LGEA Presentation

Shore Regional High School District

April 2, 2025

New Jersey's
Clean Energy Program

Lighting the way to New Jersey's Clean Energy Future

INTRODUCTIONS

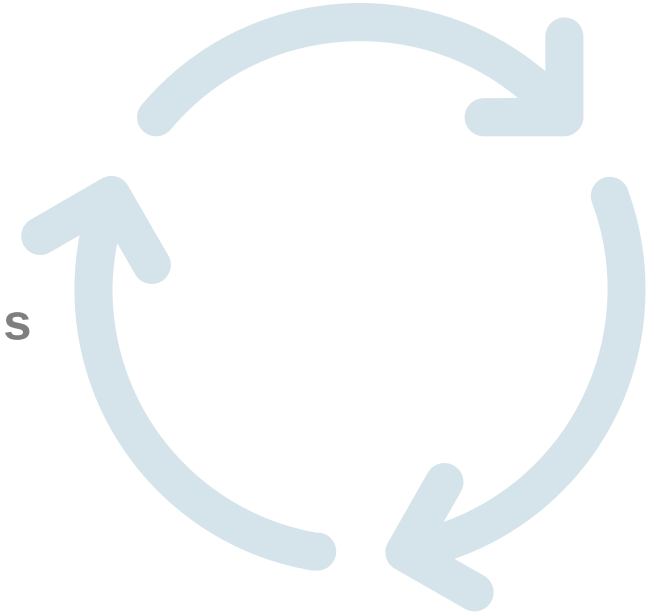
- *Shore Regional High School District*
  - Andrew Polo
  - Kelly Boehler
- *NJ Clean Energy Program*
  - Sarah Walters – LGEA Project Manager
  - Moussa Traore – LGEA Technical Manager
  - Melissa Lott – LGEA Account Manager
  - Michelle Rossi – ESIP Coordinator (BPU)
- *Utility Energy Efficiency Programs*
  - Mike Mandzik - NJNG
  - Tiffany Lewis - JCP&L
  - Andrew Doss

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 Shore Regional High School District

LGEA Process

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



SHORE REGIONAL HIGH SCHOOL

Overview of Systems, Baseline & Existing Conditions:

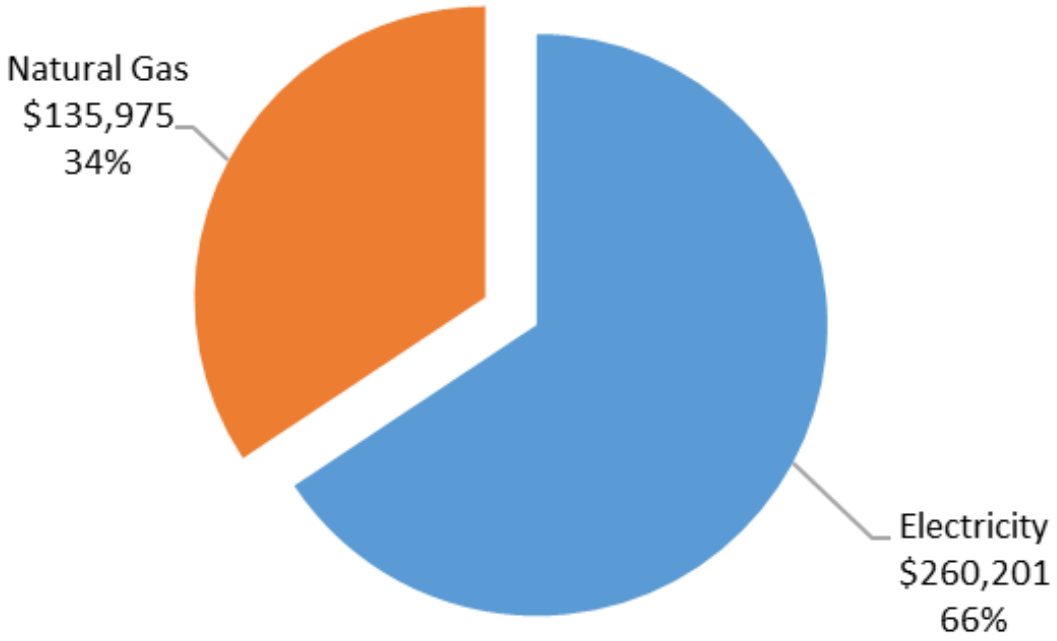
- Building Envelope
- Lighting System
- HVAC and Mechanical Systems
- Plug Load Equipment
- Refrigeration and Food Service Equipment
- Building Automation System (BAS)

Utility Consumption:

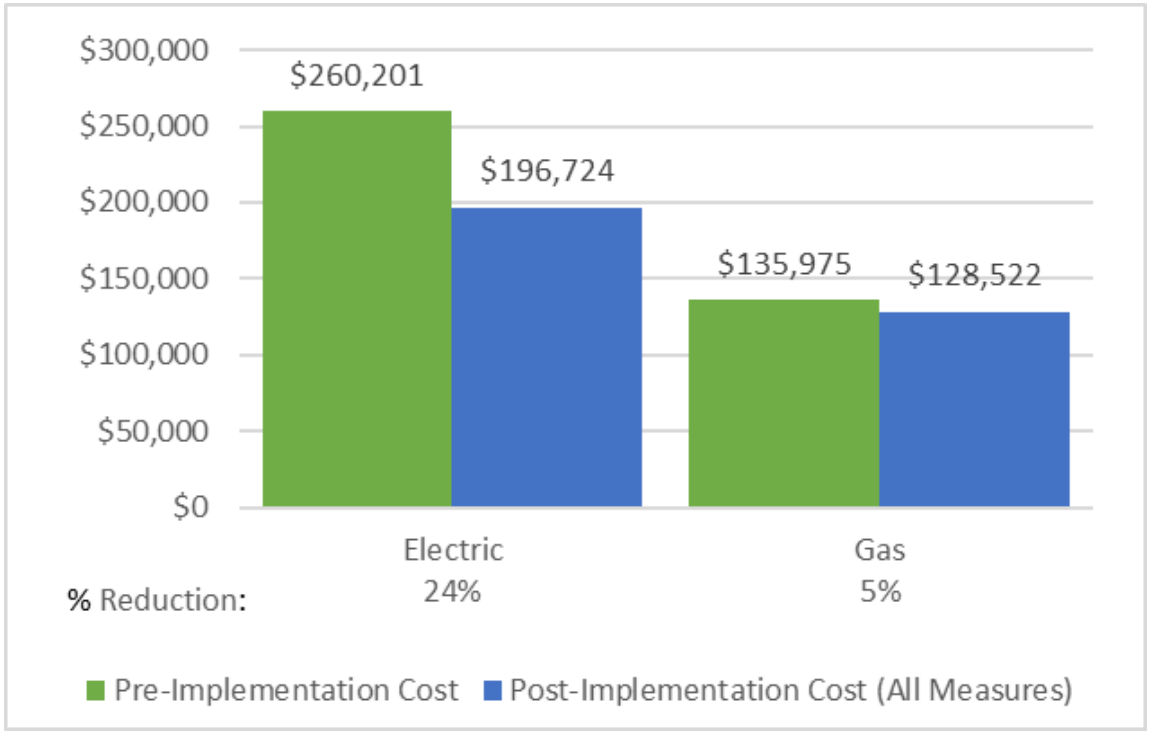
- Electric Consumption and Costs
- Natural Gas Consumption and Costs
- Water Consumption and Costs

Utility Breakout

Percent of Total Annual Energy Costs



Pre & Post Implementation Cost



BENCHMARKING

ENERGY STAR® Statement of Energy Performance

LEARN MORE AT energystar.gov

20

ENERGY STAR® Score[1]

Shore Regional High School

Primary Property Type: K-12 School
Gross Floor Area (ft²): 155,000
Built: 1961

For Year Ending: January 31, 2024
Date Generated: February 19, 2025

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
Shore Regional High School 132 Monmouth Park Highway West Long Branch, New Jersey 07764	Shore Regional High School 132 Monmouth Park Hwy West Long Branch, NJ 07764 (732) 222-9300	Andrew Polo 132 Monmouth Park Hwy West Long Branch, NJ 07764 (732) 222-9300 apolo@shoreregional.org

Property ID: 43599592

Energy Consumption and Energy Use Intensity (EUI)

Site EUI
99.3 kBtu/ft²

Source EUI
178 kBtu/ft²

Annual Energy by Fuel		Annual Emissions	
Electric - Grid (kBtu)	6,525,621 (42%)	Total (Location-Based) GHG Emissions (Metric Tons CO2e/year)	1,044
Natural Gas (kBtu)	8,870,867 (58%)		
National Median Comparison		**Green Power**	
National Median Site EUI (kBtu/ft²)	72	Green Power – Onsite (kWh)	N/A
National Median Source EUI (kBtu/ft²)	129.1	Green Power – Offsite (kWh)	0
% Diff from National Median Source EUI	38%	Percent of RECs Retained	N/A

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
99.3 kBtu/ft²

Source EUI
178 kBtu/ft²

National Median Comparison

National Median Site EUI (kBtu/ft²)	72
National Median Source EUI (kBtu/ft²)	129.1
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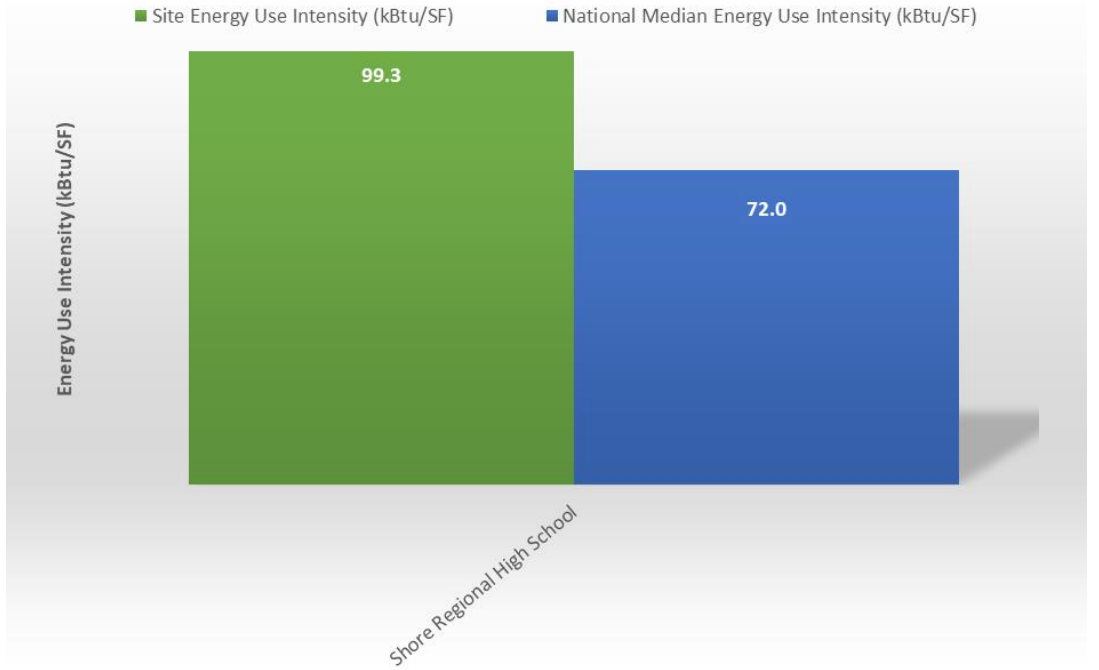
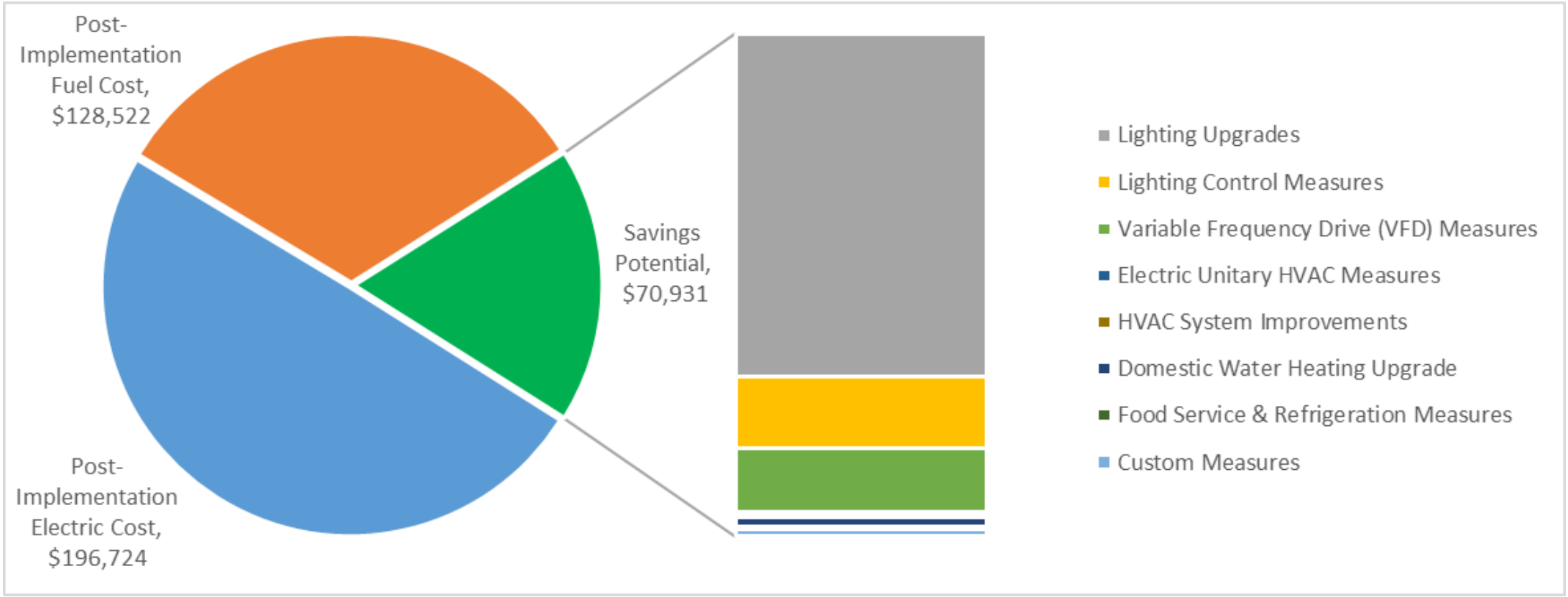


ENERGY STAR® scores are percentile ranking from 1 (least efficient) to 100 (most efficient). It compares your building's energy performance to similar buildings nationwide.

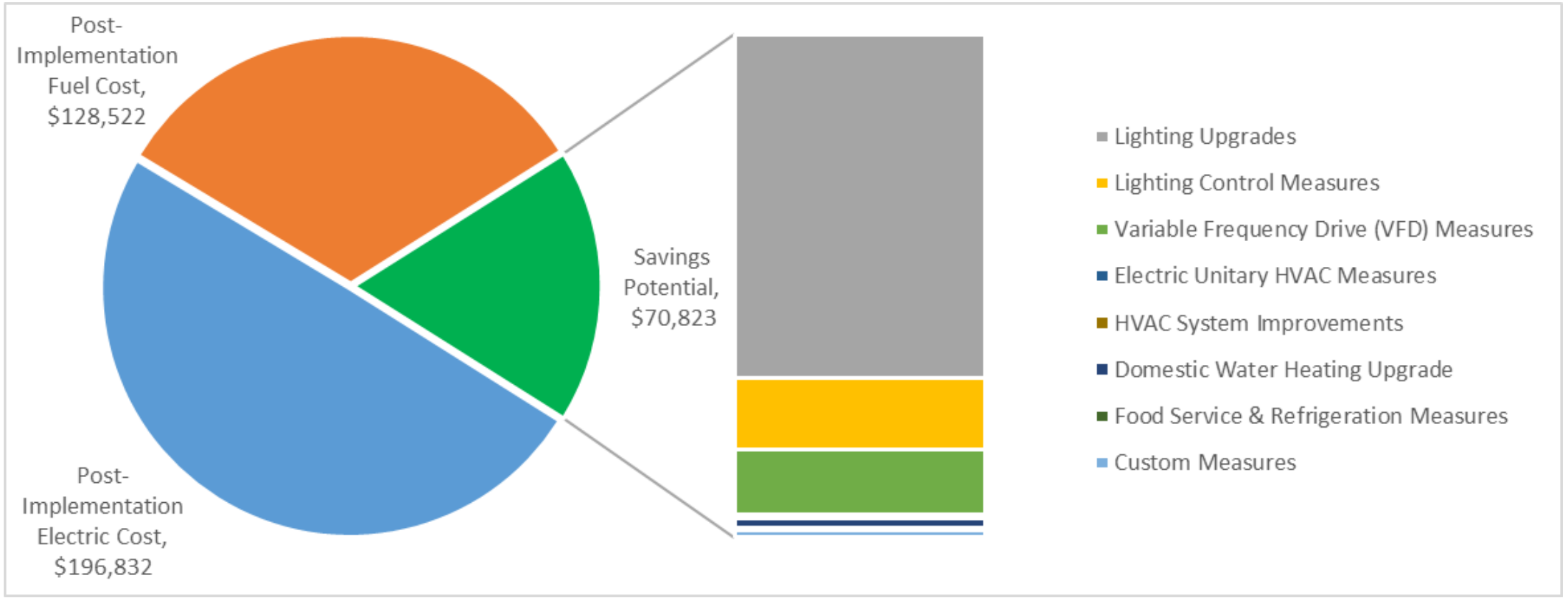
ALL OPPORTUNITIES

Savings Potential



Cost Effective Opportunities

Savings Potential



SHORE REGIONAL HIGH 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			**375,426**	**43.8**	**-60**	**$48,461**	**$150,420**	**$23,630**	**$126,790**	**2.6**	**371,032**
ECM 1	Install LED Fixtures	Yes	20,000	0.0	0	$2,630	$30,330	$200	$30,130	11.5	20,140
ECM 2	Retrofit Fixtures with LED Lamps	Yes	355,426	43.8	-60	$45,832	$120,090	$23,430	$96,660	2.1	350,893
Lighting Control Measures			**78,316**	**12.0**	**-16**	**$10,051**	**$65,150**	**$47,950**	**$17,200**	**1.7**	**76,946**
ECM 3	Install Occupancy Sensor Lighting Controls	Yes	72,780	11.1	-15	$9,341	$54,160	$39,230	$14,930	1.6	71,507
ECM 4	Install High/Low Lighting Controls	Yes	5,535	0.8	-1	$710	$10,990	$8,720	$2,270	3.2	5,438
Variable Frequency Drive (VFD) Measures			**56,872**	**4.8**	**104**	**$9,047**	**$102,800**	**$5,700**	**$97,100**	**10.7**	**69,478**
ECM 5	Install VFDs on Heating Water Pumps	Yes	48,904	4.8	0	$6,430	$62,400	$3,200	$59,200	9.2	49,246
ECM 6	Install VFDs on Kitchen Hood Fan Motors	Yes	7,967	0.0	104	$2,617	$40,400	$2,500	$37,900	14.5	20,232
Unitary HVAC Measures			**1,400**	**0.5**	**0**	**$184**	**$2,000**	**$0**	**$2,000**	**10.9**	**1,410**
ECM 7	Install High Efficiency Air Conditioning Units	Yes	1,400	0.5	0	$184	$2,000	$0	$2,000	10.9	1,410
HVAC System Improvements			**0**	**0.0**	**32**	**$477**	**$560**	**$80**	**$480**	**1.0**	**3,710**
ECM 8	Install Pipe Insulation	Yes	0	0.0	32	$477	$560	$80	$480	1.0	3,710
Domestic Water Heating Upgrade			**0**	**0.0**	**86**	**$1,290**	**$6,510**	**$150**	**$6,360**	**4.9**	**10,040**
ECM 9	Install Low-Flow DHW Devices	Yes	0	0.0	86	$1,290	$6,510	$150	$6,360	4.9	10,040
Food Service & Refrigeration Measures			**3,580**	**0.4**	**0**	**$471**	**$3,730**	**$600**	**$3,130**	**6.6**	**3,605**
ECM 10	Refrigerator/Freezer Case Electrically Commutated Motors	No	820	0.1	0	$108	$2,920	$300	$2,620	24.3	826
ECM 11	Vending Machine Control	Yes	2,760	0.3	0	$363	$810	$300	$510	1.4	2,780
Custom Measures			**-32,826**	**0.0**	**350**	**$950**	**$8,400**	**$0**	**$8,400**	**8.8**	**7,925**
ECM 12	Replace Fossil Fuel Water Heater with Heat Pump Water Heater	Yes	-32,826	0.0	350	$950	$8,400	$0	$8,400	8.8	7,925
TOTALS (COST EFFECTIVE MEASURES)			**481,947**	**61.4**	**495**	**$70,823**	**$336,650**	**$77,810**	**$258,840**	**3.7**	**543,321**
TOTALS (ALL MEASURES)			**482,767**	**61.5**	**495**	**$70,931**	**$339,570**	**$78,110**	**$261,460**	**3.7**	**544,146**

* - All incentives presented in this table are estimated from the utility run Prescriptive and Custom Rebate program at the beginning of the fiscal year. Always contact your utility provider for details on all 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

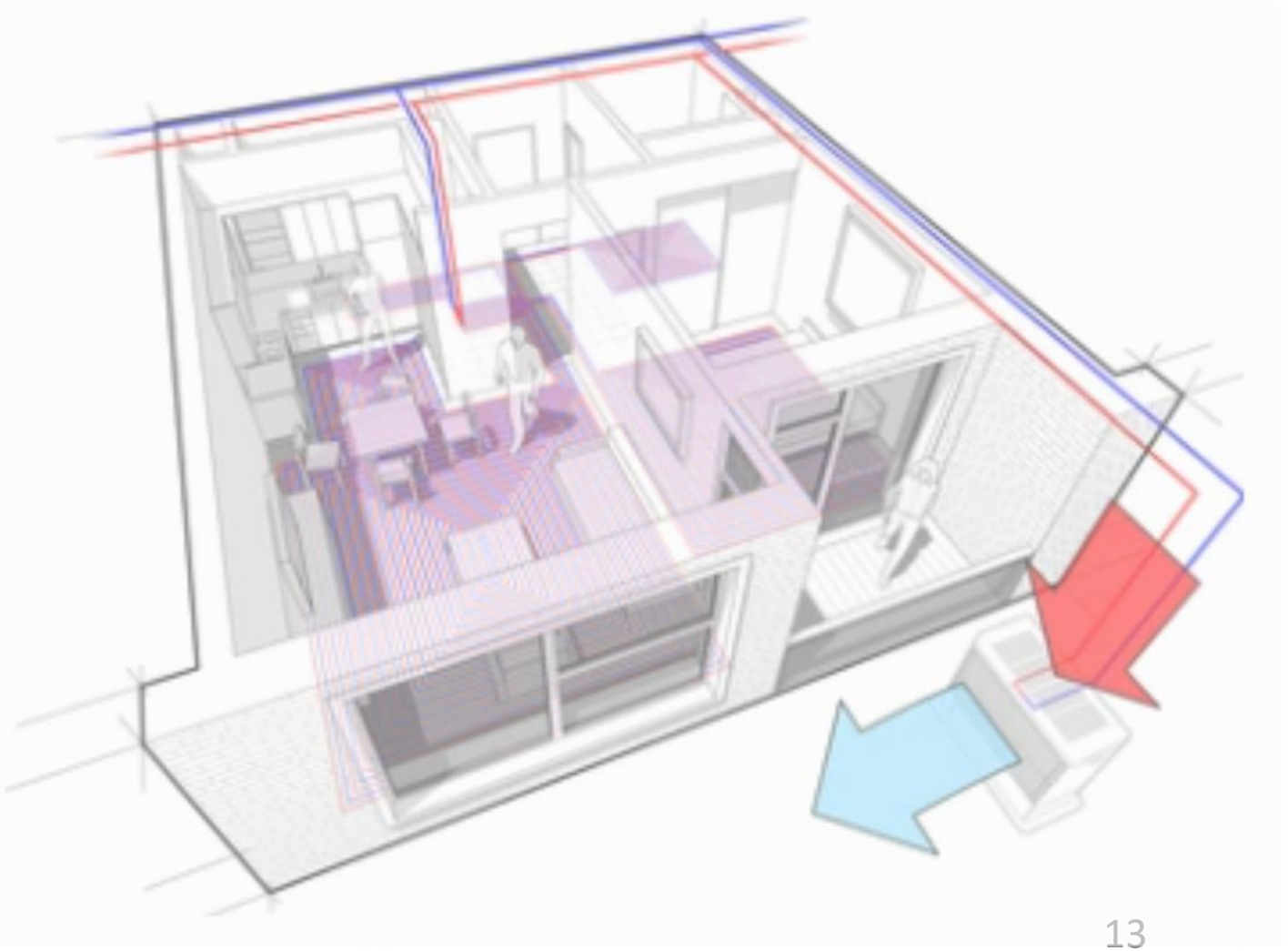
- Leak Detection and Repair
- Toilets and Urinals
- Faucets and Showerheads
- Commercial Kitchen Equipment
- Laundry Equipment
- Cooling Towners
- Steam Boiler System
- Pools and Spas
- Laboratory and Medical Equipment
- Water Metering and Submetering
- Vehicle Washing
- Single Pass Cooling System
-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

See individual reports for specific Water Best Practices by building

BPU New Jersey's cleanenergy program™

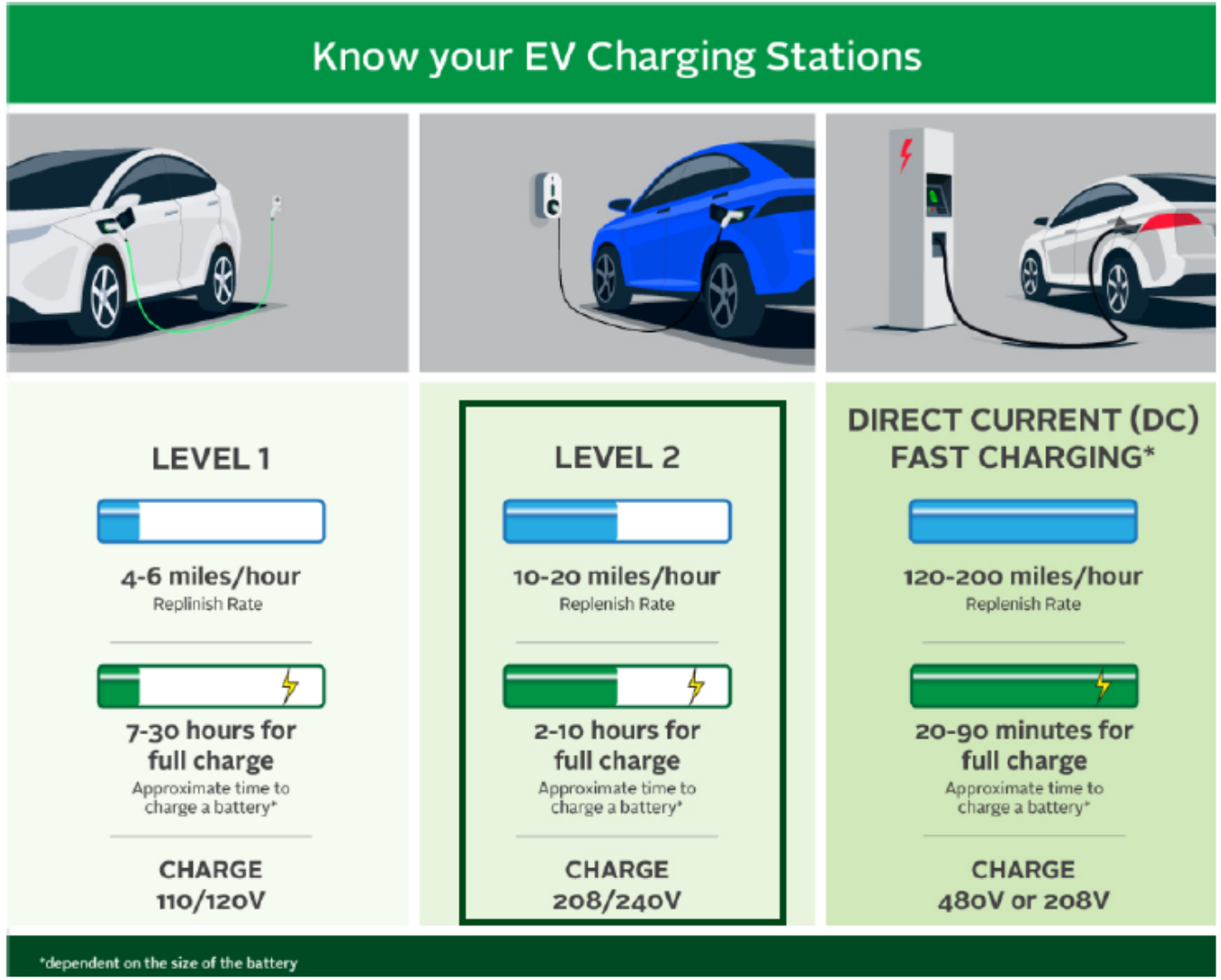
Measures for Future Consideration

- Upgrade to a Heat Pump System



EV Charging Station Potential

NJCleanEnergy.com/EV



	Shore Regional High School
Potential:	**High**

Solar Energy Generation Potential

NJCleanEnergy.com/renewable-energy

	Shore Regional HS
Potential:	**HIGH**
System Potential: (kW)	473
Electric Generation: (kWh per year)	563,518
Displaced Cost: (per year)	$74,090

FINANCING MECHANISM: ESIP

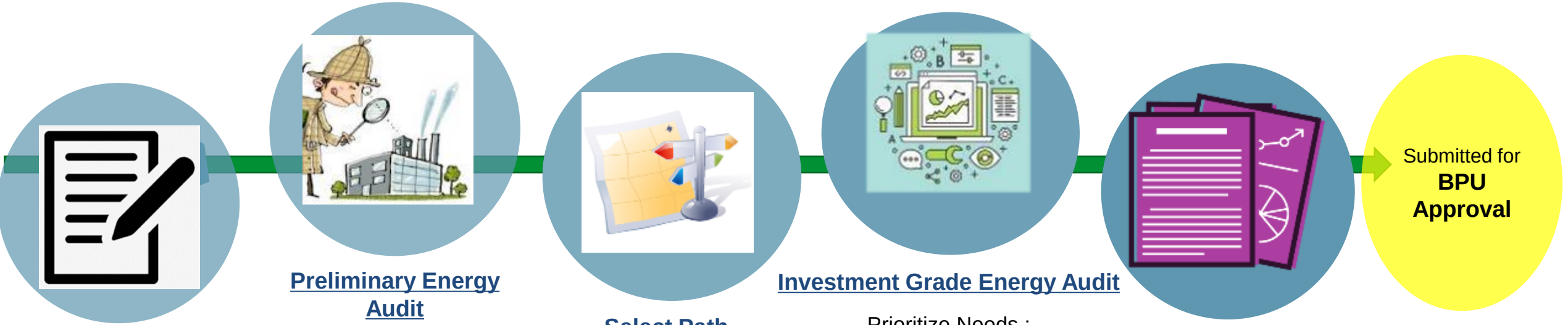
NJCleanEnergy.com/ESIP

ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

- Energy Performance Contracting = NJ ESIP Program
- A creative tool and financing mechanism that allows public entities to make energy efficiency improvements without impacting their budgets
- Administered by the NJBPU
- Project is paid for with the value of its own energy savings
- 2 Options: Lease Purchase Loan or Bond
- 15 or 20 year pay back term
- NJBPU Approved Incentive Programs
    - Utility or NJCEP
- Can be combined with Federal/State Grants
- No upfront capital expenses
- No referendum or impact to tax payers

Energy Savings Improvement Program

NJCleanEnergy.com/ESIP



ESIP Intake Form

Get informed;
Begin the process

Preliminary Energy Audit

Free LGEA
or
other ASHRAE Level II Audit

Select Path

ESCO, Hybrid or DIY Model;
Local Public Contract Law
Public School Contract Law
Compliance

Investment Grade Energy Audit

Prioritize Needs ;
Select Project's ECM's

Energy Savings Plan

Must be Cash Flow Positive;
Purchase Savings Guarantee?
Third Party Verification

Submitted for **BPU Approval**

New Jersey's cleanenergy program™

Energy Savings Improvement Program

NJCleanEnergy.com/ESIP

FOR MORE INFORMATION

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SUSTAINABLE JERSEY – DIRECT PAY

Combining NJBPU Incentives with Direct Pay

Direct Pay (Elective Pay), part of Inflation Reduction Act (IRA), allows tax-exempt entities, including municipalities and school districts, to receive tax credits for clean energy projects.

About Direct Pay

- All eligible projects receive tax credits (not competitive)
- Currently authorized for 10 years
- Projects completed in 2023 are eligible for tax credits until Nov 15
  For local governments filing on a calendar year, fiscal year deadline is May 15

Eligible Projects Include

- Renewables – solar, geothermal, wind, etc.
- Electric vehicles
- Electric vehicle charging infrastructure *(limited)*
- Combined heat and power; Electric storage

Direct Pay can be used in combination with other funding sources like NJBPU incentives.

Example

Lightweight EV	$24,000
NJBPU Clean Fleet Grant	-$4,000
Direct Pay Tax Credit	-$7,500
Total cost to entity	**$12,500**

Note: Total incentive can not exceed total project cost.

Full list of Direct Pay eligible tax credits at https://www.irs.gov/pub/irs-pdf/p5817a.pdf

For more information, visit Sustainable Jersey's Direct Pay Tax Credits page.

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

New Jersey's cleanenergy program™

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

JCP&L

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Tiffany Lewis – Tlewis@trccompanies.com

New Jersey Natural Gas

Michael Mandzik - MMandzik@njng.com

For More Information

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THANK YOU