LGEA Presentation

Newark Performing Arts Corporation

November 4, 2024

New Jersey's
Clean Energy Program

Lighting the way to New Jersey's Clean Energy Future

INTRODUCTIONS

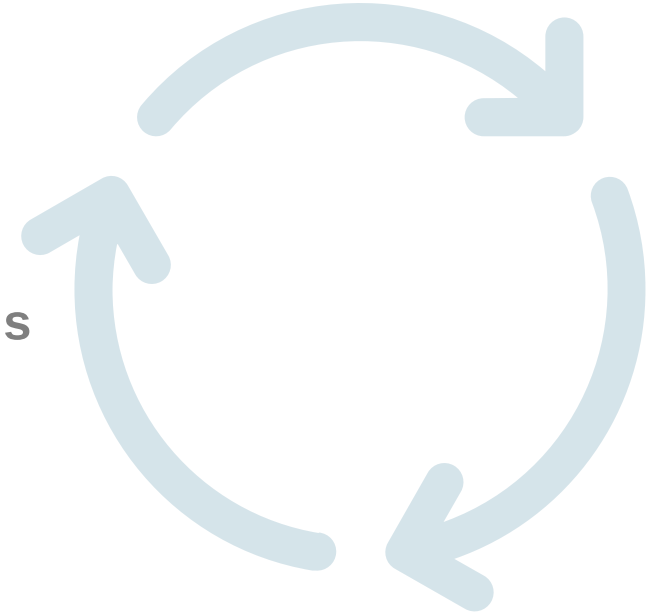
- *Newark Performing Arts Corporation*
  - Jamal Cooper
  - Shawn Roberts
  - Umamah Najeeb
  - Talia Young
  - Francisco Arias
- *NJ Clean Energy Program*
  - Sarah Walters – LGEA Project Manager
  - Moussa Traore – LGEA Technical Manager
  - Ryan Knippenberg– LGEA Project Auditor
  - Daniel Krasowsky – 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 Efficiency Incentive Programs
- Questions regarding the draft audit report
- Next steps for Newark Preforming Arts Corporation

LGEA Process

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



NEWARK SYMPHONY HALL

Overview of Systems, Baseline & Existing Conditions:

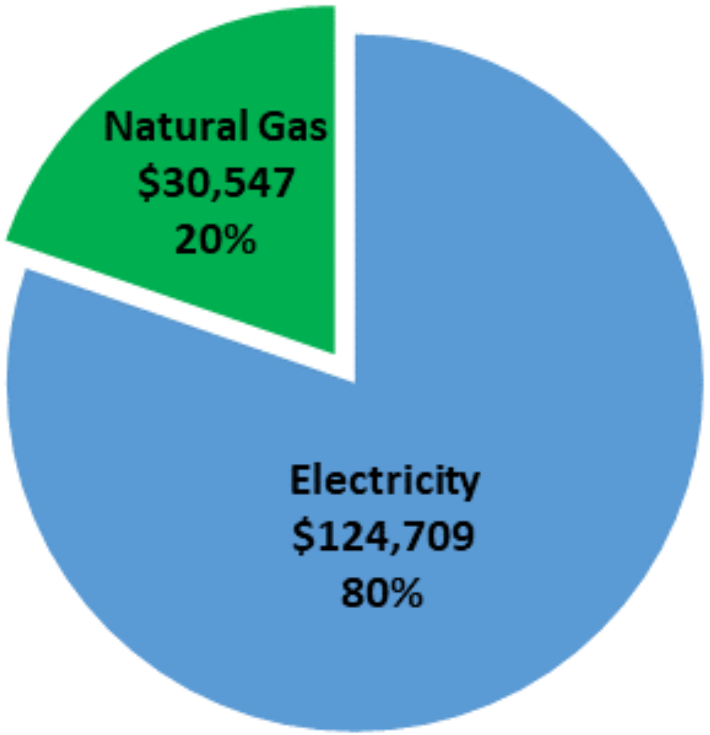
- Building Envelope
- Lighting System
- HVAC and Mechanical Systems
- Plug Load Equipment

Utility Consumption:

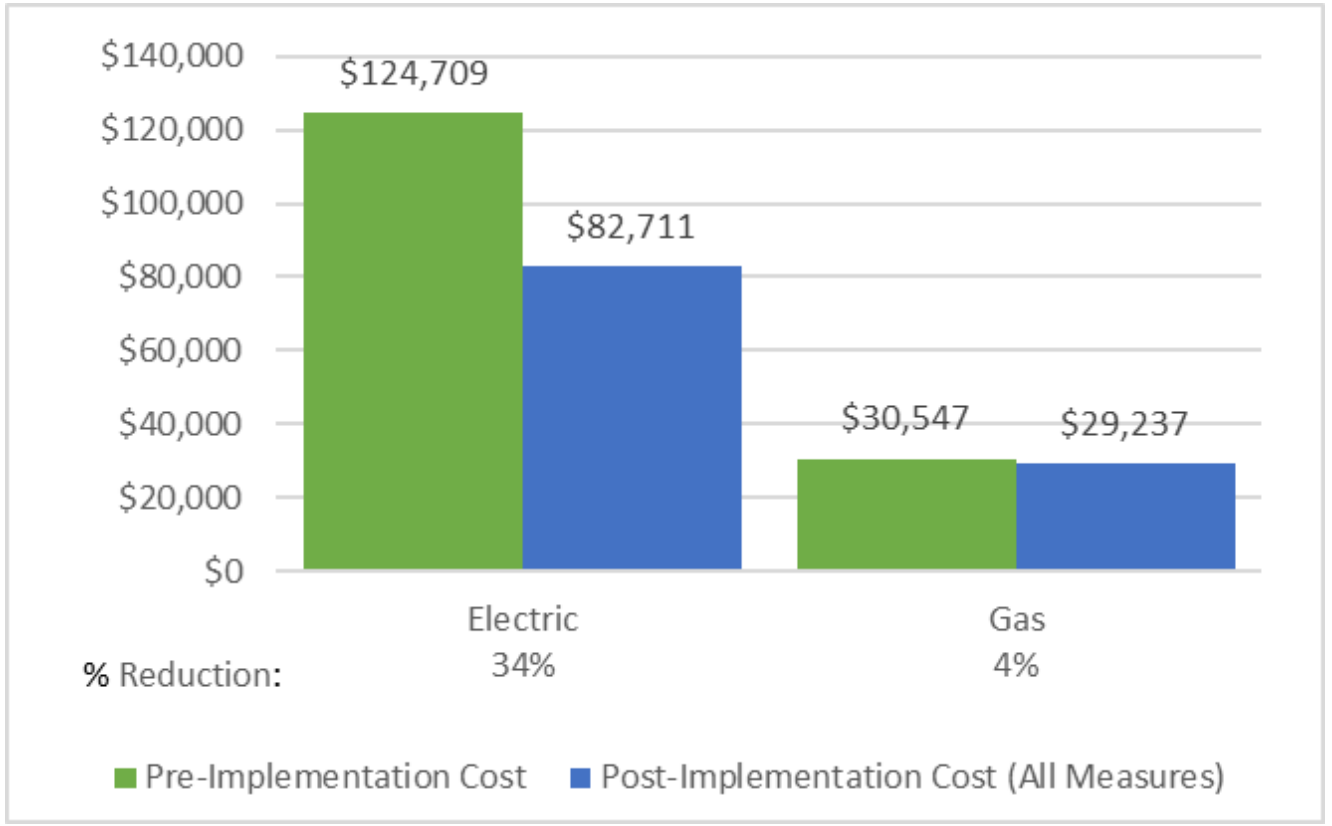
- Electric Consumption and Costs
- Gas Consumption and Costs

Utility Breakout

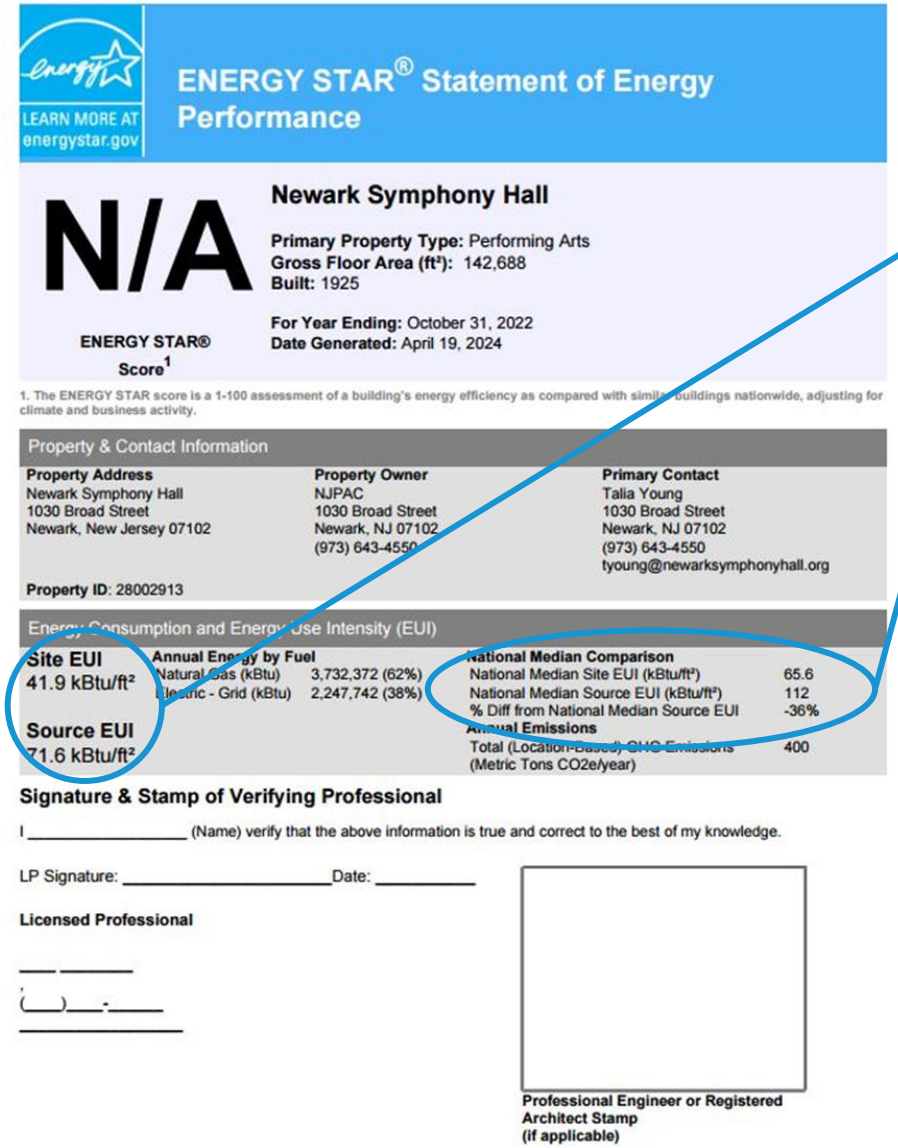
Percent of Total Annual Energy Costs



Pre & Post Implementation Cost



BENCHMARKING



ENERGY STAR® Statement of Energy Performance

LEARN MORE AT energystar.gov

N/A

ENERGY STAR® Score[1]

Newark Symphony Hall

Primary Property Type: Performing Arts
Gross Floor Area (ft²): 142,688
Built: 1925

For Year Ending: October 31, 2022
Date Generated: April 19, 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
Newark Symphony Hall 1030 Broad Street Newark, New Jersey 07102	NJPAC 1030 Broad Street Newark, NJ 07102 (973) 643-4550	Talia Young 1030 Broad Street Newark, NJ 07102 (973) 643-4550 tyoung@newarksymphonyhall.org

Property ID: 28002913

Energy Consumption and Energy Use Intensity (EUI)

Site EUI
41.9 kBtu/ft²

Source EUI
71.6 kBtu/ft²

Annual Energy by Fuel

Natural Gas (kBtu)	3,732,372 (62%)
Electric - Grid (kBtu)	2,247,742 (38%)

National Median Comparison

National Median Site EUI (kBtu/ft²)	65.6
National Median Source EUI (kBtu/ft²)	112
% Diff from National Median Source EUI	-36%

Annual Emissions

Total (Location-Based) GHG Emissions (Metric Tons CO2e/year)	400

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
41.9 kBtu/ft²

Source EUI
71.6 kBtu/ft²

National Median Comparison

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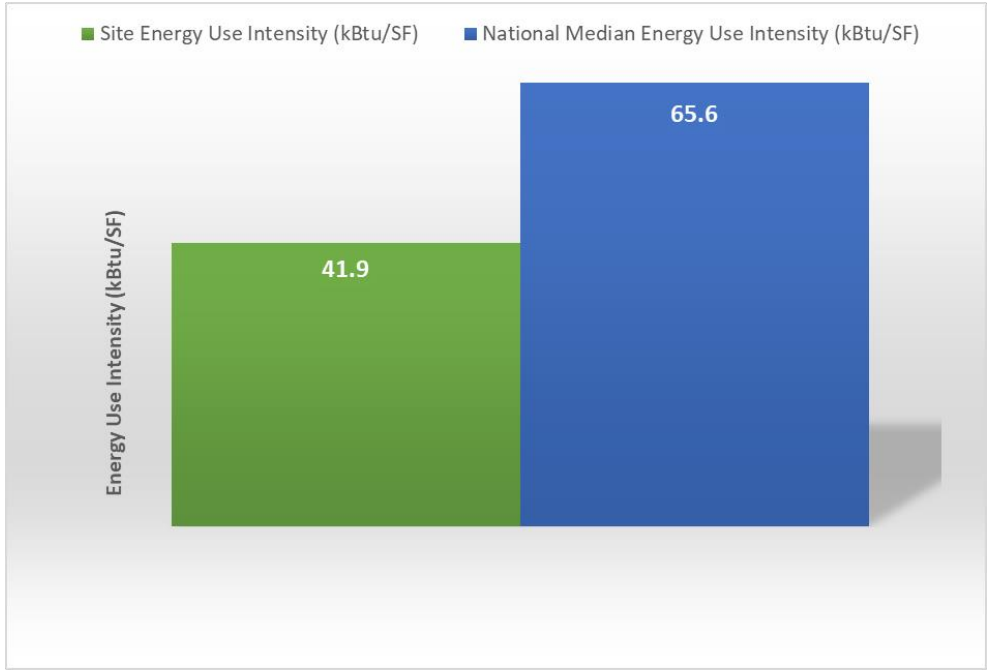
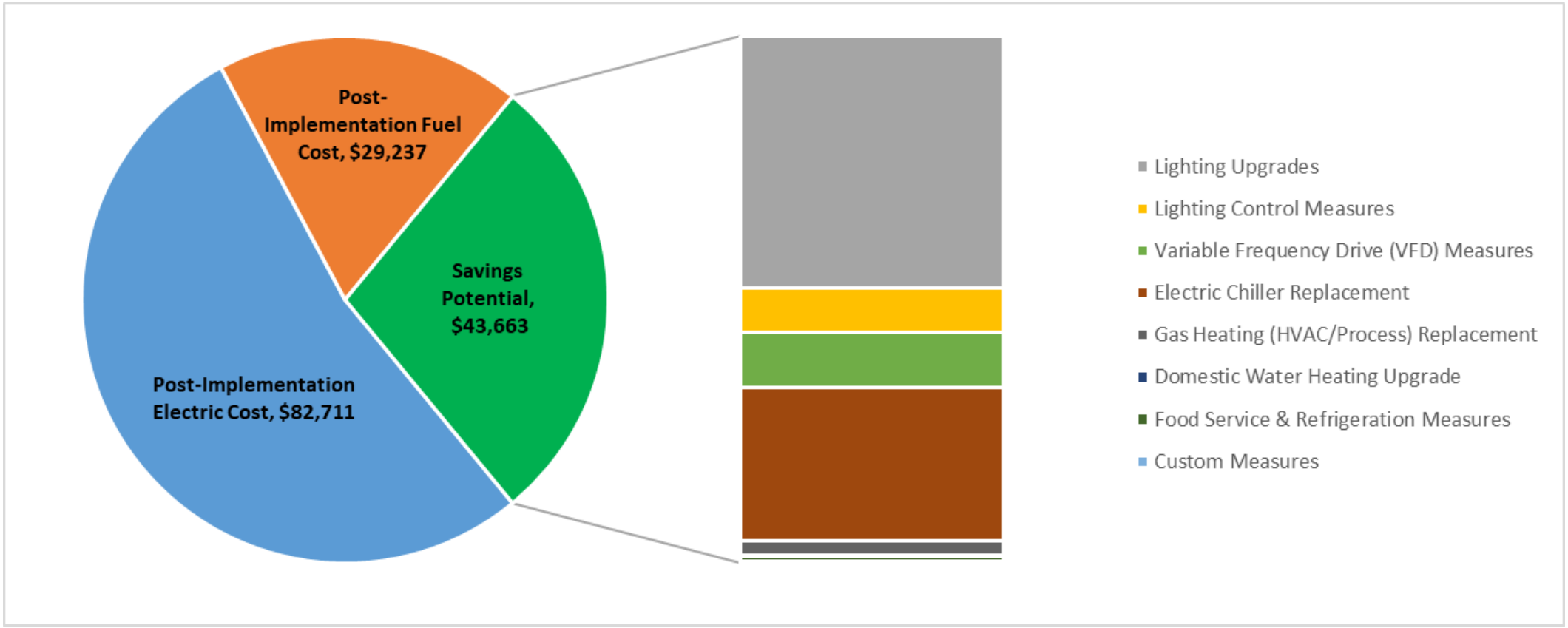


ENERGY STAR® scores are percentile ranking from 1 (least efficient) to 100 (most efficient). It compares your building's energy performance to similar buildings nationwide.

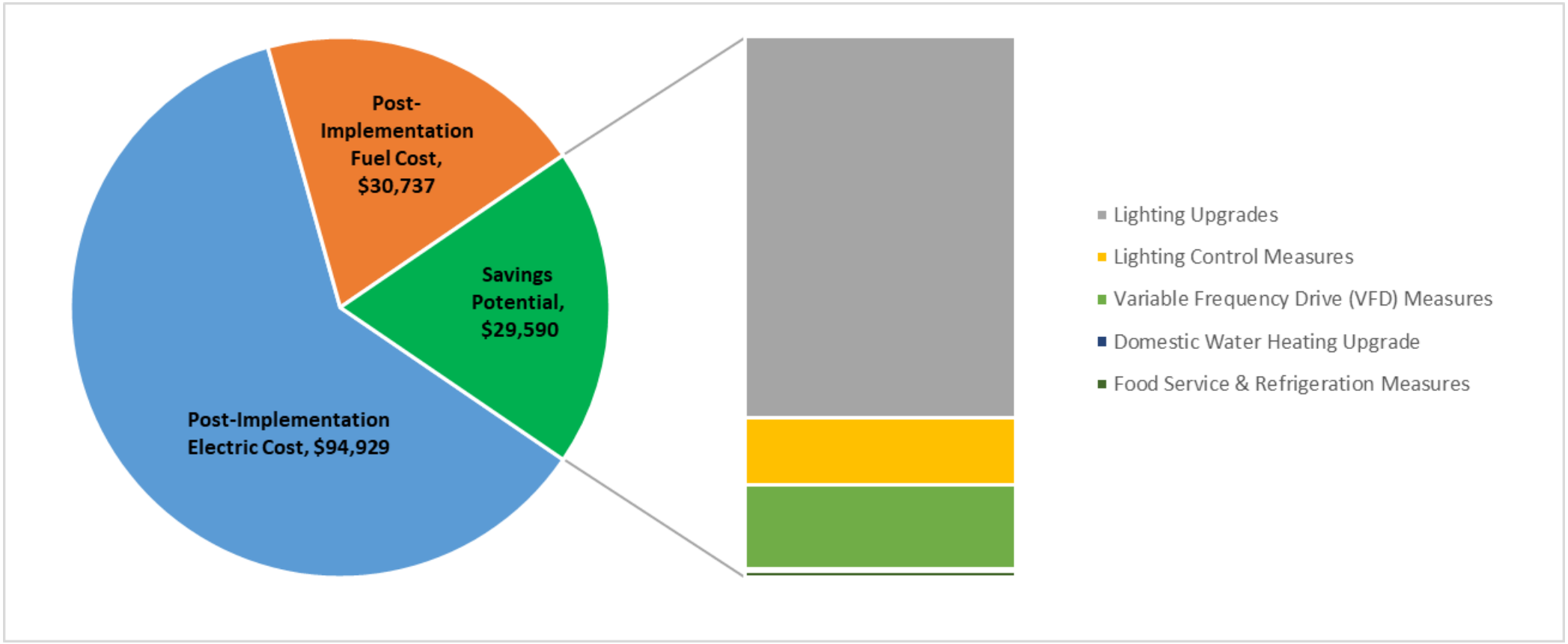
ALL OPPORTUNITIES

Savings Potential



Cost Effective Opportunities

Savings Potential



NEWARK SYMPHONY HALL

#	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			**123,714**	**34.5**	**-26**	**$20,827**	**$50,120**	**$1,110**	**$49,010**	**2.4**	**121,523**
ECM 1	Install LED Fixtures	Yes	324	0.0	0	$55	$270	$50	$220	4.0	326
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	Yes	135	0.0	0	$23	$90	$10	$80	3.5	133
ECM 3	Retrofit Fixtures with LED Lamps	Yes	123,255	34.5	-26	$20,749	$49,760	$1,050	$48,710	2.3	121,064
Lighting Control Measures			**21,845**	**5.8**	**-5**	**$3,677**	**$48,020**	**$10,110**	**$37,910**	**10.3**	**21,453**
ECM 4	Install Occupancy Sensor Lighting Controls	Yes	14,982	4.5	-3	$2,522	$33,720	$3,110	$30,610	12.1	14,713
ECM 5	Install High/Low Lighting Controls	Yes	6,863	1.3	-1	$1,155	$14,300	$7,000	$7,300	6.3	6,740
Variable Frequency Drive (VFD) Measures			**27,128**	**12.9**	**0**	**$4,623**	**$28,600**	**$2,700**	**$25,900**	**5.6**	**27,318**
ECM 6	Install VFDs on Constant Volume (CV) Fans	Yes	27,128	12.9	0	$4,623	$28,600	$2,700	$25,900	5.6	27,318
Electric Chiller Replacement			**74,639**	**8.6**	**0**	**$12,721**	**$405,500**	**$31,100**	**$374,400**	**29.4**	**75,161**
ECM 7	Install High Efficiency Chillers	No	74,639	8.6	0	$12,721	$405,500	$31,100	$374,400	29.4	75,161
Gas Heating (HVAC/Process) Replacement			**0**	**0.0**	**119**	**$1,175**	**$271,700**	**$0**	**$271,700**	**231.2**	**13,945**
ECM 8	Install High Efficiency Steam Boilers	No	0	0.0	119	$1,175	$271,700	$0	$271,700	231.2	13,945
Domestic Water Heating Upgrade			**0**	**0.0**	**11**	**$113**	**$1,140**	**$230**	**$910**	**8.0**	**1,344**
ECM 9	Install Low-Flow DHW Devices	Yes	0	0.0	11	$113	$1,140	$230	$910	8.0	1,344
Food Service & Refrigeration Measures			**2,051**	**0.1**	**0**	**$350**	**$3,450**	**$210**	**$3,240**	**9.3**	**2,066**
ECM 10	Refrigerator/Freezer Case Electrically Commutated Motors	Yes	524	0.1	0	$89	$750	$80	$670	7.5	528
ECM 11	Refrigeration Controls	Yes	1,527	0.0	0	$260	$2,700	$130	$2,570	9.9	1,538
Custom Measures* **			**-2,955**	**0.0**	**33**	**-$177**	**$14,000**	**$0**	**$14,000**	**-79.1**	**888**
ECM 12	Replace Gas Fired Water Heater with Heat Pump Water Heater***	No	-2,955	0.0	33	-$177	$14,000	$0	$14,000	-79.1	888
TOTALS (COST EFFECTIVE MEASURES)			**174,739**	**53.4**	**-19**	**$29,590**	**$131,330**	**$14,360**	**$116,970**	**4.0**	**173,705**
TOTALS (ALL MEASURES)			**246,424**	**62.0**	**133**	**$43,309**	**$822,530**	**$45,460**	**$777,070**	**17.9**	**263,699**

* - 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).

*** - Negative payback explained in section 4.8

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

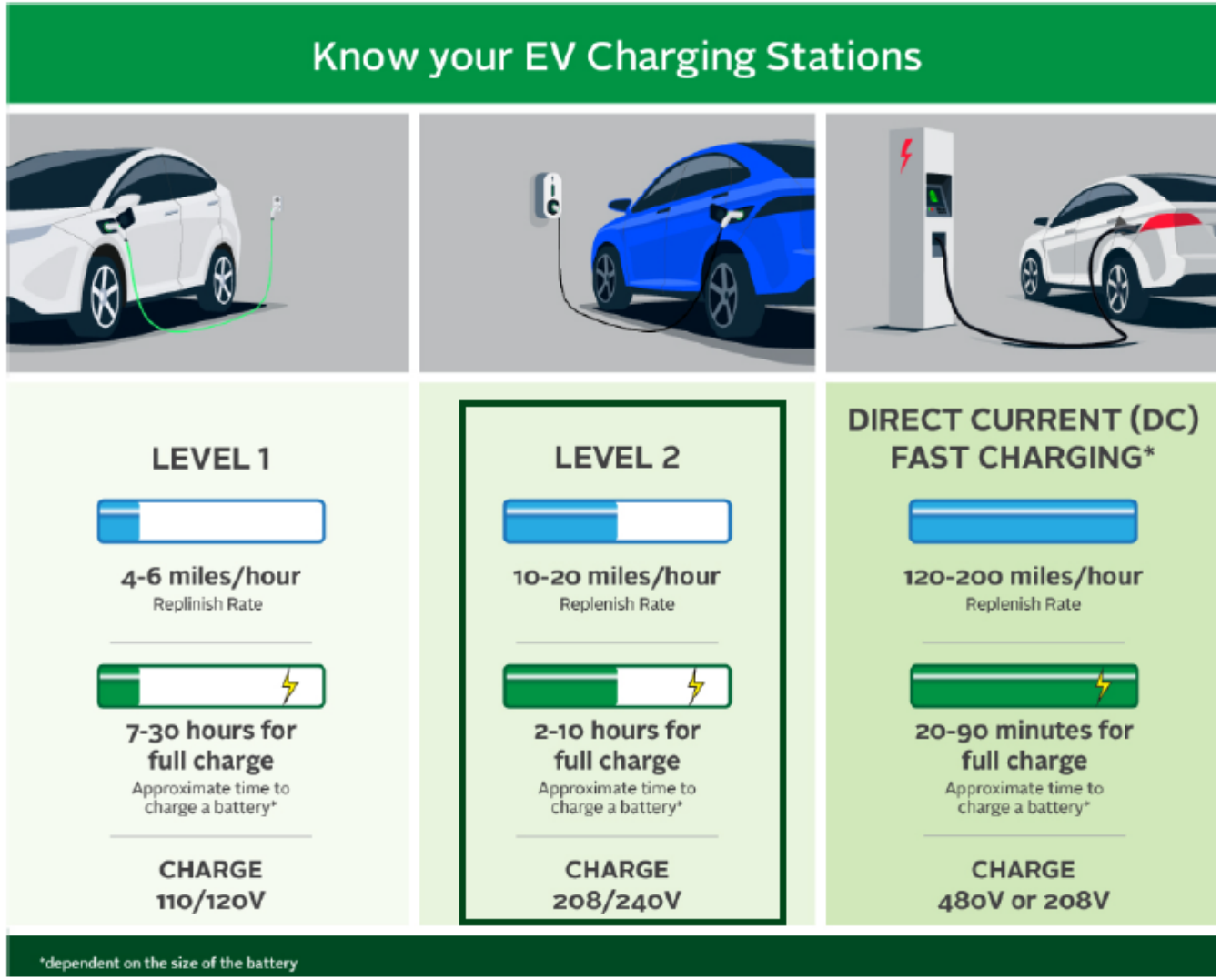
BPU New Jersey's cleanenergy program™

Measures for Future Consideration

- Eliminate Oversized Domestic Hot Water Heating Systems
- Retro-Commissioning Study

EV Charging Station Potential

NJCleanEnergy.com/EV



	Newark Symphony Hall
Potential:	HIGH

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

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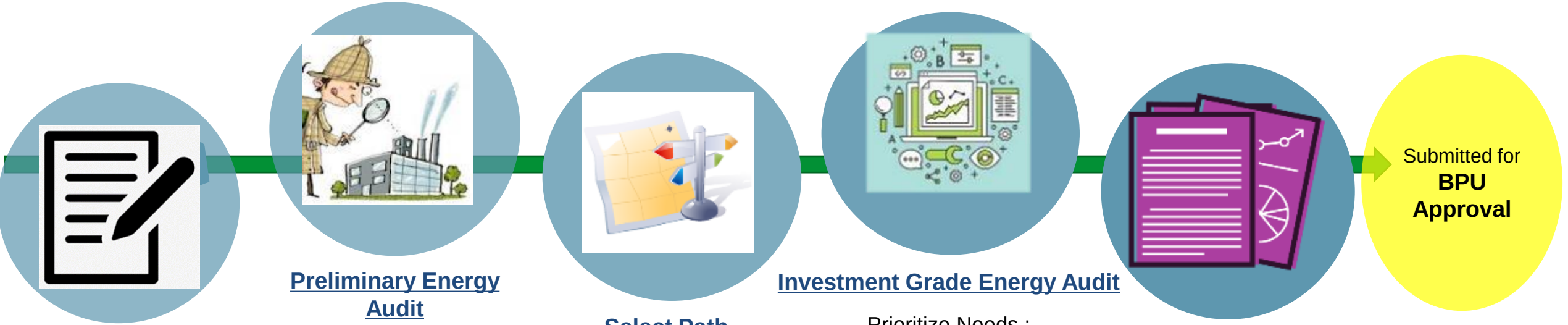
Energy Savings Improvement Program

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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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

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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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For More Information

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THANK YOU