



LGEA Presentation
Clarence Dillon Public Library

November 24, 2021

New Jersey's
Clean Energy Program

Lighting the way to New Jersey's Clean Energy Future

INTRODUCTIONS

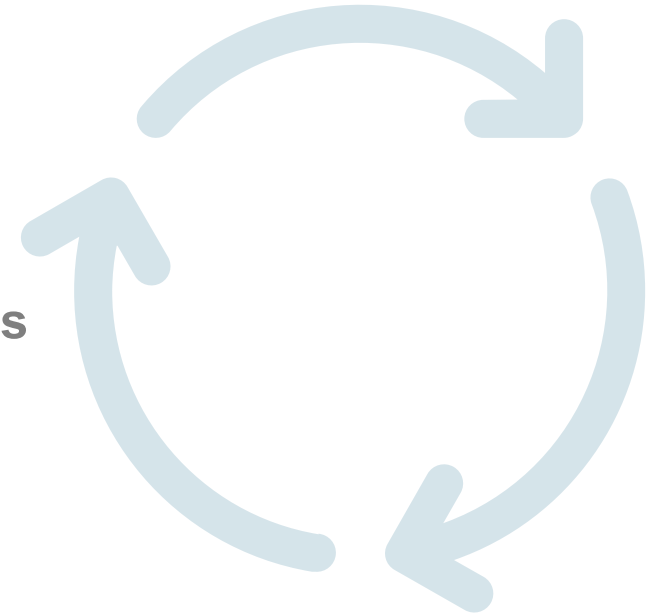
- *Clarence Dillon Public Library*
 - Marie Crenshaw – Library Director
 - Dan McCollum – Building Custodian
- *NJ Clean Energy Program*
 - Sarah Walters – LGEA Project Manager
 - Moussa Traore – LGEA Lead Auditor
 - Ryan Knippenberg – LGEA Project Auditor
 - Nauman Khurshid – TRC Outreach Account Manager

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)
- C&I Transition of EE Programs
- JCP&L Energy Efficiency Program
- Questions regarding the draft audit report
- Next steps for Clarence Dillon Public Library

LGEA PROCESS

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



CLARENCE DILLON PUBLIC LIBRARY

Overview of Systems, Baseline & Existing Conditions:

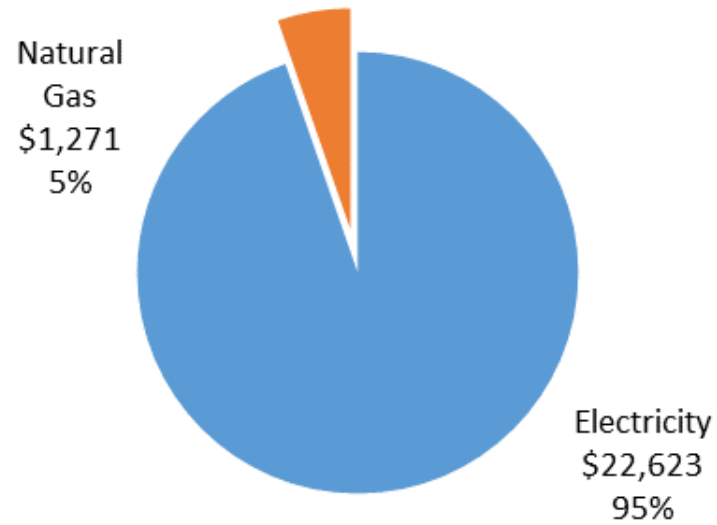
- Building Envelope
- Lighting System
- HVAC and Mechanical Systems
- Plug Load Equipment
- Café Equipment

Utility Consumption:

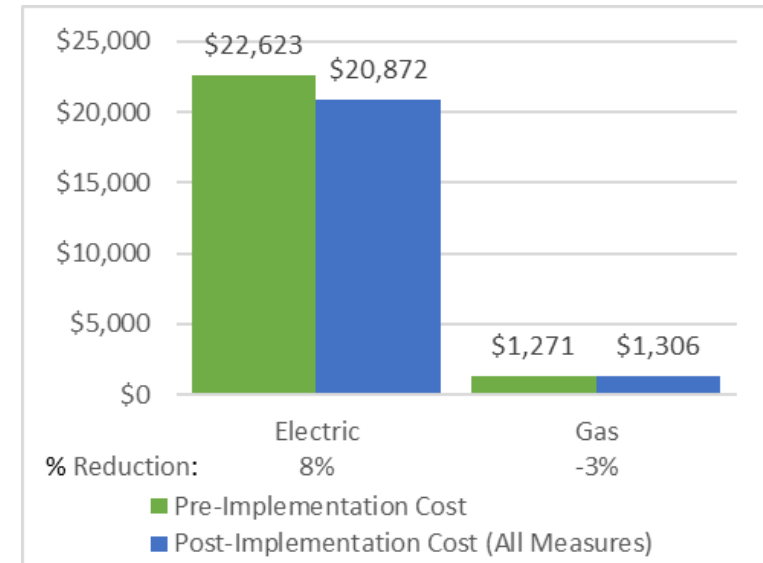
- Electric Consumption and Costs
- Natural Gas Consumption and Costs
- Solar Consumption and Costs

UTILITY BREAKOUT

Annual Energy Costs



Pre & Post Implementation Cost



BENCHMARKING

ENERGY STAR® Statement of Energy Performance

LEARN MORE AT energystar.gov

N/A **Clarence Dillon Public Library**

Primary Property Type: Library
Gross Floor Area (ft²): 15,200
Built: 1962

For Year Ending: April 30, 2021
Date Generated: October 15, 2021

ENERGY STAR® Score¹

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 Clarence Dillon Public Library 2336 Lamington Road Bedminster, New Jersey 07921	Property Owner Clarence Dillon Public Library 2336 Lamington Road Bedminster, NJ 07921 908-234-2325	Primary Contact Marie Crenshaw 2336 Lamington Road Bedminster, NJ 07921 908-234-2325 mcrenshaw@dillonlibrary.org
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Property ID: 17334771

Energy Consumption and Energy Use Intensity (EUI)

Site EUI 51.9 kBtu/ft²	Annual Energy by Fuel	National Median Comparison
	Electric - Grid (kBtu) 507,732 (64%)	National Median Site EUI (kBtu/ft²) 66.3
	Electric - Solar (kBtu) 163,787 (21%)	National Median Source EUI (kBtu/ft²) 143.6
	Natural Gas (kBtu) 117,760 (15%)	% Diff from National Median Source EUI -22%
Source EUI 112.4 kBtu/ft²		Annual Emissions
		Greenhouse Gas Emissions (Metric Tons CO2e/year) 69

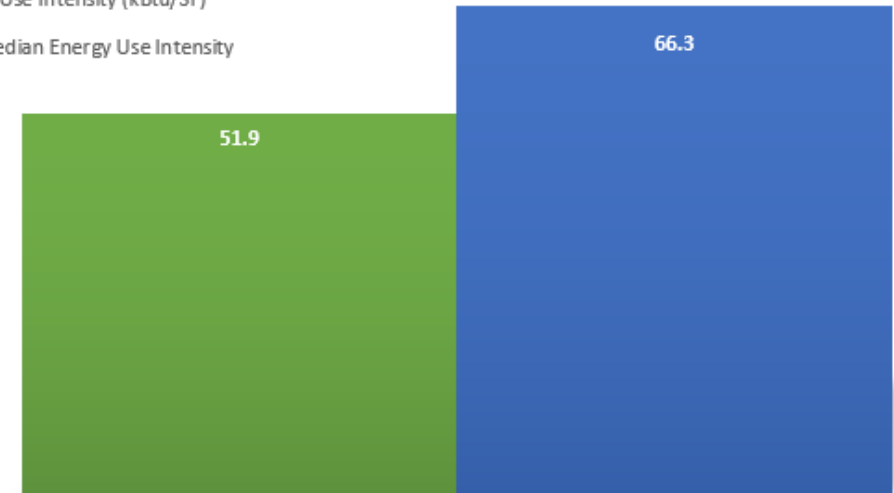
Site EUI
51.9 kBtu/ft²

Source EUI
112.4 kBtu/ft²

■ Site Energy Use Intensity (kBtu/SF)

■ National Median Energy Use Intensity (kBtu/SF)

Energy Use Intensity (kBtu/SF)



National Median Comparison	
National Median Site EUI (kBtu/ft²)	66.3
National Median Source EUI (kBtu/ft²)	143.6
% Diff from National Median Source EUI	-22%

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.

CLARENCE DILLON PUBLIC LIBRARY

#	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 ₂ e Emissions Reduction (lbs)
Lighting Upgrades			3,097	0.9	-1	\$350	\$1,365	\$130	\$1,235	3.5	3,041
ECM 1	Retrofit Fixtures with LED Lamps	Yes	3,097	0.9	-1	\$350	\$1,365	\$130	\$1,235	3.5	3,041
Lighting Control Measures			12,102	3.4	-3	\$1,366	\$11,572	\$1,825	\$9,747	7.1	11,885
ECM 2	Install Occupancy Sensor Lighting Controls	Yes	11,294	3.2	-2	\$1,275	\$10,222	\$1,335	\$8,887	7.0	11,091
ECM 3	Install High/Low Lighting Controls	Yes	809	0.2	0	\$91	\$1,350	\$490	\$860	9.4	794
TOTALS (COST EFFECTIVE MEASURES)			15,199	4.2	-3	\$1,716	\$12,937	\$1,955	\$10,982	6.4	14,926
TOTALS (ALL MEASURES)			15,199	4.2	-3	\$1,716	\$12,937	\$1,955	\$10,982	6.4	14,926

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

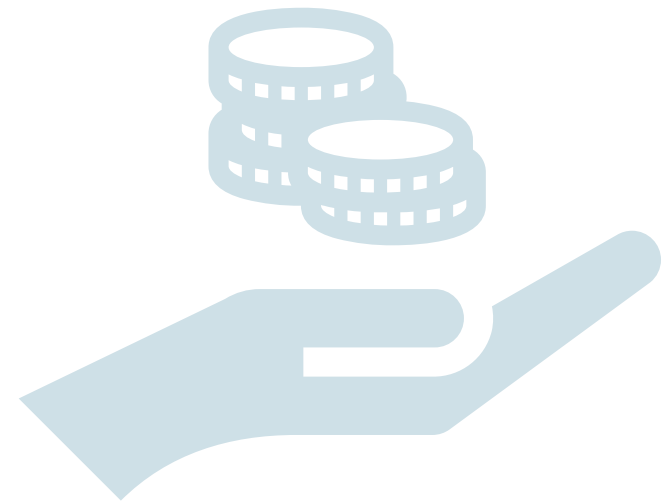
- Reduce Air Leakage
- Close Doors and Windows
- Develop a Lighting Maintenance Schedule
- Ensure Lighting Controls Are Operating Properly
- Use Fans to Reduce Cooling Load
- Use Window Treatments/Coverings
- Clean and/or Replace HVAC filters
- Check and Seal Duct Leakage
- Perform Proper Boiler Maintenance
- Perform Proper Water Heater Maintenance
- Plug Load Controls
- Water Conservation

See individual reports for specific EE practices by building

FINANCING MECHANISM: ESIP

ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

- Energy Performance Contracting – NJ ESIP
- Financing Mechanism that allows state 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
- 15 or 20 year self-funding loan
- Recent Energy Efficiency Transition
 - NJBPU Approved Incentive Programs
 - Utility or NJCEP
- Can be combined with Federal/State Pandemic Relief Funds
- No upfront capital expenses
- No referendum or impact to tax payers

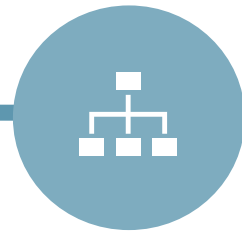


FINANCING MECHANISM: ESIP



**Preliminary
Energy Audit**

LGEA



Select Path

ESCO Model
Hybrid Model
DIY Model



**Investment Grade
Energy Audit**

Prioritize ECM's to
determine project

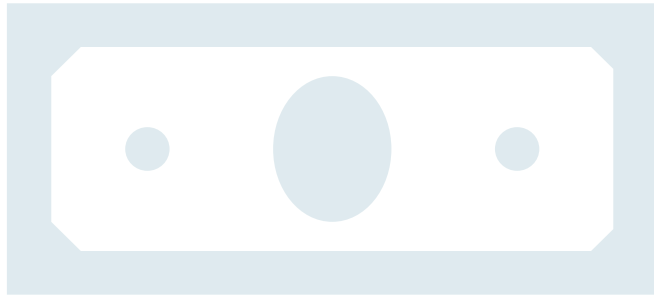


**Energy Savings Plan
Developed**

Cash Flow Positive
Third Part Audit of Plan



Submitted for
BPU
Approval



Energy SAVINGS Improvement Program

FOR MORE INFORMATION

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ESIP Coordinator

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c: 609.915.0903

C&I TRANSITION OF ENERGY EFFICIENCY PROGRAMS

<https://www.njcleanenergy.com/transition>

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

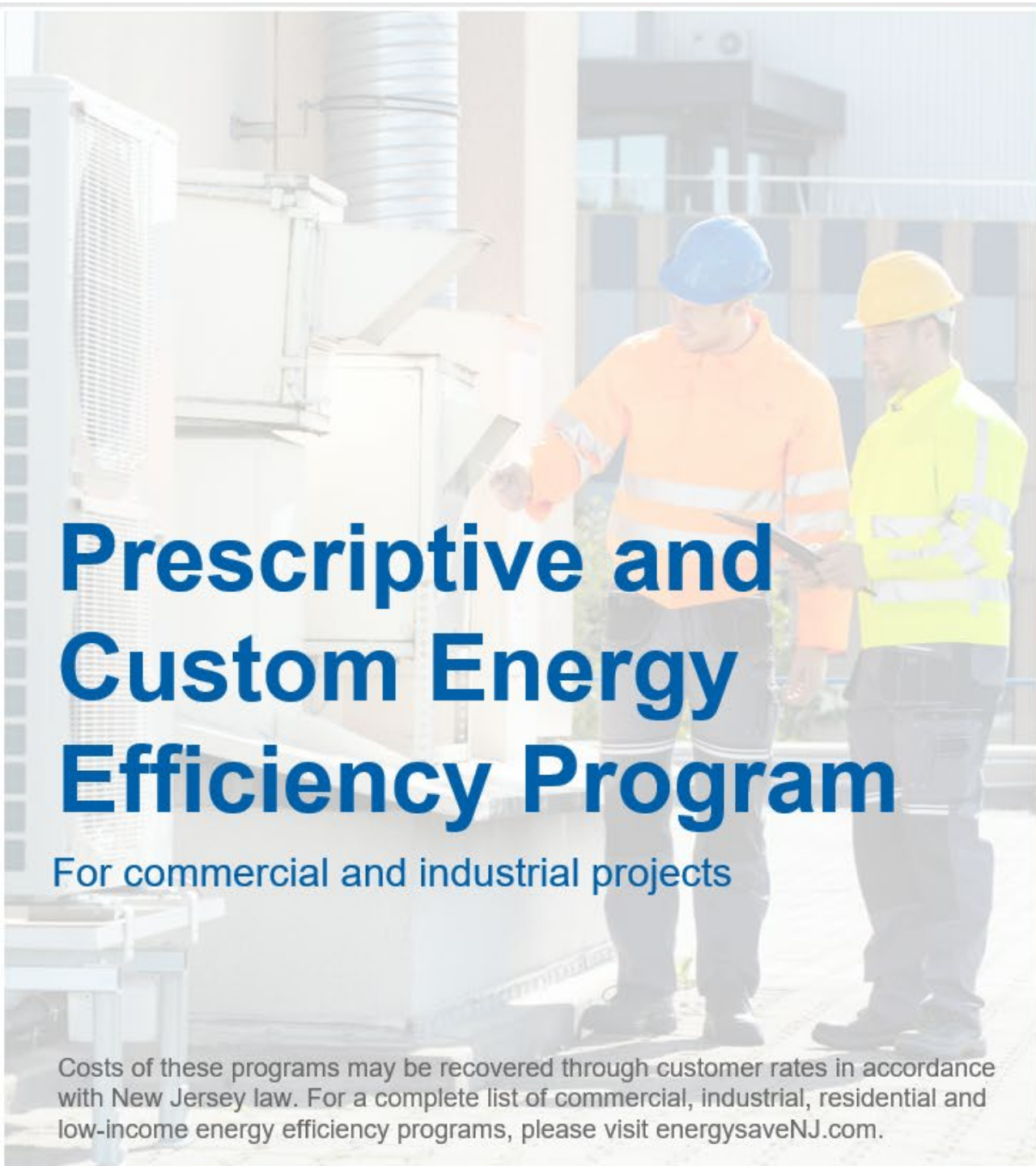
Combined Heat & Power
and Fuel Cell Installation
Incentives

Microgrid Development

Battery Storage

Muni EV Fleets



A photograph of two utility workers in safety gear (hard hats and high-visibility jackets) standing on a rooftop, reviewing documents. They are positioned next to a large HVAC unit. The background shows a building facade with windows and a balcony.

Prescriptive and Custom Energy Efficiency Program

For commercial and industrial projects

Costs of these programs may be recovered through customer rates in accordance with New Jersey law. For a complete list of commercial, industrial, residential and low-income energy efficiency programs, please visit energysaveNJ.com.

Jersey Central
Power & Light

A FirstEnergy Company

Eligibility

Prescriptive Projects

Purchased **on or after** July 1, 2021* follow two paths:

If not yet installed or purchased

→ submit for pre-approval

If installed on or after July 1, 2021 but did not receive pre-approval

→ you may apply for incentives no later than 180 days of project completion. Completion is defined as equipment being installed and operable.

*Equipment purchased prior to July 1,2021 may be eligible for incentives at NJCleanEnergy.com

Prescriptive vs. Custom



*fixed incentive
based on the
equipment list*



*incentive based on
energy savings*

Prescriptive

Install high-efficiency eligible electric equipment across a variety of technologies including:

- Refrigeration Doors, Covers, Freezer Motors
- Electric HVAC
- Controls
- Lighting and Lighting Controls
- Food Service Equipment
- Variable Frequency Drives
- Ground Source Heat Pumps
- More!

Custom

Incentives are available for:

- Compressed Air (excluding maintenance or repair for air system leaks)
- Refrigeration
- HVAC
- Building Optimization
- Process Improvements
- Custom Lighting Projects
- More!

Process

Required for Custom,
recommended but
optional for Prescriptive

Pre-approval



Project deficiencies will be addressed every 5 business days until resolved. Installation may begin once approval has been issued. Approval documents will include the list of documentation required for project verification and payment.

Installation



Certain projects will undergo post-inspection prior to payment.

Subject to post-inspection



Incentive Payment



Subject to pre-inspection



Applications are subject to pre-inspections prior to approval.

Project must be completed within 90 calendar days of the project approval date.

If a project is not completed within 90 calendar days customer will be contacted within 5 business days.

Final documentation



Once you complete your project you can submit final documentation for payment. The customer can assign either the full incentive or part of the incentive to another entity.

Outreach Account Managers



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THANK YOU

