

New Jersey's Clean Energy Program

LGEA Exit Meeting for:
Congregation Beth-El of the Oranges

TRC Energy Services

January 18, 2019

Introductions



Congregation Beth-El of the Oranges

- Steve Weber – Executive VP
- Steve Rod – VP for Administration

NJ Clean Energy Program

- Moussa Traore– TRC Lead Auditor
- Elizabeth Ebinger – TRC Account Manager
- Mike Mandzik – TRC Regional Outreach Manager
- Arif Welcher – BPU Ombudsman

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 Congregation Beth-El of the Oranges

LGEA Process



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

Congregation Beth-El of the Oranges

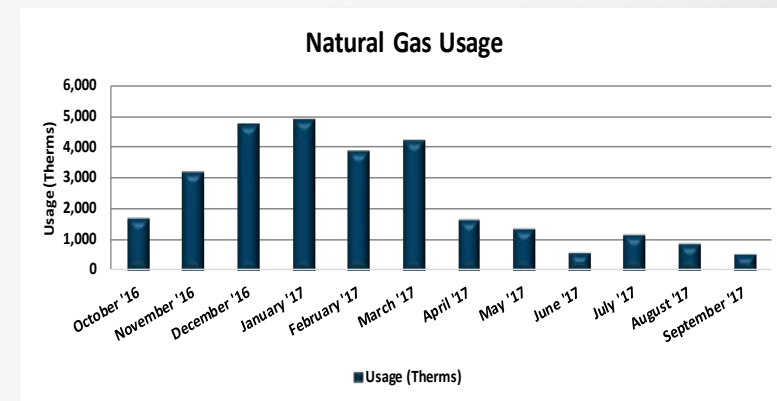
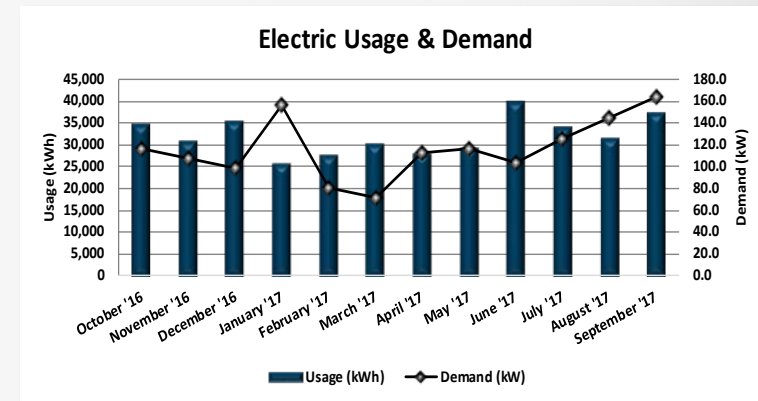


Overview of Systems, Baseline & Existing Conditions:

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

Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs



Low Cost, Fast-Payback Upgrades



#	Energy Improvement	Annual Energy Cost Savings (\$)	Installation Cost (\$)	Potential Incentive (\$)	Net Cost (\$)	Simple Payback Period (yrs)	CO ₂ e Emissions Reduction (Tons)
1	LED Fixtures	\$375	\$1,814	\$190	\$1,624	4.3	1.0
2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	\$1,610	\$4,491	\$660	\$3,831	2.4	4.4
3	Retrofit Fixtures with LED Lamps	\$6,537	\$18,471	\$3,644	\$14,827	2.3	18.0
4	Low-Flow Devices	\$104	\$72	\$0	\$72	0.7	0.7
TOTALS		\$8,626	\$24,848	\$4,494	\$20,354	2.4	24.1

Additional measures evaluated are found in the report appendix

Motor Inventory

Motor Inventory								Motor Analysis
Locations	Motor Quantity	Motor Application	HP per Motor	Motor RPM	Open/Enclosed	Motor Load Factor	Annual Operating Hours	Annual Electric Consumption (kWh)
Roof	5	Exhaust Fan	0.8	1,800	Enclosed	0.75	2,745	7,102
Mechanical Room	2	Heating Hot Water Pump	7.5	1,800	Open	0.75	3,391	31,274
Roof	2	Supply Fan	15.0	1,800	Enclosed	0.75	3,391	61,599
Roof	2	Exhaust Fan						
Roof	1	Supply Fan						

Electric HVAC Inventory

Electric HVAC Inventory			
Locations	System Quantity	System Type	Capacity
Roof	2	Packaged AC	
Roof	1	Packaged AC	
Roof	1	Packaged AC	
Roof	2	Packaged AC	
Roof	2	Packaged AC	

Heating Equipment Inventory

Fuel Heating Inventory					
Locations	System Quantity	System Type	Output Heating Capacity per Unit (MBh)	Heating Fuel Type	Heating System Efficiency
Roof	2	Furnace	432.0	Natural Gas	78.0%
Roof	1	Furnace	200.0	Natural Gas	78.0%
Roof	1	Furnace	160.0	Natural Gas	78.0%
Roof	1	Furnace	121.5	Natural Gas	78.0%
Roof	2	Furnace	80.0	Natural Gas	78.0%
Roof	2	Furnace	324.0	Natural Gas	78.0%
Mechanical Room	2	Forced Draft Steam Boiler	949.0	Natural Gas	79.0%

Capital Replacement Upgrades



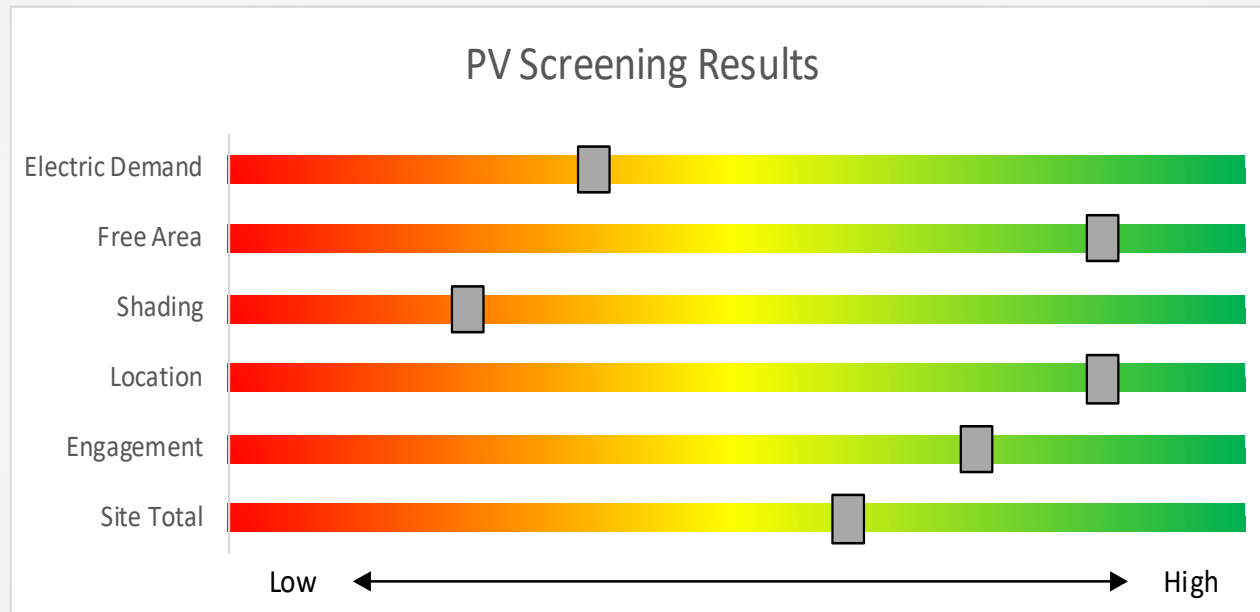
Opportunities Identified during the Audit for Upgrade

- Lighting & Lighting Controls
- Premium Efficiency Motors (Hot Water Pumps)
- Variable Frequency Drives (Variable Air Volume – HVAC)
- High Efficiency Air Conditioning Units
- High Efficiency Steam Boilers
- Demand Control Ventilation (DCV)
- Pipe Insulation (Domestic Hot Water)
- Food Service & Refrigeration Equipment Replacement

Solar Energy Generation Potential



Medium Potential



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 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 →

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

Direct Install: Overview



- Turn-key retrofit program to replace outdated and inefficient equipment, including lighting, HVAC, refrigeration, etc.
- Open to Small to Mid-Sized Commercial and Industrial facilities with an average electric demand ≤ 200 kW
- Provides incentives of up to 70% of the installed cost
- Incentives are paid directly to the contractor
 - Customer only pays remaining 30% of installed cost
 - \$125,000 project/building cap
 - \$250,000 per entity cap
- Participating contractors provide support and process all paperwork
- Fast turnaround time: Average length of time for job completion (4-6 months)

Direct Install:



Participating Contractor

Willdan Energy Solutions

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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

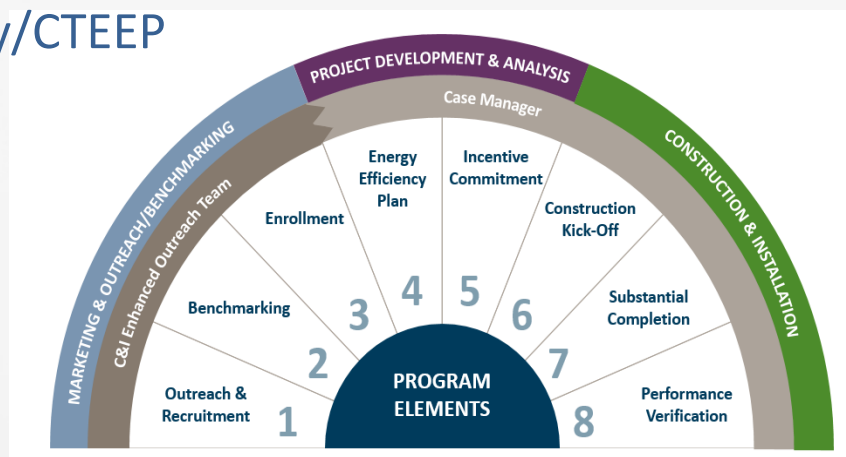
CTEEP: Overview



Customer Tailored Energy Efficiency Pilot (CTEEP)

- Provide customers with **on-site assistance** to discuss project opportunities and program incentives.
- A **single application** submission streamlines multiple prescriptive and custom measures.
- Provide **technical assistance incentives** to help offset soft costs associated with developing and planning an energy efficiency project.
- Incentives up to \$250,000 entity cap.

www.NJCleanEnergy/CTEEP



Recommended NJCEP Incentives



Entity Name	Direct Install	SmartStart	CTEEP
<i>Congregation Beth-El of the Oranges</i>	X	X	X

Questions



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FOR MORE INFORMATION

Visit NJCleanEnergy.com

Call (866) NJSMART

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