New Jersey's Clean Energy Program

LGEA Exit Meeting for: Lindenwold Public Schools

September 18, 2019





INTRODUCTIONS

- Lindenwold Public Schools
 - Kathleen Huder Business Administrator/Board Secretary
 - Carl Haines Director of Facilities & Grounds
 - Johnathan Mason Supervisor of Facilities
- NJ Clean Energy Program
 - Moussa Traore TRC Auditor
 - Sarah Walters TRC Account Manager
 - Gary Finger 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 Energy Conservation Measures (ECMs) identified
- Questions regarding the draft audit report
- Overview of NJCEP equipment incentives
- Next steps for Lindenwold Public Schools



LGEA PROCESS

Application Approval

Scheduling Call

Audit

Benchmarking & Analysis

Draft Report

Exit Meeting Presentation

Final Report



SITE VISIT & UTILITY ANALYSIS

Overview of Systems, Baseline & Existing Conditions:

- Lighting System
- HVAC and Mechanical Systems
- Plug Load Equipment
- Food & Refrigeration Equipment

Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs
- Solar PV Production



Sites Visited/Analyzed

- Lindenwold High School
- Lindenwold Middle School
- Lindenwold Elementary School #4
- Lindenwold Elementary School #5



Benchmarking

Elementary School #5



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.

Building Name	ENERGY STAR® Score
Lindenwold High School	18
Lindenwold Middle School	8
Lindenwold Elementary School #4	47
Lindenwold Elementary School #5	26

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	987,269	148.2	-186.0	\$124,834.79	\$370,698.88	\$62,810.00	\$307,888.88	2.5	972,399
Install LED Fixtures	236,506	29.1	-30.4	\$30,110.37	\$183,526.37	\$25,135.00	\$158,391.37	5.3	234,595
Retrofit Fluorescent Fixtures with LED Lamps and Drivers	1,806	0.2	-0.4	\$229.33	\$404.12	\$40.00	\$364.12	1.6	1,774
Retrofit Fixtures with LED Lamps	748,958	118.9	-155.1	\$94,495.09	\$186,768.39	\$37,635.00	\$149,133.39	1.6	736,030
Lighting Control Measures	184,525	27.0	-38.6	\$23,374.44	\$93,753.00	\$8,760.00	\$84,993.00	3.6	181,297
Install Occupancy Sensor Lighting Controls	164,524	24.2	-34.4	\$20,853.63	\$76,878.00	\$8,760.00	\$68,118.00	3.3	161,647
Install High/Low Lighting Controls	20,000	2.9	-4.2	\$2,520.81	\$16,875.00	\$0.00	\$16,875.00	6.7	19,650
Variable Frequency Drive (VFD) Measures	137,718	33.7	0.0	\$17,053.06	\$174,009.17	\$8,546.67	\$165,462.50	9.7	138,681
Install VFDs on Constant Volume (CV) Fans	131,030	32.9	0.0	\$16,182.06	\$157,056.14	\$8,546.67	\$148,509.47	9.2	131,946
Install VFDs on Heating Water Pumps	6,688	0.8	0.0	\$871.00	\$16,953.03	\$0.00	\$16,953.03	19.5	6,735
Electric Unitary HVAC Measures	45,838	23.8	0.0	\$5,625.30	\$269,394.35	\$12,056.00	\$257,338.35	45.7	46,159
Install High Efficiency Air Conditioning Units	45,838	23.8	0.0	\$5,625.30	\$269,394.35	\$12,056.00	\$257,338.35	45.7	46,159
Gas Heating (HVAC/Process) Replacement	0	0.0	820.5	\$8,527.03	\$332,289.78	\$16,026.90	\$316,262.88	37.1	96,076
Install High Efficiency Hot Water Boilers	0	0.0	440.0	\$4,115.08	\$163,748.98	\$1,284.50	\$162,464.48	39.5	51,516
Install High Efficiency Steam Boilers	0	0.0	82.7	\$1,075.14	\$120,246.69	\$7,142.40	\$113,104.29	105.2	9,679
Install High Efficiency Furnaces	0	0.0	297.9	\$3,336.81	\$48,294.11	\$7,600.00	\$40,694.11	12.2	34,881
HVAC System Improvements	2,055	0.0	70.9	\$1,169.43	\$14,077.65	\$0.00	\$14,077.65	12.0	10,375
Implement Demand Control Ventilation (DCV)	2,055	0.0	20.8	\$507.40	\$13,594.20	\$0.00	\$13,594.20	26.8	4,500
Install Pipe Insulation	0	0.0	50.2	\$662.03	\$483.45	\$0.00	\$483.45	0.7	5,875
Domestic Water Heating Upgrade	0	0.0	163.7	\$1,790.59	\$451.71	\$0.00	\$451.71	0.3	19,166
Install Low-Flow DHW Devices	0	0.0	163.7	\$1,790.59	\$451.71	\$0.00	\$451.71	0.3	19,166
Food Service Equipment & Refrigeration Measures	10,856	0.5	0.0	\$1,388.27	\$11,460.80	\$350.00	\$11,110.80	8.0	10,932
Refrigerator/Freezer Case Electrically Commutated Motors	3,393	0.4	0.0	\$437.28	\$4,246.20	\$0.00	\$4,246.20	9.7	3,416
Refrigeration Controls	7,463	0.1	0.0	\$950.99	\$7,214.60	\$350.00	\$6,864.60	7.2	7,515
Plug Load Equipment Control - Vending Machine	9,087	1.0	0.0	\$1,155.52	\$1,840.00	\$250.00	\$1,590.00	1.4	9,150
Vending Machine Control	9,087	1.0	0.0	\$1,155.52	\$1,840.00	\$250.00	\$1,590.00	1.4	9,150
TOTALS	1,377,347	234.2	830.6	\$184,918.43	\$1,267,975.34	\$108,799.57	\$1,159,175.77	6.3	1,484,235

* - 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

	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	987,269	148.2	-186.0	\$124,834.79	\$370,698.88	\$62,810.00	\$307,888.88	2.5	972,399
ECM 1	Install LED Fixtures	236,506	29.1	-30.4	\$30,110.37	\$183,526.37	\$25,135.00	\$158,391.37	5.3	234,595
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	1,806	0.2	-0.4	\$229.33	\$404.12	\$40.00	\$364.12	1.6	1,774
ECM 3	Retrofit Fixtures with LED Lamps	748,958	118.9	-155.1	\$94,495.09	\$186,768.39	\$37,635.00	\$149,133.39	1.6	736,030
	Lighting Control Measures	184,525	27.0	-38.6	\$23,374.44	\$93,753.00	\$8,760.00	\$84,993.00	3.6	181,297
ECM 4	Install Occupancy Sensor Lighting Controls	164,524	24.2	-34.4	\$20,853.63	\$76,878.00	\$8,760.00	\$68,118.00	3.3	161,647
ECM 5	Install High/Low Lighting Controls	20,000	2.9	-4.2	\$2,520.81	\$16,875.00	\$0.00	\$16,875.00	6.7	19,650
	Variable Frequency Drive (VFD) Measures	131,030	32.9	0.0	\$16,182.06	\$157,056.14	\$8,546.67	\$148,509.47	9.2	131,946
ECM 6	Install VFDs on Constant Volume (CV) Fans	131,030	32.9	0.0	\$16,182.06	\$157,056.14	\$8,546.67	\$148,509.47	9.2	131,946
	HVAC System Improvements	0	0.0	50.2	\$662.03	\$483.45	\$0.00	\$483.45	0.7	5,875
ECM 7	Install Pipe Insulation	0	0.0	50.2	\$662.03	\$483.45	\$0.00	\$483.45	0.7	5,875
	Domestic Water Heating Upgrade	0	0.0	163.7	\$1,790.59	\$451.71	\$0.00	\$451.71	0.3	19,166
ECM 8	Install Low-Flow DHW Devices	0	0.0	163.7	\$1,790.59	\$451.71	\$0.00	\$451.71	0.3	19,166
	Food Service Equipment & Refrigeration Measures	10,856	0.5	0.0	\$1,388.27	\$11,460.80	\$350.00	\$11,110.80	8.0	10,932
ECM 9	Refrigerator/Freezer Case Electrically Commutated Motors	3,393	0.4	0.0	\$437.28	\$4,246.20	\$0.00	\$4,246.20	9.7	3,416
ECM 10	Refrigeration Controls	7,463	0.1	0.0	\$950.99	\$7,214.60	\$350.00	\$6,864.60	7.2	7,515
	Plug Load Equipment Control - Vending Machine	9,087	1.0	0.0	\$1,155.52	\$1,840.00	\$250.00	\$1,590.00	1.4	9,150
ECM 11	Vending Machine Control	9,087	1.0	0.0	\$1,155.52	\$1,840.00	\$250.00	\$1,590.00	1.4	9,150
	TOTALS	1,322,766	209.7	-10.7	\$169,387.70	\$635,743.98	\$80,716.67	\$555,027.31	3.3	1,330,766

* - 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).



LINDENWOLD HIGH SCHOOL

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program

#	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 (Ibs)
Lighting	Upgrades		488,420	70.5	-95	\$59,429	\$159,084	\$21,551	\$137,533	2.3	480,687
ECM 1	Install LED Fixtures	Yes	153,338	18.9	-25	\$18,699	\$84,182	\$13,120	\$71,062	3.8	151,427
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	1,198	0.2	0	\$146	\$303	\$30	\$273	1.9	1,177
ECM 3	Retrofit Fixtures with LED Lamps	Yes	333,884	51.5	-69	\$40,584	\$74,599	\$8,401	\$66,198	1.6	328,082
Lighting	Control Measures		68,471	8.7	-14	\$8,322	\$31,109	\$2,530	\$28,579	3.4	67,274
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	58,723	7.5	-12	\$7,137	\$23,684	\$2,530	\$21,154	3.0	57,696
ECM 5	Install High/Low Lighting Controls	Yes	9,748	1.2	-2	\$1,185	\$7,425	\$0	\$7,425	6.3	9,578
Variable	Frequency Drive (VFD) Measures		131,030	32.9	0	\$16,182	\$157,056	\$8,547	\$148,509	9.2	131,946
ECM 6	Install VFDs on Constant Volume (CV) Fans	Yes	131,030	32.9	0	\$16,182	\$157,056	\$8,547	\$148,509	9.2	131,946
Electric	Unitary HVAC Measures		28,411	12.8	0	\$3,509	\$118,347	\$5,167	\$113,180	32.3	28,610
ECM 7	Install High Efficiency Air Conditioning Units	No	28,411	12.8	0	\$3,509	\$118,347	\$5,167	\$113,180	32.3	28,610
Gas Hea	ting (HVAC/Process) Replacement		0	0.0	594	\$5,555	\$181,875	\$4,485	\$177,390	31.9	69,541
ECM 8	Install High Efficiency Hot Water Boilers	No	0	0.0	440	\$4,115	\$163,749	\$1,285	\$162,464	39.5	51,516
ECM 9	Install High Efficiency Furnaces	No	0	0.0	154	\$1,440	\$18,126	\$3,200	\$14,926	10.4	18,025
Domest	ic Water Heating Upgrade		0	0.0	94	\$879	\$237	\$0	\$237	0.3	11,000
ECM 10	Install Low-Flow DHW Devices	Yes	0	0.0	94	\$879	\$237	\$0	\$237	0.3	11,000
Food Se	rvice & Refrigeration Measures		14,255	1.0	0	\$1,760	\$7,066	\$400	\$6,666	3.8	14,354
ECM 11	Refrigerator/Freezer Case Electrically Commutated Motors	Yes	1,376	0.2	0	\$170	\$1,820	\$0	\$1,820	10.7	1,386
ECM 12	Refrigeration Controls	Yes	5,746	0.1	0	\$710	\$3,867	\$200	\$3,667	5.2	5,786
ECM 13	Vending Machine Control	Yes	7,132	0.8	0	\$881	\$1,380	\$200	\$1,180	1.3	7,182
	TOTALS (COST EFFECTIVE MEASURES)		702,176	113.2	-16	\$86,572	\$354,553	\$33,028	\$321,525	3.7	705,261
	TOTALS (ALL MEASURES)		730,587	126.0	578	\$95,636	\$654,774	\$42,679	\$612,095	6.4	803,411

LINDENWOLD MIDDLE 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 (Ibs)
Lighting	Upgrades		220,820	33.7	-41	\$30,499	\$105,697	\$19,905	\$85,792	2.8	217,532
ECM 1	Install LED Fixtures	Yes	45,586	6.4	-5	\$6,342	\$57,706	\$7,700	\$50,006	7.9	45,324
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	607	0.0	0	\$84	\$101	\$10	\$91	1.1	596
ECM 3	Retrofit Fixtures with LED Lamps	Yes	174,627	27.3	-36	\$24,073	\$47,889	\$12,195	\$35,694	1.5	171,612
Lighting	Control Measures		48,324	7.0	-10	\$6,660	\$25,515	\$2,520	\$22,995	3.5	47,479
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	44,189	6.4	-9	\$6,090	\$20,790	\$2,520	\$18,270	3.0	43,416
ECM 5	Install High/Low Lighting Controls	Yes	4,135	0.6	-1	\$570	\$4,725	\$0	\$4,725	8.3	4,063
Electric l	Jnitary HVAC Measures		2,020	2.1	0	\$284	\$26,932	\$1,656	\$25,276	89.0	2,034
ECM 6	Install High Efficiency Air Conditioning Units	No	2,020	2.1	0	\$284	\$26,932	\$1,656	\$25,276	89.0	2,034
Gas Heat	ting (HVAC/Process) Replacement		0	0.0	83	\$1,075	\$120,247	\$7,142	\$113,104	105.2	9,679
ECM 7	Install High Efficiency Steam Boilers	No	0	0.0	83	\$1,075	\$120,247	\$7,142	\$113,104	105.2	9,679
HVAC Sy	stem Improvements		0	0.0	11	\$141	\$5,438	\$0	\$5,438	38.7	1,266
ECM 8	Implement Demand Control Ventilation (DCV)	No	0	0.0	11	\$141	\$5,438	\$0	\$5,438	38.7	1,266
Domesti	c Water Heating Upgrade		0	0.0	48	\$629	\$122	\$0	\$122	0.2	5,667
ECM 9	Install Low-Flow DHW Devices	Yes	0	0.0	48	\$629	\$122	\$0	\$122	0.2	5,667
Food Se	rvice & Refrigeration Measures		4,458	0.4	0	\$627	\$5,021	\$200	\$4,821	7.7	4,489
ECM 10	Refrigerator/Freezer Case Electrically Commutated Motors	Yes	786	0.1	0	\$111	\$1,213	\$0	\$1,213	11.0	792
ECM 11	Refrigeration Controls	Yes	1,717	0.0	0	\$241	\$3,348	\$150	\$3,198	13.3	1,729
ECM 12	Vending Machine Control	Yes	1,954	0.2	0	\$275	\$460	\$50	\$410	1.5	1,968
	TOTALS (COST EFFECTIVE MEASURES)		273,603	41.1	-3	\$38,415	\$136,355	\$22,625	\$113,730	3.0	275,167
	TOTALS (ALL MEASURES)		275,622	43.2	90	\$39,915	\$288,971	\$31,423	\$257,548	6.5	288,146



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ELEMENTARY SCHOOL #4

#	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		143,372	22.2	-23	\$20,014	\$60,065	\$11,444	\$48,621	2.4	141,640
ECM 1	Install LED Fixtures	Yes	28,557	2.8	0	\$4,048	\$28,114	\$2,915	\$25,199	6.2	28,756
ECM 2	Retrofit Fixtures with LED Lamps	Yes	114,816	19.4	-23	\$15,966	\$31,951	\$8,529	\$23,422	1.5	112,884
Lighting	Control Measures		31,993	5.4	-7	\$4,446	\$18,227	\$1,960	\$16,267	3.7	31,434
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	28,819	4.9	-6	\$4,005	\$16,202	\$1,960	\$14,242	3.6	28,315
ECM 4	Install High/Low Lighting Controls	Yes	3,175	0.5	-1	\$441	\$2,025	\$0	\$2,025	4.6	3,119
Variable	Frequency Drive (VFD) Measures		3,995	0.4	0	\$566	\$10,172	\$0	\$10,172	18.0	4,023
ECM 5	Install VFDs on Heating Water Pumps	No	3,995	0.4	0	\$566	\$10,172	\$0	\$10,172	18.0	4,023
Electric	Unitary HVAC Measures		3,123	4.0	0	\$443	\$57,117	\$2,386	\$54,731	123.6	3,144
ECM 6	Install High Efficiency Air Conditioning Units	No	3,123	4.0	0	\$443	\$57,117	\$2,386	\$54,731	123.6	3,144
Gas Hea	ting (HVAC/Process) Replacement		0	0.0	39	\$519	\$16,177	\$2,000	\$14,177	27.3	4,583
ECM 7	Install High Efficiency Furnaces	No	0	0.0	39	\$519	\$16,177	\$2,000	\$14,177	27.3	4,583
HVAC Sy	stem Improvements		107	0.0	24	\$333	\$2,939	\$0	\$2,939	8.8	2,915
ECM 8	Implement Demand Control Ventilation (DCV)	No	107	0.0	4	\$62	\$2,719	\$0	\$2,719	44.1	518
ECM 9	Install Pipe Insulation	Yes	0	0.0	20	\$272	\$220	\$0	\$220	0.8	2,397
Domest	ic Water Heating Upgrade		0	0.0	16	\$208	\$79	\$0	\$79	0.4	1,833
ECM 10	Install Low-Flow DHW Devices	Yes	0	0.0	16	\$208	\$79	\$0	\$79	0.4	1,833
Food Se	rvice & Refrigeration Measures		615	0.0	0	\$87	\$607	\$0	\$607	7.0	619
ECM 11	Refrigerator/Freezer Case Electrically Commutated Motors	Yes	615	0.0	0	\$87	\$607	\$0	\$607	7.0	619
	TOTALS (COST EFFECTIVE MEASURES)		175,981	27.7	6	\$25,026	\$79,197	\$13,404	\$65,793	2.6	177,924
	TOTALS (ALL MEASURES)		183,206	32.1	49	\$26,616	\$165,382	\$17,790	\$147,592	5.5	190,192





ELEMENTARY SCHOOL #5

program™

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (Ibs)
Lighting	Upgrades		134,656	21.7	\$14,894	\$45,853	\$9,910	\$35,943	2.4	132,540
ECM 1	Install LED Fixtures	Yes	9,025	1.0	\$1,021	\$13,524	\$1,400	\$12,124	11.9	9,088
ECM 2	Retrofit Fixtures with LED Lamps	Yes	125,631	20.7	\$13,872	\$32,329	\$8,510	\$23,819	1.7	123,452
Lighting	Control Measures		35,736	5.9	\$3,945	\$18,902	\$1,750	\$17,152	4.3	35,111
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	32,794	5.4	\$3,621	\$16,202	\$1,750	\$14,452	4.0	32,220
ECM 4	Install High/Low Lighting Controls	Yes	2,942	0.5	\$325	\$2,700	\$0	\$2,700	8.3	2,890
Variable	Frequency Drive (VFD) Measures		2,693	0.3	\$305	\$6,781	\$0	\$6,781	22.3	2,712
ECM 5	Install VFDs on Heating Water Pumps	No	2,693	0.3	\$305	\$6,781	\$0	\$6,781	22.3	2,712
Electric	Unitary HVAC Measures		12,285	4.9	\$1,390	\$66,999	\$2 <i>,</i> 848	\$64,151	46.2	12,371
ECM 6	Install High Efficiency Air Conditioning Units	No	12,285	4.9	\$1,390	\$66,999	\$2,848	\$64,151	46.2	12,371
Gas Hea	ting (HVAC/Process) Replacement		0	0.0	\$1,378	\$13,991	\$2,400	\$11,591	8.4	12,272
ECM 7	Install High Efficiency Furnaces	No	0	0.0	\$1,378	\$13,991	\$2,400	\$11,591	8.4	12,272
HVAC Sy	rstem Improvements		1,947	0.0	\$696	\$5,701	\$0	\$5,701	8.2	6,194
ECM 8	Implement Demand Control Ventilation (DCV)	No	1,947	0.0	\$305	\$5,438	\$0	\$5 <i>,</i> 438	17.8	2,716
ECM 9	Install Pipe Insulation	Yes	0	0.0	\$390	\$264	\$0	\$264	0.7	3,478
Domest	ic Water Heating Upgrade		0	0.0	\$75	\$14	\$0	\$14	0.2	667
ECM 10	Install Low-Flow DHW Devices	Yes	0	0.0	\$75	\$14	\$0	\$14	0.2	667
Food Se	rvice & Refrigeration Measures		615	0.0	\$70	\$607	\$0	\$607	8.7	619
ECM 11	Refrigerator/Freezer Case Electrically Commutated Motors	Yes	615	0.0	\$70	\$607	\$0	\$607	8.7	619
	TOTALS (COST EFFECTIVE MEASURES)		171,006	27.6	\$19,374	\$65,639	\$11,660	\$53,979	2.8	172,415
	TOTALS (ALL MEASURES)		187,931	32.8	\$22,751	\$158,848	\$16,908	\$141,940	6.2	202,486
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SOLAR ENERGY GENERATION POTENTIAL

	Elementary School #4	Elementary School #5
Potential:	MEDIUM	MEDIUM
System Potential: (kW)	97	86
Electric Generation: (kWh per year)	115,563	102,458
Displaced Cost: (per year)	\$16,380	\$11,590

SREC Registration Program (SRP):

http://www.NJCleanEnergy.com/SREC

Community Solar Energy Pilot Program:

http://www.NJCleanEnergy.com/Com munitySolar



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



CLEAN ENERGY PROGRAM PORTFOLIO

ELIGIBLE SECTORS

INCENTIVE PROGRAMS

OTHER PROGRAMS



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

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

Renewable Energy Generation:

- SREC Registration Program (SRP)
- Community Solar

RECOMMENDED NJCEP INCENTIVES PER BUILDING

Facility	Pay For Performance	Direct Install	SmartStart	CTEEP
Lindenwold High School	Х		Х	Х
Lindenwold Middle School			Х	Х
Elementary School #4		Х	Х	Х
Elementary School #5		Х	Х	Х



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 ParticipatingPartners

Incentives: Incentives paid in <u>three</u> installments

Public Schools

- 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 <u>80%</u> for UEZ/OZ/ MUNI/<u>K-12</u> <u>Public Schools</u>) up to \$2MM per project / \$4MM per entity annually

Incentive #2 & #3 are doubled for UEZ/OZ/ MUNI/K-12



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 (<u>\$250K</u>UEZ/OZ/ MUNI/<u>K-12 Public Schools</u>), or
 - \$250,000 entity cap (<u>\$4MM</u>UEZ/OZ/MUNI/<u>K-12 Public Schools</u>)



DIRECT INSTALL

NJCleanEnergy.com/DI

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

INCENTIVE FUNDING	CUSTOMER								
Up to 80% of installed cost is paid directly to the contractor	20% of installed cost								
All other eligible facilities:									
INCENTIVE FUNDING	CUSTOMER								
Up to 70% of installed cost is paid directly to the contractor	30% of installed cost								





Participating Contractor

Hutchinson Mechanical Services Pete Hatton 856-429-5828 x259 petehatton@hutchbiz.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 <u>all</u> 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/ MUNI/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



SMARTSTART, CTEEP, & P4P: 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:

Peter Druckenmiller Program Manager South Jersey Gas 609-572-4271

wdruckenmiller@sjindustries.com







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Elementary School #4		Х	Х	Х
Elementary School #5		Х	Х	Х



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





Program

ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

FOR MORE INFORMATION

Michelle Rossi ESIP Coordinator Office: 609-633-9641 ESIP@bpu.nj.gov



FOR MORE INFORMATION

Visit NJCleanEnergy.com Call (732) 855-0033

Gary Finger Regional Outreach Manager 856.780.8553 gfinger@trccompanies.com



QUESTIONS



