

New Jersey's Clean Energy Program

LGEA Presentation
The Church of St. Anne

October 14, 2021

INTRODUCTIONS

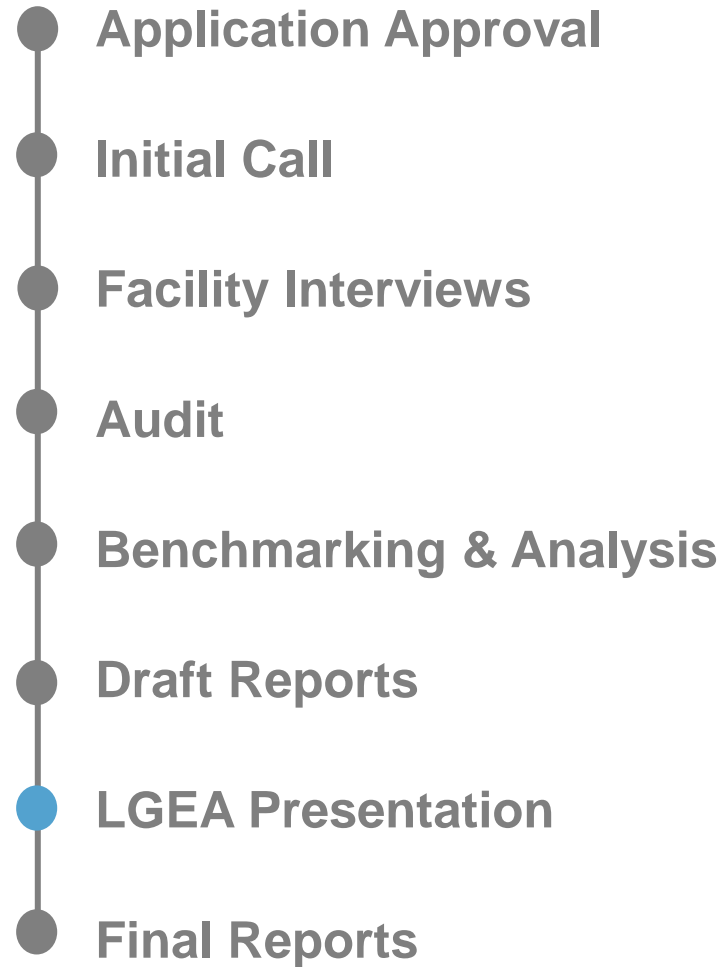
- *The Church of St. Anne*
 - Rev. Joe Doyle - Pastor
 - Rev. S. Monaco – Vicar
 - Michael LaRocco – Church Committee Member
- *NJ Clean Energy Program*
 - Sarah Walters – TRC Project Manager
 - Moussa Traore – TRC Lead Auditor
 - Eduardo Garcia – TRC Auditor
 - Amanda Muench – TRC Account Manager

AGENDA

- The audit process overview
- Energy use & existing conditions
- Review of **E**nergy **C**onservation **M**easures (ECMs) identified & other recommendations
- C&I Transition of EE Programs
- Questions regarding the draft audit report



LGEA PROCESS



SITE VISIT & UTILITY ANALYSIS

Overview of Systems, Baseline & Existing Conditions:

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

Utility Consumption:

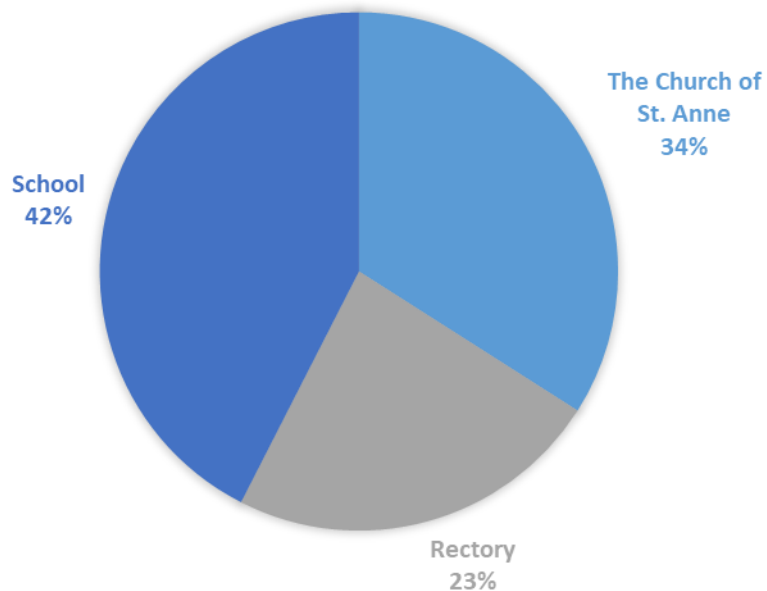
- Electric Consumption and Costs
- Natural Gas Consumption and Costs

Sites Visited/Analyzed

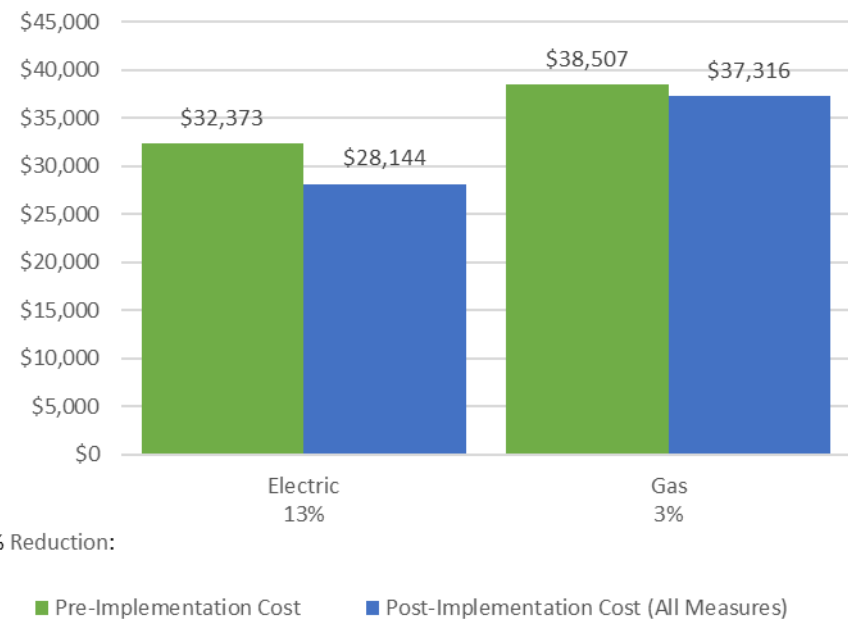
- Rectory
- Church
- School

UTILITY BREAKOUT


Percent of Total Annual Energy Costs



Pre & Post Implementation Cost



BENCHMARKING

 **ENERGY STAR® Statement of Energy Performance**
LEARN MORE AT energystar.gov

51
ENERGY STAR® Score¹

The Church of St. Anne - Church
Primary Property Type: Worship Facility
Gross Floor Area (ft²): 27,000
Built: 1957
For Year Ending: December 31, 2019
Date Generated: June 22, 2021

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
The Church of St. Anne - Church 2-01 Lyncrest Avenue Fair Lawn, New Jersey 07410	The Church of St. Anne 15-05 St. Anne Street Fair Lawn, NJ 07410 201-791-1616	Rev. Joseph Doyle 15-05 St. Anne Street Fair Lawn, NJ 07410 201-791-1616 jdoyle@stannefairlawnnj.org

Property ID: 14944198

Energy Consumption and Energy Use Intensity (EUI)

Site EUI	Source EUI	Annual Energy by Fuel	National Median Comparison
52.8 kBtu/ft²	69.4 kBtu/ft²	Electric - Grid (kBtu) 214,841 (15%) Natural Gas (kBtu) 1,211,128 (85%)	National Median Site EUI (kBtu/ft²) 53.7 National Median Source EUI (kBtu/ft²) 70.5 % Diff from National Median Source EUI -2% Annual Emissions Greenhouse Gas Emissions (Metric Tons CO2e/year) 85

Signature & Stamp of Verifying Professional

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

LP Signature: _____ Date: _____

Licensed Professional

() _____

Professional Engineer or Registered Architect Stamp (if applicable)

Site EUI
52.8 kBtu/ft²

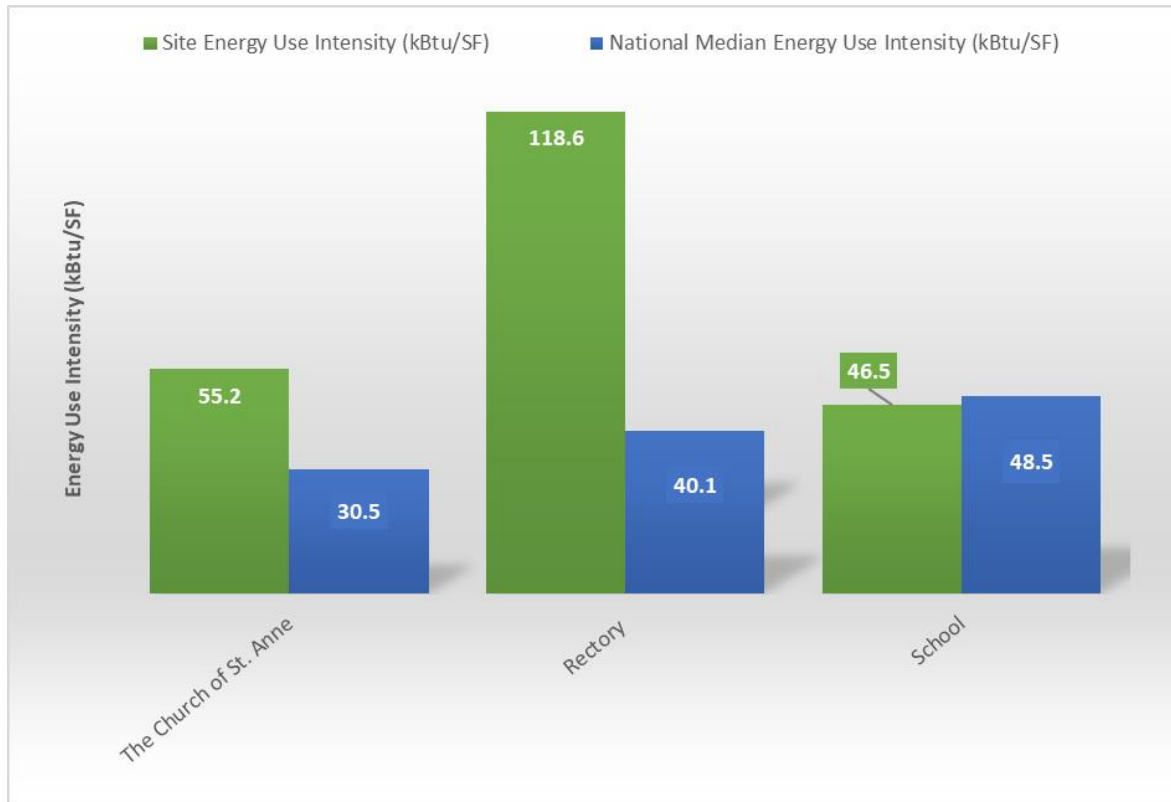
Source EUI
69.4 kBtu/ft²

National Median Comparison

National Median Site EUI (kBtu/ft²)	53.7
National Median Source EUI (kBtu/ft²)	70.5
% Diff from National Median Source EUI	-2%
Annual Emissions	
Greenhouse Gas Emissions (Metric Tons CO2e/year)	85

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.

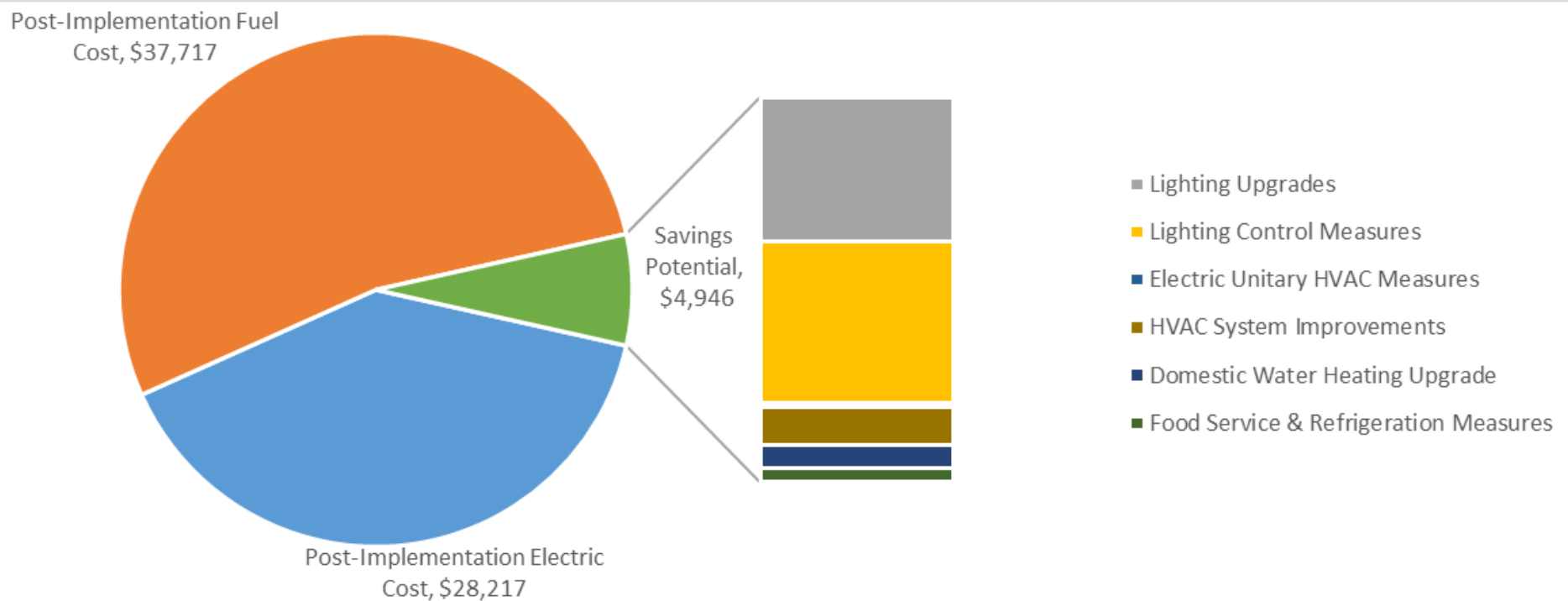
BENCHMARKING



Site Name	Energy Star Score
The Church of St. Anne	51
Rectory	N/A
School	N/A

ALL OPPORTUNITIES

Savings Potential



ALL OPPORTUNITIES

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated M&L Cost (\$)	Estimated Incentive (\$)*	Estimated Net M&L Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades		9,736	5.9	-1.8	\$1,863	\$4,796	\$1,631	\$3,165	1.7	9,590
ECM 1	Install LED Fixtures	561	0.0	0.0	\$108	\$116	\$50	\$66	0.6	565
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	206	0.0	0.0	\$37	\$129	\$20	\$109	3.0	202
ECM 3	Retrofit Fixtures with LED Lamps	7,644	5.8	-1.5	\$1,464	\$3,828	\$1,561	\$2,267	1.5	7,522
ECM 4	Install LED Exit Signs	1,325	0.1	-0.3	\$255	\$724	\$0	\$724	2.8	1,301
Lighting Control Measures		11,524	3.3	-2.6	\$2,064	\$17,301	\$2,995	\$14,306	6.9	11,299
ECM 5	Install Occupancy Sensor Lighting Controls	10,251	3.0	-2.3	\$1,837	\$14,151	\$1,770	\$12,381	6.7	10,050
ECM 6	Install High/Low Lighting Controls	1,273	0.3	-0.3	\$227	\$3,150	\$1,225	\$1,925	8.5	1,248
Electric Unitary HVAC Measures		317	0.4	0.0	\$58	\$6,625	\$210	\$6,415	111.1	319
ECM 7	Install High Efficiency Air Conditioning Units	317	0.4	0.0	\$58	\$6,625	\$210	\$6,415	111.1	319
HVAC System Improvements		264	0.0	47.5	\$487	\$1,047	\$166	\$881	1.8	5,832
ECM 8	Install Pipe Insulation	264	0.0	47.5	\$487	\$1,047	\$166	\$881	1.8	5,832
Domestic Water Heating Upgrade		0	0.0	33.5	\$296	\$995	\$158	\$837	2.8	3,920
ECM 9	Install Low-Flow DHW Devices	0	0.0	33.5	\$296	\$995	\$158	\$837	2.8	3,920
Food Service & Refrigeration Measures		402	0.0	10.8	\$179	\$10,570	\$575	\$9,995	56.0	1,674
ECM 10	Food Service Equipment Replacement	0	0.0	10.8	\$107	\$9,290	\$500	\$8,790	82.4	1,269
ECM 11	Replace Refrigeration Equipment	402	0.0	0.0	\$72	\$1,280	\$75	\$1,205	16.8	404
TOTALS		22,242	9.7	87.4	\$4,946	\$41,334	\$5,735	\$35,599	7.2	32,633

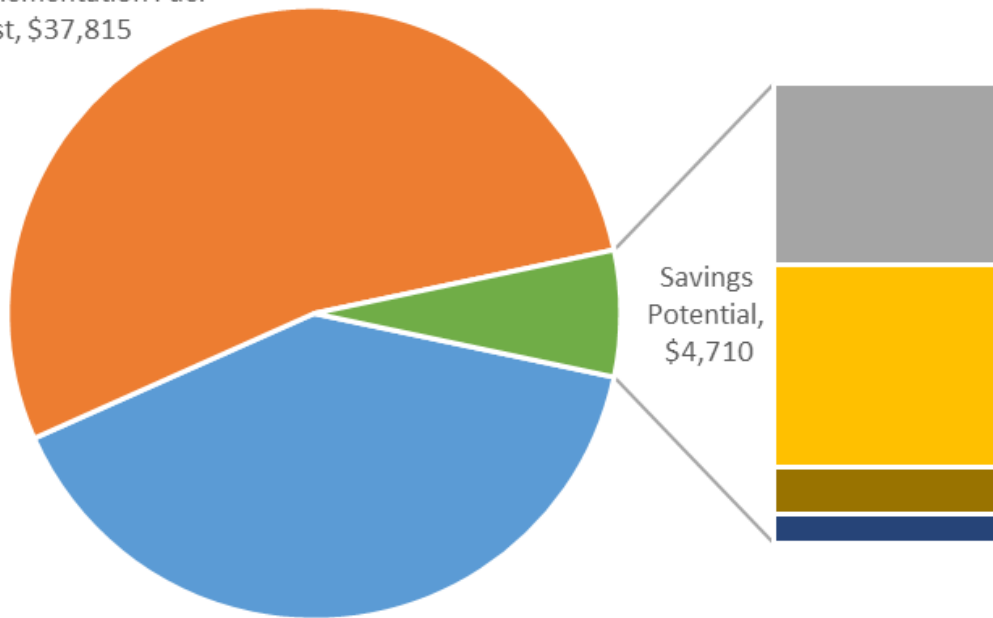
* - All incentives presented in this table are included as placeholders and are based on previously run state rebate programs. Contact your utility provider for details on current programs

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

COST EFFECTIVE OPPORTUNITIES

Savings Potential

Post-Implementation Fuel
Cost, \$37,815



Savings
Potential,
\$4,710

Post-Implementation Electric
Cost, \$28,355

- Lighting Upgrades
- Lighting Control Measures
- HVAC System Improvements
- Domestic Water Heating Upgrade

COST EFFECTIVE OPPORTUNITIES

#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated M&L Cost (\$)	Estimated Incentive (\$)*	Estimated Net M&L Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades		9,736	5.9	-1.8	\$1,863	\$4,796	\$1,631	\$3,165	1.7	9,590
ECM 1	Install LED Fixtures	561	0.0	0.0	\$108	\$116	\$50	\$66	0.6	565
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	206	0.0	0.0	\$37	\$129	\$20	\$109	3.0	202
ECM 3	Retrofit Fixtures with LED Lamps	7,644	5.8	-1.5	\$1,464	\$3,828	\$1,561	\$2,267	1.5	7,522
ECM 4	Install LED Exit Signs	1,325	0.1	-0.3	\$255	\$724	\$0	\$724	2.8	1,301
Lighting Control Measures		11,524	3.3	-2.6	\$2,064	\$17,301	\$2,995	\$14,306	6.9	11,299
ECM 5	Install Occupancy Sensor Lighting Controls	10,251	3.0	-2.3	\$1,837	\$14,151	\$1,770	\$12,381	6.7	10,050
ECM 6	Install High/Low Lighting Controls	1,273	0.3	-0.3	\$227	\$3,150	\$1,225	\$1,925	8.5	1,248
HVAC System Improvements		264	0.0	47.5	\$487	\$1,047	\$166	\$881	1.8	5,832
ECM 8	Install Pipe Insulation	264	0.0	47.5	\$487	\$1,047	\$166	\$881	1.8	5,832
Domestic Water Heating Upgrade		0	0.0	33.5	\$296	\$995	\$158	\$837	2.8	3,920
ECM 9	Install Low-Flow DHW Devices	0	0.0	33.5	\$296	\$995	\$158	\$837	2.8	3,920
TOTALS		21,524	9.2	76.6	\$4,710	\$24,139	\$4,950	\$19,189	4.1	30,640

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** - Simple Payback Period is based on net measure costs (i.e. after incentives).

RECTORY

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated M&L Cost (\$)	Estimated Incentive (\$)*	Estimated Net M&L Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			1,067	1.0	0	\$195	\$633	\$0	\$633	3.3	1,052
ECM 1	Install LED Fixtures	Yes	132	0.0	0	\$24	\$16	\$0	\$16	0.7	133
ECM 2	Retrofit Fixtures with LED Lamps	Yes	936	1.0	0	\$170	\$617	\$0	\$617	3.6	919
Lighting Control Measures			688	0.3	0	\$125	\$1,736	\$0	\$1,736	13.9	676
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	254	0.1	0	\$46	\$386	\$0	\$386	8.4	250
ECM 4	Install High/Low Lighting Controls	Yes	434	0.2	0	\$79	\$1,350	\$0	\$1,350	17.1	426
HVAC System Improvements			0	0.0	6	\$44	\$289	\$0	\$289	6.5	680
ECM 5	Install Pipe Insulation	Yes	0	0.0	6	\$44	\$289	\$0	\$289	6.5	680
Domestic Water Heating Upgrade			0	0.0	14	\$106	\$694	\$0	\$694	6.5	1,635
ECM 6	Install Low-Flow DHW Devices	Yes	0	0.0	14	\$106	\$694	\$0	\$694	6.5	1,635
TOTALS (COST EFFECTIVE MEASURES)			1,755	1.3	19	\$470	\$3,351	\$0	\$3,351	7.1	4,043
TOTALS (ALL MEASURES)			1,755	1.3	19	\$470	\$3,351	\$0	\$3,351	7.1	4,043

Incentives are based on previously run state rebate programs. Contact your utility provider for current program incentives that may apply.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

CHURCH

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated M&L Cost (\$)	Estimated Incentive (\$) *	Estimated Net M&L Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			8,462	4.9	-2	\$1,632	\$4,035	\$1,611	\$2,424	1.5	8,336
ECM 1	Install LED Fixtures	Yes	429	0.0	0	\$84	\$100	\$50	\$50	0.6	432
ECM 2	Retrofit Fixtures with LED Lamps	Yes	6,709	4.7	-1	\$1,293	\$3,211	\$1,561	\$1,650	1.3	6,603
ECM 3	Install LED Exit Signs	Yes	1,325	0.1	0	\$255	\$724	\$0	\$724	2.8	1,301
Lighting Control Measures			1,457	1.1	0	\$281	\$1,923	\$440	\$1,483	5.3	1,431
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	1,457	1.1	0	\$281	\$1,923	\$440	\$1,483	5.3	1,431
Unitary HVAC Measures			67	0.2	0	\$13	\$703	\$0	\$703	54.2	67
ECM 5	Install High Efficiency Air Conditioning Units	No	67	0.2	0	\$13	\$703	\$0	\$703	54.2	67
HVAC System Improvements			264	0.0	34	\$365	\$470	\$116	\$354	1.0	4,226
ECM 6	Install Pipe Insulation	Yes	264	0.0	34	\$365	\$470	\$116	\$354	1.0	4,226
Domestic Water Heating Upgrade			0	0.0	5	\$43	\$79	\$38	\$41	1.0	542
ECM 7	Install Low-Flow DHW Devices	Yes	0	0.0	5	\$43	\$79	\$38	\$41	1.0	542
TOTALS (COST EFFECTIVE MEASURES)			10,184	6.0	37	\$2,320	\$6,507	\$2,205	\$4,302	1.9	14,535
TOTALS (ALL MEASURES)			10,250	6.2	37	\$2,333	\$7,210	\$2,205	\$5,005	2.1	14,602

* - All incentives presented in this table are included as placeholders and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

SCHOOL

#	Energy Conservation Measure	Cost Effective?	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated M&L Cost (\$)	Estimated Incentive (\$)*	Estimated Net M&L Cost (\$)	Simple Payback Period (yrs)**	CO ₂ e Emissions Reduction (lbs)
Lighting Upgrades			206	0.0	0	\$36	\$129	\$20	\$109	3.0	202
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	206	0.0	0	\$36	\$129	\$20	\$109	3.0	202
Lighting Control Measures			9,379	1.9	-2	\$1,658	\$13,642	\$2,555	\$11,087	6.7	9,192
ECM 2	Install Occupancy Sensor Lighting Controls	Yes	8,540	1.7	-2	\$1,510	\$11,842	\$1,330	\$10,512	7.0	8,370
ECM 3	Install High/Low Lighting Controls	Yes	839	0.2	0	\$148	\$1,800	\$1,225	\$575	3.9	822
Unitary HVAC Measures			250	0.3	0	\$45	\$5,922	\$210	\$5,712	127.6	252
ECM 4	Install High Efficiency Air Conditioning Units	No	250	0.3	0	\$45	\$5,922	\$210	\$5,712	127.6	252
HVAC System Improvements			0	0.0	8	\$78	\$289	\$50	\$239	3.1	926
ECM 5	Install Pipe Insulation	Yes	0	0.0	8	\$78	\$289	\$50	\$239	3.1	926
Domestic Water Heating Upgrade			0	0.0	15	\$146	\$222	\$120	\$102	0.7	1,742
ECM 6	Install Low-Flow DHW Devices	Yes	0	0.0	15	\$146	\$222	\$120	\$102	0.7	1,742
Food Service & Refrigeration Measures			402	0.0	11	\$179	\$10,570	\$575	\$9,995	56.0	1,674
ECM 7	Food Service Equipment Replacement	No	0	0.0	11	\$107	\$9,290	\$500	\$8,790	82.4	1,269
ECM 8	Replace Refrigeration Equipment	No	402	0.0	0	\$72	\$1,280	\$75	\$1,205	16.8	404
TOTALS (COST EFFECTIVE MEASURES)			9,585	1.9	21	\$1,919	\$14,281	\$2,745	\$11,536	6.0	12,062
TOTALS (ALL MEASURES)			10,237	2.2	31	\$2,143	\$30,773	\$3,530	\$27,243	12.7	13,987

Incentives are based on previously run state rebate programs. Contact your utility provider for current program incentives that may apply.

** - Simple Payback Period is based on net measure costs (i.e. after incentives).

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

COMMERCIAL & INDUSTRIAL PROGRAMS

<https://www.njcleanenergy.com/transition>

LOCAL
GOVERNMENT
CUSTOMERS

COMMERCIAL &
INSTITUTIONAL
CUSTOMERS

LARGE
ENERGY
CUSTOMERS

EXISTING BUILDINGS

MEASUREMENT & AUDITS

FREE Energy Audits



RETROFITS

Prescriptive &
Custom Rebates

Direct Install

Engineered Solutions

And more from
your local utility!



Incentives up
to \$4 million
for eligible projects



NEW CONSTRUCTION

Prescriptive & Custom
Rebates for New
Construction and
Gut Rehabs

Pay for Performance
incentives for
buildings over
50,000 sq. ft.



DISTRIBUTED ENERGY RESOURCES

Combined Heat & Power
and Fuel Cell Installation
Incentives

Microgrid Development

Battery Storage

Muni EV Fleets



Key:

Programs run by NJCEP



Programs run by investor-owned utility companies



FOR MORE INFORMATION

LGEA TEAM

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QUESTIONS

