

# New Jersey's Clean Energy Program

LGEA Exit Meeting for:

*Cape May County Special Services School District*

Smruti Srinivasan, TRC

January 12, 2018

# Meeting Setup

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***1) Dial the following:***

1-877-304-9323

***2) When prompted, enter the code below:***

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# Introductions

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- *Cape May County Special Services School District*
  - Charles Yahara
  - Kathleen Allen
- *NJ Clean Energy Program – TRC*
  - Auditor: Smruti Srinivasan
  - Case Manager: Amanda Muench

# Agenda

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- Overview of LGEA process (application to deliverable)
- 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 Cape May County Special Services School District

# Process to Draft Report

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



## **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

# Cape May County Special Services 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 <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>			<b>348,251</b>	<b>64.3</b>	<b>0.0</b>	<b>\$52,481.57</b>	<b>\$206,793.09</b>	<b>\$37,695.00</b>	<b>\$169,098.09</b>	<b>3.2</b>	<b>350,686</b>
ECM 1	Install LED Fixtures	Yes	103,401	15.0	0.0	\$15,582.64	\$64,008.75	\$13,615.00	\$50,393.75	3.2	104,124
ECM 2	Retrofit Fixtures with LED Lamps	Yes	244,849	49.3	0.0	\$36,898.93	\$142,784.34	\$24,080.00	\$118,704.34	3.2	246,561
<b>Lighting Control Measures</b>			<b>39,975</b>	<b>7.9</b>	<b>0.0</b>	<b>\$6,024.24</b>	<b>\$27,916.00</b>	<b>\$7,030.00</b>	<b>\$20,886.00</b>	<b>3.5</b>	<b>40,254</b>
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	34,753	6.9	0.0	\$5,237.26	\$24,800.00	\$4,010.00	\$20,790.00	4.0	34,996
ECM 4	Install High/Low Lighting Controls	Yes	5,222	1.0	0.0	\$786.98	\$3,000.00	\$3,000.00	\$0.00	0.0	5,259
<b>Motor Upgrades</b>			<b>1,293</b>	<b>0.3</b>	<b>0.0</b>	<b>\$194.80</b>	<b>\$7,853.44</b>	<b>\$0.00</b>	<b>\$7,853.44</b>	<b>40.3</b>	<b>1,302</b>
ECM 5	Premium Efficiency Motors	Yes	1,293	0.3	0.0	\$194.80	\$7,853.44	\$0.00	\$7,853.44	40.3	1,302
<b>Variable Frequency Drive (VFD) Measures</b>			<b>74,352</b>	<b>11.5</b>	<b>0.0</b>	<b>\$11,204.84</b>	<b>\$52,389.63</b>	<b>\$3,160.00</b>	<b>\$49,229.63</b>	<b>4.4</b>	<b>74,872</b>
ECM 6	Install VFDs on Constant Volume (CV) HVAC	Yes	17,069	5.4	0.0	\$2,572.35	\$33,169.33	\$3,160.00	\$30,009.33	11.7	17,189
ECM 7	Install VFDs on Hot Water Pumps	Yes	57,282	6.1	0.0	\$8,632.49	\$19,220.30	\$0.00	\$19,220.30	2.2	57,683
<b>Electric Unitary HVAC Measures</b>			<b>67,120</b>	<b>51.4</b>	<b>0.0</b>	<b>\$10,115.08</b>	<b>\$160,426.71</b>	<b>\$5,559.00</b>	<b>\$154,867.71</b>	<b>15.3</b>	<b>67,590</b>
ECM 8	Install High Efficiency Electric AC	Yes	67,120	51.4	0.0	\$10,115.08	\$160,426.71	\$5,559.00	\$154,867.71	15.3	67,590
<b>Gas Heating (HVAC/Process) Replacement</b>			<b>0</b>	<b>0.0</b>	<b>890.8</b>	<b>\$8,469.03</b>	<b>\$206,973.54</b>	<b>\$22,928.00</b>	<b>\$184,045.54</b>	<b>21.7</b>	<b>104,298</b>
ECM 9	Install High Efficiency Hot Water Boilers	Yes	0	0.0	890.8	\$8,469.03	\$206,973.54	\$22,928.00	\$184,045.54	21.7	104,298
<b>HVAC System Improvements</b>			<b>30,149</b>	<b>6.8</b>	<b>0.0</b>	<b>\$4,543.49</b>	<b>\$6,900.00</b>	<b>\$1,500.00</b>	<b>\$5,400.00</b>	<b>1.2</b>	<b>30,360</b>
ECM 10	Install Dual Enthalpy Outside Economizer Control	Yes	30,149	6.8	0.0	\$4,543.49	\$6,900.00	\$1,500.00	\$5,400.00	1.2	30,360
<b>Domestic Water Heating Upgrade</b>			<b>7,000</b>	<b>10.8</b>	<b>-82.3</b>	<b>\$1,607.31</b>	<b>\$47,766.53</b>	<b>\$1,640.00</b>	<b>\$46,126.53</b>	<b>28.7</b>	<b>-2,587</b>
	Install High Efficiency Gas Water Heater	No	7,000	10.8	-138.5	\$1,073.12	\$47,022.80	\$1,640.00	\$45,382.80	42.3	-9,166
ECM 11	Install Low-Flow Domestic Hot Water Devices	Yes	0	0.0	56.2	\$534.19	\$743.73	\$0.00	\$743.73	1.4	6,579
<b>Food Service Equipment &amp; Refrigeration Measures</b>			<b>5,716</b>	<b>2.0</b>	<b>86.7</b>	<b>\$1,685.35</b>	<b>\$40,025.49</b>	<b>\$3,000.00</b>	<b>\$37,025.49</b>	<b>22.0</b>	<b>15,903</b>
	Food Service Equipment Replacement	No	5,716	2.0	86.7	\$1,685.35	\$40,025.49	\$3,000.00	\$37,025.49	22.0	15,903
<b>Plug Load Equipment Control - Vending Machine</b>			<b>3,224</b>	<b>0.0</b>	<b>0.0</b>	<b>\$485.81</b>	<b>\$460.00</b>	<b>\$0.00</b>	<b>\$460.00</b>	<b>0.9</b>	<b>3,246</b>
ECM 12	Vending Machine Control	Yes	3,224	0.0	0.0	\$485.81	\$460.00	\$0.00	\$460.00	0.9	3,246
<b>TOTAL OF ALL EVALUATED ECMS</b>			<b>577,080</b>	<b>154.9</b>	<b>895.1</b>	<b>\$96,811.53</b>	<b>\$757,504.43</b>	<b>\$82,512.00</b>	<b>\$674,992.43</b>	<b>7.0</b>	<b>685,923</b>
<b>TOTAL OF ALL RECOMMENDED ECMS</b>			<b>564,363</b>	<b>142</b>	<b>947</b>	<b>\$ 94,053.06</b>	<b>\$ 670,340.14</b>	<b>\$ 77,852.00</b>	<b>\$592,488.14</b>	<b>6.3</b>	<b>679,186</b>
<b>TOTAL OF ALL NON-RECOMMENDED ECMS</b>			<b>12,716</b>	<b>13</b>	<b>-52</b>	<b>\$ 2,758.47</b>	<b>\$ 87,048.29</b>	<b>\$ 4,640.00</b>	<b>\$ 82,408.29</b>	<b>29.9</b>	<b>6,737</b>

\* - 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 Best Practices*

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- Reduce Air Leakage
- Close Doors and Windows
- Ensure Lighting Controls Are Operating Properly
- Use Window Treatments/Coverings
- Check and Seal Duct Leakage
- Perform Proper Water Heater Maintenance
- Plug Load Controls
- Water Conservation



# 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

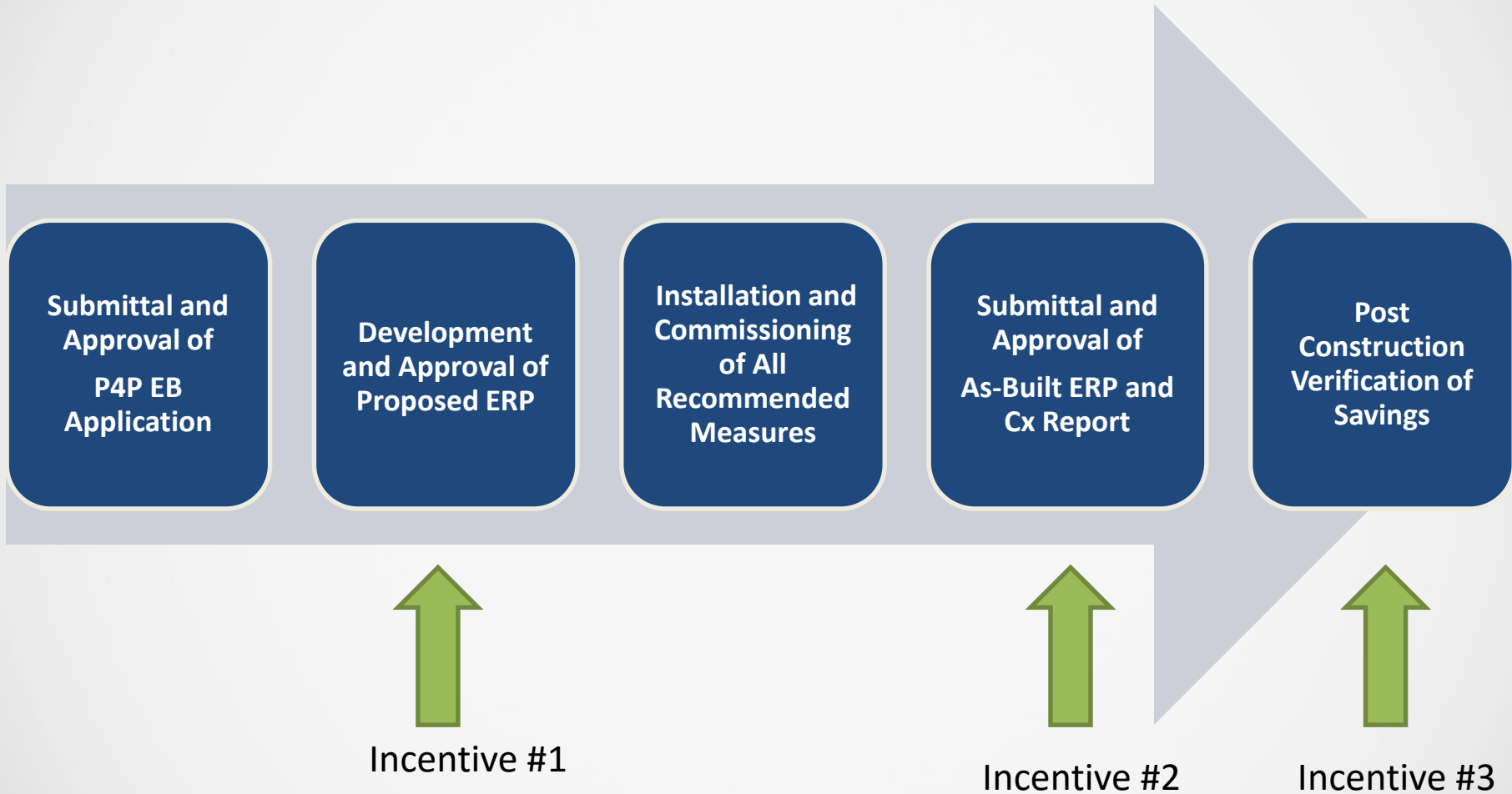
# Recommended NJCEP Incentives

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

# P4P EB: PROCESS



# P4P EB: INCENTIVES



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

## Energy Savings Improvement Program (ESIP)

- 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/require voter approval.
- Requires an audit as 1<sup>st</sup> step (LGEA satisfies requirement)
- ESIP participation question on LGEA application
- Program administered directly by BPU

# Questions

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# FOR MORE INFORMATION

**Visit** [NJCleanEnergy.com](http://NJCleanEnergy.com)

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