

# New Jersey's Clean Energy Program

LGEA Exit Meeting for:  
*Roseland Board of Education*

Smruti Srinivasan, TRC

February 12, 2018

# Meeting Setup

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

1-877-304-9323

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

5391398#

# Introductions

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## *Roseland Board of Education*

- Business Administrator: Julie Anne Kot
- Supervisor Building & Grounds: Tom August

## *NJ Clean Energy Program – TRC / BPU*

- Auditor: Smruti Srinivasan
- Outreach Manager: Jim Friedl
- ESIP Coordinator: Mike Thulen

# Agenda

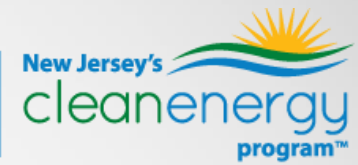
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- Overview of LGEA process (application to deliverable)
- Energy use & existing conditions
- Review of **E**nergy **C**onservation **M**easures (ECMs) identified
- Questions or concerns regarding the draft audit report
- Overview of NJCEP equipment incentives
- Next steps for Roseland Board of Education

# 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

# Lester C. Noecker School



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 <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>136,213</b>	<b>29.2</b>	<b>0.0</b>	<b>\$23,916.87</b>	<b>\$82,934.35</b>	<b>\$15,500.00</b>	<b>\$67,434.35</b>	<b>2.8</b>	<b>137,165</b>
ECM 1	Install LED Fixtures	35,386	8.5	0.0	\$6,213.21	\$28,910.10	\$7,400.00	\$21,510.10	3.5	35,633
ECM 2	Retrofit Fixtures with LED Lamps	100,827	20.7	0.0	\$17,703.66	\$54,024.25	\$8,100.00	\$45,924.25	2.6	101,532
<b>Lighting Control Measures</b>		<b>24,446</b>	<b>5.0</b>	<b>0.0</b>	<b>\$4,292.34</b>	<b>\$23,434.00</b>	<b>\$6,110.00</b>	<b>\$17,324.00</b>	<b>4.0</b>	<b>24,617</b>
ECM 3	Install Occupancy Sensor Lighting Controls	20,431	4.2	0.0	\$3,587.43	\$19,484.00	\$2,730.00	\$16,754.00	4.7	20,574
ECM 4	Install Daylight Dimming Controls	586	0.1	0.0	\$102.93	\$750.00	\$180.00	\$570.00	5.5	590
ECM 5	Install High/Low Lighting Controls	3,428	0.7	0.0	\$601.98	\$3,200.00	\$3,200.00	\$0.00	0.0	3,452
<b>Variable Frequency Drive (VFD) Measures</b>		<b>6,675</b>	<b>2.2</b>	<b>0.0</b>	<b>\$1,172.06</b>	<b>\$12,567.00</b>	<b>\$1,280.00</b>	<b>\$11,287.00</b>	<b>9.6</b>	<b>6,722</b>
ECM 6	Install VFDs on Constant Volume (CV) HVAC	6,675	2.2	0.0	\$1,172.06	\$12,567.00	\$1,280.00	\$11,287.00	9.6	6,722
<b>Electric Unitary HVAC Measures</b>		<b>79,761</b>	<b>32.9</b>	<b>0.0</b>	<b>\$14,004.81</b>	<b>\$101,992.59</b>	<b>\$6,280.00</b>	<b>\$95,712.59</b>	<b>6.8</b>	<b>80,319</b>
ECM 7	Install High Efficiency Electric AC	79,761	32.9	0.0	\$14,004.81	\$101,992.59	\$6,280.00	\$95,712.59	6.8	80,319
<b>Domestic Water Heating Upgrade</b>		<b>0</b>	<b>0.0</b>	<b>15.6</b>	<b>\$141.74</b>	<b>\$100.38</b>	<b>\$0.00</b>	<b>\$100.38</b>	<b>0.7</b>	<b>1,825</b>
ECM 8	Install Low-Flow Domestic Hot Water Devices	0	0.0	15.6	\$141.74	\$100.38	\$0.00	\$100.38	0.7	1,825
<b>TOTALS</b>		<b>247,094</b>	<b>69.3</b>	<b>15.6</b>	<b>\$43,527.83</b>	<b>\$221,028.32</b>	<b>\$29,170.00</b>	<b>\$191,858.32</b>	<b>4.4</b>	<b>250,647</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
- Use Window Treatments/Coverings
- Ensure Lighting Controls are Working Properly
- Practice Proper Use of Thermostat Schedules and Temperature Resets
- Perform Proper Boiler Maintenance
- Perform Proper Water Heater Maintenance
- Install 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

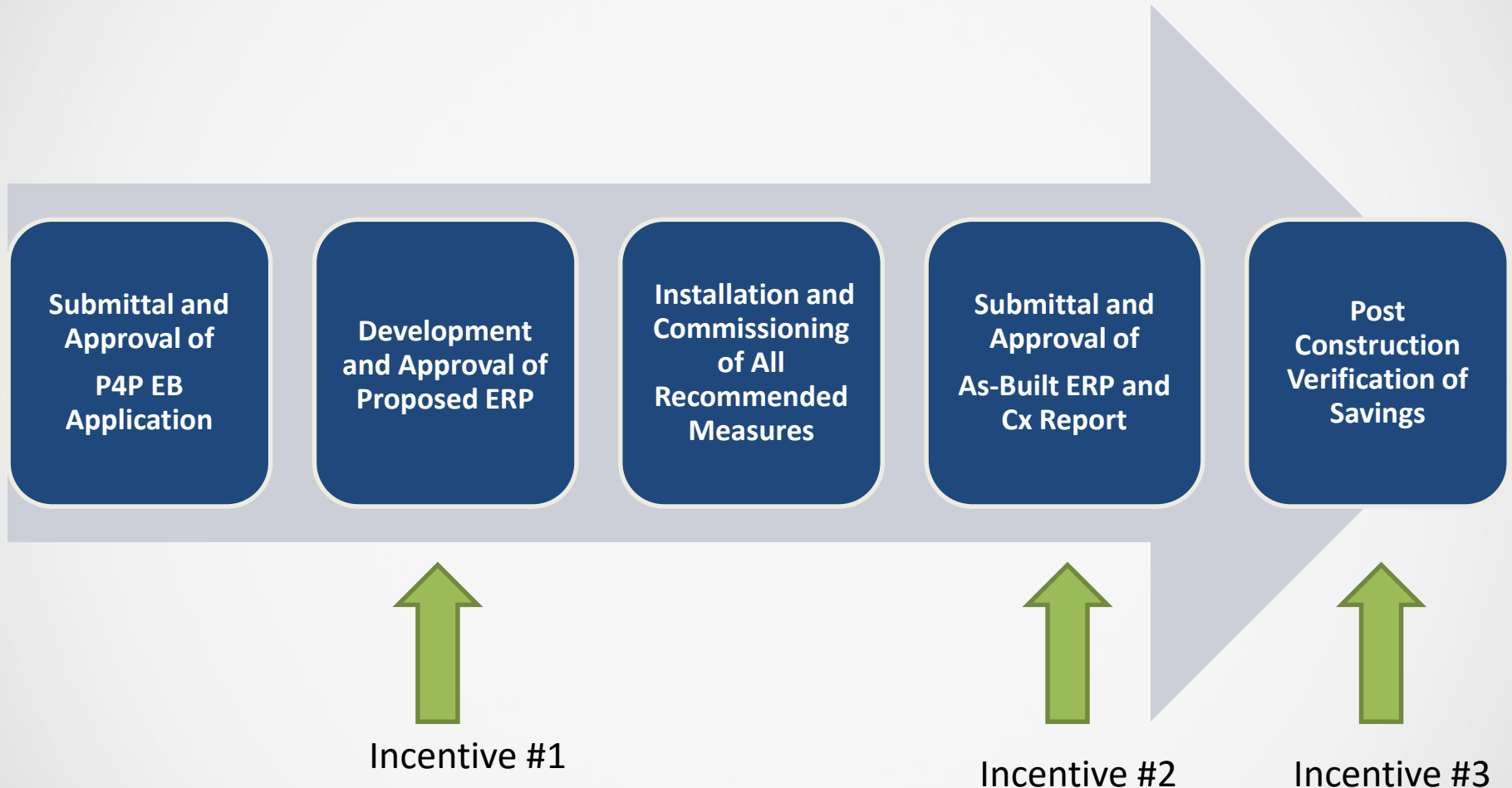
# Recommended NJCEP Incentives

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

# P4P EB: PROCESS



# P4P EB: INCENTIVES



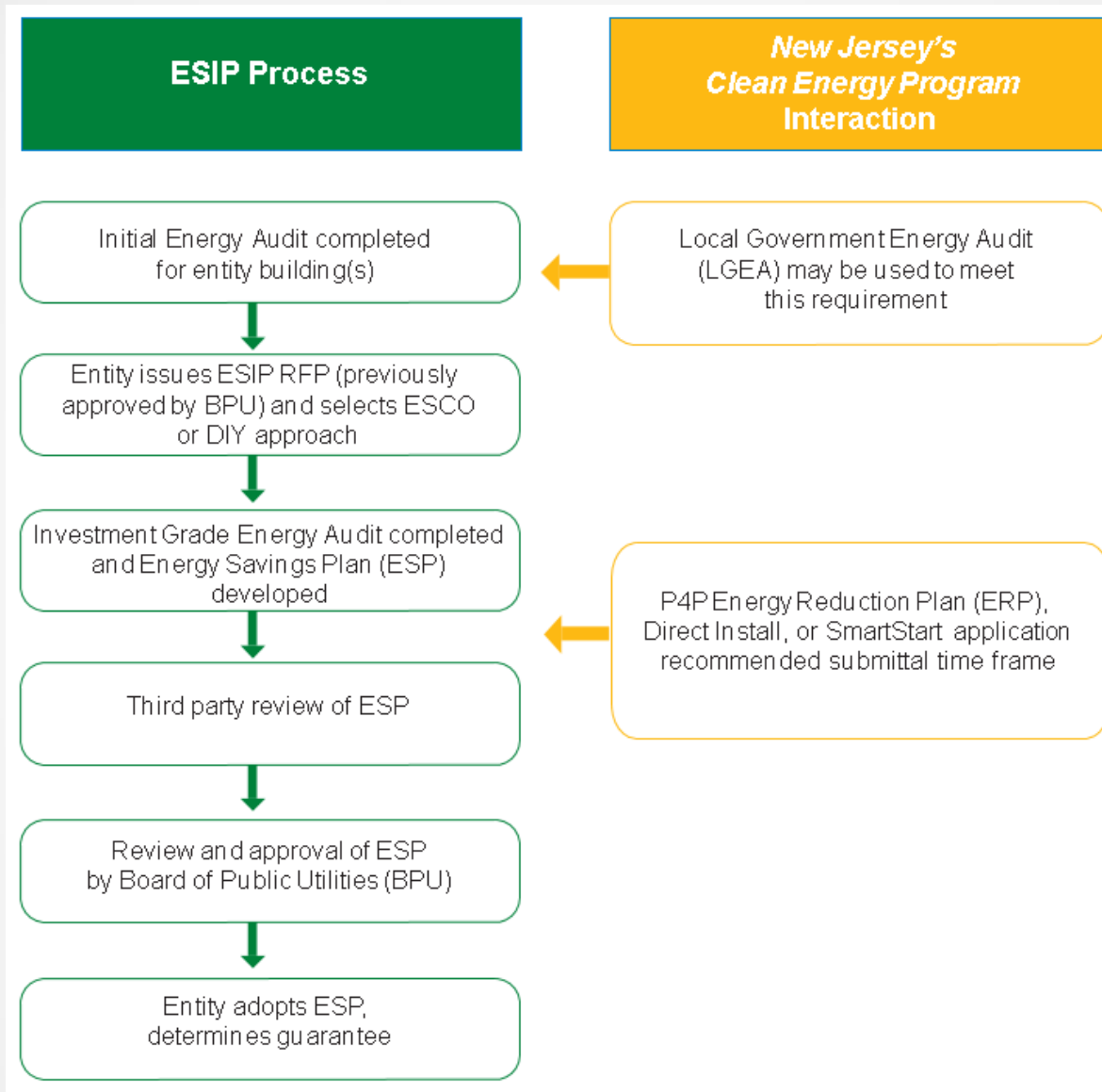
Incentive #1: Energy Reduction Plan			
Incentive Amount:		\$0.15	per sq ft
Minimum Incentive:		\$7,500	
Maximum Incentive:		\$50,000	or 50% of facility annual energy cost
Incentive #2: Installation of Recommended Measures			
Minimum Performance Target:		15%	
Electric Incentives	Base Incentive based on 15% savings:	\$0.09	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	
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	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	
Incentive Cap:		25%	of total project cost

# *Energy Savings Improvement Program (ESIP)*

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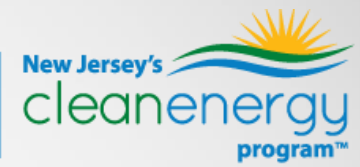


- Program administered directly by BPU
- Provides alternative financing for energy savings projects at public institutions.
- Value of energy savings leveraged to pay for cost of EE projects over a 15 year contract.
- Does not count as debt or require voter approval.
- Requires an audit as 1<sup>st</sup>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



# Questions

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# FOR MORE INFORMATION

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

**Call** (866) NJSMART

**Jim Friedl**

Outreach Manager

732-855-6543

[jfriedl@trcsolutions.com](mailto:jfriedl@trcsolutions.com)