New Jersey's Clean Energy Program

LGEA Exit Meeting for:

West Side Presbyterian Church

October 2, 2019

New Jersey's cleanenergy program™

TRC

INTRODUCTIONS

West Side Presbyterian Church

- Jamie Cella
- John Pierce
- Melissa Bangdash
- Deidra Demario
- Craig Matthews

- *NJ Clean Energy Program*
  - Aimee Lalonde – TRC Program Manager
  - Kush Patel – TRC Auditor
  - Amanda Muench – TRC Account Manager
  - Mike Mandzik – TRC Outreach Manager
  - Amanda Newman – TRC Outreach Coordinator

AGENDA

- The audit process overview
- Energy use & existing conditions
- Review of **E**nergy **C**onservation **M**easures (ECMs) identified
- Questions regarding the draft audit report
- Overview of NJCEP equipment incentives
- Next steps for West Side Presbyterian Church

LGEA Process

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

West Side Presbyterian Church

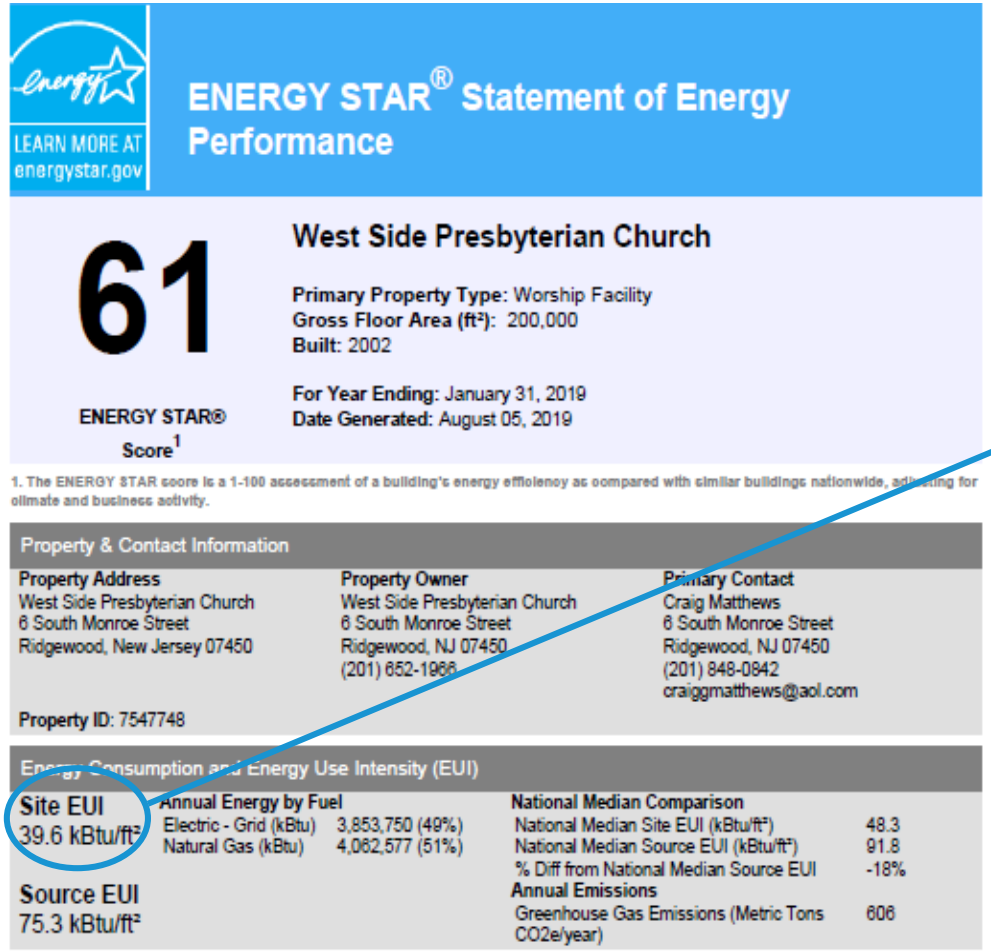
Overview of Systems, Baseline & Existing Conditions:

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

Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs

BENCHMARKING



LEARN MORE AT energystar.gov

ENERGY STAR® Statement of Energy Performance

61

ENERGY STAR® Score[1]

West Side Presbyterian Church

Primary Property Type: Worship Facility
Gross Floor Area (ft²): 200,000
Built: 2002

For Year Ending: January 31, 2019
Date Generated: August 05, 2019

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	Property Owner	Primary Contact
West Side Presbyterian Church 6 South Monroe Street Ridgewood, New Jersey 07450	West Side Presbyterian Church 6 South Monroe Street Ridgewood, NJ 07450 (201) 652-1966	Craig Matthews 6 South Monroe Street Ridgewood, NJ 07450 (201) 848-0842 craiggmatthews@aol.com

Property ID: 7547748

Energy Consumption and Energy Use Intensity (EUI)

Site EUI
39.6 kBtu/ft²

Source EUI
75.3 kBtu/ft²

Annual Energy by Fuel		
Electric - Grid (kBtu)	3,853,750 (49%)	
Natural Gas (kBtu)	4,062,577 (51%)	

National Median Comparison	
National Median Site EUI (kBtu/ft²)	48.3
National Median Source EUI (kBtu/ft²)	91.8
% Diff from National Median Source EUI	-18%
Annual Emissions	
Greenhouse Gas Emissions (Metric Tons CO2e/year)	606

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.

BPU New Jersey's cleanenergy program™

West Side Presbyterian Church

#	Energy Conservation Measure	*Cost effective?*	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_2e Emissions Reduction (lbs)
Lighting Upgrades			**287,837**	**54.4**	**-61**	**$37,359**	**$41,364**	**$6,500**	**$34,864**	**0.9**	**282,732**
ECM 1	Install LED Fixtures	Yes	386	0.0	0	$51	$1,460	$105	$1,355	26.6	389
ECM 2	Retrofit Fixtures with LED Lamps	Yes	287,451	54.3	-61	$37,308	$39,905	$6,395	$33,510	0.9	282,343
Lighting Control Measures			**34,141**	**5.0**	**-7**	**$4,437**	**$20,425**	**$3,385**	**$17,040**	**3.8**	**33,610**
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	23,527	3.5	-5	$3,053	$13,500	$1,540	$11,960	3.9	23,105
ECM 4	Install Daylight Dimming Controls	Yes	3,278	0.4	0	$432	$2,200	$1,845	$355	0.8	3,301
ECM 5	Install High/Low Lighting Controls	Yes	7,336	1.1	-2	$952	$4,725	$0	$4,725	5.0	7,204
Motor Upgrades			**2,066**	**0.5**	**0**	**$272**	**$6,338**	**$0**	**$6,338**	**23.3**	**2,080**
ECM 6	Premium Efficiency Motors	No	2,066	0.5	0	$272	$6,338	$0	$6,338	23.3	2,080
Variable Frequency Drive (VFD) Measures			**33,464**	**9.6**	**0**	**$4,406**	**$20,063**	**$1,950**	**$18,113**	**4.1**	**33,698**
ECM 7	Install VFD on Variable Air Volume (VAV) Fans	Yes	24,613	8.6	0	$3,241	$11,911	$1,950	$9,961	3.1	24,785
ECM 8	Install VFDs on Heating Water Pumps	Yes	8,852	1.0	0	$1,166	$8,152	$0	$8,152	7.0	8,913
Electric Unitary HVAC Measures			**4,740**	**2.0**	**0**	**$624**	**$122,387**	**$1,580**	**$120,807**	**193.6**	**4,773**
ECM 9	Install High Efficiency Air Conditioning Units	No	4,740	2.0	0	$624	$122,387	$1,580	$120,807	193.6	4,773
Gas Heating (HVAC/Process) Replacement			**0**	**0.0**	**172**	**$1,535**	**$65,922**	**$2,800**	**$63,122**	**41.1**	**20,174**
ECM 10	Install High Efficiency Hot Water Boilers	No	0	0.0	57	$511	$43,899	$2,000	$41,899	82.0	6,715
ECM 11	Install High Efficiency Furnaces	No	0	0.0	115	$1,024	$22,023	$800	$21,223	20.7	13,459
Domestic Water Heating Upgrade			**0**	**0.0**	**22**	**$198**	**$280**	**$0**	**$280**	**1.4**	**2,600**
ECM 12	Install Low-Flow DHW Devices	Yes	0	0.0	22	$198	$280	$0	$280	1.4	2,600
Food Service & Refrigeration Measures			**1,612**	**0.2**	**0**	**$212**	**$230**	**$50**	**$180**	**0.8**	**1,623**
ECM 13	Vending Machine Control	Yes	1,612	0.2	0	$212	$230	$50	$180	0.8	1,623
Custom Measures			**31,854**	**0.0**	**132**	**$5,373**	**$60,000**	**$0**	**$60,000**	**11.2**	**47,565**
ECM 14	Retro-Commissioning Study & HVAC Improvements	No	31,854	0.0	132	$5,373	$60,000	$0	$60,000	11.2	47,565
TOTALS (COST EFFECTIVE MEASURES)			**357,054**	**69.2**	**-45**	**$46,613**	**$82,362**	**$11,885**	**$70,477**	**1.5**	**354,263**
TOTALS (ALL MEASURES)			**395,714**	**71.7**	**259**	**$54,417**	**$337,009**	**$16,265**	**$320,744**	**5.9**	**428,855**

Solar Energy Generation Potential

	West Side Presbyterian Church
Potential:	**Low**
System Potential: (kW)	254
Electric Generation: (kWh per year)	191,121
Displaced Cost: (per year)	$25,170

SREC Registration Program (SRP):

http://www.NJCleanEnergy.com/SREC

Community Solar Energy Pilot Program:

http://www.NJCleanEnergy.com/CommunitySolar

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

Whole Buildings:

- **Pay for Performance**

Energy Generation:

- Combined Heat and Power – Fuel Cells

Other Programs →

Renewable Energy Generation:

- SREC Registration Program (SRP)
- **Community Solar**

BPU | New Jersey's cleanenergy program™

Recommended NJCEP Incentives per Building

West Side Presbyterian Church	Pay For Performance	SmartStart	CTEEP
West Side Presbyterian Church	X	X	X

Pay for Performance

NJCleanEnergy.com/P4P

What is P4P: Comprehensive, whole-building approach to saving energy in existing or new facilities.

Qualifications: Annual peak demand 200 kW+ in the previous year for existing buildings

About: Customer choose from a network of pre-approved ***Participating Partners***

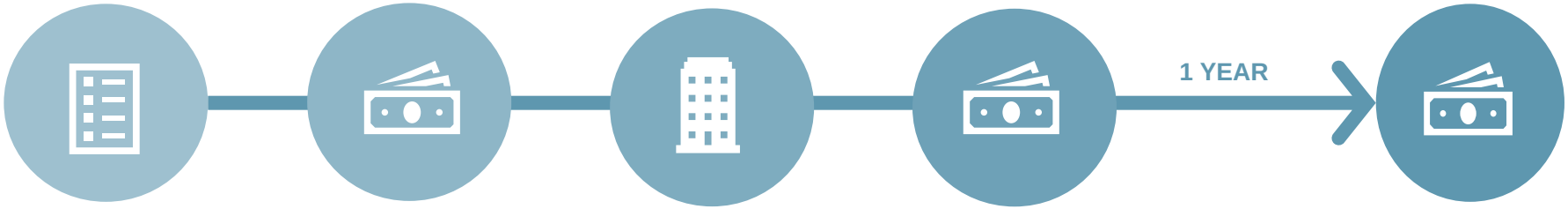
Incentives:

- Incentives paid in *three* installments
  - Up to $2MM per project
    - $1 million for electric measures
    - $1 million for gas measures
  - Up to 50% of project cost

  Incentive #2 & #3 are doubles for UEZ/OZ/ MUNI/K-12 Public Schools

Pay for Performance

NJCleanEnergy.com/P4P



Program Enrollment

Submission and Approval of Application

Energy Reduction Plan (ERP)

Development and Approval

Incentive #1
fixed

Installation of Measures

Installation Report

Incentive #2
up to 25% project cost

Verification of Savings

Comparison of Performance vs ERP

Incentive #3
up to 25% project cost

New Jersey's cleanenergy program™

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 *all* 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

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

BPU | New Jersey's cleanenergy program™

For More Information

Visit NJCleanEnergy.com

Call (732) 855-0033

Mike Mandzik

Regional Outreach Manager

732.570.7534

mmandzik@trccompanies.com

BPU | New Jersey's cleanenergy program™

QUESTIONS

?