

New Jersey's Clean Energy Program

LGEA Presentation
Florham Park School District

July 23, 2020



INTRODUCTIONS

- Florham Park School District
 - Steve Caponegro – Superintendent
 - John Csatlos – Business Administrator
 - Philip Infantolino – Supervisor of Buildings
 - Alita Thomas – Board Vice President
 - Linda Rozek – Board Member
 - Fabienne Crimi – Board Member
- NJ Clean Energy Program
 - Aimee Lalonde – TRC Program Manager
 - Sarah Landis – TRC Auditor
 - Sarah Walters – TRC Account Manager
 - Mike Mandzik – TRC Outreach Manager
 - Michelle Rossi – ESIP Coordinator (BPU)
 - Arif Welcher – Government/Business Manager

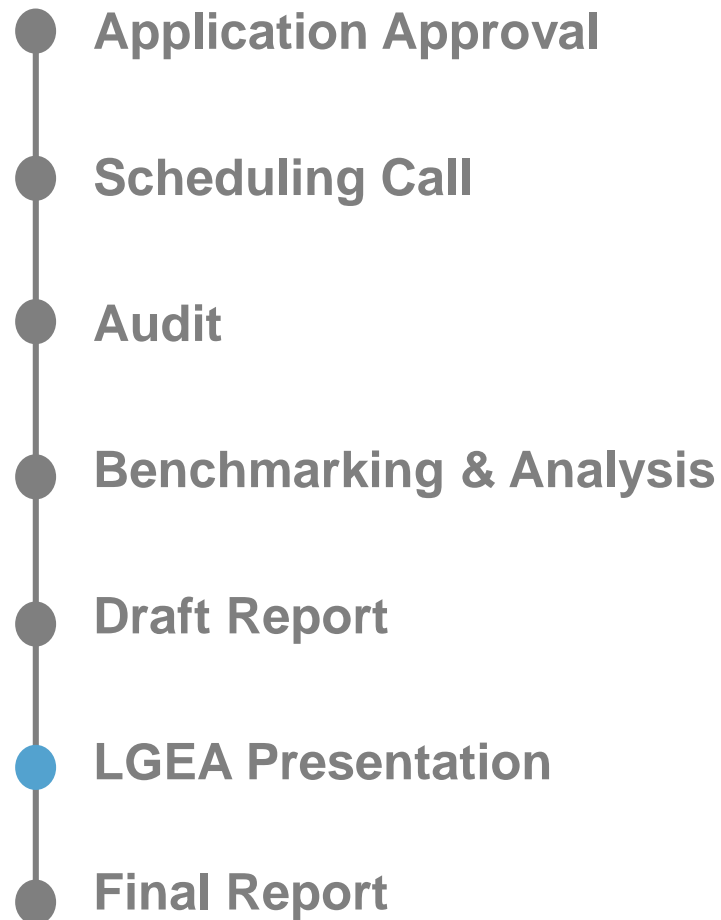


AGENDA

- 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 Florham Park School District



LGEA PROCESS



SITE VISIT & UTILITY ANALYSIS

Overview of Systems, Baseline & Existing Conditions:

- Lighting System
- HVAC and Mechanical Systems
- Plug Load Equipment
- Energy Management System (EMS)

Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs

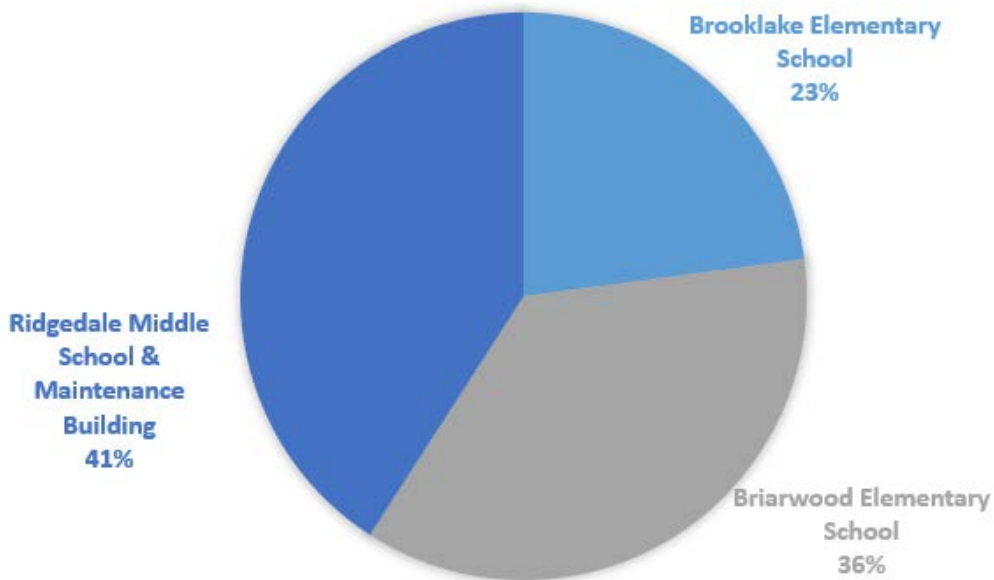
Sites Visited/Analyzed

- Briarwood Elementary School
- Brooklake Elementary School
- Ridgedale Middle School
- Ridgedale Maintenance Building

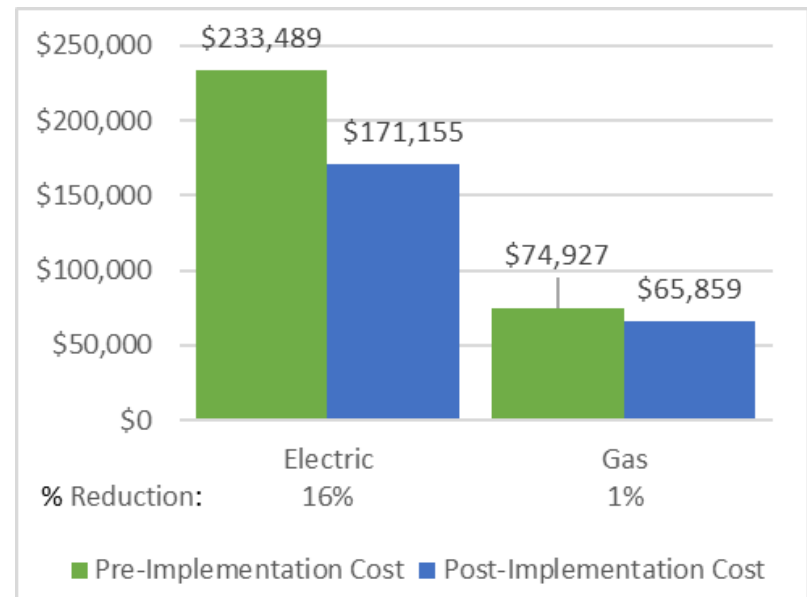


UTILITY BREAKOUT

Percent of Total Annual Energy Costs



Pre & Post Implementation Cost



BENCHMARKING

ENERGY STAR® Statement of Energy Performance

26
ENERGY STAR® Score¹

Briarwood Elementary School
Primary Property Type: K-12 School
Gross Floor Area (ft²): 47,000
Built: 1962
For Year Ending: November 30, 2019
Date Generated: May 01, 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 Briarwood Elementary School 151 Briarwood Road Florham Park, New Jersey 07932	Property Owner Florham Park Board of Education 67 Ridgedale Avenue PO Box 92 Florham Park, NJ 07932 (973) 822-3880	Primary Contact John Costlos 67 Ridgedale Avenue PO Box 92 Florham Park, NJ 07932 (973) 822-3880 x1006 john.costlos@fpks.org
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Property ID: 10541303

Energy Consumption and Energy Use Intensity (EUI)

Site EUI 61 kBtu/ft ²	Annual Energy by Fuel Electric - Grid (kBtu) 2,807,633 (100%)	National Median Comparison National Median Site EUI (kBtu/ft ²) 47.7 National Median Source EUI (kBtu/ft ²) 133.7 % Diff from National Median Source EUI 28%
Source EUI 170.8 kBtu/ft ²	Annual Emissions Greenhouse Gas Emissions (Metric Tons CO ₂ e/year) 290	

Site EUI
61 kBtu/ft²

Source EUI
170.8 kBtu/ft²

National Median Comparison

National Median Site EUI (kBtu/ft ²)	47.7
National Median Source EUI (kBtu/ft ²)	133.7
% Diff from National Median Source EUI	28%

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: _____

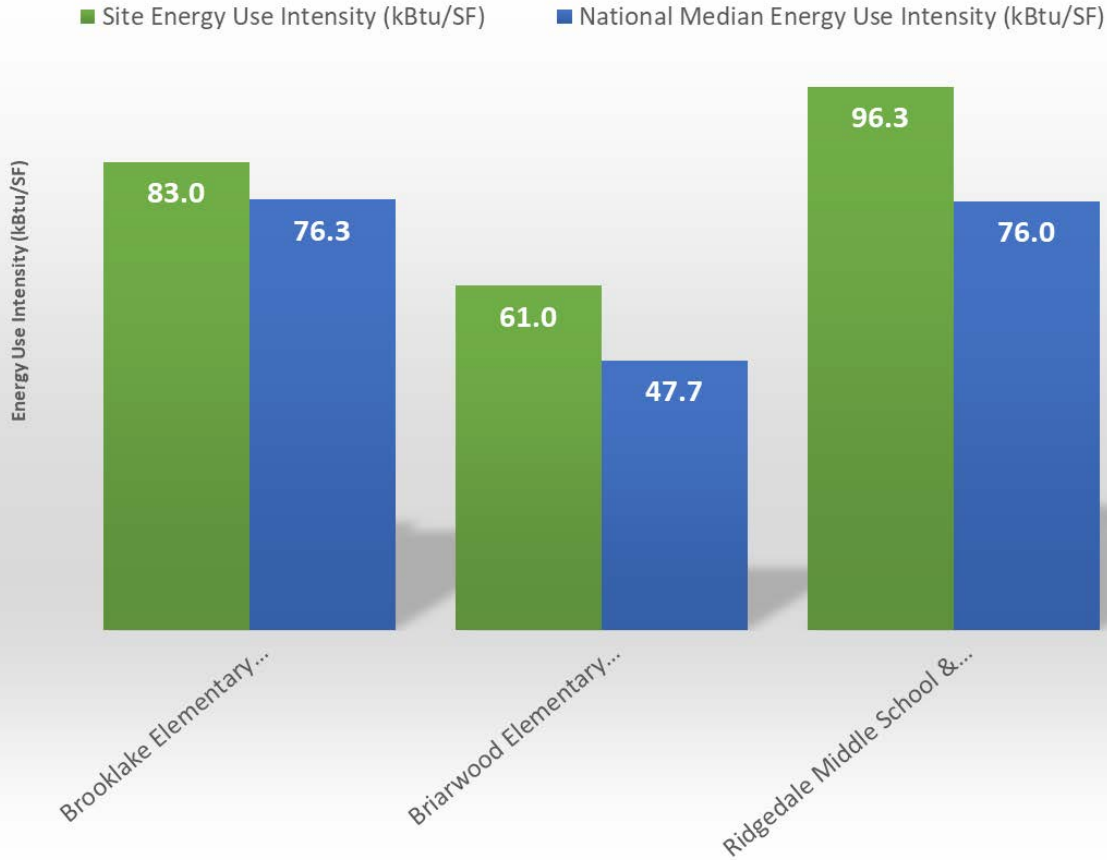
Licensed Professional

() - _____

Professional Engineer or Registered Architect Stamp (if applicable)

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.

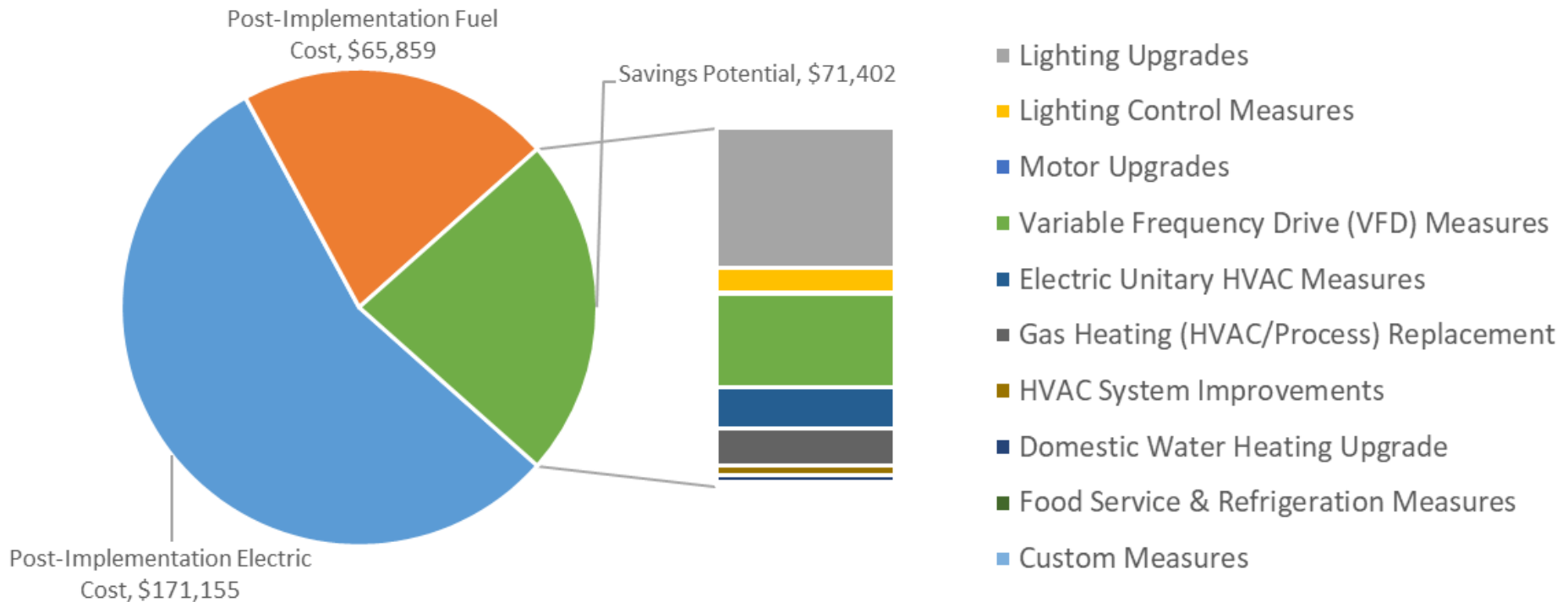
BENCHMARKING



Site Name	Energy Star Score
Brooklake Elementary School	41
Briarwood Elementary School	26
Ridgedale Middle School & Maintenance Bldg.	27

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		225,641	65.3	-23.0	\$27,694	\$583,201	\$122,830	\$460,371	16.6	224,523
ECM 1	Install LED Fixtures	61,122	12.7	-8.3	\$7,227	\$525,948	\$96,622	\$429,326	59.4	60,572
ECM 2	Retrofit Fixtures with LED Lamps	164,519	52.6	-14.7	\$20,467	\$57,253	\$26,208	\$31,045	1.5	163,951
Lighting Control Measures		41,004	9.2	-3.6	\$5,109	\$39,550	\$17,550	\$22,000	4.3	40,873
ECM 3	Install Occupancy Sensor Lighting Controls	29,692	7.0	-2.2	\$3,731	\$27,000	\$6,720	\$20,280	5.4	29,647
ECM 4	Install Daylight Dimming/PhotoCell Controls	359	0.0	0.0	\$42	\$400	\$0	\$400	9.4	361
ECM 5	Install High/Low Lighting Controls	10,953	2.2	-1.4	\$1,335	\$12,150	\$10,830	\$1,320	1.0	10,865
Motor Upgrades		275	0.0	0.0	\$36	\$1,029	\$0	\$1,029	28.7	276
ECM 6	Premium Efficiency Motors	275	0.0	0.0	\$36	\$1,029	\$0	\$1,029	28.7	276
Variable Frequency Drive (VFD) Measures		155,854	48.6	0.0	\$18,719	\$285,434	\$46,450	\$238,984	12.8	156,943
ECM 7	Install VFDs on Constant Volume (CV) Fans	139,992	47.1	0.0	\$16,806	\$218,858	\$42,250	\$176,608	10.5	140,970
ECM 8	Install VFDs on Heating Water Pumps	13,187	1.5	0.0	\$1,564	\$62,954	\$4,000	\$58,954	37.7	13,279
ECM 9	Install VFDs on Kitchen Hood Fan Motors	2,675	0.0	0.0	\$349	\$3,623	\$200	\$3,423	9.8	2,694
Electric Unitary HVAC Measures		61,694	17.6	0.0	\$8,013	\$265,153	\$19,745	\$245,408	30.6	62,125
ECM 10	Install High Efficiency Air Conditioning Units	86	0.2	0.0	\$11	\$1,122	\$138	\$984	87.2	87
ECM 11	Install High Efficiency Heat Pumps	30,205	3.2	0.0	\$3,906	\$53,402	\$5,307	\$48,095	12.3	30,416
ECM 12	Install High Efficiency PTAC/PTHP	31,402	14.2	0.0	\$4,096	\$210,629	\$14,300	\$196,329	47.9	31,622

ALL OPPORTUNITIES

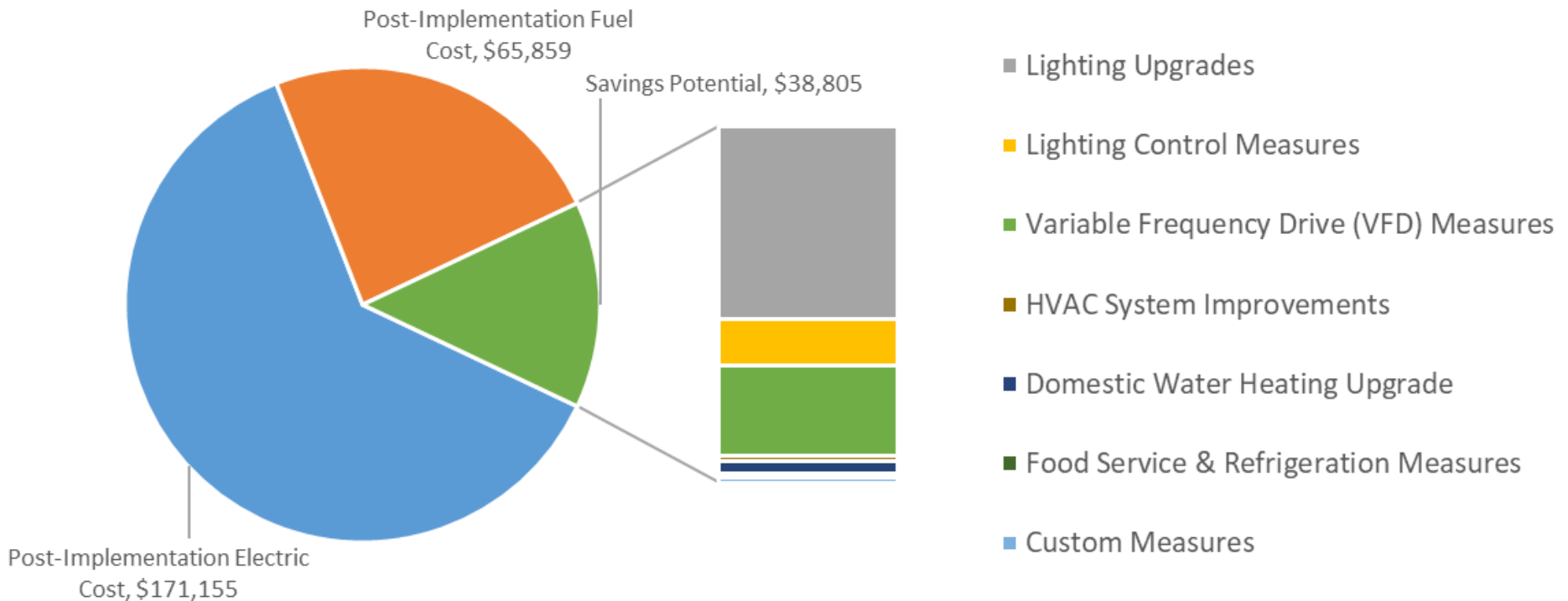
#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Gas Heating (HVAC/Process) Replacement		0	0.0	821.4	\$7,507	\$176,668	\$39,090	\$137,578	18.3	96,173
ECM 13	Install High Efficiency Hot Water Boilers	0	0.0	821.4	\$7,507	\$176,668	\$39,090	\$137,578	18.3	96,173
HVAC System Improvements		5,641	0.0	116.2	\$1,761	\$16,434	\$70	\$16,364	9.3	19,291
ECM 14	Implement Demand Control Ventilation (DCV)	4,587	0.0	109.9	\$1,568	\$16,313	\$0	\$16,313	10.4	17,487
ECM 15	Install Pipe Insulation	1,054	0.0	6.3	\$194	\$121	\$70	\$51	0.3	1,804
Domestic Water Heating Upgrade		7,785	0.0	40.2	\$1,381	\$975	\$975	\$0	0.0	12,548
ECM 16	Install Low-Flow DHW Devices	7,785	0.0	40.2	\$1,381	\$975	\$975	\$0	0.0	12,548
Food Service & Refrigeration Measures		2,863	0.3	0.0	\$369	\$3,017	\$1,200	\$1,817	4.9	2,883
ECM 17	Replace Refrigeration Equipment	2,520	0.3	0.0	\$329	\$2,787	\$1,200	\$1,587	4.8	2,538
ECM 18	Vending Machine Control	343	0.0	0.0	\$40	\$230	\$0	\$230	5.7	345
Custom Measures		1,869	1.8	38.2	\$588	\$2,072	\$0	\$2,072	3.5	6,360
ECM 19	Install Duct Insulation	1,869	1.8	38.2	\$588	\$2,072	\$0	\$2,072	3.5	6,360
TOTALS		502,624	142.8	989.5	\$71,176	\$1,373,534	\$247,910	\$1,125,624	15.8	621,995

* - 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		168,493	52.6	-14.7	\$20,986	\$61,852	\$27,852	\$34,000	1.6	167,953
ECM 1	Install LED Fixtures	3,974	0.0	0.0	\$518	\$4,599	\$1,644	\$2,955	5.7	4,002
ECM 2	Retrofit Fixtures with LED Lamps	164,519	52.6	-14.7	\$20,467	\$57,253	\$26,208	\$31,045	1.5	163,951
Lighting Control Measures		41,004	9.2	-3.6	\$5,109	\$39,550	\$17,550	\$22,000	4.3	40,873
ECM 3	Install Occupancy Sensor Lighting Controls	29,692	7.0	-2.2	\$3,731	\$27,000	\$6,720	\$20,280	5.4	29,647
ECM 4	Install Daylight Dimming/Photocell Controls	359	0.0	0.0	\$42	\$400	\$0	\$400	9.4	361
ECM 5	Install High/Low Lighting Controls	10,953	2.2	-1.4	\$1,335	\$12,150	\$10,830	\$1,320	1.0	10,865
Variable Frequency Drive (VFD) Measures		82,505	25.8	0.0	\$9,771	\$117,555	\$23,950	\$93,605	9.6	83,081
ECM 7	Install VFDs on Constant Volume (CV) Fans	79,829	25.8	0.0	\$9,422	\$113,932	\$23,750	\$90,182	9.6	80,388
ECM 9	Install VFDs on Kitchen Hood Fan Motors	2,675	0.0	0.0	\$349	\$3,623	\$200	\$3,423	9.8	2,694
HVAC System Improvements		1,665	0.0	44.1	\$602	\$2,840	\$70	\$2,770	4.6	6,839
ECM 14	Implement Demand Control Ventilation (DCV)	611	0.0	37.8	\$408	\$2,719	\$0	\$2,719	6.7	5,036
ECM 15	Install Pipe Insulation	1,054	0.0	6.3	\$194	\$121	\$70	\$51	0.3	1,804
Domestic Water Heating Upgrade		7,785	0.0	40.2	\$1,381	\$975	\$975	\$0	0.0	12,548
ECM 16	Install Low-Flow DHW Devices	7,785	0.0	40.2	\$1,381	\$975	\$975	\$0	0.0	12,548
Food Service & Refrigeration Measures		2,863	0.3	0.0	\$369	\$3,017	\$1,200	\$1,817	4.9	2,883
ECM 17	Replace Refrigeration Equipment	2,520	0.3	0.0	\$329	\$2,787	\$1,200	\$1,587	4.8	2,538
ECM 18	Vending Machine Control	343	0.0	0.0	\$40	\$230	\$0	\$230	5.7	345
Custom Measures		1,869	1.8	38.2	\$588	\$2,072	\$0	\$2,072	3.5	6,360
ECM 19	Install Duct Insulation	1,869	1.8	38.2	\$588	\$2,072	\$0	\$2,072	3.5	6,360
TOTALS		306,183	89.7	104.3	\$38,805	\$227,861	\$71,597	\$156,263	4.0	320,537

* - 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).

BRIARWOOD ELEMENTARY SCHOOL

#	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			94,543	19.3	0	\$12,331	\$32,231	\$15,662	\$16,569	1.3	95,204
ECM 1	Install LED Fixtures	Yes	3,974	0.0	0	\$518	\$4,599	\$1,644	\$2,955	5.7	4,002
ECM 2	Retrofit Fixtures with LED Lamps	Yes	90,569	19.3	0	\$11,812	\$27,632	\$14,018	\$13,614	1.2	91,202
Lighting Control Measures			23,599	4.5	0	\$3,078	\$19,035	\$7,570	\$11,465	3.7	23,764
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	19,382	3.7	0	\$2,528	\$14,310	\$3,640	\$10,670	4.2	19,518
ECM 4	Install High/Low Lighting Controls	Yes	4,217	0.8	0	\$550	\$4,725	\$3,930	\$795	1.4	4,246
Motor Upgrades			275	0.0	0	\$36	\$1,029	\$0	\$1,029	28.7	276
ECM 5	Premium Efficiency Motors	No	275	0.0	0	\$36	\$1,029	\$0	\$1,029	28.7	276
Variable Frequency Drive (VFD) Measures			19,224	3.4	0	\$2,507	\$27,024	\$1,750	\$25,274	10.1	19,359
ECM 6	Install VFDs on Constant Volume (CV) Fans	No	16,549	3.4	0	\$2,158	\$23,401	\$1,550	\$21,851	10.1	16,665
ECM 7	Install VFDs on Kitchen Hood Fan Motors	Yes	2,675	0.0	0	\$349	\$3,623	\$200	\$3,423	9.8	2,694
Electric Unitary HVAC Measures			58,550	17.2	0	\$7,636	\$253,218	\$18,447	\$234,772	30.7	58,960
ECM 8	Install High Efficiency Air Conditioning Units	No	86	0.2	0	\$11	\$1,122	\$138	\$984	87.3	87
ECM 9	Install High Efficiency Heat Pumps	No	27,062	2.8	0	\$3,530	\$41,467	\$4,009	\$37,459	10.6	27,251
ECM 10	Install High Efficiency PTAC/PTHP	No	31,402	14.2	0	\$4,096	\$210,629	\$14,300	\$196,329	47.9	31,622
HVAC System Improvements			2,410	0.0	0	\$314	\$2,782	\$38	\$2,744	8.7	2,427
ECM 11	Implement Demand Control Ventilation (DCV)	No	1,356	0.0	0	\$177	\$2,719	\$0	\$2,719	15.4	1,366
ECM 12	Install Pipe Insulation	Yes	1,054	0.0	0	\$137	\$63	\$38	\$25	0.2	1,062
Domestic Water Heating Upgrade			7,785	0.0	0	\$1,015	\$344	\$344	\$0	0.0	7,839
ECM 13	Install Low-Flow DHW Devices	Yes	7,785	0.0	0	\$1,015	\$344	\$344	\$0	0.0	7,839
Food Service & Refrigeration Measures			2,520	0.3	0	\$329	\$2,787	\$1,200	\$1,587	4.8	2,538
ECM 14	Replace Refrigeration Equipment	Yes	2,520	0.3	0	\$329	\$2,787	\$1,200	\$1,587	4.8	2,538
TOTALS (COST EFFECTIVE MEASURES)			132,176	24.1	0	\$17,239	\$58,083	\$25,014	\$33,069	1.9	133,100
TOTALS (ALL MEASURES)			208,907	44.7	0	\$27,247	\$338,451	\$45,011	\$293,441	10.8	210,367

BROOKLAKE ELEMENTARY SCHOOL

#	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			56,083	18.3	-10	\$6,629	\$212,502	\$40,281	\$172,221	26.0	55,271
ECM 1	Install LED Fixtures	No	22,135	4.9	-4	\$2,620	\$199,258	\$34,795	\$164,463	62.8	21,867
ECM 2	Retrofit Fixtures with LED Lamps	Yes	33,948	13.4	-7	\$4,008	\$13,244	\$5,486	\$7,758	1.9	33,404
Lighting Control Measures			5,163	1.3	-1	\$609	\$7,380	\$3,580	\$3,800	6.2	5,073
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	3,425	1.0	-1	\$404	\$5,130	\$1,330	\$3,800	9.4	3,365
ECM 4	Install High/Low Lighting Controls	Yes	1,738	0.3	0	\$205	\$2,250	\$2,250	\$0	0.0	1,707
Variable Frequency Drive (VFD) Measures			47,671	18.3	0	\$5,712	\$109,877	\$17,350	\$92,527	16.2	48,004
ECM 5	Install VFDs on Constant Volume (CV) Fans	No	43,613	17.8	0	\$5,226	\$81,524	\$16,950	\$64,574	12.4	43,918
ECM 6	Install VFDs on Heating Water Pumps	No	4,058	0.5	0	\$486	\$28,353	\$400	\$27,953	57.5	4,086
Electric Unitary HVAC Measures			3,143	0.4	0	\$377	\$11,935	\$1,299	\$10,636	28.2	3,165
ECM 7	Install High Efficiency Heat Pumps	No	3,143	0.4	0	\$377	\$11,935	\$1,299	\$10,636	28.2	3,165
Gas Heating (HVAC/Process) Replacement			0	0.0	345	\$3,064	\$72,272	\$16,650	\$55,622	18.2	40,416
ECM 8	Install High Efficiency Hot Water Boilers	No	0	0.0	345	\$3,064	\$72,272	\$16,650	\$55,622	18.2	40,416
HVAC System Improvements			611	0.0	44	\$465	\$2,776	\$32	\$2,744	5.9	5,778
ECM 9	Implement Demand Control Ventilation (DCV)	Yes	611	0.0	38	\$408	\$2,719	\$0	\$2,719	6.7	5,036
ECM 10	Install Pipe Insulation	Yes	0	0.0	6	\$56	\$58	\$32	\$26	0.5	742
Domestic Water Heating Upgrade			0	0.0	21	\$190	\$366	\$366	\$0	0.0	2,500
ECM 11	Install Low-Flow DHW Devices	Yes	0	0.0	21	\$190	\$366	\$366	\$0	0.0	2,500
TOTALS (COST EFFECTIVE MEASURES)			39,721	14.7	58	\$5,271	\$23,766	\$9,464	\$14,302	2.7	46,754
TOTALS (ALL MEASURES)			112,671	38.4	399	\$17,044	\$417,108	\$79,557	\$337,551	19.8	160,207

RIDGEDALE MS & MAINTENANCE BLDG.

#	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			75,014	27.7	-13	\$8,735	\$338,468	\$66,887	\$271,581	31.1	74,048
ECM 1	Install LED Fixtures	No	35,013	7.8	-5	\$4,088	\$322,091	\$60,183	\$261,908	64.1	34,703
ECM 2	Retrofit Fixtures with LED Lamps	Yes	40,002	19.9	-8	\$4,647	\$16,377	\$6,704	\$9,673	2.1	39,345
Lighting Control Measures			12,242	3.4	-2	\$1,422	\$13,135	\$6,400	\$6,735	4.7	12,037
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	6,885	2.3	-1	\$799	\$7,560	\$1,750	\$5,810	7.3	6,764
ECM 4	Install PhotoCell Controls	Yes	359	0.0	0	\$42	\$400	\$0	\$400	9.4	361
ECM 5	Install High/Low Lighting Controls	Yes	4,999	1.1	-1	\$580	\$5,175	\$4,650	\$525	0.9	4,911
Variable Frequency Drive (VFD) Measures			88,959	26.9	0	\$10,499	\$148,532	\$27,350	\$121,182	11.5	89,581
ECM 6	Install VFDs on Constant Volume (CV) Fans	Yes	79,829	25.8	0	\$9,422	\$113,932	\$23,750	\$90,182	9.6	80,388
ECM 7	Install VFDs on Heating Water Pumps	No	9,129	1.1	0	\$1,077	\$34,601	\$3,600	\$31,001	28.8	9,193
Gas Heating (HVAC/Process) Replacement			0	0.0	476	\$4,443	\$104,396	\$22,440	\$81,956	18.4	55,757
ECM 8	Install High Efficiency Hot Water Boilers	No	0	0.0	476	\$4,443	\$104,396	\$22,440	\$81,956	18.4	55,757
HVAC System Improvements			2,620	0.0	72	\$982	\$10,875	\$0	\$10,875	11.1	11,086
ECM 9	Implement Demand Control Ventilation (DCV)	No	2,620	0.0	72	\$982	\$10,875	\$0	\$10,875	11.1	11,086
Domestic Water Heating Upgrade			0	0.0	19	\$176	\$265	\$265	\$0	0.0	2,209
ECM 10	Install Low-Flow DHW Devices	Yes	0	0.0	19	\$176	\$265	\$265	\$0	0.0	2,209
Food Service & Refrigeration Measures			343	0.0	0	\$40	\$230	\$0	\$230	5.7	345
ECM 11	Vending Machine Control	Yes	343	0.0	0	\$40	\$230	\$0	\$230	5.7	345
Custom Measures			1,869	1.8	38	\$588	\$2,072	\$0	\$2,072	3.5	6,360
ECM 12	Install Duct Insulation	Yes	1,869	1.8	38	\$588	\$2,072	\$0	\$2,072	3.5	6,360
TOTALS (COST EFFECTIVE MEASURES)			134,285	50.9	47	\$16,295	\$146,011	\$37,119	\$108,892	6.7	140,682
TOTALS (ALL MEASURES)			181,047	59.7	590	\$26,886	\$617,974	\$123,342	\$494,632	18.4	251,421

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**
- **Install High Efficiency Energy Recovery Units (ERUs)**
- Electric Submeter
- Ozone Laundry System
- Pool Heating System Upgrades
- Vestibule Revolving Doors
- **Upgrade to a Heat Pump System**
- Heating System Conversion from Steam to Hot Water
- 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

	Briarwood ES	Brooklake ES	Ridgedale MS
<i>Potential:</i>	HIGH	HIGH	HIGH
<i>System Potential: (kW)</i>	165	115	161
<i>Electric Generation: (kWh per year)</i>	196,576	137,008	\$191,811
<i>Displaced Cost: (per year)</i>	\$25,640	\$16,420	\$22,640

Transition Incentive (TI) Program:

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

Community Solar Energy Pilot Program:

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

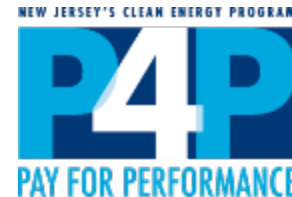
RECOMMENDED NJCEP INCENTIVES PER BUILDING

Building	Pay For Performance	Direct Install	SmartStart	CTEEP
Briarwood Elementary School	X		X	X
Brooklake Elementary School		X	X	X
Ridgedale Middle School & Maintenance Bldg.	X	X	X	X



PAY FOR PERFORMANCE

NJCleanEnergy.com/P4P



What is P4P: Comprehensive, whole-building approach to saving energy in existing or new facilities.

Qualifications: Annual peak demand 200 kW+ in the previous year for existing buildings

About: Customer choose from a network of pre-approved *Participating Partners*

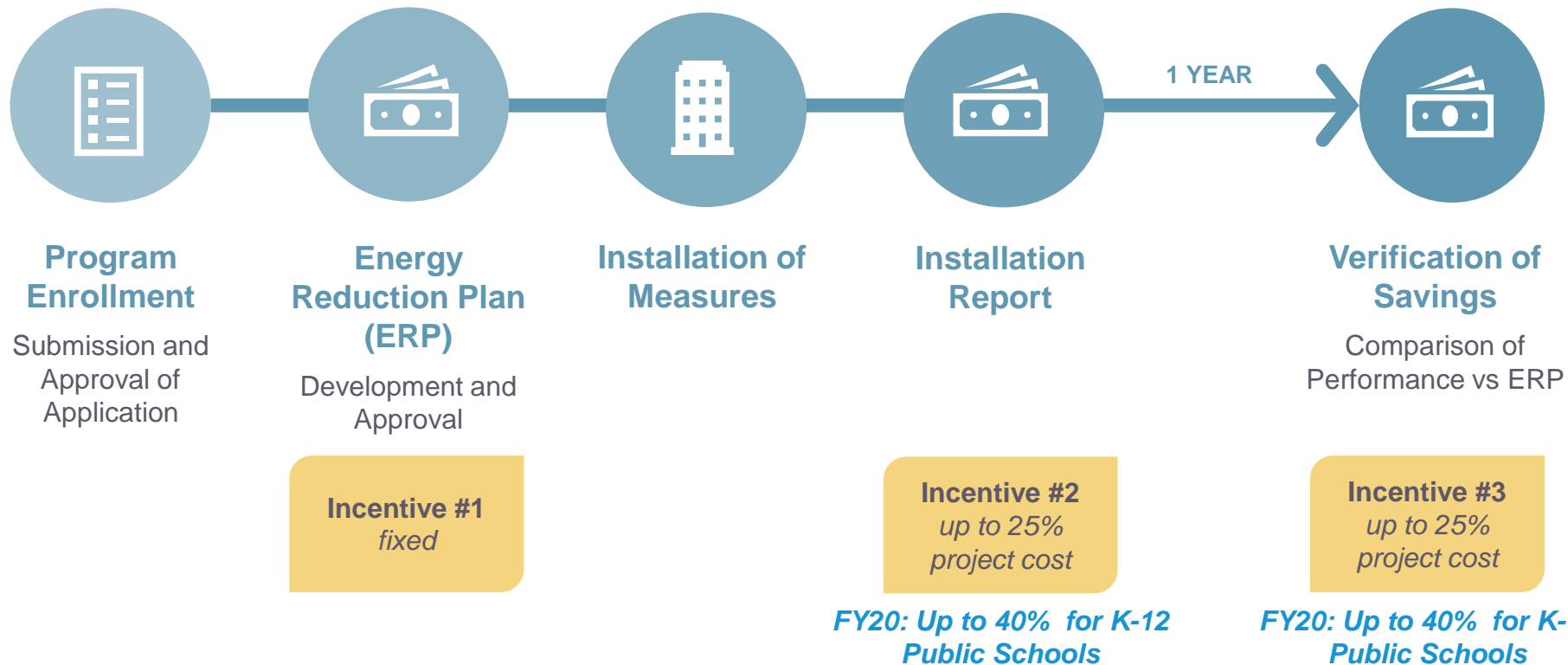
Incentives:

- Incentives paid in *three* installments
 - Up to \$2MM per project((\$4MM entity cap/year)
 - \$1 million for electric measures
 - \$1 million for gas measures
 - Up to 50% of project cost (or **80%** for UEZ/OZ/Local Govt./ **K-12 Public Schools**) up to \$2MM per project / \$4MM per entity annually



PAY FOR PERFORMANCE

NJCleanEnergy.com/P4P



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**

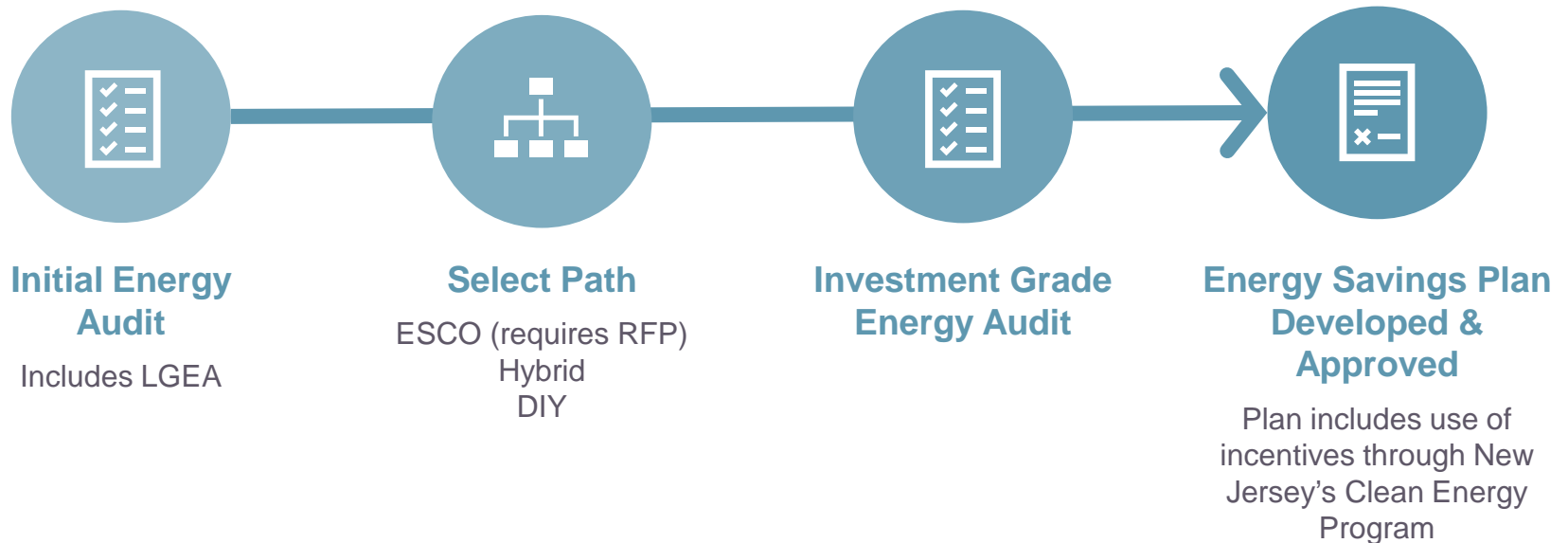
FINANCING MECHANISM: ESIP

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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New Jersey's
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QUESTIONS

