LGEA Presentation

Green Bank Office

December 17, 2024

New Jersey's
Clean Energy Program

Lighting the way to New Jersey's Clean Energy Future

INTRODUCTIONS

- *State of NJ – Green Bank Office*
  - Sarah Gentile
  - Randy Ficken
  - Stephen Myers
  - Jessica August

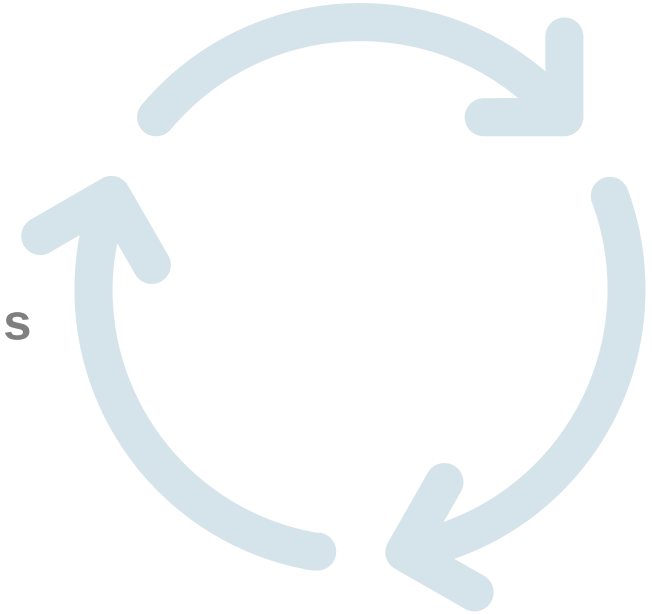
- *NJ Clean Energy Program*
  - Sarah Walters – LGEA Project Manager
  - Moussa Traore – LGEA Technical Manager
  - Nicholas Nocco – LGEA Project Auditor
  - Amanda Muench – LGEA Account Manager

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 Green Bank Office

LGEA Process

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



GREEN BANK OFFICE

Overview of Systems, Baseline & Existing Conditions:

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

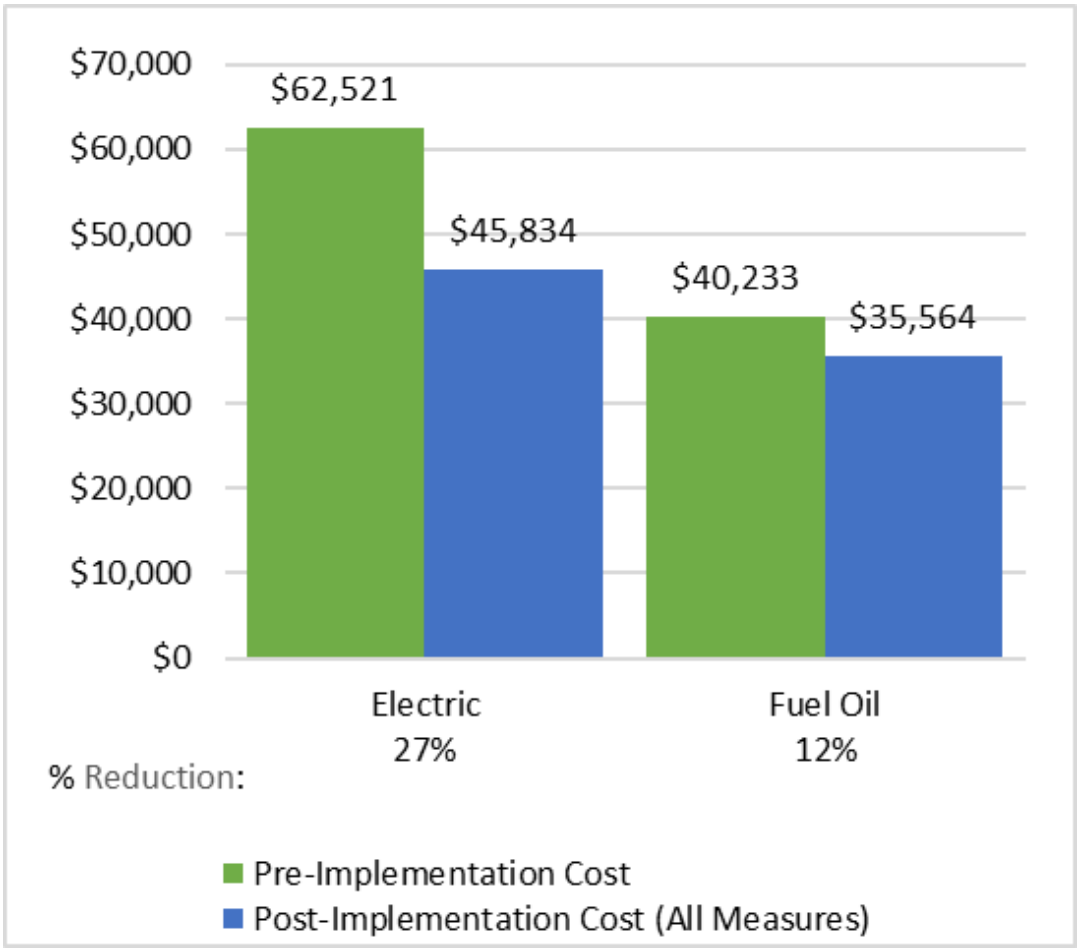
Utility Consumption:

- Electric Consumption and Costs
- Fuel Oil 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

42

ENERGY STAR® Score[1]

DEP - Green Bank Office

Primary Property Type: Office
Gross Floor Area (ft²): 24,965
Built: 2006

For Year Ending: May 31, 2024
Date Generated: September 29, 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
DEP - Green Bank Office 2434 Route 563 Egg Harbor City, New Jersey 08215	State of New Jersey 428 East State Street Trenton, NJ 08625 (609) 940-4129	New Jersey Board of Public Utilities State Energy Services 44 South Clinton Ave Trenton, NJ 08625 6096339666 BPU.EnergyServices@bpu.nj.gov

Property ID: 17398457
LBAM Facility ID: 1331
AvidXChange ID: 24484-GREEN BANK OFFICE
Unique Building Identifier (UBID): 87F7JC78+GQV-13-11-13-14

Energy Consumption and Energy Use Intensity (EUI)

Site EUI
118.6 kBtu/ft²

Annual Energy by Fuel

Electric - Grid (kBtu)	1,156,254 (39%)
Fuel Oil (No. 2) (kBtu)	1,804,184 (61%)

Source EUI
202.7 kBtu/ft²

National Median Comparison

National Median Site EUI (kBtu/ft²)	107.9
National Median Source EUI (kBtu/ft²)	184.5
% Diff from National Median Source EUI	10%

Annual Emissions

Total (Location-Based) GHG Emissions (Metric Tons CO2e/year)	235

Green Power

Green Power – Onsite (kWh)	N/A
Green Power – Offsite (kWh)	0
Percent of RECs Retained	N/A

Signature & Stamp of Verifying Professional

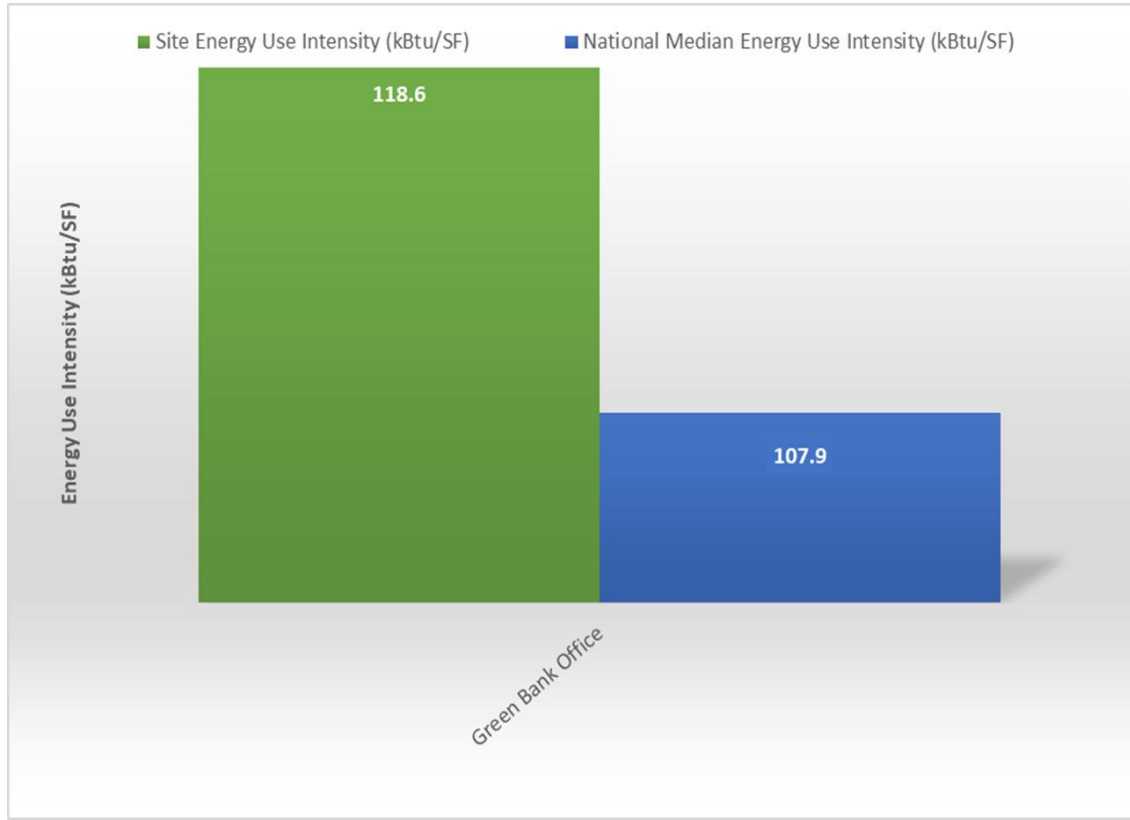
I _____ (Name) verify that the above information is true and correct to the best of my knowledge.

LP Signature: _____ Date: _____

Licensed Professional

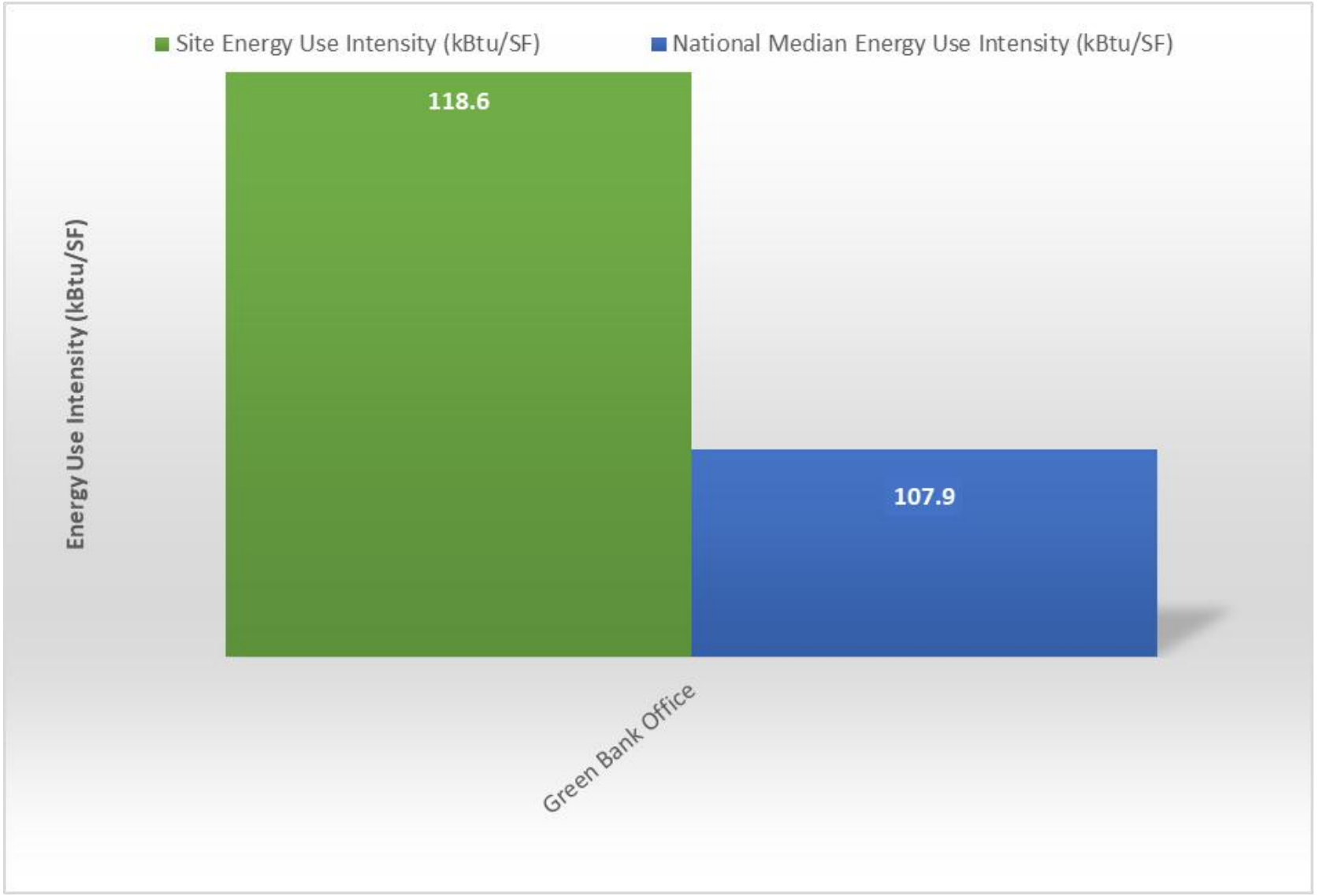
___ _____
,
(___)___-____
_____

Professional Engineer or Registered Architect Stamp (if applicable)



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



ALL OPPORTUNITIES

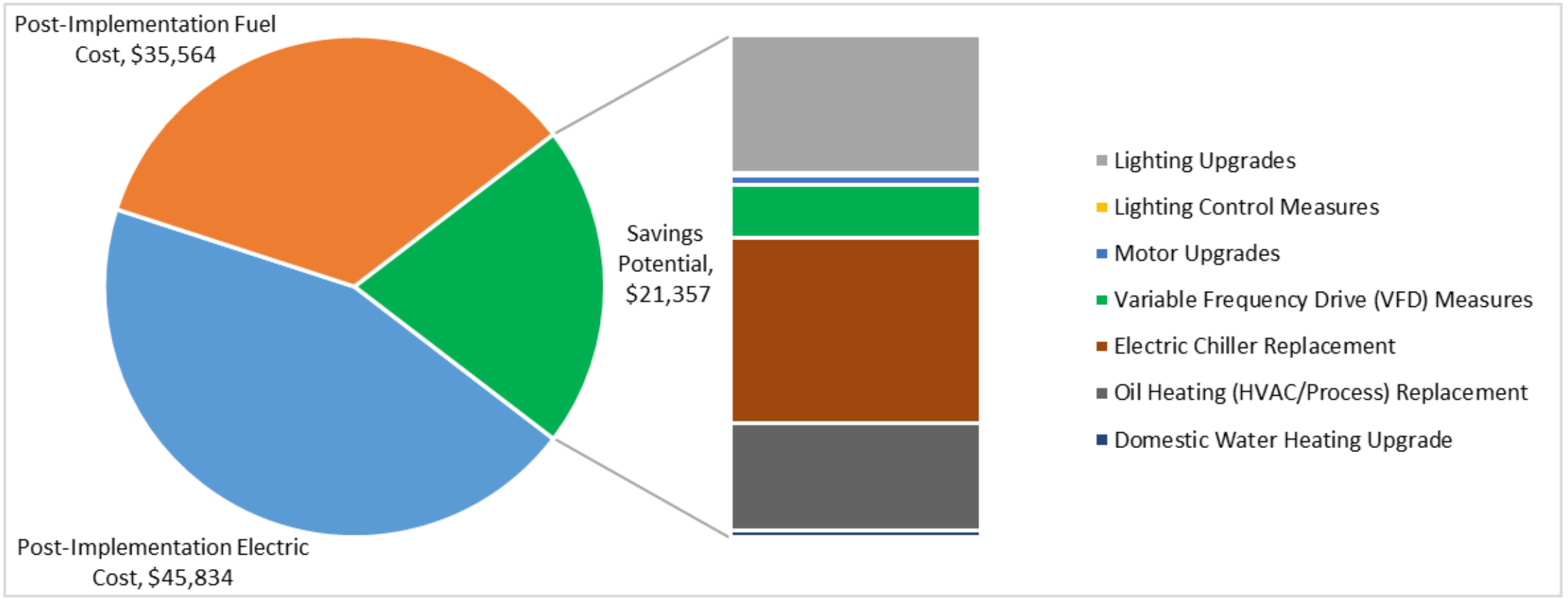
#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings ($)	Estimated M&L Cost ($)	Estimated Incentive ($)*	Estimated Net M&L Cost ($)	Simple Payback Period (yrs)**	CO_2e Emissions Reduction (lbs)
Lighting Upgrades		**32,074**	**9.8**	**-9**	**$5,836**	**$19,980**	**$3,950**	**$16,030**	**2.7**	**30,867**
ECM 1	Install LED Fixtures	10,359	0.0	0	$1,947	$6,260	$1,100	$5,160	2.7	10,431
ECM 2	Retrofit Fixtures with LED Lamps	21,716	9.8	-9	$3,889	$13,720	$2,850	$10,870	2.8	20,436
Lighting Control Measures		**758**	**0.2**	**0**	**$136**	**$1,260**	**$120**	**$1,140**	**8.4**	**712**
ECM 3	Install Occupancy Sensor Lighting Controls	758	0.2	0	$136	$1,260	$120	$1,140	8.4	712
Motor Upgrades		**1,961**	**0.7**	**0**	**$369**	**$4,500**	**$0**	**$4,500**	**12.2**	**1,975**
ECM 4	Premium Efficiency Motors	1,961	0.7	0	$369	$4,500	$0	$4,500	12.2	1,975
Variable Frequency Drive (VFD) Measures		**11,984**	**3.4**	**0**	**$2,252**	**$37,400**	**$2,000**	**$35,400**	**15.7**	**12,068**
ECM 5	Install VFDs on Constant Volume (CV) Fans	9,129	3.0	0	$1,716	$11,200	$1,800	$9,400	5.5	9,193
ECM 6	Install VFDs on Heating Water Pumps	2,855	0.4	0	$537	$26,200	$200	$26,000	48.5	2,875
Electric Chiller Replacement		**42,006**	**-1.1**	**0**	**$7,895**	**$164,300**	**$11,300**	**$153,000**	**19.4**	**42,300**
ECM 7	Install High Efficiency Chillers	42,006	-1.1	0	$7,895	$164,300	$11,300	$153,000	19.4	42,300
Gas Heating (HVAC/Process) Replacement		**0**	**0.0**	**208**	**$4,573**	**$113,800**	**$6,500**	**$107,300**	**23.5**	**33,956**
ECM 8	Install High Efficiency Hot Water Boilers	0	0.0	208	$4,573	$113,800	$6,500	$107,300	23.5	33,956
Domestic Water Heating Upgrade		**0**	**0.0**	**13**	**$296**	**$7,000**	**$500**	**$6,500**	**22.0**	**2,195**
ECM 9	Install High Efficiency Oil-Fired Water Heater	0	0.0	13	$296	$7,000	$500	$6,500	22.0	2,195
TOTALS (COST EFFECTIVE MEASURES)		**41,962**	**13.0**	**-9**	**$7,687**	**$32,440**	**$5,870**	**$26,570**	**3.5**	**40,772**
TOTALS (ALL MEASURES)		**88,785**	**13.1**	**212**	**$21,357**	**$348,240**	**$24,370**	**$323,870**	**15.2**	**124,074**

* - 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).

All Opportunities

Savings Potential



Cost Effective Opportunities

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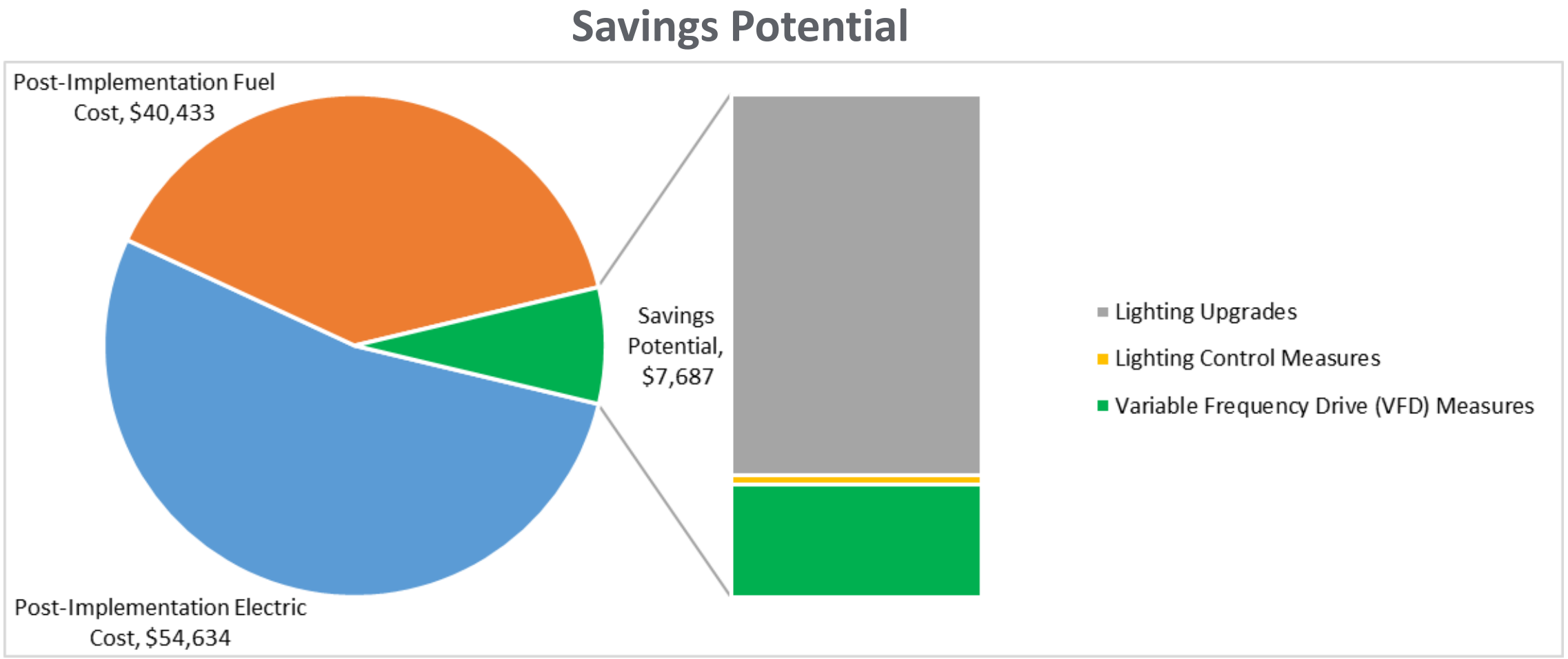
Cost Effective Opportunities



GREEN BANK OFFICE

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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

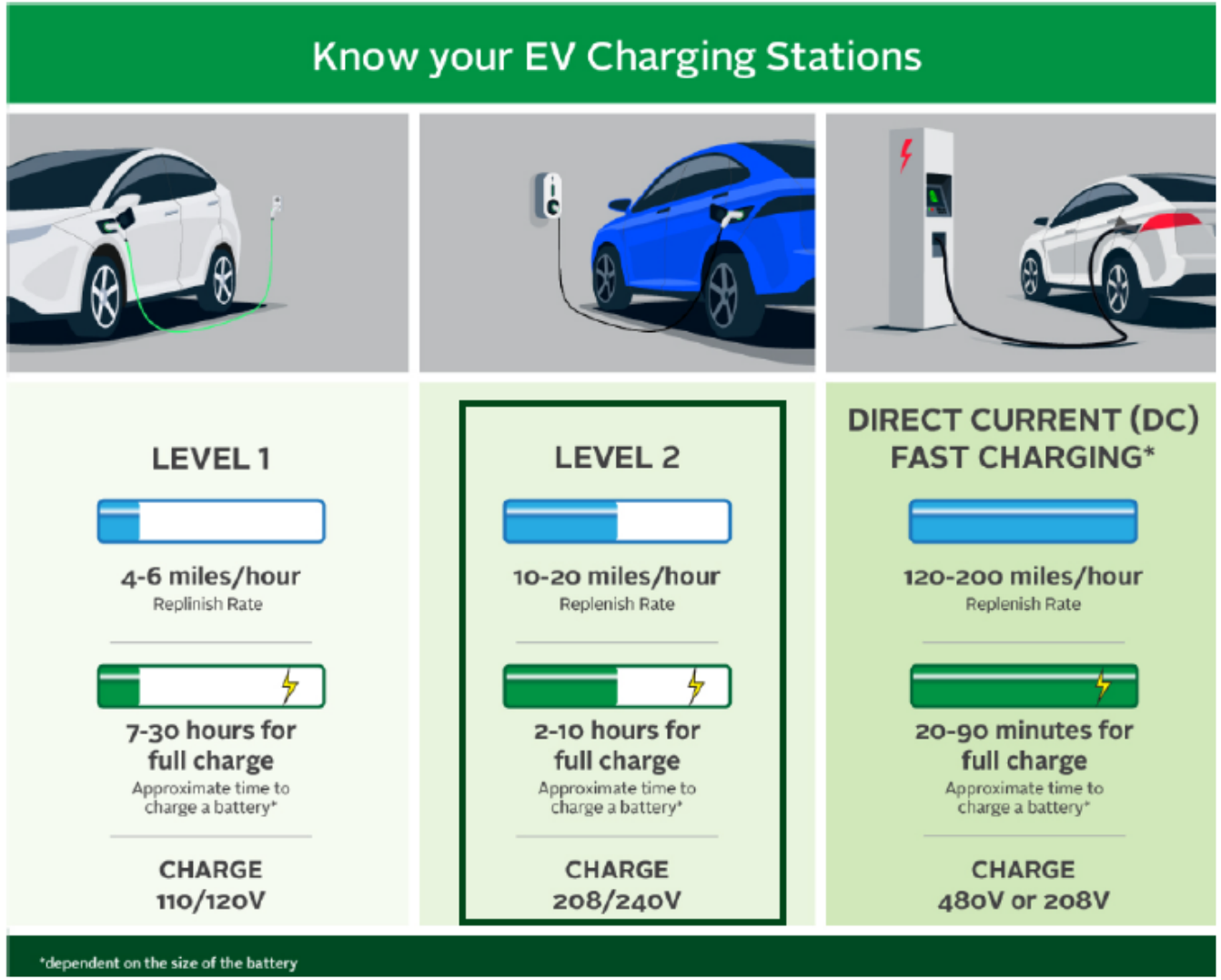
- Leak Detection and Repair
- Toilets and Urinals
- Faucets and Showerheads
- Commercial Kitchen Equipment
- Laundry Equipment
- Cooling Towners
- Steam Boiler System
- Pools and Spas
- Laboratory and Medical Equipment
- Water Metering and Submetering
- Vehicle Washing
- Single Pass Cooling System
-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

See individual reports for specific Water Best Practices by building

BPU New Jersey's cleanenergy program™

EV Charging Station Potential

NJCleanEnergy.com/EV



	Green Bank Office
Potential:	**Medium**

Solar Energy Generation Potential

NJCleanEnergy.com/renewable-energy

	Green Bank Office
Potential:	**MEDIUM**
System Potential: (kW)	84
Electric Generation: (kWh per year)	100,075
Displaced Cost: (per year)	$18,810

FINANCING MECHANISM: ESIP

NJCleanEnergy.com/ESIP

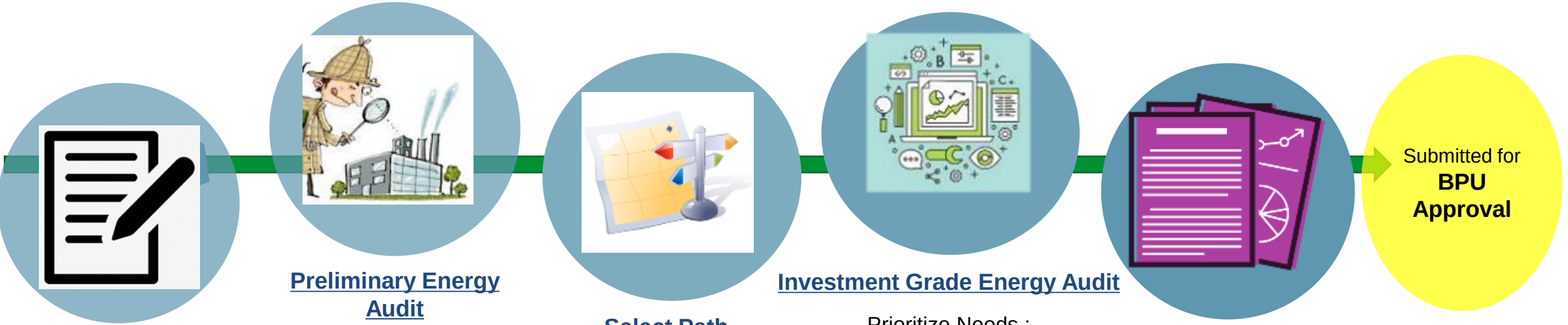
ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

- 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

New Jersey's cleanenergy program™

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

Michelle Rossi

ESIP Coordinator

ESIP@bpu.nj.gov

o: 609.913.6295

c: 609.915.0903

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.

State Facilities Initiative (SFI)

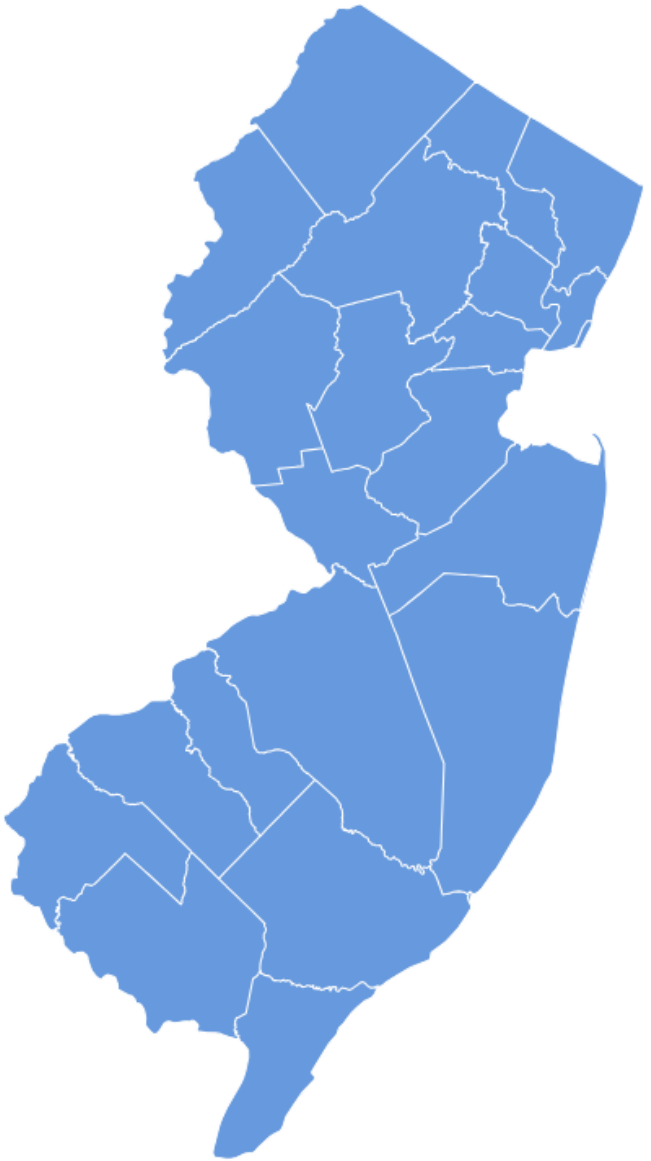
The State Facilities Initiative (SFI)

This program is for State-owned facilities.

The program identifies and implements Energy Efficiency projects in State-owned facilities or State-sponsored projects with the objective of producing energy and cost savings. The funding provided to the SFI is directly in line with EMP Goals 3.3.5 and 4.1.1.

EMP Goal 3.3.5 seeks to "[i]mprove energy efficiency in, and retrofit state buildings to, a high performance standard."

EMP Goal 4.1.1 addresses electrifying State facilities.



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

Atlantic City Electric (ACE)

Paul Miles - Paul.Miles@exeloncorp.com
Greg Reinert - GReinert@trccompanies.com
Alex Haver – AHaver@trccompanies.com

For More Information

Sarah Walters – LGEA Project Manager
SWalters@trccompanies.com
(732) 589-7372

Moussa Traore – LGEA Technical Manager
MTraore@trccompanies.com
(732) 902-1797

Amanda Muench – LGEA Account Manager
AMuench@trccompanies.com
(732) 612-9381

Nicholas Nocco – LGEA Energy Auditor
NNocco@trccompanies.com
(848) 235-4169

THANK YOU