas bill
- Need to review project with NJNG to confirm project qualifies.
- The SAVEGREEN program can help with a consultation to discuss your Commercial Energy Efficiency Project.



- Questions? Contact:

Jerry Ryan

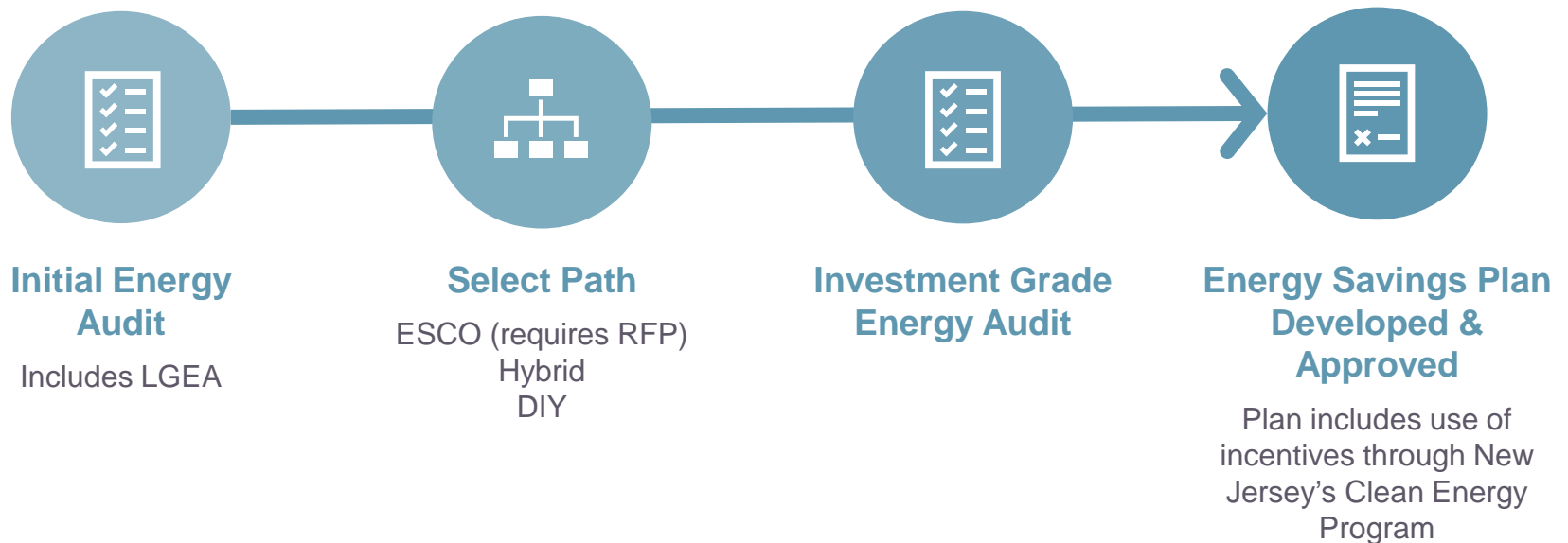
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FINANCING MECHANISM: ESIP

ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

- Provides alternative financing for energy savings projects at public institutions
- Administered directly by the BPU
- Value of energy savings leveraged to pay for cost of EE projects over a 15 year contract
- Requires NO new bonding and is outside of capital budget
- Does not count as debt or require voter approval

FINANCING MECHANISM: ESIP



ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

FOR MORE INFORMATION

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FOR MORE INFORMATION

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QUESTIONS

