LGEA Presentation

Bnai Keshet

October 30, 2023

New Jersey's
Clean Energy Program

Lighting the way to New Jersey's Clean Energy Future

INTRODUCTIONS

- *Bnai Keshet*
  - Mark Bogard – Executive Director
  - Bill Beren – Congregant

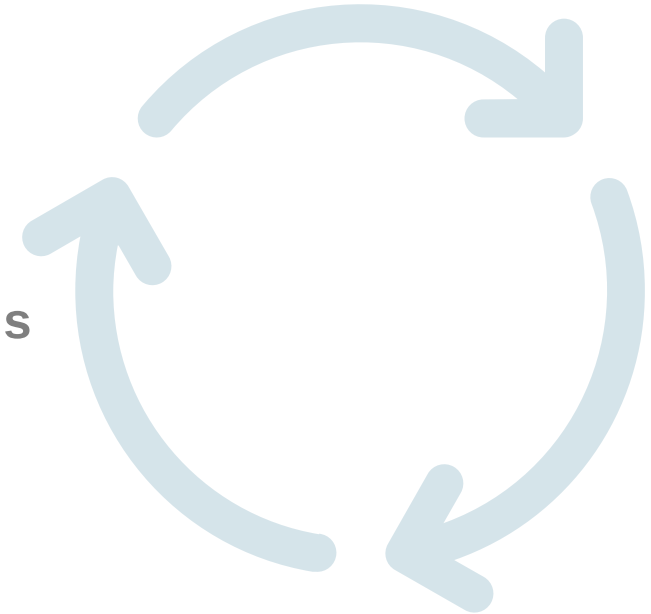
- *NJ Clean Energy Program*
  - Sarah Walters – LGEA Project Manager
  - Moussa Traore – LGEA Technical Manager
  - Sara Neiss– LGEA Project Auditor
  - Amanda Muench – LGEA Account Manager

AGENDA

- The audit process overview
- Energy use & existing conditions
- Review of **E**nergy **C**onservation **M**easures (ECMs) identified & other recommendations
- Energy Savings Improvement Program (ESIP)
- Energy Efficiency Incentive Programs
- Questions regarding the draft audit report
- Next steps for Bnai Keshet

LGEA Process

- Application Approval
- Initial Call
- Facility Interviews
- Audit
- Benchmarking & Analysis
- Draft Reports
- LGEA Presentation
- Final Reports



Site Visit & Utility Analysis

Overview of Systems, Baseline & Existing Conditions:

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

Utility Consumption:

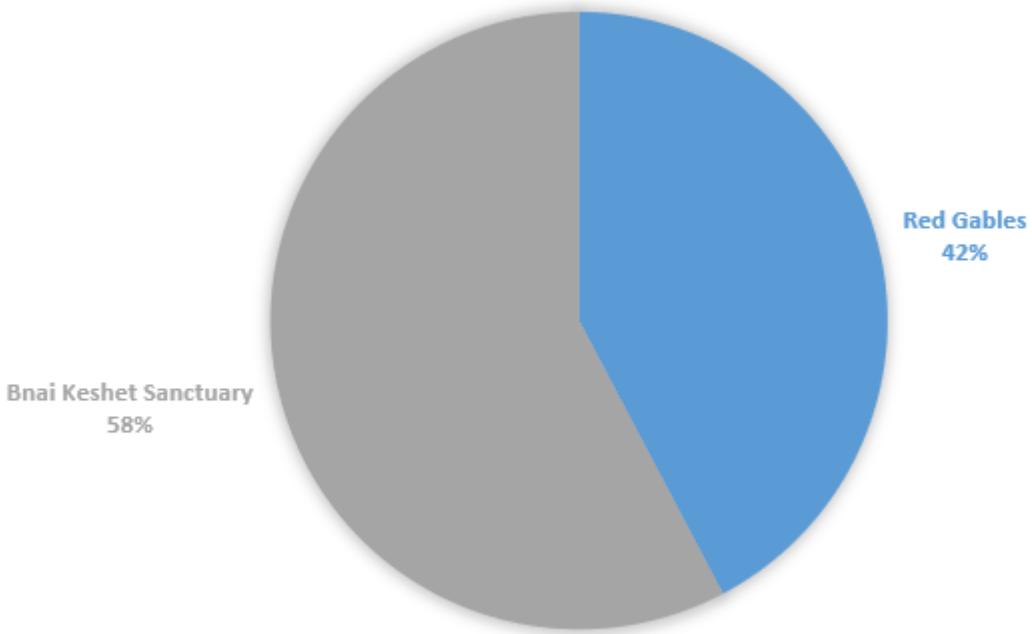
- Electric Consumption and Costs
- Natural Gas Consumption and Costs

Sites Visited/Analyzed

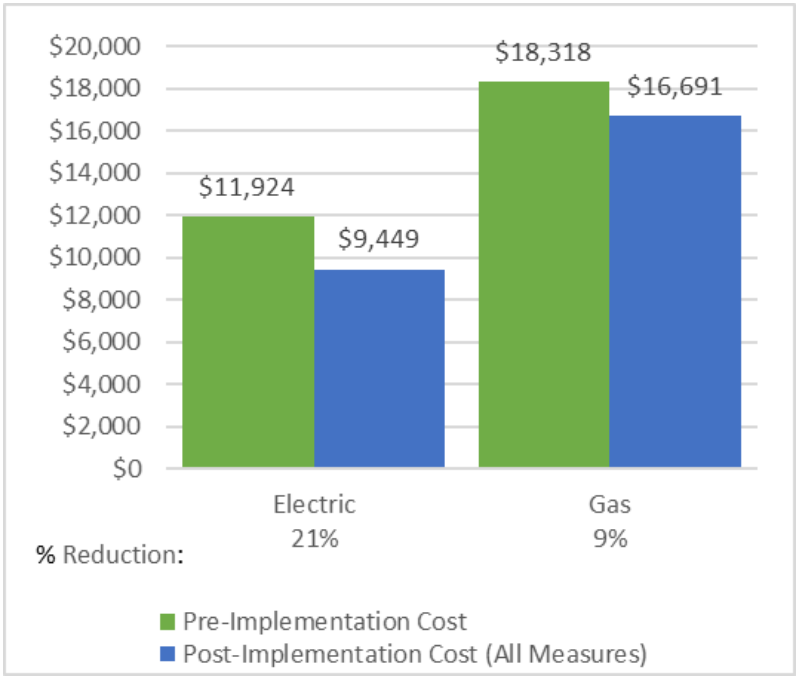
- Sanctuary
- Red Gables

Utility Breakout

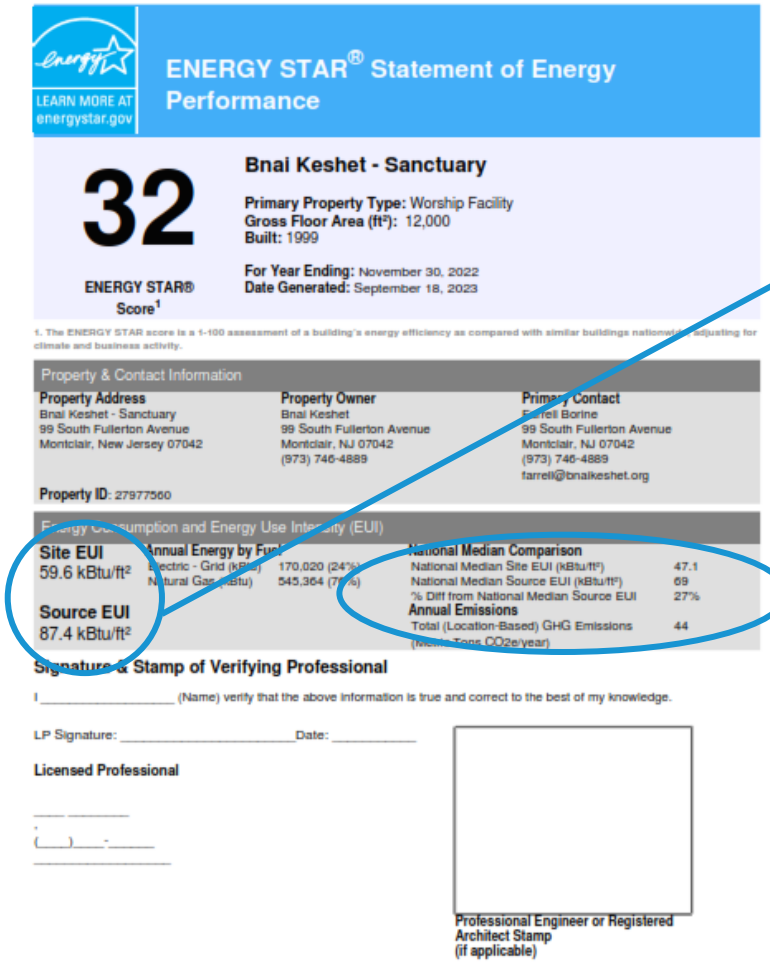
Percent of Total Annual Energy Costs



Pre & Post Implementation Cost



BENCHMARKING



ENERGY STAR® Statement of Energy Performance

LEARN MORE AT energystar.gov

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ENERGY STAR® Score[1]

Bnai Keshet - Sanctuary

Primary Property Type: Worship Facility
Gross Floor Area (ft²): 12,000
Built: 1999

For Year Ending: November 30, 2022
Date Generated: September 18, 2023

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
Bnai Keshet - Sanctuary 99 South Fullerton Avenue Montclair, New Jersey 07042	Bnai Keshet 99 South Fullerton Avenue Montclair, NJ 07042 (973) 746-4889	Farrell Borine 99 South Fullerton Avenue Montclair, NJ 07042 (973) 746-4889 farrell@bnaikeshet.org

Property ID: 27977560

Energy Consumption and Energy Use Intensity (EUI)

Site EUI
59.6 kBtu/ft²

Source EUI
87.4 kBtu/ft²

Annual Energy by Fuel

Electric - Grid (kBtu)	170,020 (24%)	
Natural Gas (kBtu)	545,364 (76%)	

National Median Comparison

National Median Site EUI (kBtu/ft²)	47.1
National Median Source EUI (kBtu/ft²)	69
% Diff from National Median Source EUI	27%
Annual Emissions	
Total (Location-Based) GHG Emissions (Metric Tons CO2e/year)	44

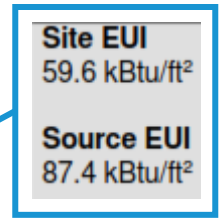
Signature & Stamp of Verifying Professional

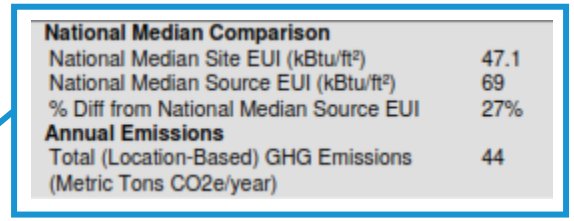
I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

LP Signature: _____ Date: _____

Licensed Professional

Professional Engineer or Registered Architect Stamp (if applicable)



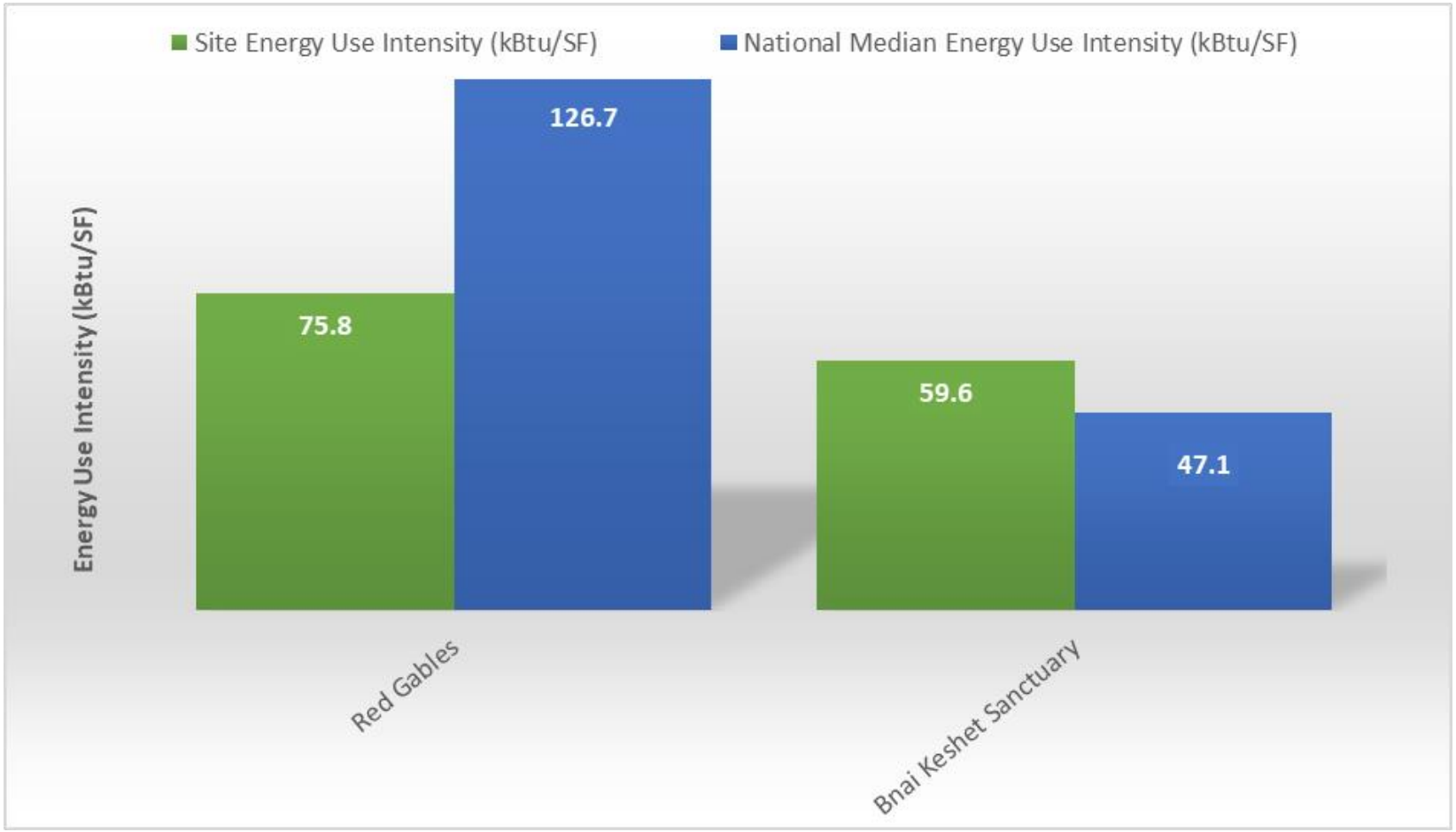


Site Name	ENERGY STAR® Score
Sanctuary	32
Red Gables	N/A

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™

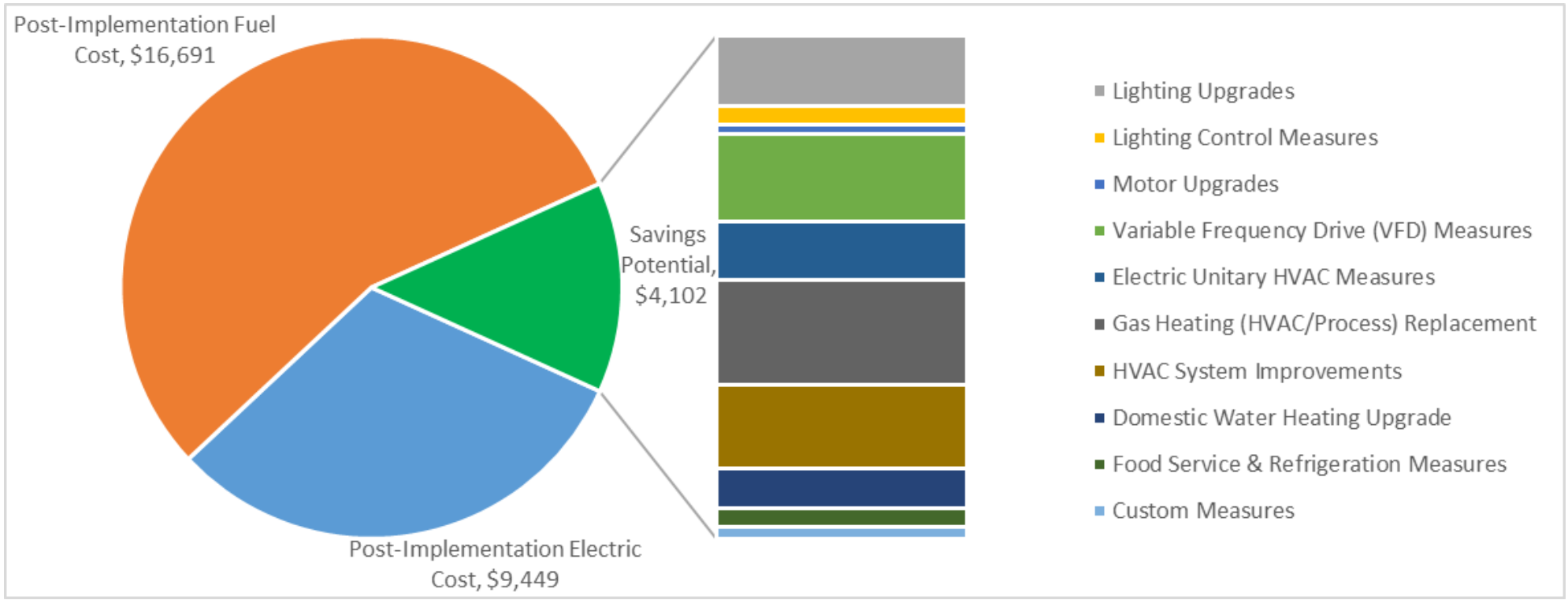
BENCHMARKING



New Jersey's cleanenergy program™

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_2e Emissions Reduction (lbs)
Lighting Upgrades		**2,855**	**1.8**	**-0.4**	**$568**	**$1,903**	**$286**	**$1,617**	**2.8**	**2,833**
ECM 1	Install LED Fixtures	438	0.0	0.0	$84	$200	$25	$175	2.1	441
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	609	0.1	-0.1	$117	$138	$20	$118	1.0	598
ECM 3	Retrofit Fixtures with LED Lamps	1,808	1.7	-0.2	$367	$1,565	$241	$1,324	3.6	1,794
Lighting Control Measures		**821**	**0.6**	**-0.2**	**$158**	**$6,894**	**$2,590**	**$4,304**	**27.2**	**806**
ECM 4	Install Occupancy Sensor Lighting Controls	293	0.3	-0.1	$58	$4,419	$1,050	$3,369	58.2	288
ECM 5	Install High/Low Lighting Controls	528	0.2	-0.1	$100	$2,475	$1,540	$935	9.3	519
Motor Upgrades		**368**	**0.6**	**0.0**	**$71**	**$8,234**	**$0**	**$8,234**	**116.3**	**371**
ECM 6	Premium Efficiency Motors	368	0.6	0.0	$71	$8,234	$0	$8,234	116.3	371
Variable Frequency Drive (VFD) Measures		**3,654**	**3.3**	**0.0**	**$715**	**$15,521**	**$1,150**	**$14,371**	**20.1**	**3,679**
ECM 7	Install VFDs on Constant Volume (CV) Fans	3,261	3.2	0.0	$627	$9,249	$1,050	$8,199	13.1	3,284
ECM 8	Install VFDs on Heating Water Pumps	393	0.1	0.0	$87	$6,272	$100	$6,172	70.7	395
Unitary HVAC Measures		**2,485**	**4.5**	**0.0**	**$481**	**$35,757**	**$1,995**	**$33,762**	**70.2**	**2,503**
ECM 9	Install High Efficiency Air Conditioning Units	2,485	4.5	0.0	$481	$35,757	$1,995	$33,762	70.2	2,503
Gas Heating (HVAC/Process) Replacement		**0**	**0.0**	**59.3**	**$859**	**$62,271**	**$4,600**	**$57,671**	**67.2**	**6,946**
ECM 10	Install High Efficiency Hot Water Boilers	0	0.0	48.3	$699	$41,325	$1,600	$39,725	56.8	5,658
ECM 11	Install High Efficiency Furnaces	0	0.0	11.0	$159	$20,946	$3,000	$17,946	112.6	1,288

ALL OPPORTUNITIES (CONT.)

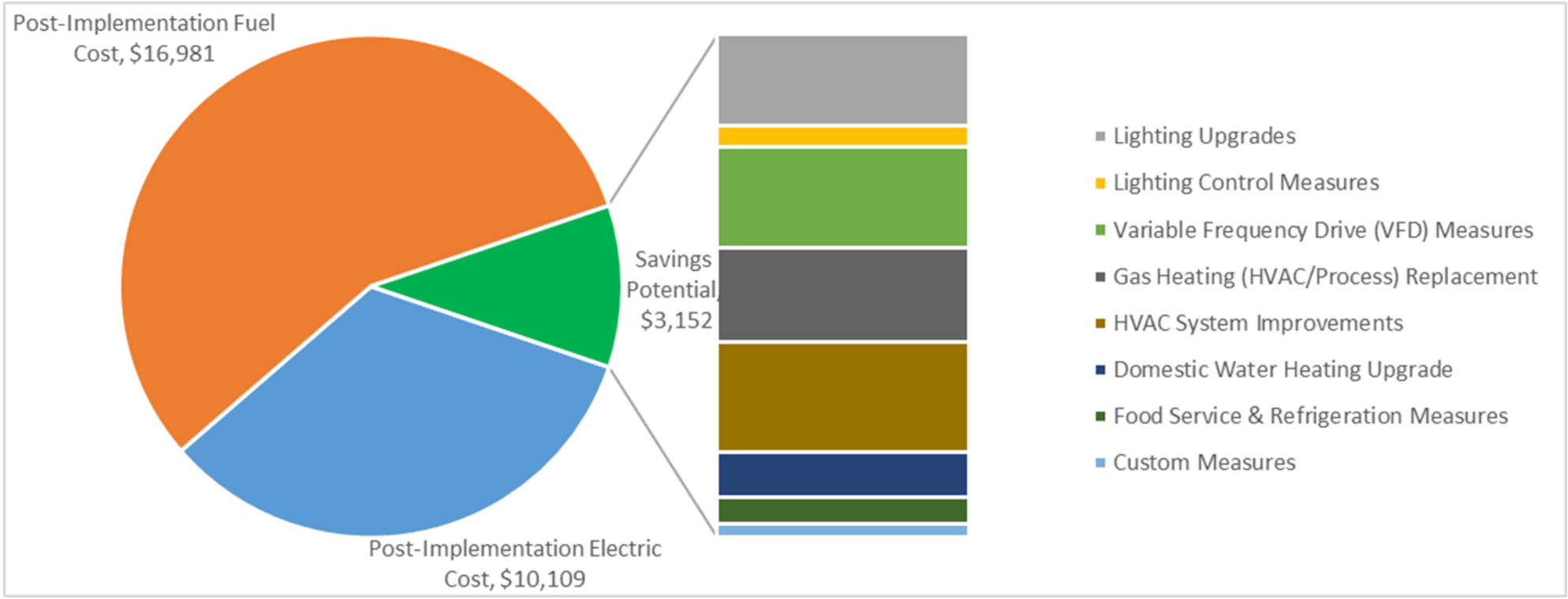
#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
HVAC System Improvements		**0**	**0.0**	**47.2**	**$684**	**$1,407**	**$206**	**$1,201**	**1.8**	**5,531**
ECM 12	Install Pipe Insulation	0	0.0	47.2	$684	$1,407	$206	$1,201	1.8	5,531
Domestic Water Heating Upgrade		**1,104**	**0.0**	**7.0**	**$314**	**$1,607**	**$224**	**$1,384**	**4.4**	**1,936**
ECM 13	Install High Efficiency Gas-Fired Water Heater	0	0.0	1.9	$27	$1,375	$140	$1,235	45.6	219
ECM 14	Install Low-Flow DHW Devices	1,104	0.0	5.2	$287	$233	$84	$149	0.5	1,716
Food Service & Refrigeration Measures		**838**	**0.1**	**0.0**	**$161**	**$2,016**	**$125**	**$1,891**	**11.7**	**844**
ECM 15	Replace Refrigeration Equipment	838	0.1	0.0	$161	$2,016	$125	$1,891	11.7	844
Custom Measures		**475**	**0.0**	**0.0**	**$91**	**$2,383**	**$0**	**$2,383**	**26.2**	**478**
ECM 16	Replace Electric Water Heater with Heat Pump Water Heater	475	0.0	0.0	$91	$2,383	$0	$2,383	26.2	478
TOTALS		**12,601**	**10.9**	**113.1**	**$4,102**	**$137,992**	**$11,176**	**$126,817**	**30.9**	**25,928**

* - All incentives presented in this table are included as placesholders 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



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_2e Emissions Reduction (lbs)
Lighting Upgrades		**2,855**	**1.8**	**-0.4**	**$568**	**$1,903**	**$286**	**$1,617**	**2.8**	**2,833**
ECM 1	Install LED Fixtures	438	0.0	0.0	$84	$200	$25	$175	2.1	441
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	609	0.1	-0.1	$117	$138	$20	$118	1.0	598
ECM 3	Retrofit Fixtures with LED Lamps	1,808	1.7	-0.2	$367	$1,565	$241	$1,324	3.6	1,794
Lighting Control Measures		**726**	**0.4**	**-0.2**	**$137**	**$4,057**	**$2,030**	**$2,027**	**14.7**	**713**
ECM 4	Install Occupancy Sensor Lighting Controls	213	0.2	0.0	$40	$2,032	$665	$1,367	33.9	209
ECM 5	Install High/Low Lighting Controls	513	0.2	-0.1	$97	$2,025	$1,365	$660	6.8	504
Variable Frequency Drive (VFD) Measures		**3,261**	**3.2**	**0.0**	**$627**	**$9,249**	**$1,050**	**$8,199**	**13.1**	**3,284**
ECM 7	Install VFDs on Constant Volume (CV) Fans	3,261	3.2	0.0	$627	$9,249	$1,050	$8,199	13.1	3,284
Gas Heating (HVAC/Process) Replacement		**0**	**0.0**	**41.2**	**$596**	**$11,785**	**$400**	**$11,385**	**19.1**	**4,821**
ECM 10	Install High Efficiency Hot Water Boilers	0	0.0	41.2	$596	$11,785	$400	$11,385	19.1	4,821
HVAC System Improvements		**0**	**0.0**	**47.2**	**$684**	**$1,407**	**$206**	**$1,201**	**1.8**	**5,531**
ECM 12	Install Pipe Insulation	0	0.0	47.2	$684	$1,407	$206	$1,201	1.8	5,531
Domestic Water Heating Upgrade		**1,104**	**0.0**	**5.2**	**$287**	**$233**	**$84**	**$149**	**0.5**	**1,716**
ECM 14	Install Low-Flow DHW Devices	1,104	0.0	5.2	$287	$233	$84	$149	0.5	1,716
Food Service & Refrigeration Measures		**838**	**0.1**	**0.0**	**$161**	**$2,016**	**$125**	**$1,891**	**11.7**	**844**
ECM 15	Replace Refrigeration Equipment	838	0.1	0.0	$161	$2,016	$125	$1,891	11.7	844
Custom Measures		**475**	**0.0**	**0.0**	**$91**	**$2,383**	**$0**	**$2,383**	**26.2**	**478**
ECM 16	Replace Electric Water Heater with Heat Pump Water Heater	475	0.0	0.0	$91	$2,383	$0	$2,383	26.2	478
TOTALS		**9,259**	**5.6**	**93.1**	**$3,152**	**$33,033**	**$4,181**	**$28,852**	**9.2**	**20,221**

* - All incentives presented in this table are included as placesholders 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).

SANCTUARY

#	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_2e Emissions Reduction (lbs)
Lighting Upgrades			**2,062**	**0.6**	**0**	**$394**	**$847**	**$154**	**$693**	**1.8**	**2,055**
ECM 1	Install LED Fixtures	Yes	438	0.0	0	$84	$200	$25	$175	2.1	441
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	558	0.1	0	$106	$69	$10	$59	0.6	548
ECM 3	Retrofit Fixtures with LED Lamps	Yes	1,066	0.5	0	$204	$578	$119	$459	2.2	1,066
Lighting Control Measures			**726**	**0.4**	**0**	**$137**	**$4,147**	**$1,820**	**$2,327**	**16.9**	**713**
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	502	0.3	0	$95	$2,572	$735	$1,837	19.3	493
ECM 5	Install High/Low Lighting Controls	Yes	224	0.1	0	$42	$1,575	$1,085	$490	11.6	220
Motor Upgrades			**199**	**0.4**	**0**	**$38**	**$6,440**	**$0**	**$6,440**	**168.6**	**200**
ECM 6	Premium Efficiency Motors	No	199	0.4	0	$38	$6,440	$0	$6,440	168.6	200
Variable Frequency Drive (VFD) Measures			**3,973**	**4.0**	**0**	**$764**	**$16,883**	**$1,200**	**$15,683**	**20.5**	**4,001**
ECM 7	Install VFDs on Constant Volume (CV) Fans	Yes	3,973	4.0	0	$764	$16,883	$1,200	$15,683	20.5	4,001
Unitary HVAC Measures			**2,385**	**4.3**	**0**	**$459**	**$34,865**	**$1,995**	**$32,870**	**71.6**	**2,402**
ECM 8	Install High Efficiency Air Conditioning Units	No	2,385	4.3	0	$459	$34,865	$1,995	$32,870	71.6	2,402
Gas Heating (HVAC/Process) Replacement			**0**	**0.0**	**18**	**$263**	**$50,485**	**$4,200**	**$46,285**	**176.1**	**2,125**
ECM 9	Install High Efficiency Hot Water Boilers	No	0	0.0	7	$104	$29,539	$1,200	$28,339	273.7	837
ECM 10	Install High Efficiency Furnaces	No	0	0.0	11	$159	$20,946	$3,000	$17,946	112.6	1,288
HVAC System Improvements			**0**	**0.0**	**8**	**$116**	**$186**	**$28**	**$158**	**1.4**	**939**
ECM 11	Install Pipe Insulation	Yes	0	0.0	8	$116	$186	$28	$158	1.4	939
Domestic Water Heating Upgrade			**1,104**	**0.0**	**0**	**$212**	**$79**	**$38**	**$41**	**0.2**	**1,112**
ECM 12	Install Low-Flow DHW Devices	Yes	1,104	0.0	0	$212	$79	$38	$41	0.2	1,112
Food Service & Refrigeration Measures			**838**	**0.1**	**0**	**$161**	**$2,016**	**$125**	**$1,891**	**11.7**	**844**
ECM 13	Replace Refrigeration Equipment	Yes	838	0.1	0	$161	$2,016	$125	$1,891	11.7	844
Custom Measures			**475**	**0.0**	**0**	**$91**	**$2,383**	**$0**	**$2,383**	**26.2**	**478**
ECM 14	Replace Electric Water Heater with Heat Pump Water Heater	Yes	475	0.0	0	$91	$2,383	$0	$2,383	26.2	478
TOTALS (COST EFFECTIVE MEASURES)			**9,179**	**5.1**	**8**	**$1,877**	**$26,541**	**$3,365**	**$23,177**	**12.3**	**10,142**
TOTALS (ALL MEASURES)			**11,763**	**9.8**	**26**	**$2,637**	**$118,332**	**$9,560**	**$108,772**	**41.3**	**14,869**

* - All incentives presented in this table are included as placeholders for planning purposes 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).

RED GABLES

#	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_2e Emissions Reduction (lbs)
Lighting Upgrades			**792**	**1.2**	**0**	**$174**	**$1,056**	**$132**	**$924**	**5.3**	**778**
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	51	0.1	0	$11	$69	$10	$59	5.3	50
ECM 2	Retrofit Fixtures with LED Lamps	Yes	741	1.2	0	$163	$987	$122	$865	5.3	728
Lighting Control Measures			**95**	**0.1**	**0**	**$21**	**$2,837**	**$560**	**$2,277**	**109.2**	**93**
ECM 3	Install Occupancy Sensor Lighting Controls	No	80	0.1	0	$17	$2,387	$385	$2,002	114.4	78
ECM 4	Install High/Low Lighting Controls	No	15	0.0	0	$3	$450	$175	$275	82.2	15
Variable Frequency Drive (VFD) Measures			**393**	**0.1**	**0**	**$87**	**$6,272**	**$100**	**$6,172**	**70.7**	**395**
ECM 5	Install VFDs on Heating Water Pumps	No	393	0.1	0	$87	$6,272	$100	$6,172	70.7	395
Unitary HVAC Measures			**100**	**0.2**	**0**	**$22**	**$892**	**$0**	**$892**	**40.1**	**101**
ECM 6	Install High Efficiency Air Conditioning Units	No	100	0.2	0	$22	$892	$0	$892	40.1	101
Gas Heating (HVAC/Process) Replacement			**0**	**0.0**	**41**	**$596**	**$11,785**	**$400**	**$11,385**	**19.1**	**4,821**
ECM 7	Install High Efficiency Hot Water Boilers	Yes	0	0.0	41	$596	$11,785	$400	$11,385	19.1	4,821
HVAC System Improvements			**0**	**0.0**	**39**	**$568**	**$1,221**	**$178**	**$1,043**	**1.8**	**4,592**
ECM 8	Install Pipe Insulation	Yes	0	0.0	39	$568	$1,221	$178	$1,043	1.8	4,592
Domestic Water Heating Upgrade			**0**	**0.0**	**7**	**$102**	**$1,528**	**$186**	**$1,343**	**13.2**	**824**
ECM 9	Install High Efficiency Gas-Fired Water Heater	No	0	0.0	2	$27	$1,375	$140	$1,235	45.6	219
ECM 10	Install Low-Flow DHW Devices	Yes	0	0.0	5	$75	$154	$46	$108	1.4	605
TOTALS (COST EFFECTIVE MEASURES)			**792**	**1.2**	**85**	**$1,412**	**$14,216**	**$756**	**$13,460**	**9.5**	**10,796**
TOTALS (ALL MEASURES)			**1,380**	**1.7**	**87**	**$1,569**	**$25,591**	**$1,556**	**$24,035**	**15.3**	**11,605**

* - All incentives presented in this table are included as placeholders for planning purposes 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).

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 Best Practices by building

BPU New Jersey's cleanenergy program™

WATER BEST PRACTICES

- Leak Detection and Repair
- Toilets and Urinals
- Faucets and Showerheads
- Commercial Kitchen Equipment
- Laundry Equipment
- Cooling Towners
- Steam Boiler System
- Pools and Spas
- Laboratory and Medical Equipment
- Water Metering and Submetering
- Vehicle Washing
- Single Pass Cooling System
- Landscaping and Irrigation
- On-Site Alternative Water Sources

See individual reports for specific Water Best Practices by building

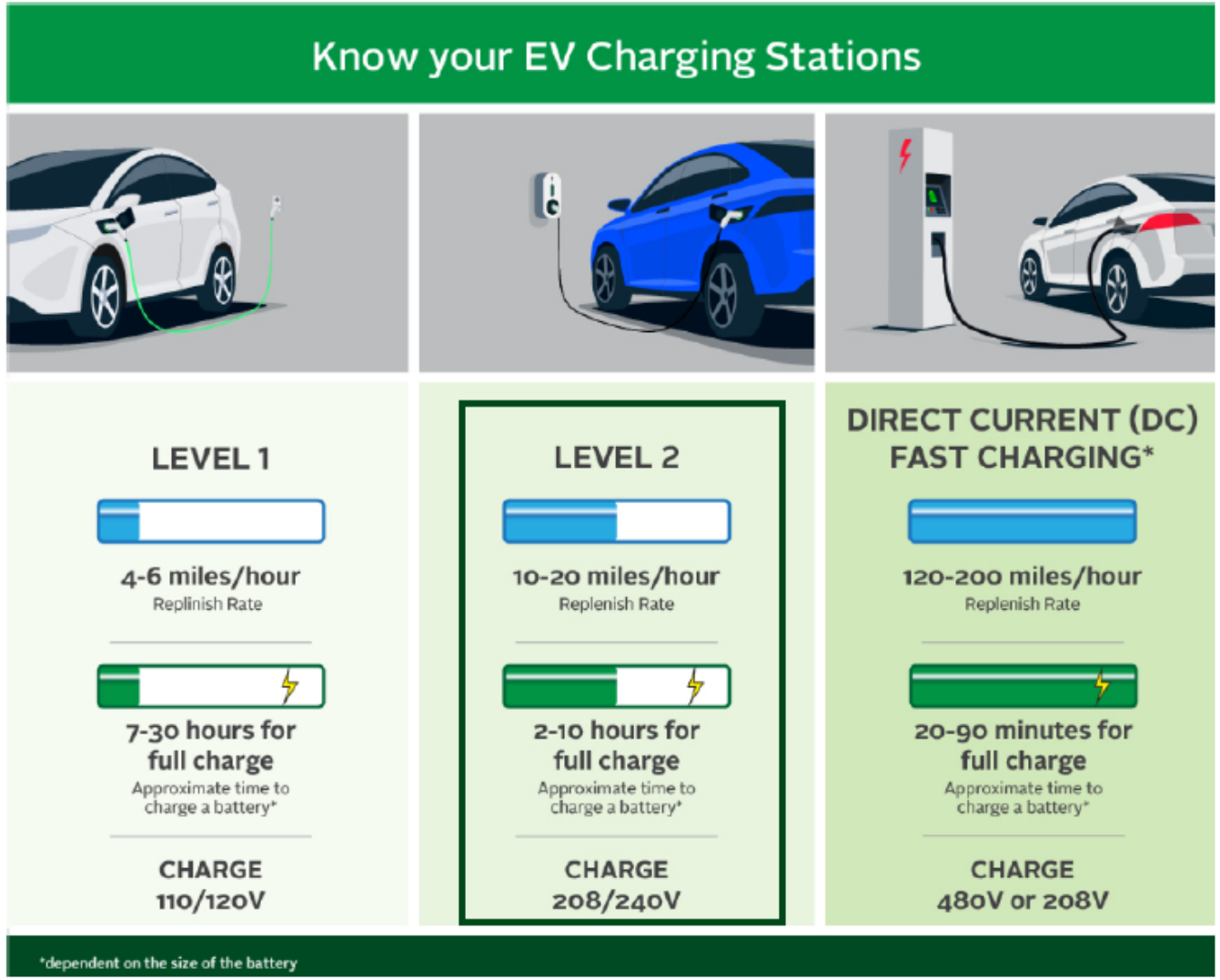
BPU New Jersey's cleanenergy program™

Measures for Future Consideration

- Upgrade/Replace Energy Management System
- Installation of an Energy Management System
- Upgrade to a Heat Pump System
- Building Insulation
- Window Replacements
- Variable Refrigerant Flow (VRF) System

EV Charging Station Potential

NJCleanEnergy.com/EV



	Bnai Keshet
Potential:	**Medium**

C&I Energy Efficiency Programs

NJCleanEnergy.com

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 investor-owned utility companies

Programs run by NJCEP

UTILITY RUN ENERGY EFFICIENCY PROGRAMS*

NJCleanEnergy.com/Transition

PRESCRIPTIVE & CUSTOM REBATES:

- Individual high efficiency equipment rebates for renovation, remodeling, and equipment replacement
- Flexibility to do a little or a lot
- No size requirement

DIRECT INSTALL:

- Turn-key retrofit program to replace outdated and inefficient equipment including, lighting, HVAC, refrigeration, etc.
- The facility must have an average electric peak demand <200kW in the previous year to qualify

ENERGY MANAGEMENT :

- Includes the Building Tune-up (BT), Retro-commissioning (RCx), and Strategic Energy Management (SEM) subprograms. These subprograms offer a comprehensive mix of custom energy-savings measures such as basic HVAC tune-ups, building systems tune-ups, controls' calibration, diagnostic testing, and installation of measures to enhance your building's energy performance and savings.

ENGINEERED SOLUTIONS:

- Comprehensive, whole-building approach to saving energy
- The facility must have an average electric peak demand >200kW in the previous year to qualify

****Other programs may be available to you. Check with your Utility Provider to see a full list of offering and what you may be qualified for.***

Utility Run Energy Efficiency Programs

PSE&G

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THANK YOU