

New Jersey's Clean Energy Program

LGEA Exit Meeting for:
Chesterfield Board of Education

TRC Energy Services

November 29, 2018

Introductions



- *Chesterfield Board of Education*
 - 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

Agenda



- The audit process overview
- 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 Chesterfield Board of Education

LGEA Process



- Application Approval
- Scheduling Call
- Audit
- Benchmarking & Analysis
- Draft Report
- Exit Meeting Presentation
- Final Report



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



Chesterfield Elementary

ENERGY STAR® Statement of Energy Performance

76
ENERGY STAR® Score¹

Chesterfield Elementary School

Primary Property Type: K-12 School
Gross Floor Area (ft²): 119,500
Built: 2011

For Year Ending: September 30, 2017
Date Generated: October 12, 2018

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

Property & Contact Information			
Property Address Chesterfield Elementary School 30 Saddle Way Chesterfield, New Jersey 08515	Property Owner Chesterfield Elementary School 30 Saddle Way Chesterfield, NJ 08515 (609) 298-6900	Primary Contact Scott Heino 30 Saddle Way Chesterfield, NJ 08515 (609) 298-6900 sheino@chesterfieldschool.com	
Property ID: 6572570			
Energy Consumption and Energy Use Intensity (EUI)			
Site EUI 38.9 kBtu/ft ²	Annual Energy by Fuel	National Median Comparison	
	Natural Gas (kBtu) 922,406 (20%)	National Median Site EUI (kBtu/ft ²)	51.7
	Electric - Solar (kBtu) 177,753 (4%)	National Median Source EUI (kBtu/ft ²)	123.3
	Electric - Grid (kBtu) 3,548,151 (76%)	% Diff from National Median Source EUI	-25%
Source EUI 92.7 kBtu/ft ²		Annual Emissions	
		Greenhouse Gas Emissions (Metric Tons CO ₂ e/year)	408

Signature & Stamp of Verifying Professional

I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: _____ Date: _____

Licensed Professional

() _____

Professional Engineer Stamp
(if applicable)

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)	Annual Energy Cost Savings (\$)	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 Lighting 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

* - 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
<i>Potential:</i>	HIGH
<i>System Potential:</i>	200 kW
<i>Electric Generation:</i>	238,274 kWh per year
<i>Displaced Cost:</i>	\$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/new-jersey-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



ELIGIBLE SECTORS

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

INCENTIVE PROGRAMS

Equipment Rebates:

- SmartStart
- CTEEP
(Customer Tailored Energy Efficiency Pilot)
- Direct Install
- Large Energy Users

Whole Buildings:

- Pay for Performance

Energy Generation:

- Combined Heat and Power (CHP)

OTHER PROGRAMS

Renewable Energy Generation:

- SREC Registration Program (SRP)

* eligible programs are highlighted in yellow

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

ESIP Process

New Jersey's Clean Energy Program Interaction

Initial Energy Audit completed
for entity building(s)

Local Government Energy Audit
(LGEA) may be used to meet
this requirement

Entity issues ESIP RFP (previously
approved by BPU) and selects ESCO
or DIY approach

Investment Grade Energy Audit completed
and Energy Savings Plan (ESP)
developed

P4P Energy Reduction Plan (ERP),
Direct Install, or SmartStart application
recommended submittal time frame

Third party review of ESP

Review and approval of ESP
by Board of Public Utilities (BPU)

Entity adopts ESP,
determines guarantee



FOR MORE INFORMATION

ESIP

Mike Thulen

ESIP Coordinator

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ESIP@bpu.nj.gov

Questions



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FOR MORE INFORMATION

Visit NJCleanEnergy.com

Call (866) NJSMART

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