New Jersey's Clean Energy Program

LGEA Exit Meeting for: *Ridge & Valley Charter School*

August 27th 2019





INTRODUCTIONS

Ridge & Valley Charter School

- Jennifer Gurdak Trustee
- Theresa Radline Business Coordinator
- NJ Clean Energy Program
 - Moussa Traore TRC Auditor
 - Amanda Muench TRC Account Manager
 - Mike Mandzik– TRC Outreach Manager
 - Michelle Rossi BPU State Energy Office



Agenda

- The audit process overview
- Energy use & existing conditions
- Review of Energy Conservation Measures (ECMs) identified
- Questions regarding the draft audit report
- Overview of NJCEP equipment incentives
- Next steps for Ridge & Valley Charter School



LGEA PROCESS

Application Approval

Scheduling Call

Audit

Benchmarking & Analysis

Draft Report

Exit Meeting Presentation

Final Report



SITE VISIT & UTILITY ANALYSIS

Overview of Systems, Baseline & Existing Conditions:

- Lighting System
- HVAC and Mechanical Systems
- Plug Load Equipment

Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs
- Solar PV Production



Sites Visited/Analyzed

- Nebula
- Nova
- Galaxy
- Constellation
- Universe
- Stardust
- Quasar

BENCHMARKING

EARN MORE AT

Ridge & Valley Charter School

ENERGY STAR[®] Statement of Energy

Ridge and Valley Charter School

Performance

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.

New Jersey's

program



(if applicable)



ALL OPPORTUNITIES

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO2e Emissions Reduction (Ibs)
Lighting Upgrades		23,569	8.1	0	\$3,065	\$45,980	\$15,848	\$2,747	\$13,101	4.3	23,733
ECM 1	Install LED Fixtures	4,649	0.5	0	\$605	\$9,070	\$7,480	\$700	\$6,780	11.2	4,682
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	93	0.0	0	\$12	\$182	\$69	\$10	\$59	4.9	94
ECM 3	Retrofit Fixtures with LED Lamps	18,826	7.5	0	\$2,449	\$36,728	\$8,299	\$2,037	\$6,262	2.6	18,958
Lighting Control Measures		2,471	1.1	0	\$321	\$2,571	\$4,320	\$560	\$3,760	11.7	2,488
ECM 4	Install Occupancy Sensor Lighting Controls	2,471	1.1	0	\$321	\$2,571	\$4,320	\$560	\$3,760	11.7	2,488
Electric Unitary HVAC Measures		21,922	12.9	0	\$2,851	\$42,768	\$122,524	\$4,968	\$117,556	41.2	22,076
ECM 5	Install High Efficiency Heat Pumps	21,922	12.9	0	\$2,851	\$42,768	\$122,524	\$4,968	\$117,556	41.2	22,076
Domestic Water Heating Upgrade		1,668	0.0	0	\$217	\$2,170	\$86	\$0	\$86	0.4	1,680
ECM 6	Install Low-Flow DHW Devices	1,668	0.0	0	\$217	\$2,170	\$86	\$0	\$86	0.4	1,680
TOTALS (COST EFFECTIVE MEASURES)		27,708	9.2	0	\$3,604	\$50,720	\$20,254	\$3,307	\$16,947	4.7	27,901
TOTALS (ALL MEASURES)		49,630	22.0	0	\$6,455	\$93,488	\$142,778	\$8,275	\$134,503	20.8	49,977



COST EFFECTIVE OPPORTUNITIES

#	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)**	CO2e Emissions Reduction (Ibs)
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ECM 4	Install Occupancy Sensor Lighting Controls	2,471	1.1	0	\$321	\$4,320	\$560	\$3,760	11.7	2,488
Domestic	Water Heating Upgrade	1,668	0.0	0	\$217	\$86	\$0	\$86	0.4	1,680
ECM 6	Install Low-Flow DHW Devices	1,668	0.0	0	\$217	\$86	\$0	\$86	0.4	1,680
	TOTALS	27,708	9.2	0	\$3,604	\$20,254	\$3,307	\$16,947	4.7	27,901



SOLAR ENERGY GENERATION POTENTIAL

	Ridge & Valley Charter School
Potential:	MEDIUM
System Potential: (kW)	54
Electric Generation: (kWh per year)	64,334
Displaced Cost: (per year)	\$8,370

SREC Registration Program (SRP):

http://www.NJCleanEnergy.com/SREC

Community Solar Energy Pilot Program:

http://www.NJCleanEnergy.com/Com munitySolar



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 Proper Boiler
 Maintenance
- Perform Proper Water Heater Maintenance
- Plug Load Controls
- Water Conservation

See individual reports for specific EE practices by building



CLEAN ENERGY PROGRAM PORTFOLIO

ELIGIBLE SECTORS

INCENTIVE PROGRAMS

OTHER PROGRAMS



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

Equipment Rebates:

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

Whole Buildings:

Pay for Performance

Energy Generation:

Combined Heat and Power (CHP)

Renewable Energy Generation:

• SREC Registration Program (SRP)

DIRECT INSTALL

NJCleanEnergy.com/DI

What is DI: Turn-key retrofit program to replace outdated and inefficient equipment, including lighting, HVAC, refrigeration, etc.



Qualifications: Average electric peak demand <200 kW in the previous 12 months

About:

- Pre-approved participating contractors provide support and process paperwork
 - Incentives paid directly to the contractor
 - Fast project turnaround time (4-6 months)

Incentives:

- \$125,000 incentive funding per project/building (\$250K UEZ/OZ/ MUNI/K-12 Public Schools), or
 - \$250,000 entity cap



DIRECT INSTALL

NJCleanEnergy.com/DI

Facilities in Urban Enterprise Zones (UEZ), Opportunity Zones (OZ), municipalities, and K-12 public schools:

INCENTIVE FUNDING	CUSTOMER							
Up to 80% of installed cost is paid directly to the contractor	20% of installed cost							
All other eligible facilities:								
INCENTIVE FUNDING	CUSTOMER							
Up to 70% of installed cost is paid directly to the contractor	30% of installed cost							





Participating Contractor

Donnelly Energy Justin Avallone 845-401-6253 javallone@donnellyenergy.com



SMARTSTART

NJCleanEnergy.com/SSB

What is SSB: Individual high efficiency equipment rebates for new construction, renovation, remodeling, equipment replacement



Qualifications: • All C&I customer types contributing into the Societal Benefits Charge (SBC)

About:

- Prescriptive and custom designed measures
- Pre-approval required only for lighting projects with incentives >\$100,000 and <u>all</u> custom projects
- For measures not requiring pre-approval, applications must be submitted to the program within one year of purchase.

Incentives:

- Prescriptive: \$500,000 cap for each electric or gas account
- Custom, lesser of the following:
 - \$0.16/kWh and/or \$1.60/Therm saved annually
 - 50% of incremental installed cost
 - Buy-down to 1 year payback based on incremental cost and savings



SMARTSTART NJCleanEnergy.com/SSB

Prescriptive Incentives

- Lighting & Lighting
 Controls
- Packaged HVAC
- Boilers & Water Heaters
- Chillers
- VFD's
- Food Service
- Refrigeration

Prescriptive Only:

DOUBLE INCENTIVES FOR OZ/UEZ/ MUNI/K-12 PUBLIC SCHOOLS

Custom Incentives

- New or innovative technologies proven to be cost-effective and not listed as prescriptive
- Projects must have a minimum first year energy savings of 75,000 kWh or 1,500 therms
- Project pre and post inspection required



CUSTOMER TAILORED ENERGY EFFICIENCY PILOT NJCleanEnergy.com/CTEEP

What is CTEEP: A streamlined/single application process for participants submitting multiple different technology types.

Qualifications: • All C&I customer types contributing into the Societal Benefits Charge (SBC)

About:

- On site assistance available
- Additional technical incentive available to offset soft costs associated with developing and planning custom projects

Incentives:

- \$250,000 fiscal year entity cap
 - Technical assistance incentives for custom project evaluation (up to \$10K)

SAME INCENTIVE VALUES AS SMARTSTART



FINANCING MECHANISM: ESIP

ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

- Provides alternative financing for energy savings projects at public institutions
- Administered directly by the BPU
- Value of energy savings leveraged to pay for cost of EE projects over a 15 year contract
- Requires NO new bonding and is outside of capital budget
- Does not count as debt or require voter approval



FINANCING MECHANISM: ESIP





Program

ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

FOR MORE INFORMATION

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FOR MORE INFORMATION

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QUESTIONS



