

New Jersey's Clean Energy Program

LGEA Exit Meeting for:

*Gloucester County Special Services School District
Gloucester County Vocational-Technical School*

Moussa Traore, TRC

December 21, 2017

Introductions



Gloucester County Special Services & Vo-Tech

- Assistant Superintendent: Amy Capriotti
- Superintendent: Michael Dicken
- Purchasing Coordinator: Bob McErlane
- Facilities Manager (GCSS): Kevin Howarth
- Facility Consultant: Harry Elton
- Architect: Bob Garrison

NJ Clean Energy Program – TRC & BPU

- Auditor: Moussa Traore
- Outreach Manager: Jim Friedl
- BPU Ombudsman / ESIP: Gary Finger

Agenda



- Overview of LGEA process
- Energy use & existing conditions
- Review of Energy Conservation Measures (ECMs) identified
- Questions or concerns regarding the draft audit report
- Overview of NJCEP equipment incentives
- Next steps for [Applicant Name]

Process to Draft Report



- Application submitted to NJCEP
- Site Visit Performed
- Utility Analysis
- Baseline Condition
- Analysis
- Recommendations
- Report

Sites Audited



Gloucester County Special Services School District

- (1) Bankbridge Regional School
- (2) Bankbridge Development Center
- (3) Barn
- (4) Bankbridge Elementary School
- (5) Greenhouse

Gloucester County Vocational Technical School

Summary of All Evaluated ECMs – GCSS



Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Natural Gas Savings (MMBtu)	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	517,479	73.8	0.0	0.0	\$74,300.67	\$234,971.30	\$33,060.00	\$201,911.30	2.7	521,097
Install LED Fixtures	61,382	9.3	0.0	0.0	\$8,648.50	\$57,606.54	\$5,150.00	\$52,456.54	6.1	61,812
Retrofit Fixtures with LED Lamps	452,269	64.3	0.0	0.0	\$65,103.83	\$170,051.02	\$27,910.00	\$142,141.02	2.2	455,431
Install LED Exit Signs	3,828	0.3	0.0	0.0	\$548.34	\$7,313.74	\$0.00	\$7,313.74	13.3	3,855
Lighting Control Measures	121,151	17.2	0.0	0.0	\$17,396.90	\$42,406.00	\$5,870.00	\$36,536.00	2.1	121,998
Install Occupancy Sensor Lighting Controls	105,639	14.9	0.0	0.0	\$15,172.15	\$35,006.00	\$5,870.00	\$29,136.00	1.9	106,378
Install High/Low Lighting Controls	15,512	2.2	0.0	0.0	\$2,224.75	\$7,400.00	\$0.00	\$7,400.00	3.3	15,621
Motor Upgrades	1,708	0.5	0.0	0.0	\$245.82	\$4,109.60	\$0.00	\$4,109.60	16.7	1,720
Premium Efficiency Motors	1,708	0.5	0.0	0.0	\$245.82	\$4,109.60	\$0.00	\$4,109.60	16.7	1,720
Variable Frequency Drive (VFD) Measures	129,481	15.4	0.0	0.0	\$18,097.31	\$48,572.45	\$4,500.00	\$44,072.45	2.4	130,386
Install VFDs on Chilled Water Pumps	54,787	7.3	0.0	0.0	\$7,545.18	\$16,944.10	\$3,600.00	\$13,344.10	1.8	55,170
Install VFDs on Hot Water Pumps	61,085	8.1	0.0	0.0	\$8,678.00	\$26,433.90	\$0.00	\$26,433.90	3.0	61,512
Install VFDs on Cooling Tower Fans	13,608	0.0	0.0	0.0	\$1,874.13	\$5,194.45	\$900.00	\$4,294.45	2.3	13,704
Electric Unitary HVAC Measures	53,831	31.9	0.0	0.0	\$7,834.38	\$169,557.75	\$8,400.00	\$161,157.75	20.6	54,208
Install High Efficiency Electric AC	53,831	31.9	0.0	0.0	\$7,834.38	\$169,557.75	\$8,400.00	\$161,157.75	20.6	54,208
Electric Chiller Replacement	126,720	141.5	0.0	0.0	\$17,451.55	\$197,047.90	\$10,000.00	\$187,047.90	10.7	127,606
Install High Efficiency Chillers	126,720	141.5	0.0	0.0	\$17,451.55	\$197,047.90	\$10,000.00	\$187,047.90	10.7	127,606
Gas Heating (HVAC/Process) Replacement	0	0.0	81.9	81.9	\$1,004.03	\$12,857.26	\$0.00	\$12,857.26	12.8	9,592
Install High Efficiency Unit Heaters	0	0.0	81.9	81.9	\$1,004.03	\$12,857.26	\$0.00	\$12,857.26	12.8	9,592
Plug Load Equipment Control - Vending Machine	1,954	0.0	0.0	0.0	\$284.43	\$460.00	\$0.00	\$460.00	1.6	1,968
Vending Machine Control	1,954	0.0	0.0	0.0	\$284.43	\$460.00	\$0.00	\$460.00	1.6	1,968
TOTALS	952,325	280.3	81.9	81.9	\$136,615.09	\$709,982.26	\$61,830.00	\$648,152.26	4.7	968,575

* - 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).

Summary of Recommended ECMs – GCSS



Energy Conservation Measure		Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Natural Gas Savings (MMBtu)	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		517,479	73.8	0.0	0.0	\$74,300.67	\$234,971.30	\$33,060.00	\$201,911.30	2.7	521,097
ECM 1	Install LED Fixtures	61,382	9.3	0.0	0.0	\$8,648.50	\$57,606.54	\$5,150.00	\$52,456.54	6.1	61,812
ECM 2	Retrofit Fixtures with LED Lamps	452,269	64.3	0.0	0.0	\$65,103.83	\$170,051.02	\$27,910.00	\$142,141.02	2.2	455,431
ECM 3	Install LED Exit Signs	3,828	0.3	0.0	0.0	\$548.34	\$7,313.74	\$0.00	\$7,313.74	13.3	3,855
Lighting Control Measures		121,151	17.2	0.0	0.0	\$17,396.90	\$42,406.00	\$5,870.00	\$36,536.00	2.1	121,998
ECM 4	Install Occupancy Sensor Lighting Controls	105,639	14.9	0.0	0.0	\$15,172.15	\$35,006.00	\$5,870.00	\$29,136.00	1.9	106,378
ECM 5	Install High/Low Lighting Controls	15,512	2.2	0.0	0.0	\$2,224.75	\$7,400.00	\$0.00	\$7,400.00	3.3	15,621
Motor Upgrades		1,362	0.4	0.0	0.0	\$198.15	\$2,262.88	\$0.00	\$2,262.88	11.4	1,371
ECM 6	Premium Efficiency Motors	1,362	0.4	0.0	0.0	\$198.15	\$2,262.88	\$0.00	\$2,262.88	11.4	1,371
Variable Frequency Drive (VFD) Measures		129,481	15.4	0.0	0.0	\$18,097.31	\$48,572.45	\$4,500.00	\$44,072.45	2.4	130,386
ECM 7	Install VFDs on Chilled Water Pumps	54,787	7.3	0.0	0.0	\$7,545.18	\$16,944.10	\$3,600.00	\$13,344.10	1.8	55,170
ECM 8	Install VFDs on Hot Water Pumps	61,085	8.1	0.0	0.0	\$8,678.00	\$26,433.90	\$0.00	\$26,433.90	3.0	61,512
ECM 9	Install VFDs on Cooling Tower Fans	13,608	0.0	0.0	0.0	\$1,874.13	\$5,194.45	\$900.00	\$4,294.45	2.3	13,704
Electric Chiller Replacement		126,720	141.5	0.0	0.0	\$17,451.55	\$197,047.90	\$10,000.00	\$187,047.90	10.7	127,606
ECM 10	Install High Efficiency Chillers	126,720	141.5	0.0	0.0	\$17,451.55	\$197,047.90	\$10,000.00	\$187,047.90	10.7	127,606
ECM 11	Install High Efficiency Unit Heaters	0	0.0	81.9	81.9	\$1,004.03	\$12,857.26	\$0.00	\$12,857.26	12.8	9,592
Plug Load Equipment Control - Vending Machine		1,954	0.0	0.0	0.0	\$284.43	\$460.00	\$0.00	\$460.00	1.6	1,968
ECM 12	Vending Machine Control	1,954	0.0	0.0	0.0	\$284.43	\$460.00	\$0.00	\$460.00	1.6	1,968
TOTALS		898,147	248.3	81.9	81.9	\$128,733.04	\$538,577.79	\$53,430.00	\$485,147.79	3.8	914,019

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Summary of Non-Recommended ECMs – GCSS

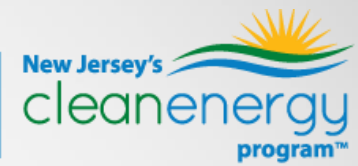


Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Motor Upgrades	346	0.1	\$47.67	\$1,846.72	\$0.00	\$1,846.72	38.7	349
Premium Efficiency Motors	346	0.1	\$47.67	\$1,846.72	\$0.00	\$1,846.72	38.7	349
Electric Unitary HVAC Measures	53,831	31.9	\$7,834.38	\$169,557.75	\$8,400.00	\$161,157.75	20.6	54,208
Install High Efficiency Electric AC	53,831	31.9	\$7,834.38	\$169,557.75	\$8,400.00	\$161,157.75	20.6	54,208
TOTALS	54,177	32.0	\$7,882.05	\$171,404.47	\$8,400.00	\$163,004.47	20.7	54,556

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

(1) Bankbridge Regional School



Overview of Systems, Baseline & Existing Conditions:

- Building Envelope
- Lighting System
- HVAC and Mechanical Systems

Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs

(1) Bankbridge Regional School



Energy Conservation Measure		Recommend?	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 (lbs)
Lighting Upgrades			266,549	38.6	\$36,708.49	\$127,000.13	\$18,440.00	\$108,560.13	3.0	268,413
ECM 1	Install LED Fixtures	Yes	49,034	6.7	\$6,752.82	\$33,493.80	\$4,050.00	\$29,443.80	4.4	49,377
ECM 2	Retrofit Fixtures with LED Lamps	Yes	215,816	31.8	\$29,721.62	\$90,064.57	\$14,390.00	\$75,674.57	2.5	217,325
ECM 3	Install LED Exit Signs	Yes	1,699	0.1	\$234.05	\$3,441.76	\$0.00	\$3,441.76	14.7	1,711
Lighting Control Measures			60,620	8.9	\$8,348.48	\$22,130.00	\$3,110.00	\$19,020.00	2.3	61,044
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	52,601	7.7	\$7,244.13	\$18,530.00	\$3,110.00	\$15,420.00	2.1	52,969
ECM 5	Install High/Low Lighting Controls	Yes	8,019	1.2	\$1,104.34	\$3,600.00	\$0.00	\$3,600.00	3.3	8,075
Motor Upgrades			346	0.1	\$47.67	\$1,846.72	\$0.00	\$1,846.72	38.7	349
	Premium Efficiency Motors	No	346	0.1	\$47.67	\$1,846.72	\$0.00	\$1,846.72	38.7	349
Variable Frequency Drive (VFD) Measures			105,483	12.2	\$14,526.81	\$34,807.15	\$4,500.00	\$30,307.15	2.1	106,220
ECM 6	Install VFDs on Chilled Water Pumps	Yes	54,787	7.3	\$7,545.18	\$16,944.10	\$3,600.00	\$13,344.10	1.8	55,170
ECM 7	Install VFDs on Hot Water Pumps	Yes	37,087	4.9	\$5,107.51	\$12,668.60	\$0.00	\$12,668.60	2.5	37,346
ECM 8	Install VFDs on Cooling Tower Fans	Yes	13,608	0.0	\$1,874.13	\$5,194.45	\$900.00	\$4,294.45	2.3	13,704
Electric Chiller Replacement			126,720	141.5	\$17,451.55	\$197,047.90	\$10,000.00	\$187,047.90	10.7	127,606
ECM 9	Install High Efficiency Chillers	Yes	126,720	141.5	\$17,451.55	\$197,047.90	\$10,000.00	\$187,047.90	10.7	127,606
TOTALS RECOMMENDED MEASURES			559,372	201.3	\$77,035.33	\$380,985.18	\$36,050.00	\$344,935.18	4.5	563,284
TOTALS EVALUATED MEASURES			559,719	201.4	\$77,083.01	\$382,831.90	\$36,050.00	\$346,781.90	4.5	563,632

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

(2) Bankbridge Development Center



Overview of Systems, Baseline & Existing Conditions:

- Building Envelope
- Lighting System
- HVAC and Mechanical Systems

Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs

(2) Bankbridge Development Center



Energy Conservation Measure		Recommend?	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			137,783	21.0	0.0	\$21,088.73	\$65,415.39	\$9,675.00	\$55,740.39	2.6	138,746
ECM 1	Install LED Fixtures	Yes	9,973	1.3	0.0	\$1,526.48	\$17,576.94	\$900.00	\$16,676.94	10.9	10,043
ECM 2	Retrofit Fixtures with LED Lamps	Yes	127,810	19.7	0.0	\$19,562.25	\$47,838.45	\$8,775.00	\$39,063.45	2.0	128,703
Lighting Control Measures			31,567	4.9	0.0	\$4,831.62	\$12,072.00	\$1,610.00	\$10,462.00	2.2	31,788
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	27,598	4.3	0.0	\$4,224.04	\$9,672.00	\$1,610.00	\$8,062.00	1.9	27,791
ECM 4	Install High/Low Lighting Controls	Yes	3,970	0.6	0.0	\$607.58	\$2,400.00	\$0.00	\$2,400.00	4.0	3,997
Variable Frequency Drive (VFD) Measures			10,358	1.3	0.0	\$1,585.36	\$6,551.70	\$0.00	\$6,551.70	4.1	10,430
ECM 5	Install VFDs on Hot Water Pumps	Yes	10,358	1.3	0.0	\$1,585.36	\$6,551.70	\$0.00	\$6,551.70	4.1	10,430
TOTALS			179,708	27.2	0.0	\$27,505.71	\$84,039.09	\$11,285.00	\$72,754.09	2.6	180,965

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

(3) Barn



Overview of Systems, Baseline & Existing Conditions:

- Building Envelope
- Lighting System
- HVAC and Mechanical Systems

Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs

(3) Barn



Energy Conservation Measure		Recommend?	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			1,819	1.5	0.0	\$310.67	\$7,269.42	\$190.00	\$7,079.42	22.8	1,831
ECM 1	Install LED Fixtures	Yes	1,271	1.2	0.0	\$217.19	\$6,085.80	\$50.00	\$6,035.80	27.8	1,280
ECM 2	Retrofit Fixtures with LED Lamps	Yes	337	0.3	0.0	\$57.56	\$753.40	\$140.00	\$613.40	10.7	339
ECM 3	Install LED Exit Signs	Yes	210	0.0	0.0	\$35.91	\$430.22	\$0.00	\$430.22	12.0	212
Lighting Control Measures			61	0.1	0.0	\$10.43	\$232.00	\$40.00	\$192.00	18.4	62
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	61	0.1	0.0	\$10.43	\$232.00	\$40.00	\$192.00	18.4	62
Gas Heating (HVAC/Process) Replacement			0	0.0	30.0	\$381.56	\$5,844.21	\$0.00	\$5,844.21	15.3	3,515
ECM 5	Install High Efficiency Unit Heaters	Yes	0	0.0	30.0	\$381.56	\$5,844.21	\$0.00	\$5,844.21	15.3	3,515
TOTALS			1,880	1.6	30.0	\$702.66	\$13,345.63	\$230.00	\$13,115.63	18.7	5,408

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

(4) Bankbridge Elementary School



Overview of Systems, Baseline & Existing Conditions:

- Building Envelope
- Lighting System
- HVAC and Mechanical Systems

Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs

(4) Bankbridge Elementary School



Energy Conservation Measure		Recommend?	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			110,119	12.5	0.0	\$16,026.31	\$34,621.25	\$4,605.00	\$30,016.25	1.9	110,889
ECM 1	Retrofit Fixtures with LED Lamps	Yes	108,306	12.4	0.0	\$15,762.40	\$31,394.60	\$4,605.00	\$26,789.60	1.7	109,063
ECM 2	Install LED Exit Signs	Yes	1,813	0.1	0.0	\$263.90	\$3,226.65	\$0.00	\$3,226.65	12.2	1,826
Lighting Control Measures			28,903	3.3	0.0	\$4,206.37	\$7,972.00	\$1,110.00	\$6,862.00	1.6	29,105
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	25,379	2.9	0.0	\$3,693.55	\$6,572.00	\$1,110.00	\$5,462.00	1.5	25,556
ECM 4	Install High/Low Lighting Controls	Yes	3,524	0.4	0.0	\$512.83	\$1,400.00	\$0.00	\$1,400.00	2.7	3,548
Motor Upgrades			1,362	0.4	0.0	\$198.15	\$2,262.88	\$0.00	\$2,262.88	11.4	1,371
ECM 5	Premium Efficiency Motors	Yes	1,362	0.4	0.0	\$198.15	\$2,262.88	\$0.00	\$2,262.88	11.4	1,371
Variable Frequency Drive (VFD) Measures			13,640	1.9	0.0	\$1,985.13	\$7,213.60	\$0.00	\$7,213.60	3.6	13,735
ECM 6	Install VFDs on Hot Water Pumps	Yes	13,640	1.9	0.0	\$1,985.13	\$7,213.60	\$0.00	\$7,213.60	3.6	13,735
Electric Unitary HVAC Measures			53,831	31.9	0.0	\$7,834.38	\$169,557.75	\$8,400.00	\$161,157.75	20.6	54,208
	Install High Efficiency Electric AC	No	53,831	31.9	0.0	\$7,834.38	\$169,557.75	\$8,400.00	\$161,157.75	20.6	54,208
Plug Load Equipment Control - Vending Machine			1,954	0.0	0.0	\$284.43	\$460.00	\$0.00	\$460.00	1.6	1,968
ECM 7	Vending Machine Control	Yes	1,954	0.0	0.0	\$284.43	\$460.00	\$0.00	\$460.00	1.6	1,968
TOTALS FOR RECOMMENDE MEASURES			155,978	18.1	0.0	\$22,700.39	\$52,529.73	\$5,715.00	\$46,814.73	2.1	157,068
TOTALS FOR EVALUATED MEASURES			209,809	50.0	0.0	\$30,534.77	\$222,087.48	\$14,115.00	\$207,972.48	6.8	211,276

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(5) Greenhouse



Overview of Systems, Baseline & Existing Conditions:

- Building Envelope
- Lighting System
- HVAC and Mechanical Systems

Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs

(5) Greenhouse



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		1,209	0.2	0.0	\$166.48	\$665.11	\$150.00	\$515.11	3.1	1,217
ECM 1	Install LED Fixtures	1,104	0.1	0.0	\$152.01	\$450.00	\$150.00	\$300.00	2.0	1,111
ECM 2	Install LED Exit Signs	105	0.0	0.0	\$14.48	\$215.11	\$0.00	\$215.11	14.9	106
Gas Heating (HVAC/Process) Replacement		0	0.0	51.9	\$622.47	\$7,013.05	\$0.00	\$7,013.05	11.3	6,077
ECM 3	Install High Efficiency Unit Heaters	0	0.0	51.9	\$622.47	\$7,013.05	\$0.00	\$7,013.05	11.3	6,077
TOTALS		1,209	0.2	51.9	\$788.95	\$7,678.16	\$150.00	\$7,528.16	9.5	7,294

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Overview of Systems, Baseline & Existing Conditions:

- Building Envelope
- Lighting System
- HVAC and Mechanical Systems

Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs
- On-Site Generation

Vocational-Technical School



Energy Conservation Measure		Recommend?	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			1,417,026	147.4	0.0	\$188,213.26	\$445,625.87	\$63,175.00	\$382,450.87	2.0	1,426,934
ECM 1	Install LED Fixtures	Yes	351,966	37.2	0.0	\$46,749.09	\$138,898.05	\$6,755.00	\$132,143.05	2.8	354,427
ECM 2	Retrofit Fixtures with LED Lamps	Yes	1,053,274	109.5	0.0	\$139,898.64	\$285,754.60	\$56,420.00	\$229,334.60	1.6	1,060,638
ECM 3	Install LED Exit Signs	Yes	11,787	0.8	0.0	\$1,565.53	\$20,973.23	\$0.00	\$20,973.23	13.4	11,869
Lighting Control Measures			316,120	32.7	0.0	\$41,987.86	\$87,198.00	\$12,130.00	\$75,068.00	1.8	318,330
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	262,634	27.1	0.0	\$34,883.76	\$76,198.00	\$12,130.00	\$64,068.00	1.8	264,470
ECM 5	Install High/Low Lighting Controls	Yes	53,486	5.5	0.0	\$7,104.09	\$11,000.00	\$0.00	\$11,000.00	1.5	53,859
Motor Upgrades			2,569	1.0	0.0	\$341.23	\$3,874.63	\$0.00	\$3,874.63	11.4	2,587
ECM 6	Premium Efficiency Motors	Yes	2,569	1.0	0.0	\$341.23	\$3,874.63	\$0.00	\$3,874.63	11.4	2,587
Variable Frequency Drive (VFD) Measures			26,893	8.2	124.3	\$5,031.53	\$25,770.41	\$3,000.00	\$22,770.41	4.5	41,640
ECM 7	Install VFDs on Constant Volume (CV) HVAC	Yes	13,563	6.8	0.0	\$1,801.53	\$11,021.55	\$2,000.00	\$9,021.55	5.0	13,658
	Install VFDs on Hot Water Pumps	No	4,793	1.3	0.0	\$636.68	\$11,473.01	\$0.00	\$11,473.01	18.0	4,827
ECM 8	Install VFDs on Single-Speed Kitchen Hoods	Yes	8,536	0.0	124.3	\$2,593.31	\$3,275.85	\$1,000.00	\$2,275.85	0.9	23,155
Electric Unitary HVAC Measures			190,068	112.6	0.0	\$25,245.32	\$918,604.50	\$31,429.64	\$887,174.86	35.1	191,397
	Install High Efficiency Electric AC	No	190,068	112.6	0.0	\$25,245.32	\$918,604.50	\$31,429.64	\$887,174.86	35.1	191,397
Gas Heating (HVAC/Process) Replacement			0	0.0	123.3	\$1,447.14	\$137,410.09	\$11,914.40	\$125,495.69	86.7	14,436
	Install High Efficiency Hot Water Boilers	No	0	0.0	66.6	\$781.17	\$58,291.13	\$6,714.40	\$51,576.73	66.0	7,793
	Install High Efficiency Furnaces	No	0	0.0	56.7	\$665.97	\$79,118.95	\$5,200.00	\$73,918.95	111.0	6,643
HVAC System Improvements			121,110	27.3	0.0	\$16,086.13	\$38,350.00	\$15,250.00	\$23,100.00	1.4	121,957
ECM 9	Install Dual Enthalpy Outside Economizer Control	Yes	121,110	27.3	0.0	\$16,086.13	\$38,350.00	\$15,250.00	\$23,100.00	1.4	121,957
Domestic Water Heating Upgrade			0	0.0	47.4	\$555.96	\$215.10	\$0.00	\$215.10	0.4	5,546
ECM 10	Install Low-Flow Domestic Hot Water Devices	Yes	0	0.0	47.4	\$555.96	\$215.10	\$0.00	\$215.10	0.4	5,546
Plug Load Equipment Control - Vending Machine			6,447	0.0	0.0	\$856.36	\$920.00	\$0.00	\$920.00	1.1	6,492
ECM 11	Vending Machine Control	Yes	6,447	0.0	0.0	\$856.36	\$920.00	\$0.00	\$920.00	1.1	6,492
TOTALS FOR RECOMMENDED MEASURES			1,885,372	215.2	171.7	\$252,435.64	\$590,481.00	\$93,555.00	\$496,926.00	2.0	1,918,660
TOTALS FOR EVALUATED MEASURES			2,080,233	329.1	295.0	\$279,764.78	\$1,657,968.60	\$136,899.04	\$1,521,069.56	5.4	2,129,319

* - 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).



Some Energy Efficient 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

PROGRAM PORTFOLIO



ELIGIBLE SECTORS

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

PROGRAMS

Equipment Rebates:

- Retrofit – Existing Buildings
- New Construction
- Direct Install – Small Business
- Large Energy Users

Whole Buildings:

- Pay for Performance Existing Buildings
- Pay for Performance New Construction

Energy Generation:

- Combined Heat and Power (CHP) and Fuel Cells

Recommended NJCEP Incentives



- SmartStart Buildings (i.e Retrofit – Existing Buildings)
- Pay for Performance (P4P)

SMARTSTART: OVERVIEW



- Individual incentives for broad project categories
- Available to all Commercial, Industrial, Agricultural, Government, Non-Profit and Institutional customers
- Provides two types of financial incentives for high efficiency equipment installation: **Prescriptive & Custom**
- Incentives up to \$500,000 per electric account and \$500,000 per natural gas account per fiscal year.

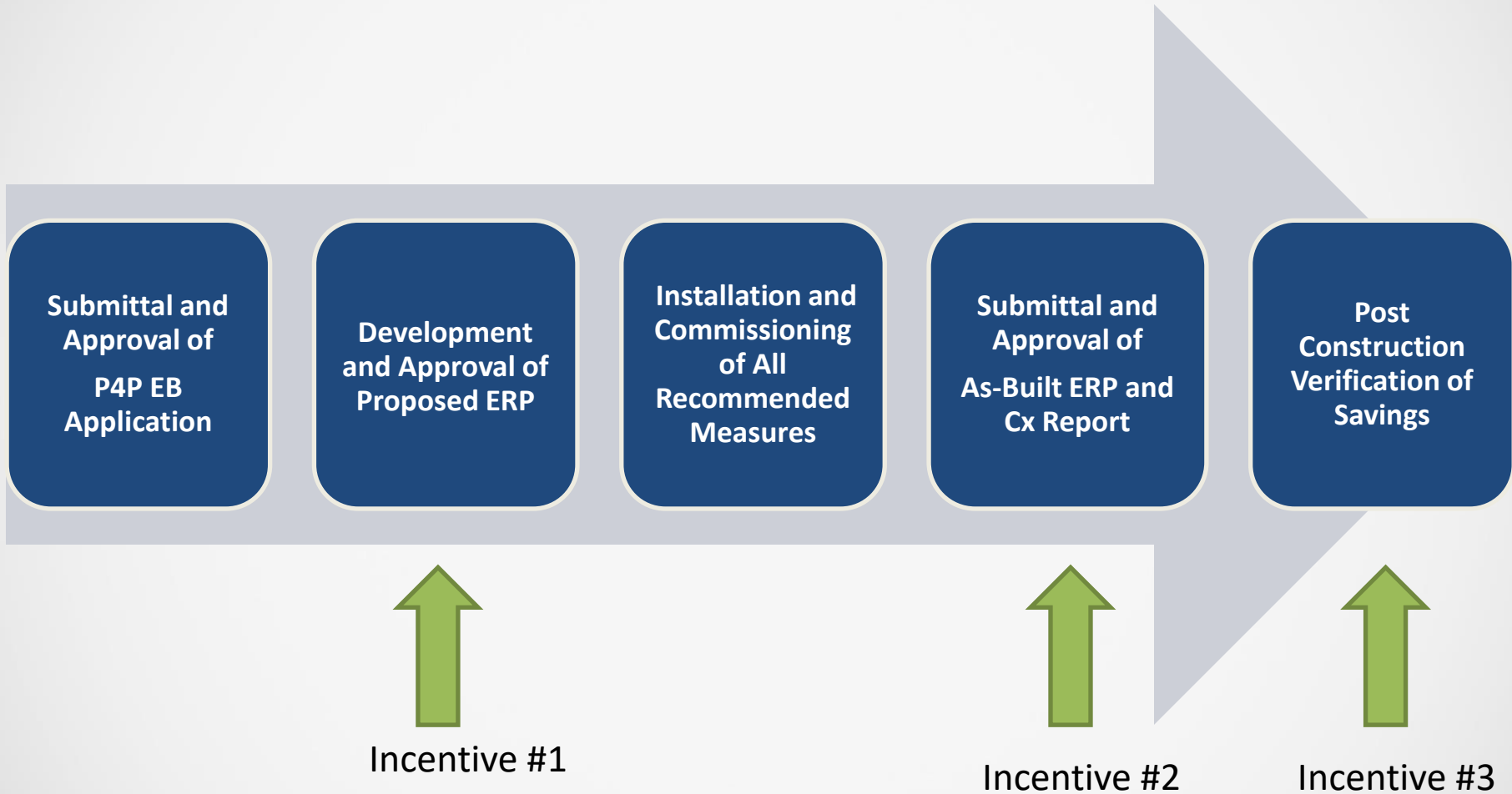
SMARTSTART: INCENTIVES



Prescriptive Incentives

- Specific incentives and individual applications for:
 - Lighting & Lighting Controls
 - Packed HVAC
 - Boilers & Water Heaters
 - Chillers
 - VFD's
 - Food Service
 - Refrigeration
- Project pre-approval required for all lighting measures

P4P – Existing Buildings (Process)



P4P – Existing Buildings (Incentives)

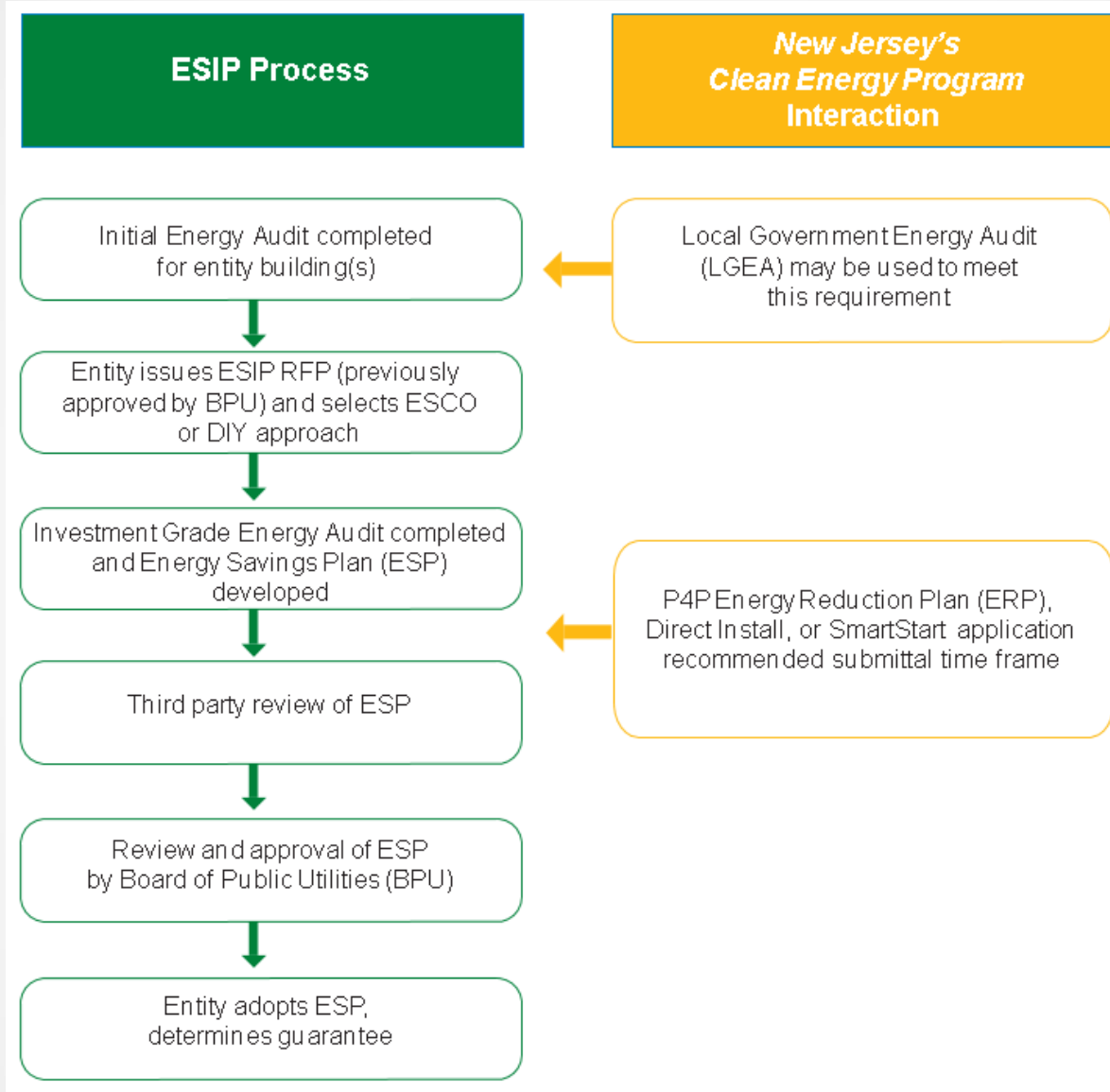


Incentive #1: Energy Reduction Plan		
	Incentive Amount:	\$0.15 per sq ft
	Minimum Incentive:	\$7,500
	Maximum Incentive:	\$50,000 or 50% of facility annual energy cost
Incentive #2: Installation of Recommended Measures		
	Minimum Performance Target:	15%
Electric Incentives	Base Incentive based on 15% savings:	\$0.09
	For each % over 15% add:	\$0.005
	Maximum Incentive:	\$0.11
Gas Incentives	Base Incentive based on 15 % savings:	\$0.90
	For each % over 15% add:	\$0.05
	Maximum Incentive:	\$1.25
	Incentive Cap:	25% of total project cost
Incentive #3: Post-Construction Benchmarking Report		
	Minimum Performance Target:	15%
Electric Incentives	Base Incentive based on 15% savings:	\$0.09
	For each % over 15% add:	\$0.005
	Maximum Incentive:	\$0.11
Gas Incentives	Base Incentive based on 15% savings:	\$0.90
	For each % over 15% add:	\$0.05
	Maximum Incentive:	\$1.25
	Incentive Cap:	25% of total project cost

Energy Savings Improvement Program (ESIP)



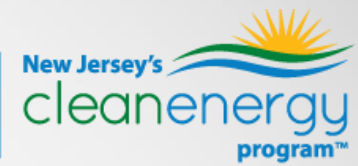
- Program administered directly by BPU
- Provides alternative financing for energy savings projects at public institutions.
- Value of energy savings leveraged to pay for cost of EE projects over a 15 year contract.
- Does not count as debt or require voter approval.
- Requires an audit as 1st step (LGEA satisfied this requirement)



Questions



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FOR MORE INFORMATION

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