LGEA Presentation

The Newmark School

January 15, 2025

New Jersey's
Clean Energy Program

Lighting the way to New Jersey's Clean Energy Future

INTRODUCTIONS

- *The Newmark School*
  - Regina Peter
  - William Fitzpatrick

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

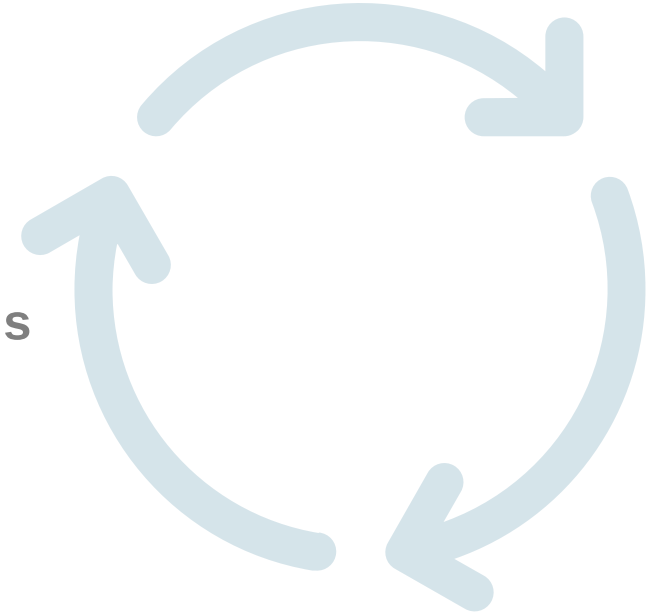
- *Utility Energy Efficiency Programs*
  - Kimberley Byk – Elizabethtown Gas
  - Casey Hennessey – Elizabethtown Gas

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 The Newmark School

LGEA Process

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



THE NEWMARK SCHOOL

Overview of Systems, Baseline & Existing Conditions:

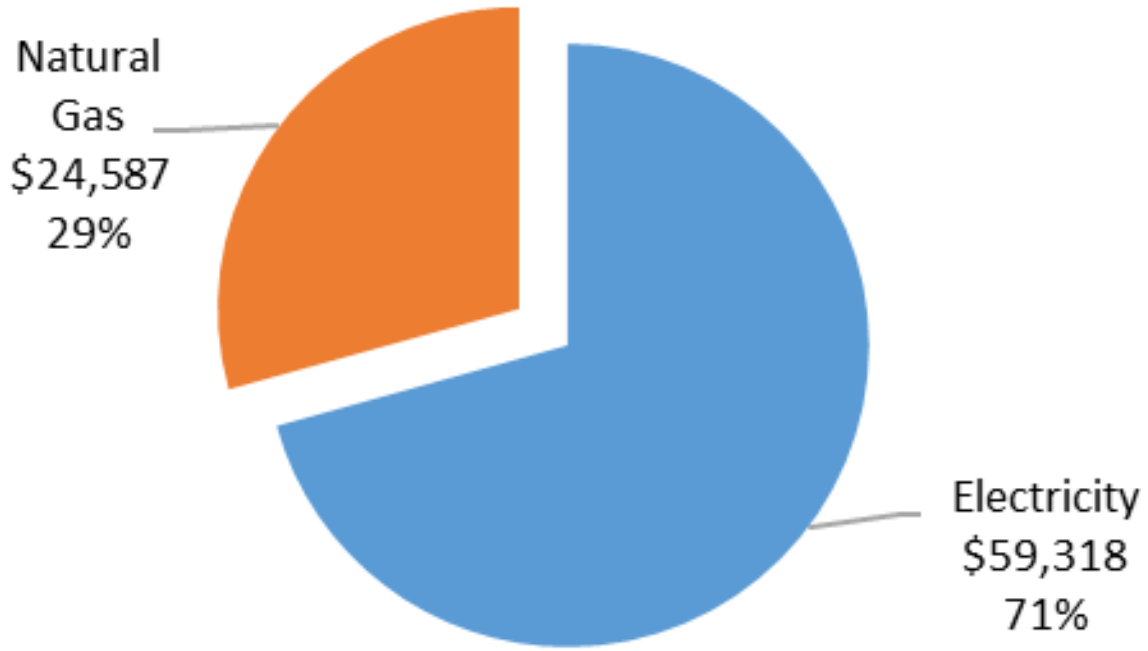
- Building Envelope
- Lighting System
- HVAC and Mechanical Systems
- Plug Load Equipment
- Refrigeration and Food Service Equipment

Utility Consumption:

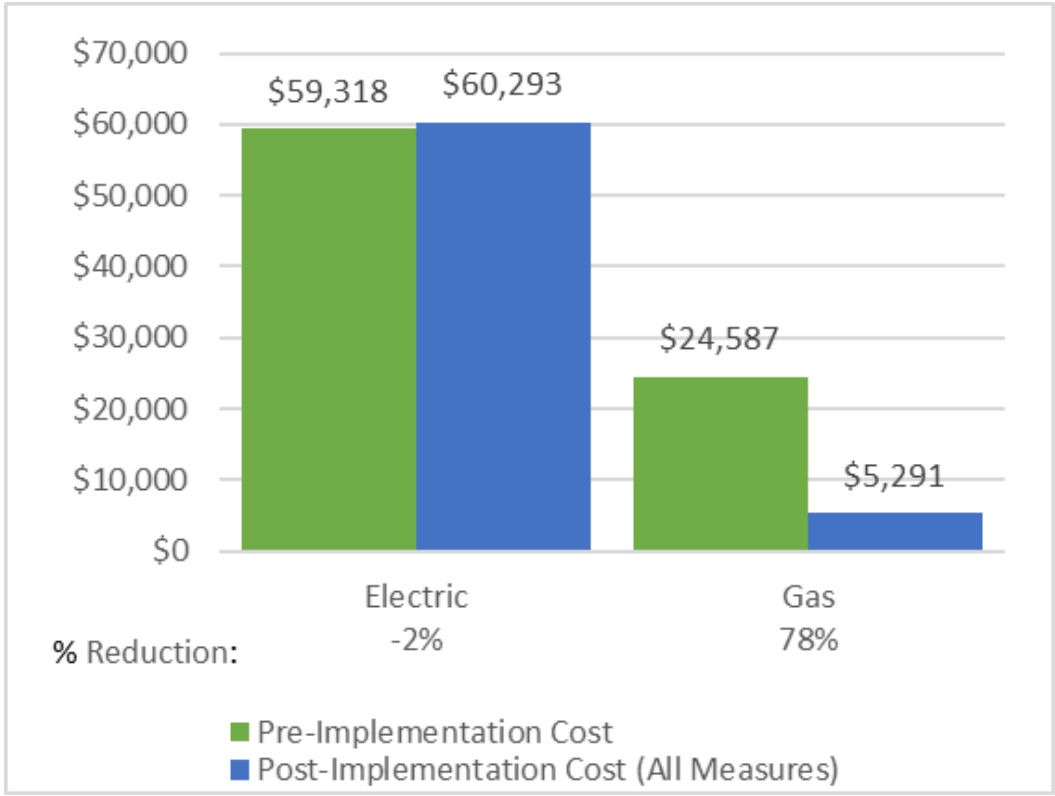
- Electric Consumption and Costs
- Natural Gas Consumption and Costs
- Water Consumption and Costs

Utility Breakout

Percent of Total Annual Energy Costs



Pre & Post Implementation Cost



BENCHMARKING

ENERGY STAR® Statement of Energy Performance

LEARN MORE AT energystar.gov

79

ENERGY STAR® Score[1]

The Newmark School

Primary Property Type: K-12 School
Gross Floor Area (ft²): 60,000
Built: 1985

For Year Ending: May 31, 2024
Date Generated: October 14, 2024

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 Newmark School 1000 Cellar Drive Scotch Plains, New Jersey 07076	The Newmark School 1000 Cellar Drive Scotch Plains, NJ 07076 908-753-0330	Dr. Regina M. Peter 1000 Cellar Drive Scotch Plains, NJ 07076 908-753-0330 RPeter@NewmarkEducation.com

Property ID: 36197549

Energy Consumption and Energy Use Intensity (EUI)

Site EUI
60 kBtu/ft²

Annual Energy by Fuel	
Natural Gas (kBtu)	1,783,551 (50%)
Electric - Grid (kBtu)	962,753 (27%)
Electric - Solar (kBtu)	855,427 (24%)

Annual Emissions	
Total (Location-Based) GHG Emissions (Metric Tons CO2e/ year)	254

Source EUI
90.4 kBtu/ft²

National Median Comparison	
National Median Site EUI (kBtu/ft²)	84.1
National Median Source EUI (kBtu/ft²)	126.6
% Diff from National Median Source EUI	-29%

Green Power	
Green Power – Onsite (kWh)	0
Green Power – Offsite (kWh)	0
Percent of RECs Retained	0%

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
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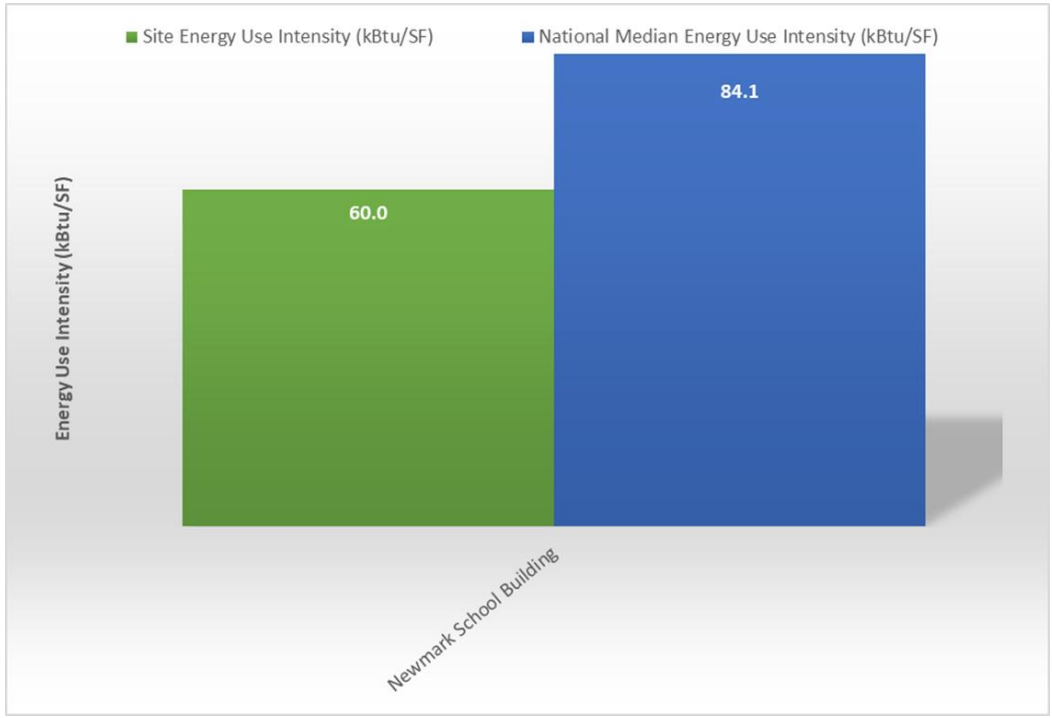
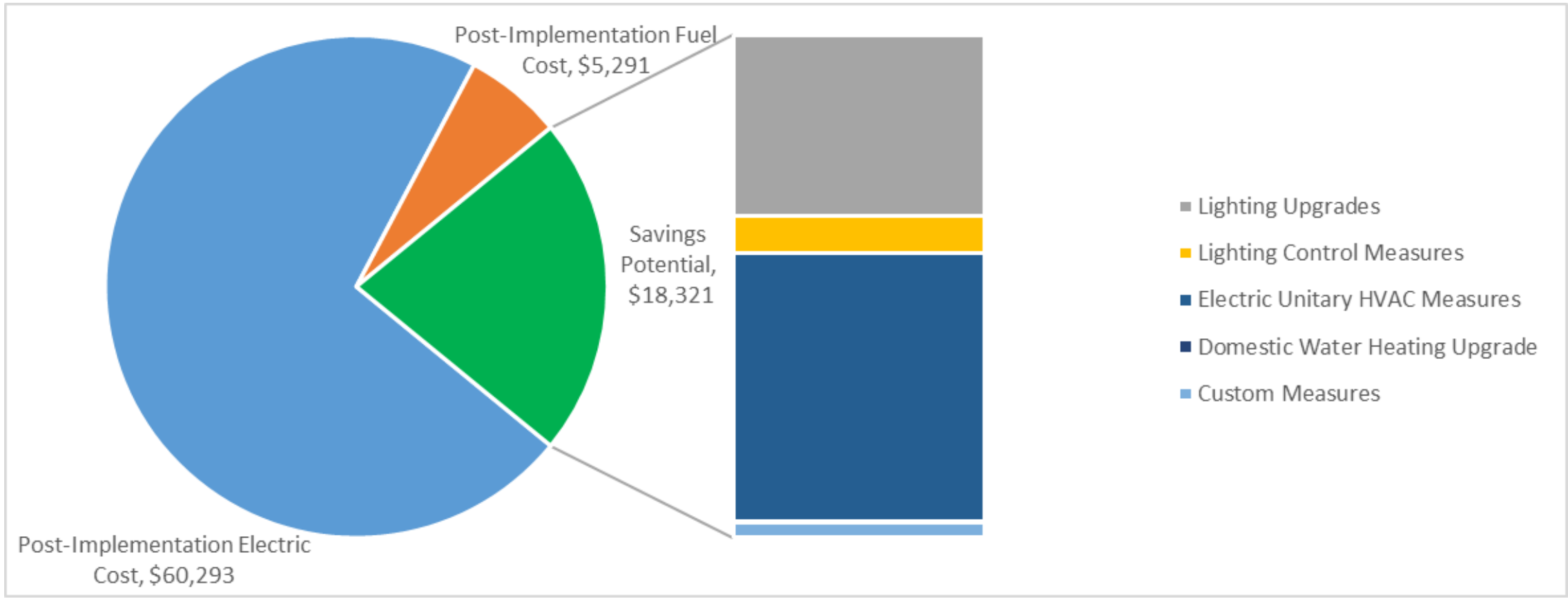
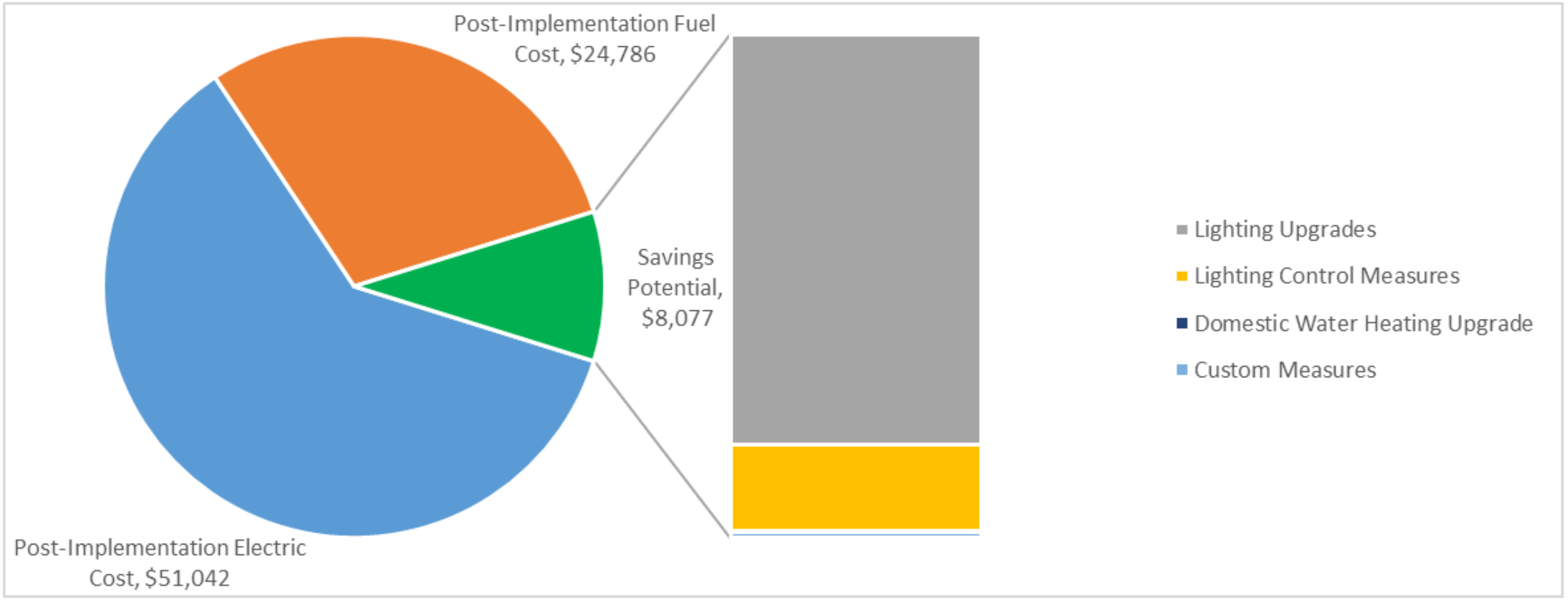


ENERGY STAR® scores are percentile ranking from 1 (least efficient) to 100 (most efficient).
It compares your building's energy performance to similar buildings nationwide.

All Opportunities



Cost Effective Opportunities



THE NEWMARK 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_2e Emissions Reduction (lbs)
Lighting Upgrades			**61,526**	**17.5**	**-13**	**$6,588**	**$47,300**	**$6,820**	**$40,480**	**6.1**	**60,467**
ECM 1	Install LED Fixtures	Yes	19,305	4.8	-4	$2,068	$19,670	$1,550	$18,120	8.8	18,978
ECM 2	Retrofit Fixtures with LED Lamps	Yes	42,221	12.7	-9	$4,520	$27,630	$5,270	$22,360	4.9	41,488
Lighting Control Measures			**12,860**	**2.3**	**-3**	**$1,377**	**$13,690**	**$5,480**	**$8,210**	**6.0**	**12,635**
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	5,710	1.4	-1	$611	$8,070	$960	$7,110	11.6	5,611
ECM 4	Install High/Low Lighting Controls	Yes	7,149	0.9	-1	$765	$5,620	$4,520	$1,100	1.4	7,024
Unitary HVAC Measures			**-72,304**	**17.9**	**1,262**	**$9,773**	**$328,467**	**$15,400**	**$313,067**	**32.0**	**74,916**
ECM 5	Install High Efficiency Air Conditioning Units	No	1,130	0.7	0	$124	$4,167	$0	$4,167	33.5	1,138
ECM 6	Install High Efficiency Heat Pumps	No	-73,434	17.2	1,262	$9,649	$324,300	$15,400	$308,900	32.0	73,778
Domestic Water Heating Upgrade			**0**	**0.0**	**1**	**$17**	**$50**	**$10**	**$40**	**2.3**	**144**
ECM 7	Install Low-Flow DHW Devices	Yes	0	0.0	1	$17	$50	$10	$40	2.3	144
Custom Measures			**-10,955**	**0.0**	**126**	**$566**	**$5,300**	**$0**	**$5,300**	**9.4**	**3,722**
ECM 8	Replace Gas Fired Water Heater with Heat Pump Water Heater	No	-11,817	0.0	126	$471	$4,700	$0	$4,700	10.0	2,853
ECM 9	Install DHW Pump Timeclock Control	Yes	862	0.0	0	$95	$600	$0	$600	6.3	868
TOTALS (COST EFFECTIVE MEASURES)			**75,248**	**19.8**	**-14**	**$8,077**	**$61,640**	**$12,310**	**$49,330**	**6.1**	**74,113**
TOTALS (ALL MEASURES)			**-8,873**	**37.7**	**1,373**	**$18,321**	**$394,807**	**$27,710**	**$367,097**	**20.0**	**151,883**

* - 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

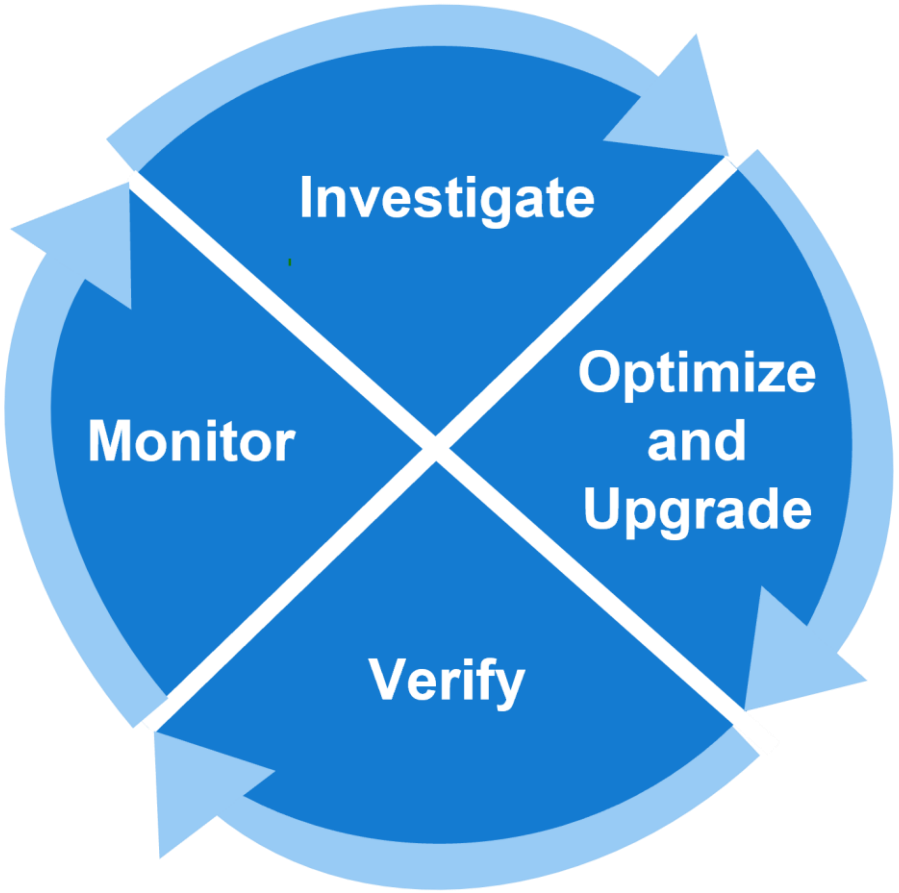
- Leak Detection and Repair
- Toilets and Urinals
- Faucets and Showerheads
- Commercial Kitchen Equipment
- Laundry Equipment
- Cooling Towners
- Steam Boiler System
- Pools and Spas
- Laboratory and Medical Equipment
- Water Metering and Submetering
- Vehicle Washing
- Single Pass Cooling System
-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

See individual reports for specific Water Best Practices by building

BPU New Jersey's cleanenergy program™

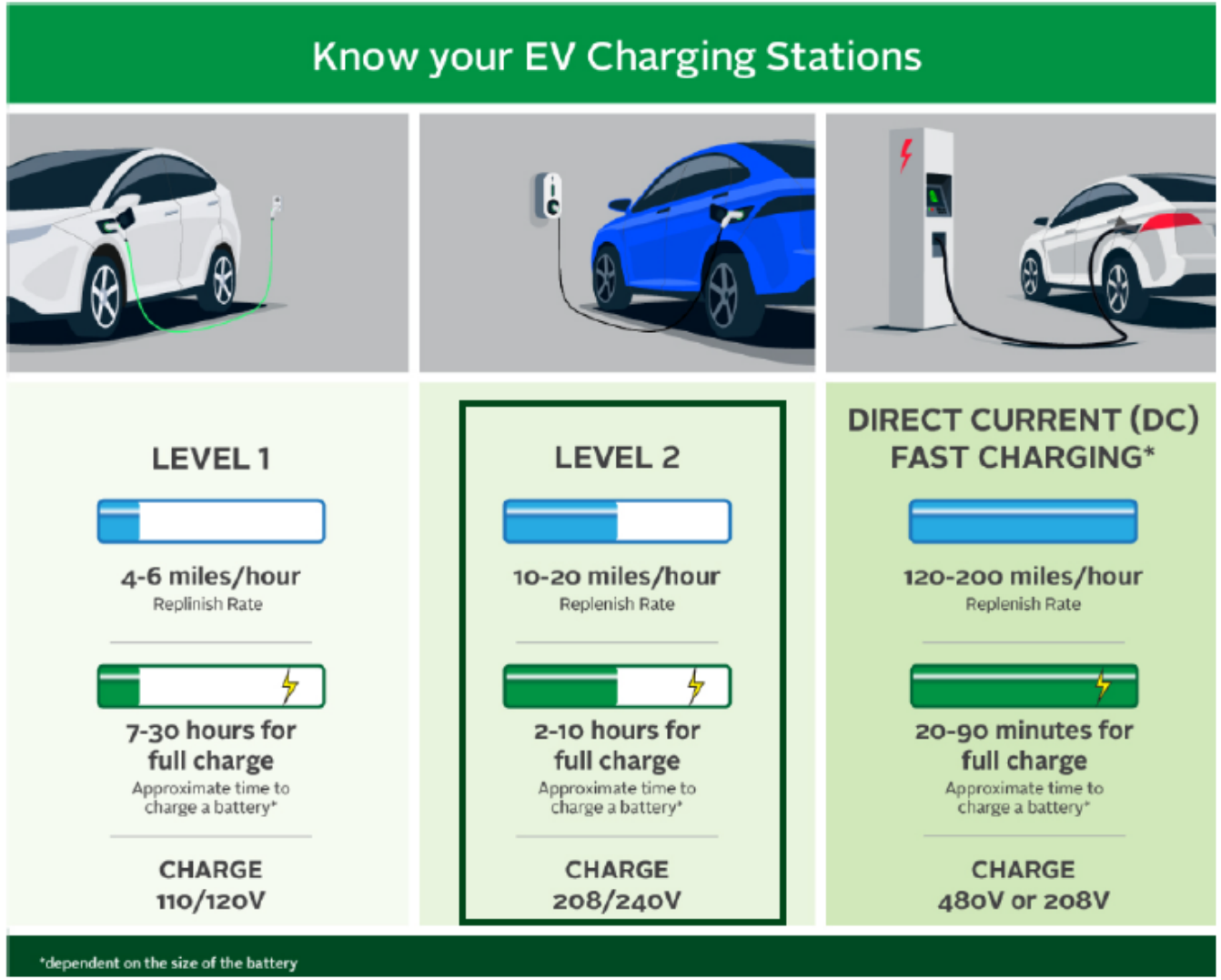
Measures for Future Consideration

- Retro-Commissioning Study



EV Charging Station Potential

NJCleanEnergy.com/EV



	The Newmark School
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

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THANK YOU