

New Jersey's Clean Energy Program

LGEA Exit Meeting for: Chesterfield Board of Education

TRC Energy Services

November 29, 2018

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Introductions



- <u>Chesterfield Board of Education</u>
 - Scott Heino Superintendent
 - Patrick Pisano Business Administrator
 - Marnie Briel Bus. Office PR/HR Secretary
 - Patty Sary Business Office Secretary
- NJ Clean Energy Program
 - Vish Nimbalkar, PE TRC Lead Auditor
 - Robert Grindrod, CEM TRC Auditor
 - Elizabeth Ebinger TRC Account Manager





- The audit process overview
- 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 Chesterfield Board of Education

LGEA Process



Application Approval

Scheduling Call

Audit

Benchmarking & Analysis

Draft Report

Exit Meeting Presentation

Final Report

Chesterfield Elementary School



Overview of Systems, Baseline & Existing Conditions:

- Building Envelope
- Lighting Systems
- HVAC and Mechanical Systems
- Kitchen and Refrigeration Systems
- Plug Load Equipment

Utility Consumption:

- Electric Consumption and Costs
- Electric Demand and Costs
- Natural Gas Consumption and Costs

Benchmarking



Chesterfield Elementary

LEARN MORE AT energystar.gov	ENERGY Performa	STAR [®] St ince	atement o	f Energy			
7	6 Prin Gro Buil	esterfield Ele nary Property Typess Floor Area (ft*): tt: 2011	e: K-12 School : 119,500	hool			
Sco	For Year Ending: September 30, 2017 ENERGY STAR® Date Generated: October 12, 2018 Score ¹						
olimate and business	 The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with climitar buildings nationwide, adjusting for climate and business ability. Property & Contact Information 						
Property Addres Chesterfield Elem 30 Saddle Way Chesterfield, New Property ID: 657	8 ientary School / Jersey 08515	Property Owner Chesterfield Elemen 30 Saddle Way Chesterfield, NJ 085 (609) 298-6900		Primary Contact Sott Heino 30 Saddie Way Chesterfield, NJ 08515 (609) 298-6900 sheino@chesterfieldscho	xol.com		
Energy Consur	mption and Energy U	se Intensity (EUI)					
Site EUI 38.9 kBtu/ft ² Source EUI 92.7 kBtu/ft ²	Annual Energy by Fu Natural Gas (kBtu) Electric - Solar (kBtu) Electric - Grid (kBtu)	922,406 (20%) 177,753 (4%)	% Diff from Nation Annual Emissions	ite EUI (kBtu/tf*) ource EUI (kBtu/tf*) al Median Source EUI	51.7 123.3 -25% 408		
Signature & S	Stamp of Verifyin	g Professional					
·	(Name) verify that	at the above informatio	on is true and correct t	o the best of my knowledg	e.		
Signature: Licensed Profes ()		Date:	Profession	nai Engineer Stamp			

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.

Chesterfield Elementary School



Energy Conservation Measure		Recommend?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	0	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
	Lighting Upgrades		107,643	33.0	0.0	\$11,457.23	\$87,882.98	\$18,655.00	\$69,227.98	6.0	108,395
ECM 1	Install LED Fixtures	Yes	15,970	3.7	0.0	\$1,699.84	\$23,248.87	\$4,320.00	\$18,928.87	11.1	16,082
ECM 2	Retrofit Fixtures with LED Lamps	Yes	91,672	29.3	0.0	\$9,757.38	\$64,634.11	\$14,335.00	\$50,299.11	5.2	92,313
	Lighting Control Measures		6,107	0.7	0.0	\$649.99	\$2,750.00	\$175.00	\$2,575.00	4.0	6,149
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	1,305	0.3	0.0	\$138.95	\$1,350.00	\$175.00	\$1,175.00	8.5	1,315
ECM 4	Install High/Low Lighitng Controls	Yes	4,801	0.3	0.0	\$511.04	\$1,400.00	\$0.00	\$1,400.00	2.7	4,835
	Plug Load Equipment Control - Vending Machine		1,954	0.0	0.0	\$208.02	\$460.00	\$0.00	\$460.00	2.2	1,968
ECM 5	Vending Machine Control	Yes	1,954	0.0	0.0	\$208.02	\$460.00	\$0.00	\$460.00	2.2	1,968
TOTALS FOR HIGH PRIORITY MEASURES			115,704	33.7	0.0	\$12,315.23	\$91,092.98	\$18,830.00	\$72,262.98	5.9	116,513
TOTALS FOR ALL EVALUATED MEASURES			115,704	33.7	0.0	\$12,315.23	\$91,092.98	\$18,830.00	\$72,262.98	5.9	116,513

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* - 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).



Solar Energy Generation Potential 🖤

	Chesterfield Elementary School
Potential:	HIGH
System Potential:	200 kW
Electric Generation:	238,274 kWh per year
Displaced Cost:	\$20,730 per year

For more information on the SREC Registration Program (SRP) please visit:

http://www.njcleanenergy.com/renewable-energy/programs/solar-renewable-energy-certificates-srec/newjersey-solar-renewable-energy

Energy Efficient Best Practices

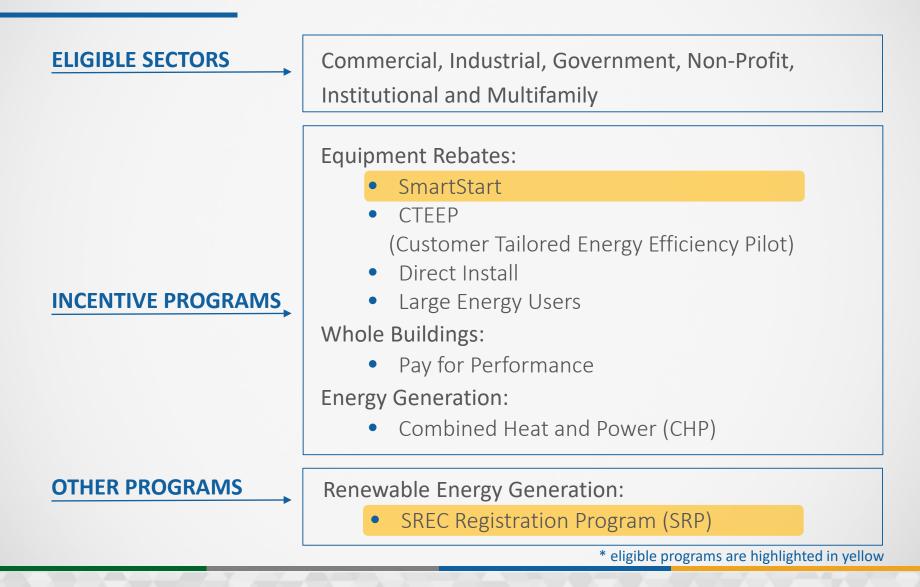


- Reduce Air Leakage
- Close Doors and Windows
- Develop a Lighting Maintenance Schedule
- Ensure Lighting Controls Are Operating Properly
- Use Fans to Reduce Cooling Load
- Use Window Treatments/Coverings
- Clean and/or Replace HVAC filters
- Check and Seal Duct Leakage
- Perform Regular Boiler Maintenance
- Perform Regular Water Heater Maintenance
- Plug Load Controls
- Water Conservation

See individual reports for specific EE practices by building

Clean Energy Program Portfolio







SmartStart: Overview

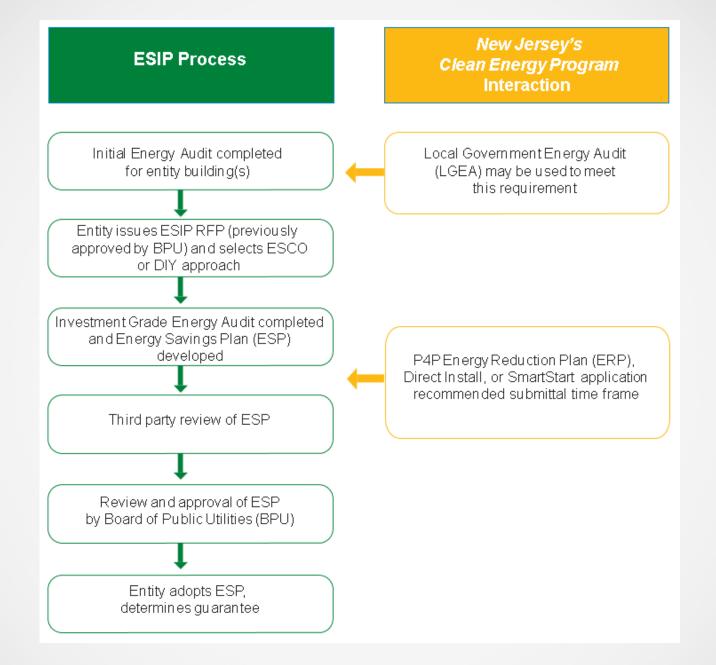
- Two types of incentives for high efficiency equipment installation:
 - Prescriptive
 - Custom
- Project Categories:
 - New Construction
 - Renovation
 - Remodeling
 - Equipment Replacement
- Project pre-approval required for lighting and custom measures
- Incentives up to \$500,000 per electric account & \$500,000 per natural gas account
- Specific incentives and individual applications for Lighting, HVAC, VFDs, Refrigeration, Controls and more!

www.NJCleanEnergy/SSB



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 1st step (LGEA satisfies requirement)
- ESIP participation question on LGEA application
- Program administered directly by BPU





FOR MORE INFORMATION

ESIP

Mike Thulen ESIP Coordinator Office: 609-777-3338 Cell: 732-330-2419 ESIP@bpu.nj.gov

Questions



NJCleanEnergy.com



FOR MORE INFORMATION

Visit NJCleanEnergy.com Call (866) NJSMART

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