

# Bringing Policy to Life!

## Successful Outreach Approaches for Energy Efficiency in Public Facilities

Michael Mandzik – Outreach Account Manager, TRC Companies

Tony O'Donnell – Outreach Account Manager, TRC Companies

New Jersey's Clean Energy Program™

October 29, 2020

"Transforming Business Education & Practice, 2020" Oct. 26-29, 2020



# NJCEP Background

## ADMINISTERED BY

New Jersey Board of Public Utilities' Division of Clean Energy

## FUNDING

Societal Benefits Charge (SBC) on utility bill

## PROGRAM GOALS

- Education
- Change behavior
- Provide opportunity for ALL NJ residents to reduce energy and lower operating cost
- Protect the environment and lower emissions
- Meet Governor's goal of 100% clean energy by 2050



# Programs to Meet Goals



**CUSTOMER EDUCATION**



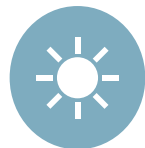
**ENERGY CONSERVATION**



**ENERGY EFFICIENCY**



**DISTRIBUTED ENERGY RESOURCES**



**RENEWABLE ENERGY**

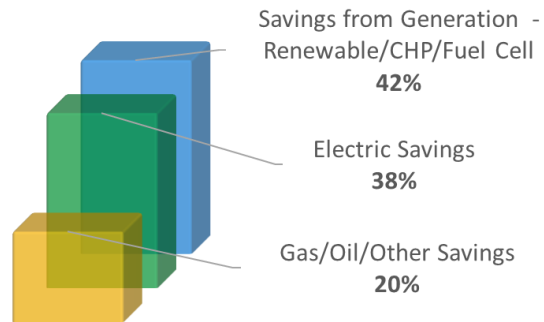


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# Program Performance...



**131,000+** applications processed in FY19



**Energy Savings** are delivered through electric, gas, oil, other efficiencies and generation



**\$136,000,000+** incentives paid in FY19



# ...Brings Real-World Results

Clean Energy Programs eliminated enough CO<sub>2</sub> to equate to:



**96,000+** cars removed



**7,400,000+** trees planted

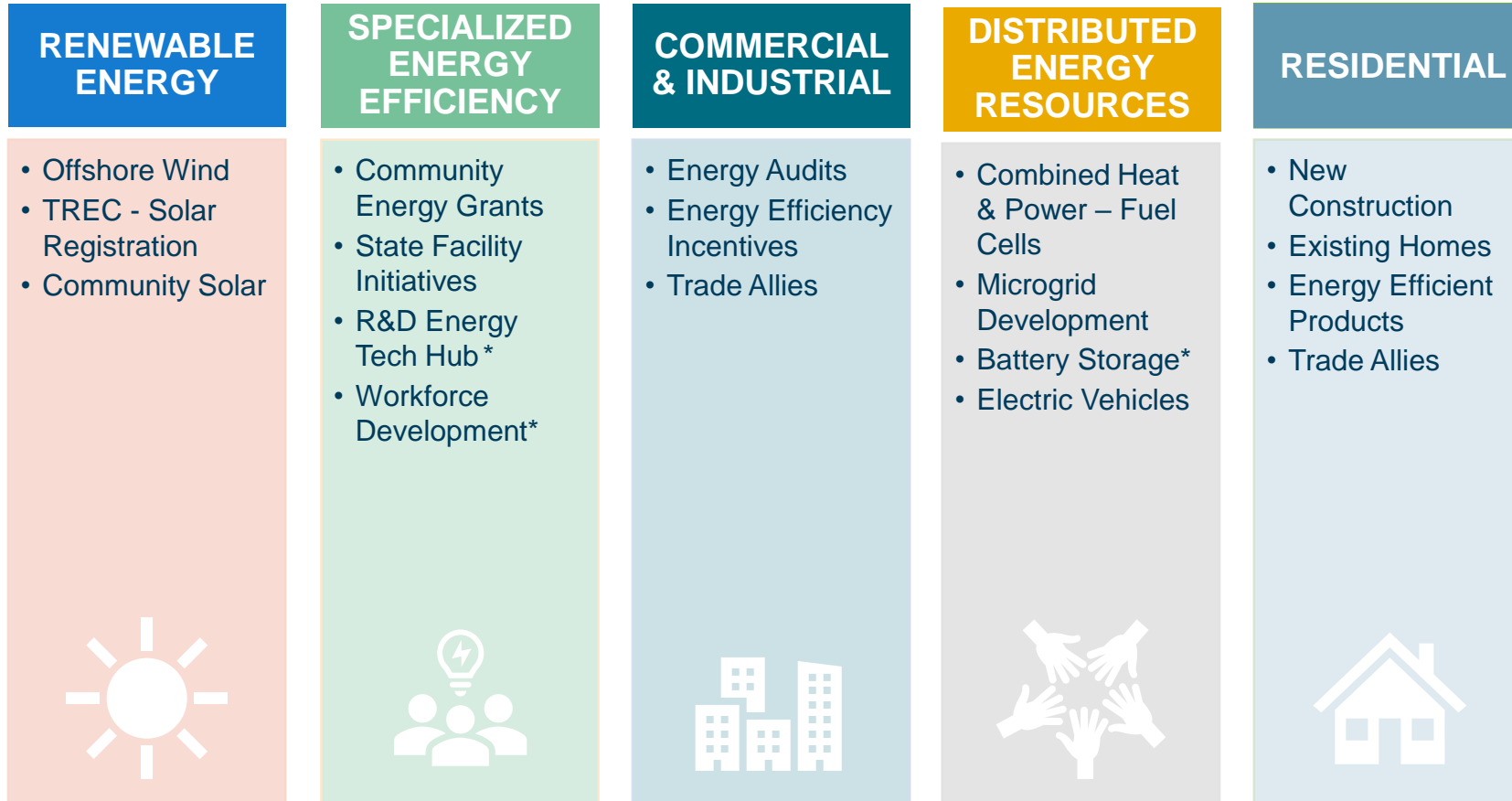


**452,616** metric tons greenhouse gases eliminated



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# NJCEP Portfolio of Programs



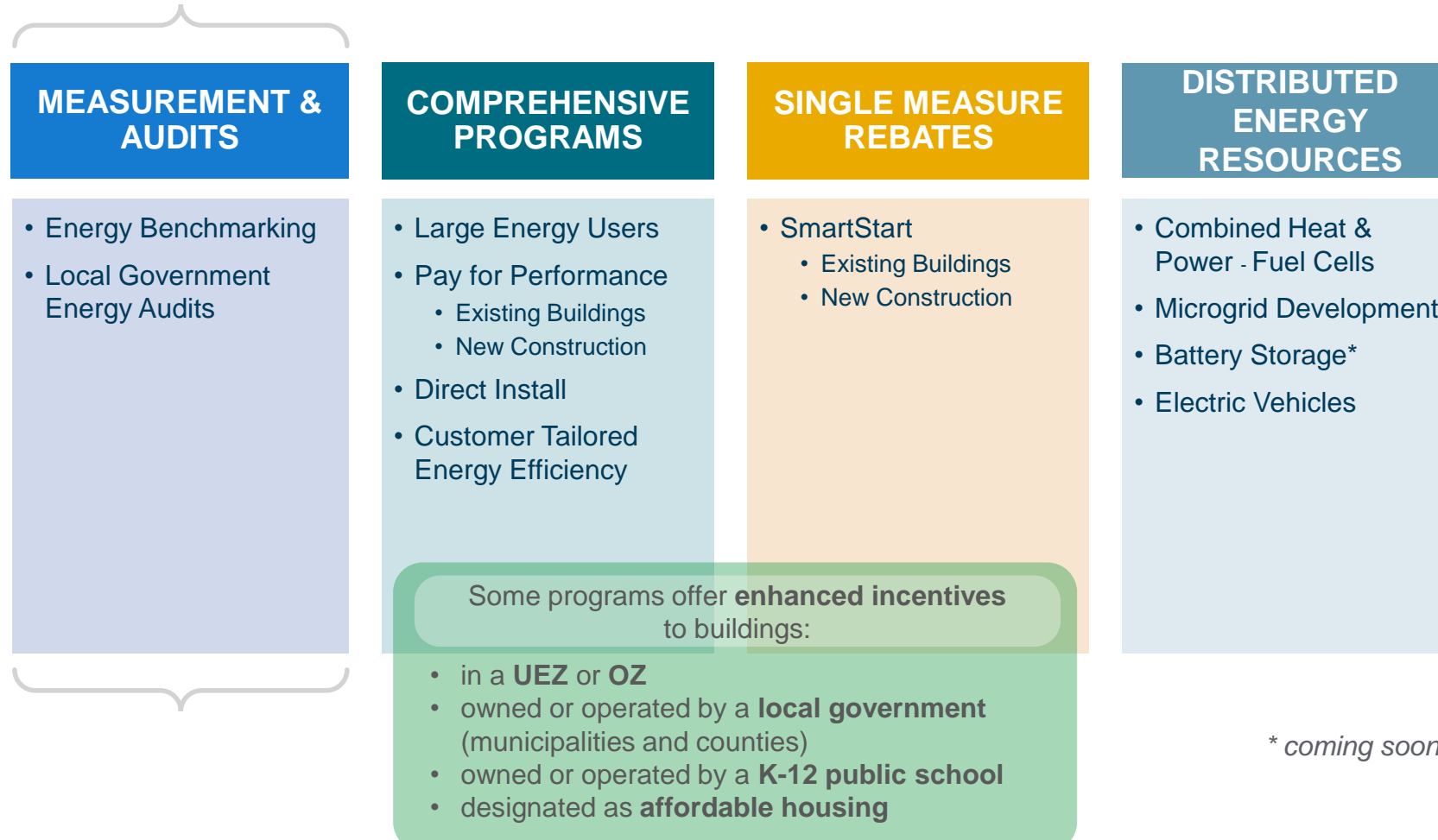
*\* coming soon!*

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# C&I Portfolio of Programs

**Eligible Sectors:** Commercial, Industrial, Government, Schools, Non-Profit, Institutional and Multifamily



*\* coming soon!*

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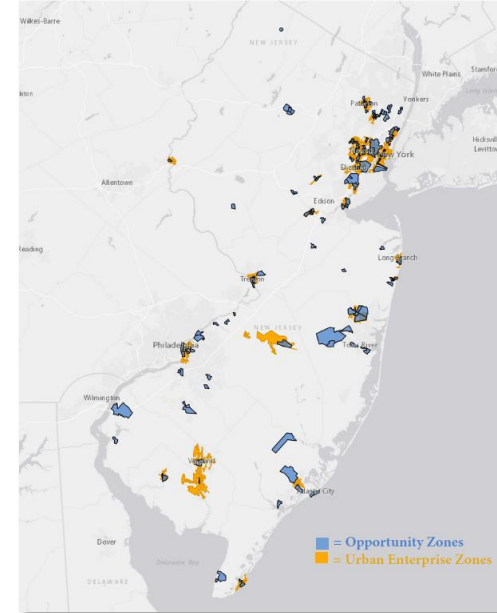
# Enhanced Incentives

Some programs offer **enhanced incentives** to buildings:

- in a **UEZ** or **OZ**
- owned or operated by a **local government** (municipalities and counties)
- owned or operated by a **K-12 public school**
- designated as **affordable housing**

The screenshot shows the website header with the BPU logo and navigation tabs: HOME, RESIDENTIAL, COMMERCIAL, INDUSTRIAL, LOCAL GOV & MULTIFAMILY, and RENEWABLE ENERGY. The main content area is titled 'About New Jersey's Clean Energy Program' and includes a section for 'Enhanced Rebates Announced' with a sub-section for 'Rebate Quicklinks' listing appliances like Refrigerator, Water Heater, Clothes Washer, and Dryer.

Eligibility Basis	Criteria
<p>➤ <b>Located in an Urban Enterprise Zone (UEZ)</b></p>	<p>The building where equipment is or will be installed must be located within the bounds of an Urban Enterprise Zone (UEZ). Please follow the steps below to confirm your facility is within the qualifying zone.</p> <p>The building location must be checked against the <a href="#">NJ Community Asset Map</a>.</p> <ol style="list-style-type: none"> <li>1. Enter the address of your building in the field at the top of the map.</li> <li>2. Under the Layers menu on the left side of the screen, scroll down to <b>Urban Enterprise Zones</b> and <i>check</i> to enable the layer.</li> <li>3. Print or save a screenshot of the page to include with your submission.</li> </ol> <p>For the avoidance of doubt, companies do not need to become a Certified UEZ Business to be eligible for enhanced incentives from NJCEP.</p>
<p>➤ <b>Located in an Opportunity Zone (OZ)</b></p>	<p>The building where equipment is or will be installed must be located within the bounds of an Opportunity Zone (OZ). Please follow the steps below to confirm your facility is within the qualifying zone.</p> <p>The building location must be checked against the <a href="#">NJ Community Asset Map</a>.</p>



[Click here for a link to NJ Community Asset Maps](#)

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# Local Government Energy Audit

NJCleanEnergy.com/LGEA

MEASUREMENT &  
AUDITS

**WHO** Local Government, New Jersey Colleges and Universities, and 501(c)(3) Non-Profit buildings with an average yearly demand >200kW\*

INCLUDES  
BENCHMARKING

**COST** Free

**WHY**

- Inventory of all energy-consuming equipment and line by line program eligibility, savings and costs
- Comprehensive utility bill analysis
- Facility benchmarking
- Feasibility for solar and combined heat & power

**INCENTIVE CAP**

- \$100,000 per entity (covers most small to large entities)
- \$300,000 per 501(c)(3) hospital
- \$300,000 per entity interested in ESIP

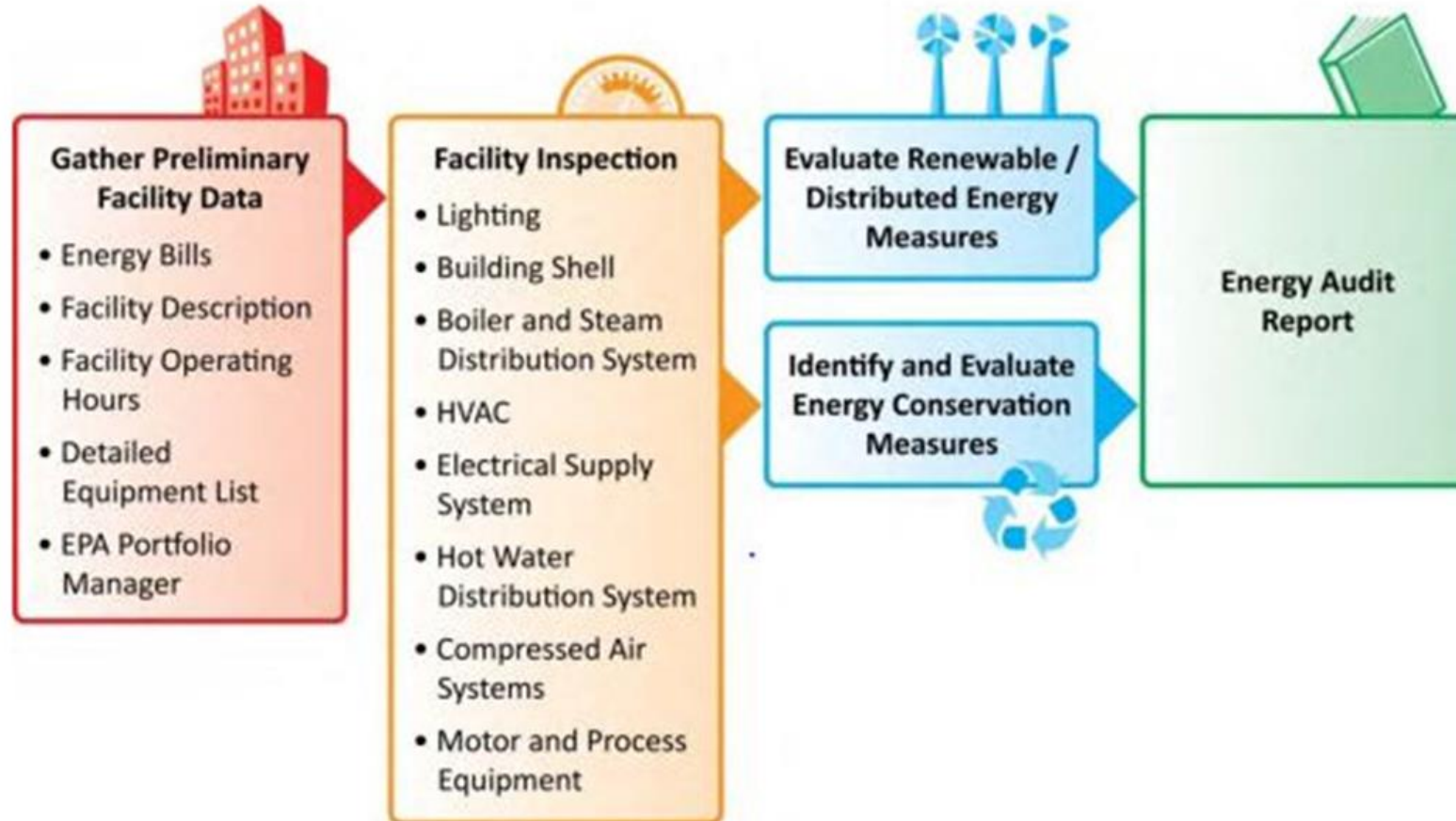
\* Inquire about the waivers available to buildings  $\leq$ 200kW average



# Local Government Energy Audit

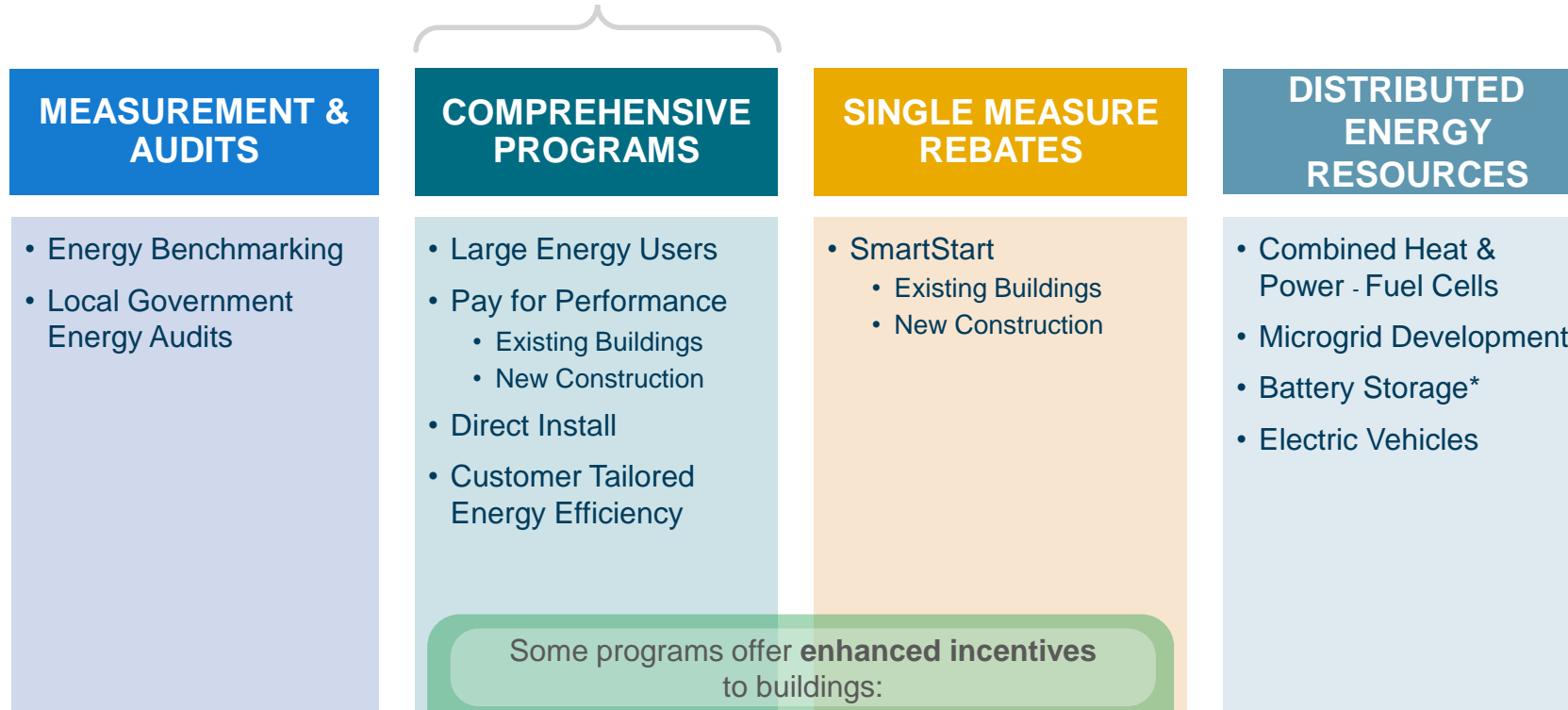
NJCleanEnergy.com/LGEA

MEASUREMENT &  
AUDITS



# C&I Portfolio of Programs

**Eligible Sectors:** Commercial, Industrial, Government, Schools, Non-Profit, Institutional and Multifamily



*\* coming soon!*

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# Pay for Performance

NJCleanEnergy.com/P4P

COMPREHENSIVE  
PROGRAMS

## WHO

Large C&I existing buildings or new construction seeking two or more energy efficiency measures with a minimum 15% savings

## SIZE TO QUALIFY

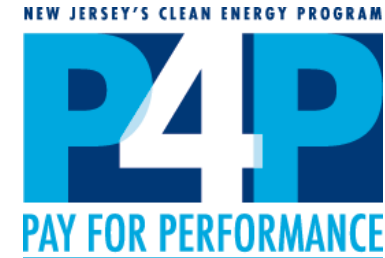
Annual peak demand 200+ kW in the previous year for existing buildings or over 50,000 square feet of planned new construction

## ABOUT

A pre-approved Participating Partner will streamline the program and guide users through the program phases

## INCENTIVE CAP

- 50% of project cost (or 80% for eligible enhanced incentive\* projects) up to \$2M per project / \$4M per entity annually
- Incentive payments #2 and #3 are increased for eligible enhanced incentive\* projects



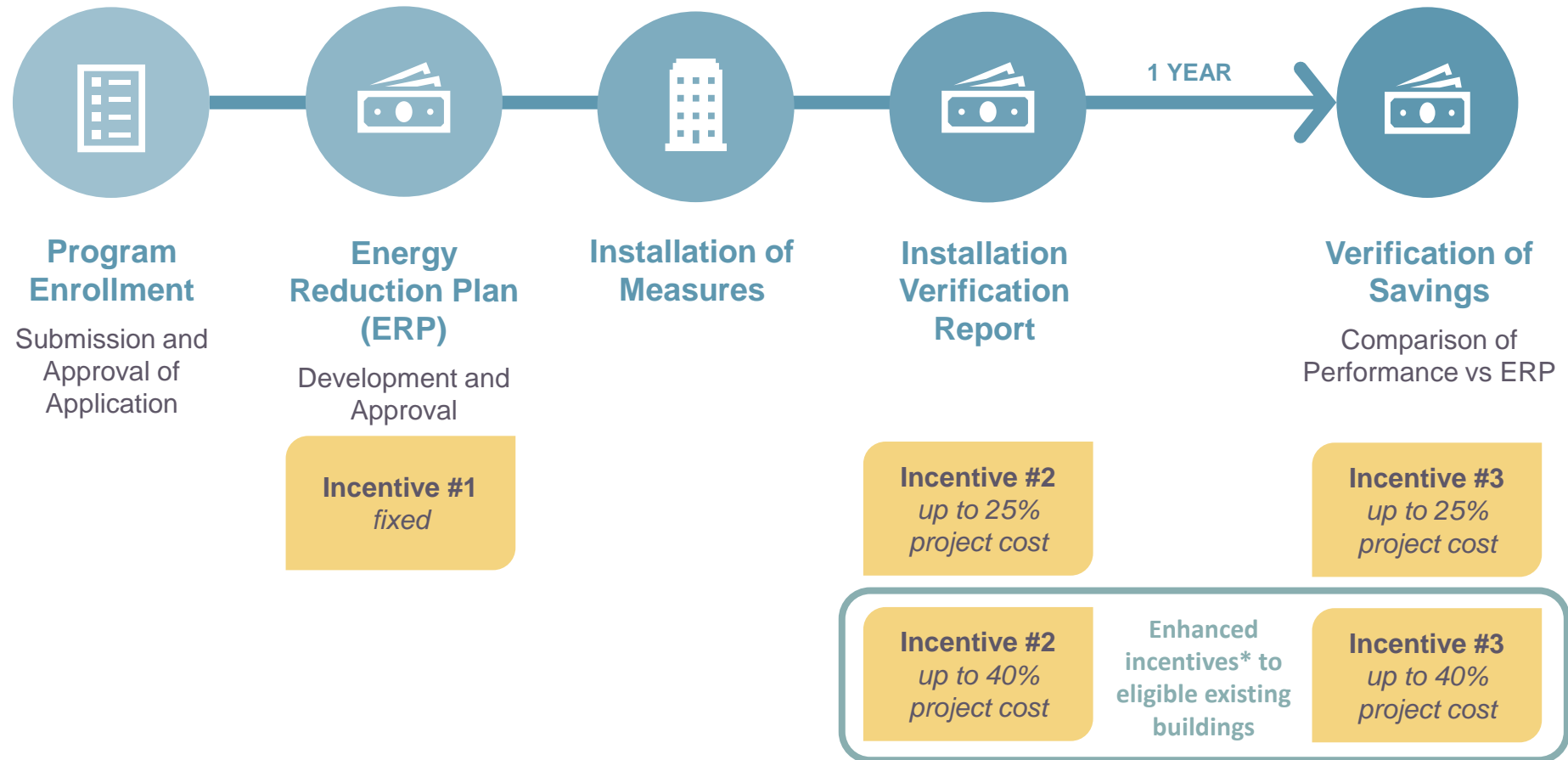
\* Enhanced incentives are available to existing buildings in a UEZ/OZ, K-12 public school, local governments (municipalities and counties), or designated as affordable housing



# Pay for Performance

NJCleanEnergy.com/P4P

COMPREHENSIVE PROGRAMS



\* Enhanced incentives are available to existing buildings in a UEZ/OZ, K-12 public school, local governments (municipalities and counties), or designated as affordable housing

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# Direct Install

[NJCleanEnergy.com/DI](http://NJCleanEnergy.com/DI)

COMPREHENSIVE  
PROGRAMS

## WHO

Small to medium sized C&I existing facilities seeking to replace inefficient equipment



## SIZE TO QUALIFY

Average annual peak demand <200 kW in the previous 12 months

## ABOUT

- A pre-approved regional Participating Contractor will do a walk-through evaluation and guide users through the program phases
- Turn-key process with fast project turnaround time

## INCENTIVE CAP

- \$125,000 incentive funding per project/building (\$250k for eligible enhanced incentive\* projects), or
- \$250,000 per entity (\$500K ESIP; \$4M for eligible enhanced incentive\* entities)

\* Enhanced incentives are available to existing buildings in a UEZ/OZ, K-12 public schools, local governments (municipalities and counties), or designated as affordable housing



# Direct Install

NJCleanEnergy.com/DI

COMPREHENSIVE  
PROGRAMS

Facilities in Urban Enterprise Zones (UEZ), Opportunity Zones (OZ), local government (municipalities and counties), K-12 public school, or designated as affordable housing:

**INCENTIVE FUNDING**

**CUSTOMER**

Up to **80%** of installed cost is paid directly to the contractor

20% of installed cost

All other eligible facilities:

**INCENTIVE FUNDING**

**CUSTOMER**

Up to **70%** of installed cost is paid directly to the contractor

30% of installed cost





# Direct Install

NJCleanEnergy.com/DI

## COMPREHENSIVE PROGRAMS

### Donnelly Energy

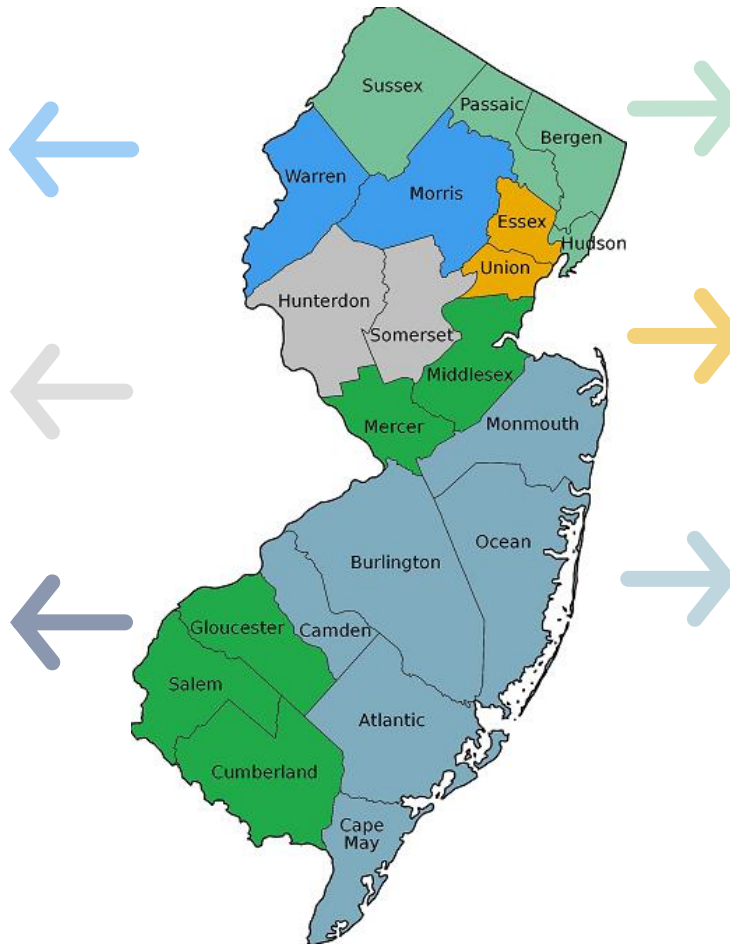
Justin Avallone  
845-401-6253  
javallone@donnellyenergy.com

### CMC Energy Services, Inc.

Ben Altomari  
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### Lime Energy

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### Willdan Energy Solutions

David Torres  
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### Hutchinson Mechanical Services

Pete Hatton  
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petehatton@hutchbiz.com





# CTEEP: Customer Tailored Energy Efficiency

COMPREHENSIVE PROGRAMS

[NJCleanEnergy.com/CTEEP](http://NJCleanEnergy.com/CTEEP)

## WHO

C&I customers seeking a streamlined/single application for participants submitting for multiple different technology types

## SIZE TO QUALIFY

N/A

## ABOUT

- On site assistance available
- One application form for multiple prescriptive or custom measures
- Utilizes SmartStart Incentives
- Additional \$10,000 technical incentive available to offset soft costs associated with developing and planning custom projects

## INCENTIVE CAP

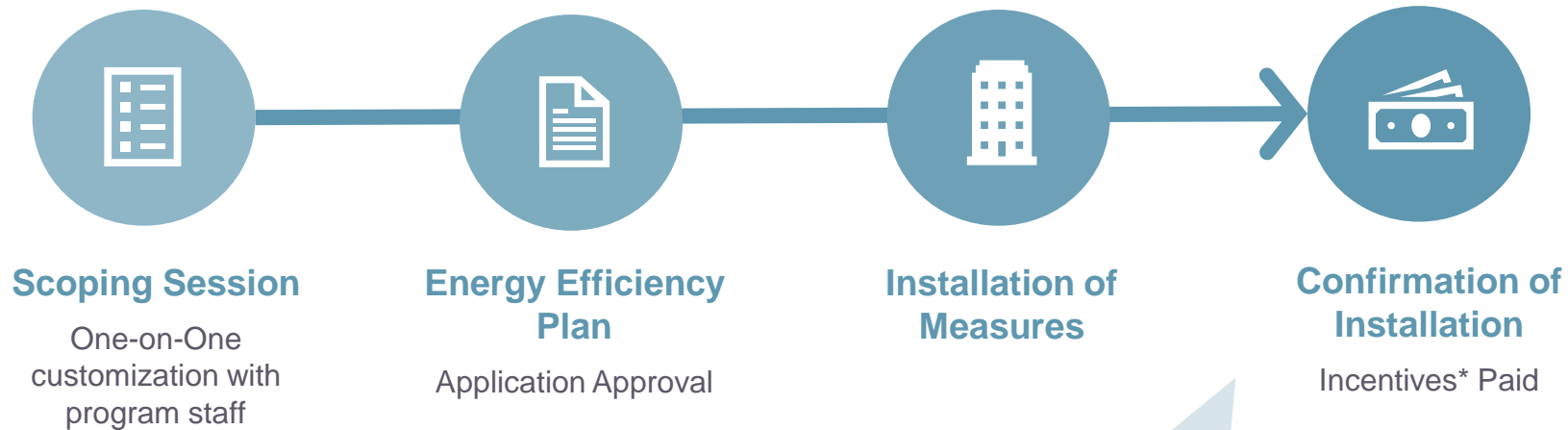
- Up to \$500,000 for each electric or gas account
- Same Prescriptive or Custom incentives as the SmartStart Buildings program



# CTEEP: Customer Tailored Energy Efficiency

COMPREHENSIVE PROGRAMS

[NJCleanEnergy.com/CTEEP](http://NJCleanEnergy.com/CTEEP)



Same incentive values as SmartStart

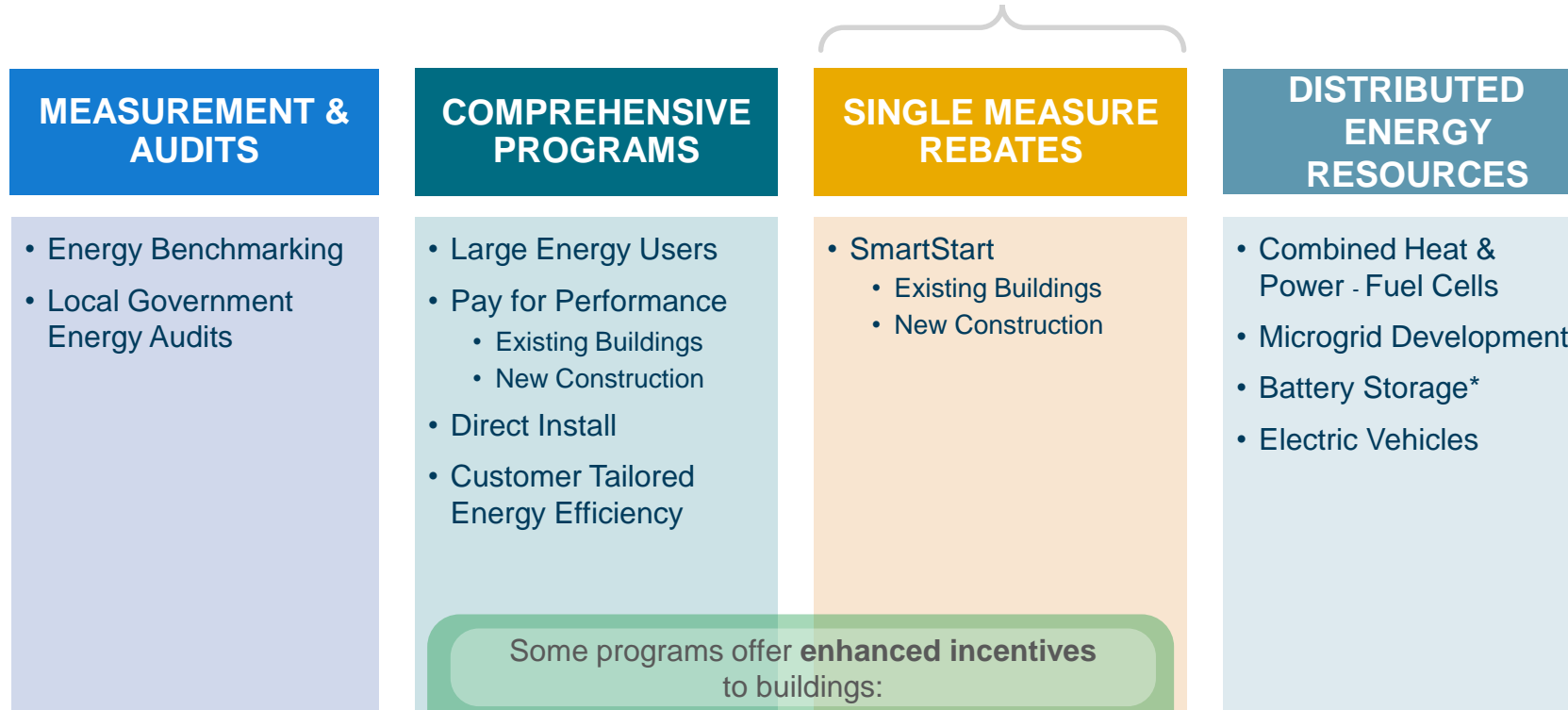
\* Enhanced incentives are available to existing buildings in a UEZ/OZ, K-12 public school, local government (municipalities and counties), or designated as affordable housing

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# C&I Portfolio of Programs

**Eligible Sectors:** Commercial, Industrial, Government, Schools, Non-Profit, Institutional and Multifamily



*\* coming soon!*

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# SmartStart

NJCleanEnergy.com/SSB

SINGLE MEASURE  
REBATES

## WHO

All C&I: commercial, industrial, agricultural, government, non-profit institutional, and multifamily customers



## SIZE TO QUALIFY

N/A

## ABOUT

- Individual high efficiency equipment rebates for new construction, renovation, remodeling, equipment replacement
- Prescriptive and custom designed measures

## INCENTIVE CAP

- Prescriptive: \$500,000 for each electric or gas account
- Custom, lesser of the following:
  - \$0.16/kWh and/or \$1.60/therm saved annually;
  - 50% of incremental installed cost; and
  - Buy-down to 1 year payback based on incremental cost and savings





## PRESCRIPTIVE INCENTIVES

- Electric Chillers
- Gas Cooling
- Electric Unitary HVAC
- Ground Source Heat Pumps
- Gas Heating
- Variable Frequency Drives
- Gas Water Heating
- Lighting/Lighting Controls
- Refrigeration Doors
- Refrigeration Controls
- Food Service Equipment
- Refrigerator/Freezer Motors

Existing buildings only:

**DOUBLE INCENTIVES**  
for OZ/UEZ, local  
government (munis &  
counties), K-12 public  
school, or designated  
as affordable housing



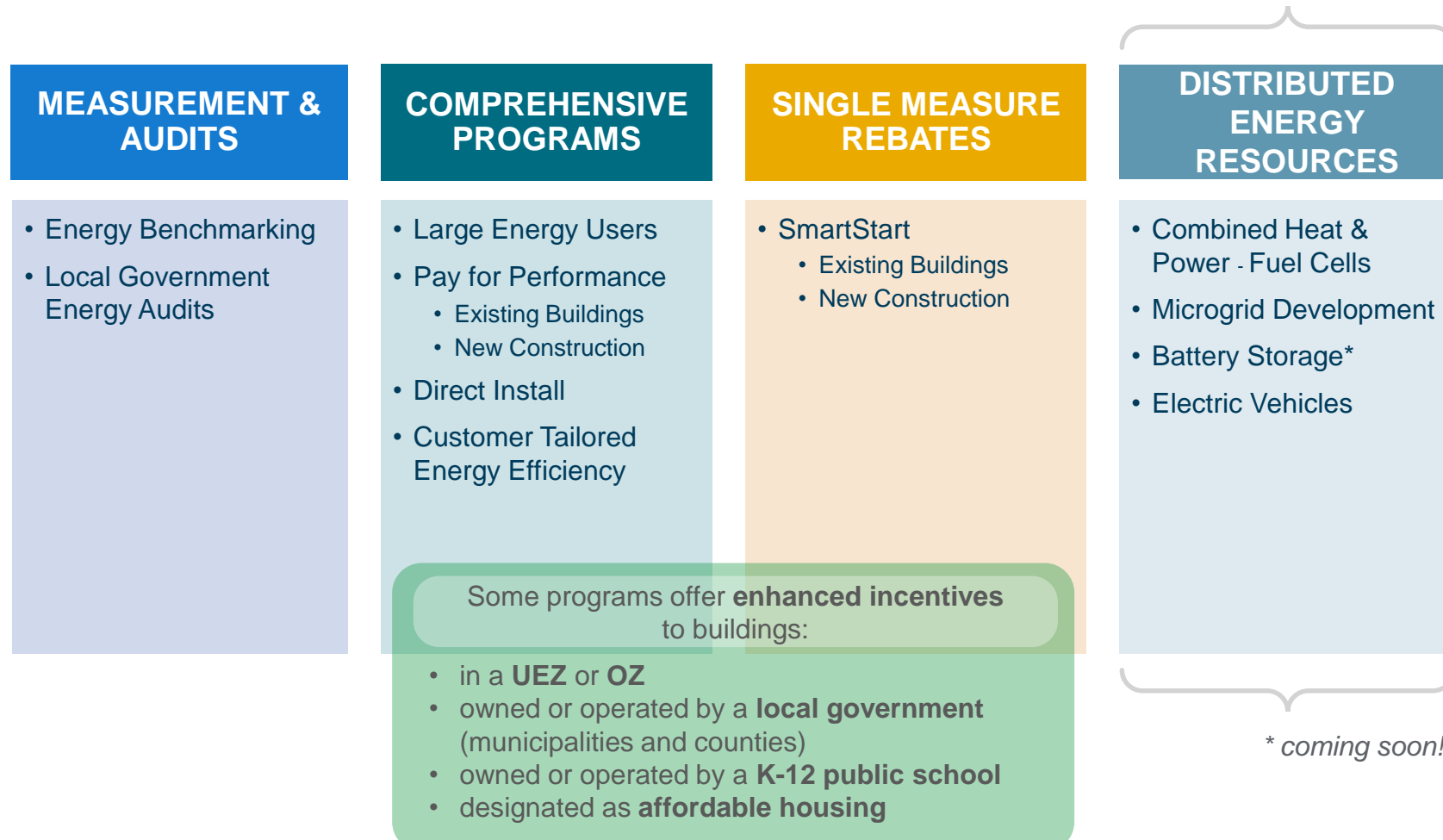
## CUSTOM INCENTIVES

- New or innovative technologies proven to be cost-effective and not listed as prescriptive
- Must meet code for retrofit projects or exceed code for new construction
- Project pre and post inspection required



# C&I Portfolio of Programs

**Eligible Sectors:** Commercial, Industrial, Government, Schools, Non-Profit, Institutional and Multifamily



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# Combined Heat & Power - Fuel Cells

DISTRIBUTED  
ENERGY

[NJCleanEnergy.com/CHP](http://NJCleanEnergy.com/CHP)

## WHO

C&I customers that require on-site electric generation that either does or does not utilize waste heat

## SIZE TO QUALIFY

N/A - Projects must pass a cost-effectiveness test and run 5,000 full load equivalent hours per year (3,500 for critical facilities)

## ABOUT

- Combined Heat & Power (CHP) units generates electricity and recycle waste heat to provide heating or cooling
- Resiliency with return on investment
- Technology-neutral incentives
- Fuel Cells (FC) with or without heat recovery (HR)

## INCENTIVE LEVELS

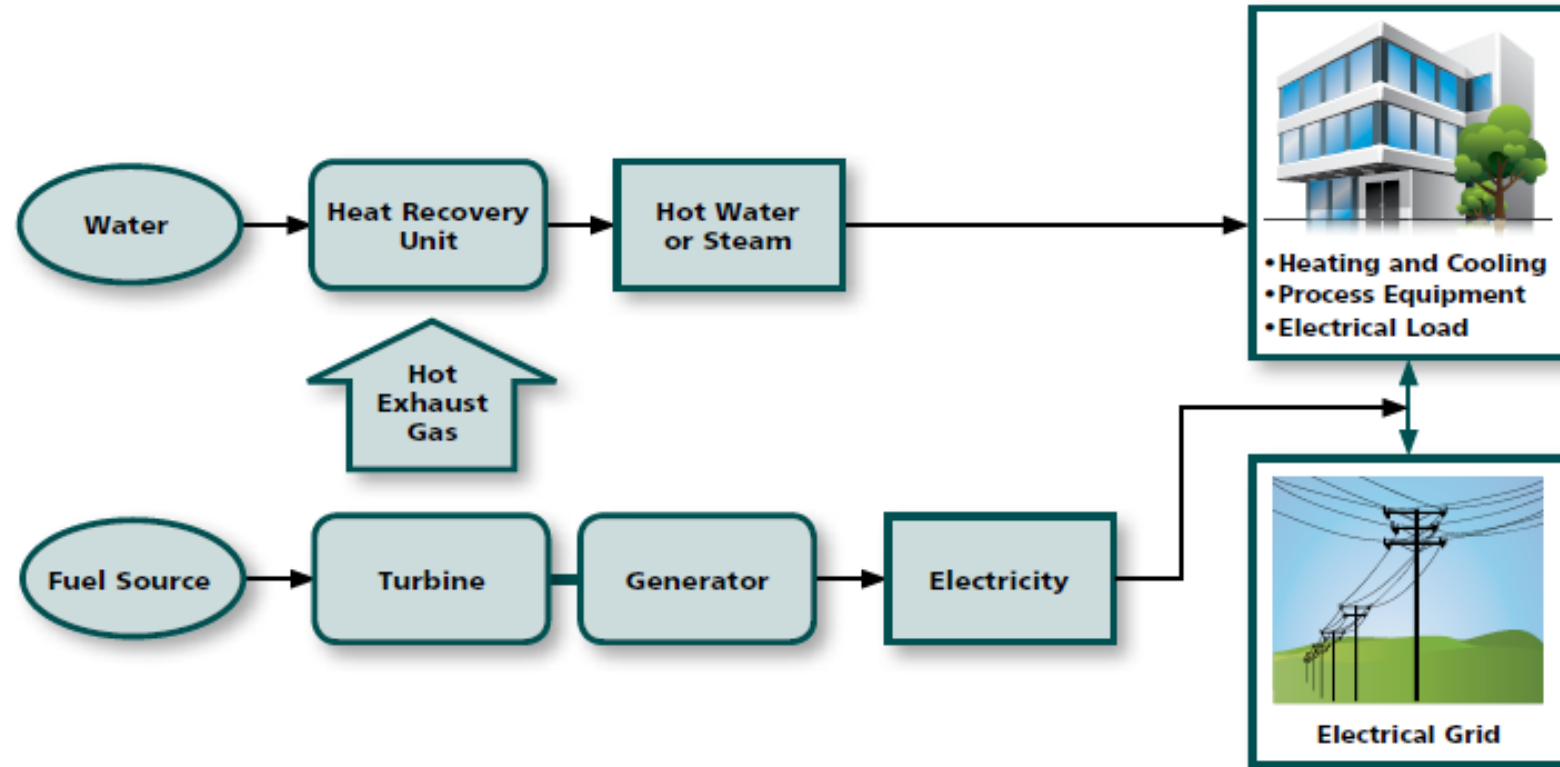
- CHPs and FC with HR have a project cap of \$2M - \$3M
- 25% bonus for critical facilities with black-start/islanding capabilities
- Up to 30% incentive bonus for CHP using biofuel
- FC without HR have a project cap of \$1M



# Combined Heat & Power

NJCleanEnergy.com/CHP

DISTRIBUTED  
ENERGY





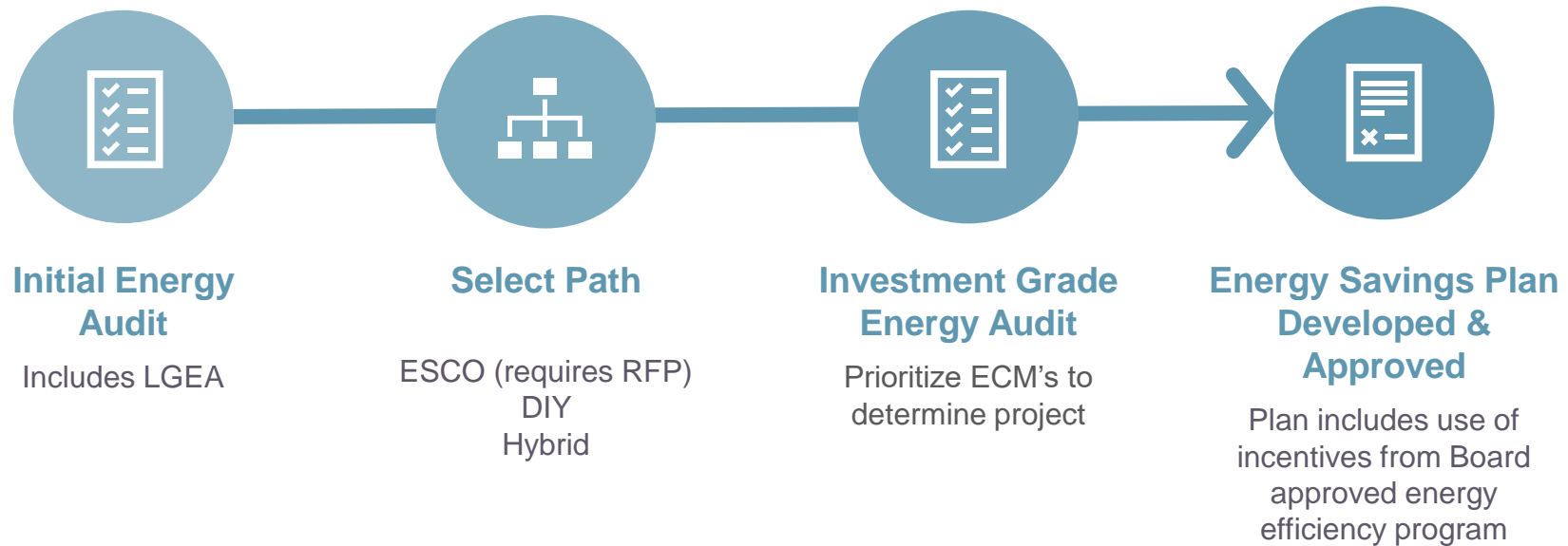
# Financing for Government Agencies

## ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

- Provides alternative financing for energy savings projects at public institutions
- Administered directly by the NJBPU
- Project is paid for with the value of its own energy savings
- 15 or 20-year repayment term
- Board approved incentives/rebates are layered within an ESIP
- No upfront capital expenses
- Doesn't require voter approval



# Financing Mechanism: ESIP



# Success Stories: Public Facilities



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# MONROE TOWNSHIP LIBRARY

- Program – Local Government Energy Audit.
- Audit report
  - identify potential energy efficiency opportunities
  - help prioritize specific measures for implementation
  - provide information about financial incentives that may be available.

## Suggested Measures

- Lighting Upgrades
- Lighting Control Measures
- Motor Upgrades
- VFD Measures
- Unitary HVAC
- Domestic Hot Water
- Food Service Refrigeration

**Total Audit Cost: \$0.00**



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# WESTFIELD BOE

- 12 Facilities Audited:

- Westfield High School
- Edison Intermediate School
- Roosevelt Intermediate School
- Franklin Elementary School
- Jefferson Elementary School
- Lincoln Elementary School
- McKinley Elementary School
- **Tamaques Elementary School**
- Washington Elementary School
- Wilson Elementary School
- Administration Building
- Kehler Stadium Field House

- Full ASHRAE level audit performed

- **Total Audit Cost: \$0.00**

## EXAMPLE: WESTFIELD BOARD OF EDUCATION

### Taking the Next Step

One school in that district, Tamaques Elementary School, has already taken advantage of the information gained from the audit and has utilized the **Direct Install Program** to make upgrades to their school and have 70% of the total project costs covered.

### Project Measures

Qualified LED lighting throughout the facility
(1) new split system HVAC unit (7.5T unit)
Programmable thermostat controls
Water conservation measures.

### Costs and Savings

Total Project Costs:	\$56,771.22
Direct Install's 70% Incentive	\$39,739.85
Westfield BOE Contribution:	\$17,031.37
Estimated Annual Energy Savings:	\$9,267.01

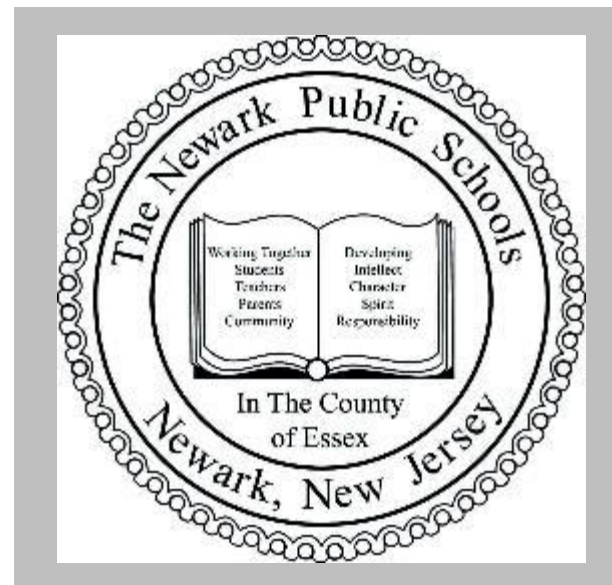
*This case study was from a previous fiscal year and may not represent current incentive levels or costs.*

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# NEWARK PUBLIC SCHOOLS

- Various Building Types
- **LGEA**  
**Pay for Performance**  
**SmartStart Buildings**
- Completed LGEA process for:
  - 41 buildings - 2013 and 2014
  - 18 buildings - 2018 and 2019



Projects developed

- **Approx Incentives: \$500,000**
- **Annual Savings: 1,600 MWh**  
**17,000 MMBTU's**





# HOWELL TOWNSHIP BOE

- 5 Facilities - ESIP funding
  - Interior and Exterior LED Lighting upgrades
  - HVAC Systems
  - Programmable Thermostats

- **Total Project Cost: \$551,108**
- **Incentive: \$366,803**
- **Annual Savings: \$ 96,7661**

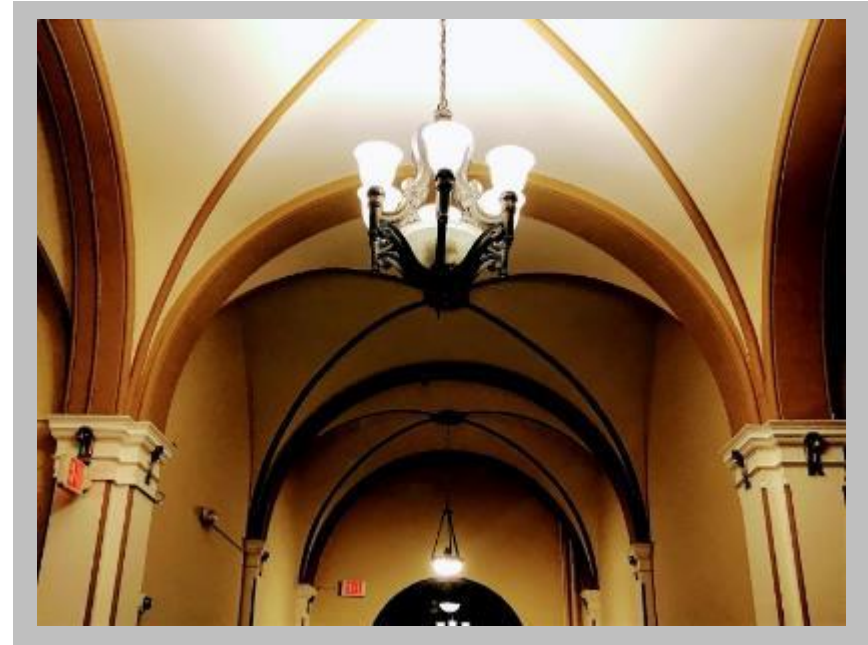


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# HOBOKEN CITY HALL

- Municipal Building
  - LED Lighting upgrades
  - HVAC Systems
  - Programable Thermostats
  - Low flow Aerators
- **Total Project Cost: \$54,552**
- **Incentive: \$38,187**
- **Annual Savings: \$17,288**
- **Payback Period: < 1 year**



*This case study was from a previous fiscal year and may not represent current incentive levels or costs.*





# HOBOKEN FIRE ENGINE COMPANY 3

- Fire Station
- LED Lighting upgrades
- HVAC Systems
- Programmable Thermostats
- **Total Project Cost: \$32,073**
- **Incentive: \$22,892**
- **Annual Savings: \$ 6,139**
- **Payback Period: 1.5 years**



Image supplied by Hoboken Reporter



# OCEAN COUNTY COLLEGE

- Education
- Lighting upgrades
  - Exterior LED Wall Packs
- **Total Project Cost: \$7,710**
- **Incentive: \$6,000**
- **Annual Savings: \$6,844**
- **Project Payback: 3 months**



*This case study was from a previous fiscal year and may not represent current incentive levels or costs.*



# More Information

## VISIT

[NJCleanEnergy.com](http://NJCleanEnergy.com)

## CONTACT

(866) 657-6278

[Outreach@NJCleanEnergy.com](mailto:Outreach@NJCleanEnergy.com)

## NEWSLETTER

[NJCleanEnergy.com/NEWSLETTER](http://NJCleanEnergy.com/NEWSLETTER)

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THANK YOU

