



# *Energy Efficiency Programs for Commercial and Industrial Buildings*



New Jersey's  
Clean Energy Program™

Lighting the way to New Jersey's Clean Energy Future

# 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



# NJCEP Portfolio of Programs

## RENEWABLE ENERGY

- Offshore Wind
- TREC - Solar Registration
- Community Solar



## SPECIALIZED ENERGY EFFICIENCY

- Community Energy Grants
- State Facility Initiatives
- R&D Energy Tech Hub \*
- Workforce Development\*



## COMMERCIAL & INDUSTRIAL

- Energy Audits
- Energy Efficiency Incentives
- Trade Allies



## DISTRIBUTED ENERGY RESOURCES

- Combined Heat & Power – Fuel Cells
- Microgrid Development
- Battery Storage\*
- Electric Vehicles



## RESIDENTIAL

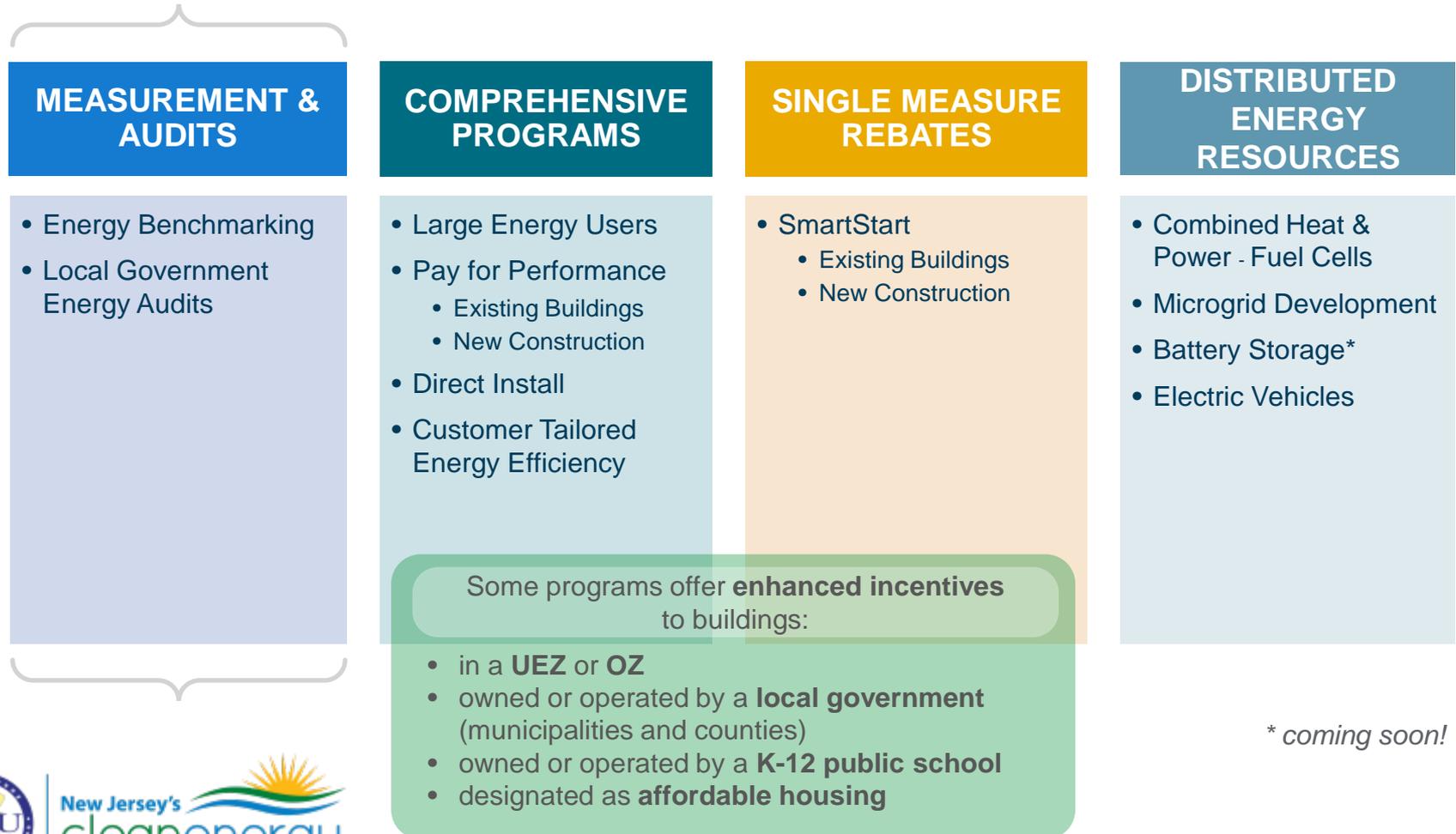
- New Construction Homes
- Existing Homes
- Energy Efficient Products
- Trade Allies



*\* coming soon!*

# C&I Portfolio of Programs

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



# 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**

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**BPU** New Jersey's **cleanenergy** program™

HOME RESIDENTIAL COMMERCIAL, INDUSTRIAL, LOCAL GOV & MULTIFAMILY RENEWABLE ENERGY

**NEW JERSEY'S CLEAN ENERGY PROGRAM**

ABOUT NJCEP

BOARD OF PUBLIC UTILITIES

REBATES AND PROMOTIONS

NJCEP POLICY UPDATES & REQUEST FOR COMMENTS

**About New Jersey's Clean Energy Program**

New Jersey's Clean Energy Program is a statewide program that offers financial incentives, programs and services for New Jersey residents, business owners and local governments to help them save energy, money and the environment.

● **Rebate QuickLinks**

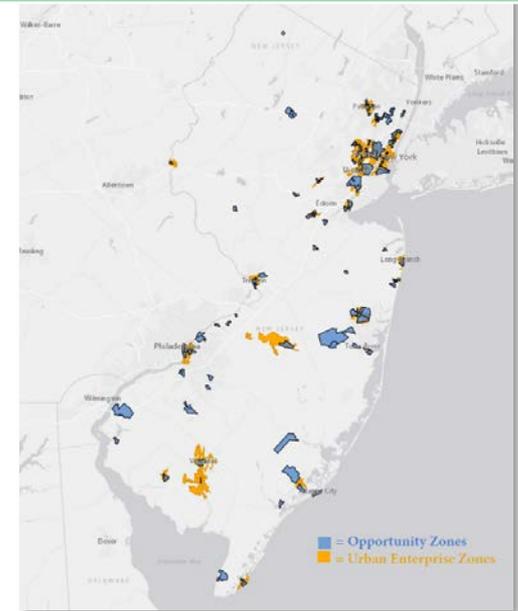
● Appliances: Refrigerator / Water Heater / Clothes Washer / Dryer / More

● **Enhanced Rebates Announced in New Jersey**

● Solar Transition Stakeholder Workshops

● Community Solar Energy Pilot Program

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](#)

# Benchmarking

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

MEASUREMENT &  
AUDITS

**WHO** Commercial, Industrial, Agricultural, Government, 501(c)(3) Non-Profit, and Institutional Entities

**COST** Free

**WHY**

- Compare your building to other similar buildings nationally
- Suggestions for improving operations and maintenance
- Personalized incentive program eligibility and account manager follow-up support
- ENERGY STAR® Portfolio Manager account setup and score

**Great opportunity to be a leader in benchmarking energy and water use, prior to the 2024 deadline.**



# Benchmarking

NJCleanEnergy.com/BENCHMARKING

## MEASUREMENT & AUDITS

### Energy Consumption & Cost

Analysis Period: July 2018 – June 2019

Energy Benchmark	Example Building	Average Building
EPA Portfolio Manager Score	48	50
Site Energy Intensity <sup>1</sup> (kBtu/sf)	85.9	82.2
Source Energy Intensity <sup>2</sup> (kBtu/sf)	88.3	90.8
Energy Cost	\$13,841	\$13,082
Total GHG Emissions (Metric Tons CO <sub>2</sub> e)	43	40

#### U.S. EPA Portfolio Manager Account:

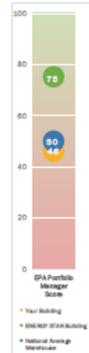
Your building was benchmarked using the U.S. Environmental Protection Agency's (EPA's) Portfolio Manager tool. The impact of factors outside of your control, such as location, occupancy and operating hours, are removed. Some building types will be provided with a 1-100 ranking of a building's energy performance relative to the national building market.

46

Your building received an EPA benchmark score of 46. Using the U.S. EPA's building type guidelines, the score is slightly below average when compared to other warehouse/distribution buildings in the United States.

Understanding and tracking energy consumption is one of the first steps in an energy reduction plan. Portfolio Manager is an energy management tool that allows you to track and assess energy and water consumption across your entire portfolio of buildings in a secure online environment. We encourage you to use Portfolio Manager to track your energy and water consumption month to month. An account has been set up for Example NJ Commercial Building. The login information is as follows:

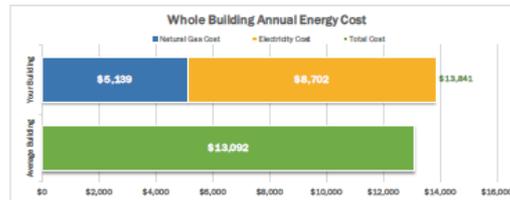
Website: <http://www.eportmanager.gov/enr/energy/>  
 User Name: ExampleCommercialBuilding  
 Password: SavingEnergy2019



<sup>1</sup> Site Energy Intensity is a measure of a building's annual energy utilization per square foot. Site energy intensity score is a good measure of a building's energy use, and is utilized regularly for comparison of energy performance for similar building types.

<sup>2</sup> Source Energy Intensity is a measure of the building's energy usage in addition to the transmission, delivery and production losses.

### Energy Consumption & Cost



#### Energy Cost:

The annual energy cost for Example NJ Commercial Building is \$13,841 (\$5,139 natural gas + \$8,702 electricity). Example NJ Commercial Building spends \$1.38 per square foot to power the building. The estimated average annual energy cost for a building of similar square feet, type, and usage is \$13,082. Therefore, your building's energy costs are slightly higher than average when compared to other warehouse/distribution buildings nationwide.

Electricity costs make up 63% of your building's total annual energy cost. Natural gas costs make up 37% of your building's total annual energy cost.

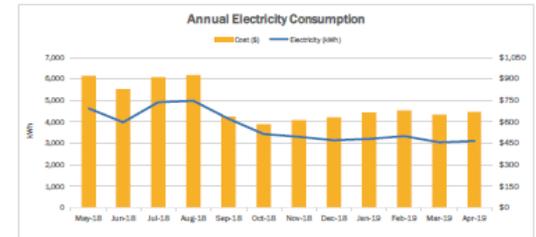
#### Carbon Emissions:

The energy consumption for Example NJ Commercial Building is equivalent to carbon emissions of 43 metric tons of CO<sub>2</sub>, compared to the national average of 40 metric tons of CO<sub>2</sub> for a similar building type. Your building's GHG emissions are slightly higher than average.

If you improved your building's energy usage to meet ENERGY STAR level the energy savings would be equivalent reducing carbon emissions by six metric tons of CO<sub>2</sub>. This reduction would be equivalent to:



### Energy Consumption & Cost



#### Electricity Usage:

The annual electricity consumption for Example NJ Commercial Building is 4.5 kWh per square foot. This amount of electricity is reasonable compared to similar building types in New Jersey.

#### Electricity Cost:

The property's electricity rate is slightly higher than the state average of \$0.17/kWh. It may be beneficial to contact your electric provider or a third-party provider to discuss rate options.

	Electricity Use Description	Example Building	Area of Concern Scale
USAGE	Annual Usage (kWh)	45,114	Low
	Annual Usage per Sq. Ft. (kWh/sf)	4.5	
COST	Annual Cost (\$)	\$8,702	Medium
	Annual Cost per Sq. Ft. (\$/sf)	\$0.87	
	Average Annual Cost (\$/kWh)	\$0.19	

#### Summary & Recommendations:

The amount of electricity shown above is slightly lower than average. However, the cost of that electricity is higher than average. As mentioned, it may be beneficial to contact your electric provider to discuss rate options. If not already in use, ENERGY STAR® products, LED and other lighting technologies could reduce the power demand needed and lower monthly electricity bills.

# 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**

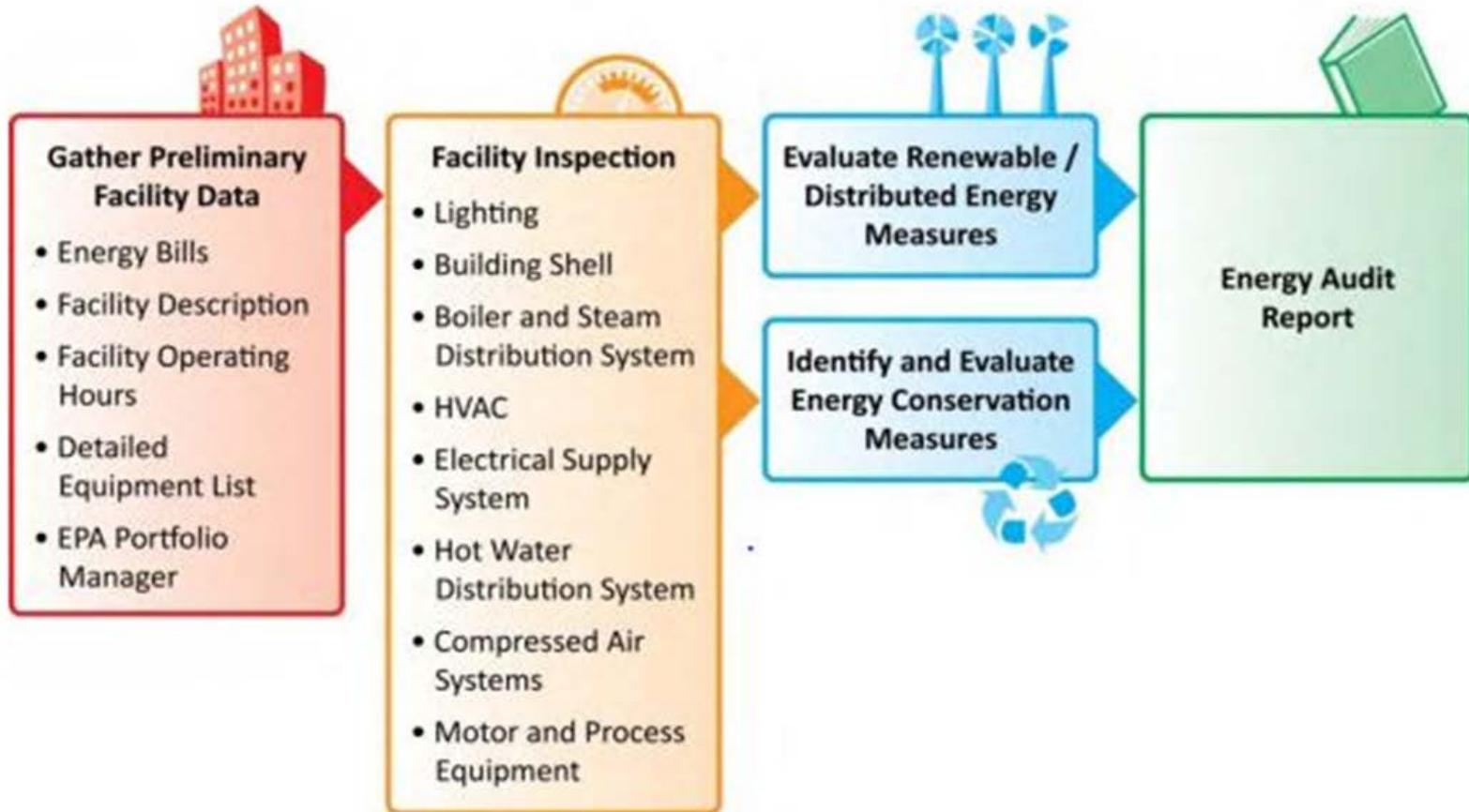
- \$100,000 per entity (covers most small to large entities)
- \$300,000 per 501(c)(3) hospital
- \$300,000 per entity interested in ESIP

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

# Local Government Energy Audit

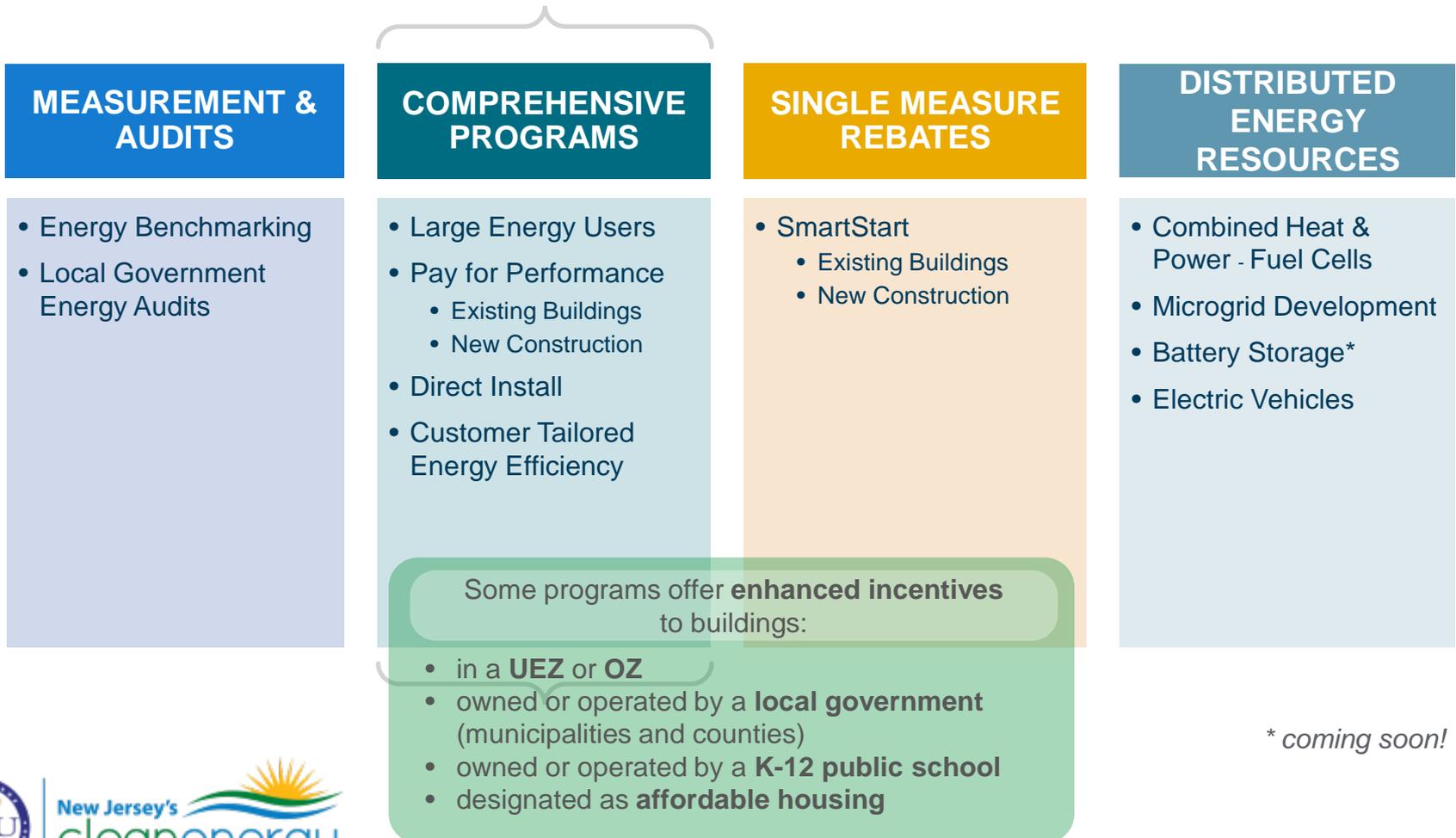
MEASUREMENT &  
AUDITS

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



# C&I Portfolio of Programs

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



# Large Energy Users

NJCleanEnergy.com/LEUP

COMPREHENSIVE  
PROGRAMS

- WHO** Large C&I entities who have paid a minimum of \$5,000,000 in the previous 12 months of utility bills
- SIZE TO QUALIFY** The average peak demand of all facilities submitted  $\geq 400\text{kW}$  and/or 4,000 DTh
- ABOUT**
- Encourages large C&I utility customers to self-invest in energy efficiency, combined heat & power, and fuel cell projects
  - Must have ability to “bank” funds for up to two fiscal years
- INCENTIVE CAP** Maximum incentive per entity is the lesser of:
- \$4 million,
  - 75% of total project cost, or
  - 90% of NJCEP contribution or annual energy saving caps (\$0.33/kWh and \$3.75/therm)

# Large Energy Users

NJCleanEnergy.com/LEUP

COMPREHENSIVE  
PROGRAMS



# 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

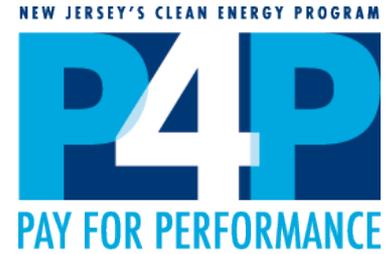
Annual peak demand 200+ kW in the previous year for existing buildings or over 50,000 square feet of planned new construction

## 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

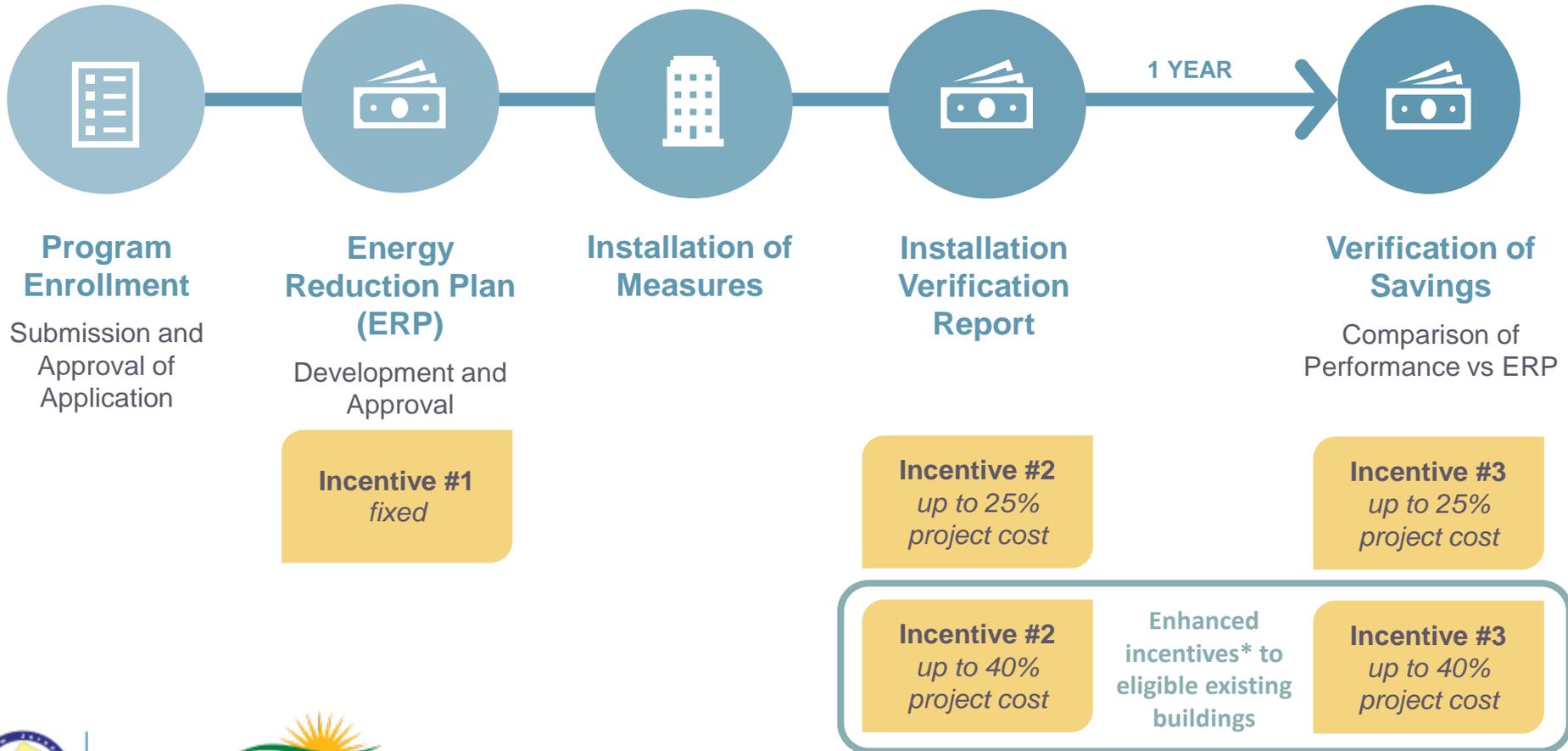


\* Enhanced incentives are available to existing buildings in a UEZ/OZ, K-12 public school, local governments (municipalities and counties), or designated as affordable housing

# 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

# Direct Install

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

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

## CUSTOMER

20% of installed cost

All other eligible facilities:

## INCENTIVE FUNDING

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

## CUSTOMER

30% of installed cost

# Direct Install

NJCleanEnergy.com/DI

**COMPREHENSIVE  
PROGRAMS**

## Donnelly Energy

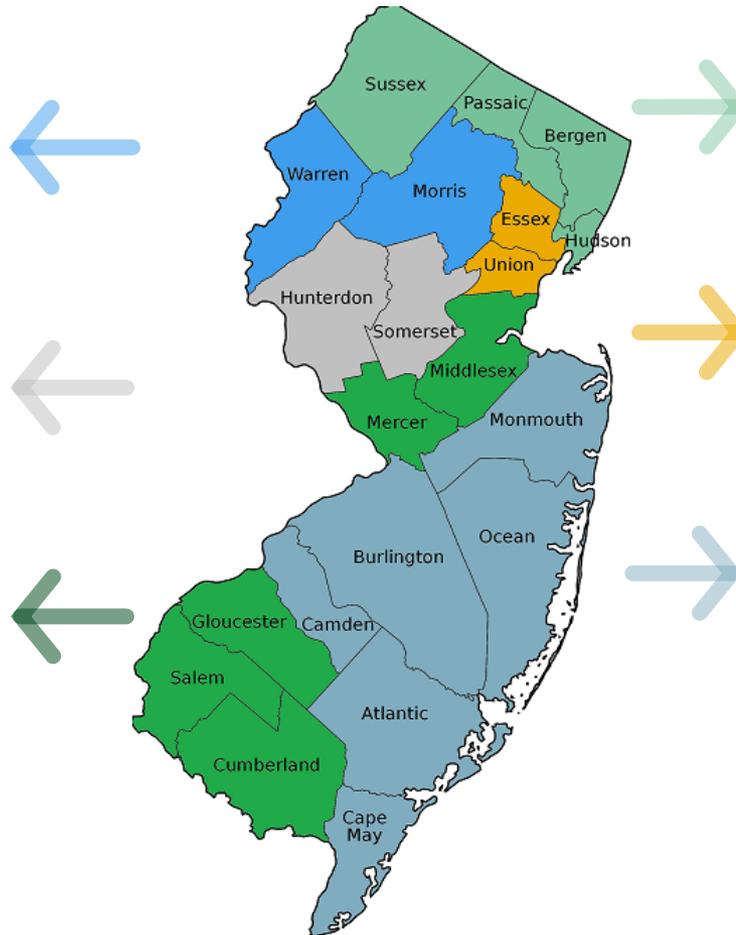
Justin Avallone  
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## Willdan Energy Solutions

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## Hutchinson Mechanical Services

Pete Hatton  
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petehatton@hutchbiz.com

# Direct Install: Be a Contractor

NJCleanEnergy.com/DI

COMPREHENSIVE  
PROGRAMS

- If an applicant wishes to utilize their own pre-existing contractor\*, rather than the pre-selected regional contractor for their county, the C&I Program Manager will work with the applicant's contractor to confirm that the contractor:
  - Meets all of the program's bid requirements
  - Agrees to the program's set pricing
  - Participates in program training provided by the Program Manager
  - Signs the Direct Install Program Sub-Contractor Agreement
- A contractor participating in the program through this path will be allowed to submit a project or projects up to a \$125,000 maximum in contractor allocation per fiscal year
- More information can be found at <https://www.njcleanenergy.com/misc/commercial-industrial/direct-install-process-contractor-participation>

*\* Pre-existing relationship is defined as having performed an energy efficiency upgrade in one or more of the applicant's facilities within the past 24-month period.*

# 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

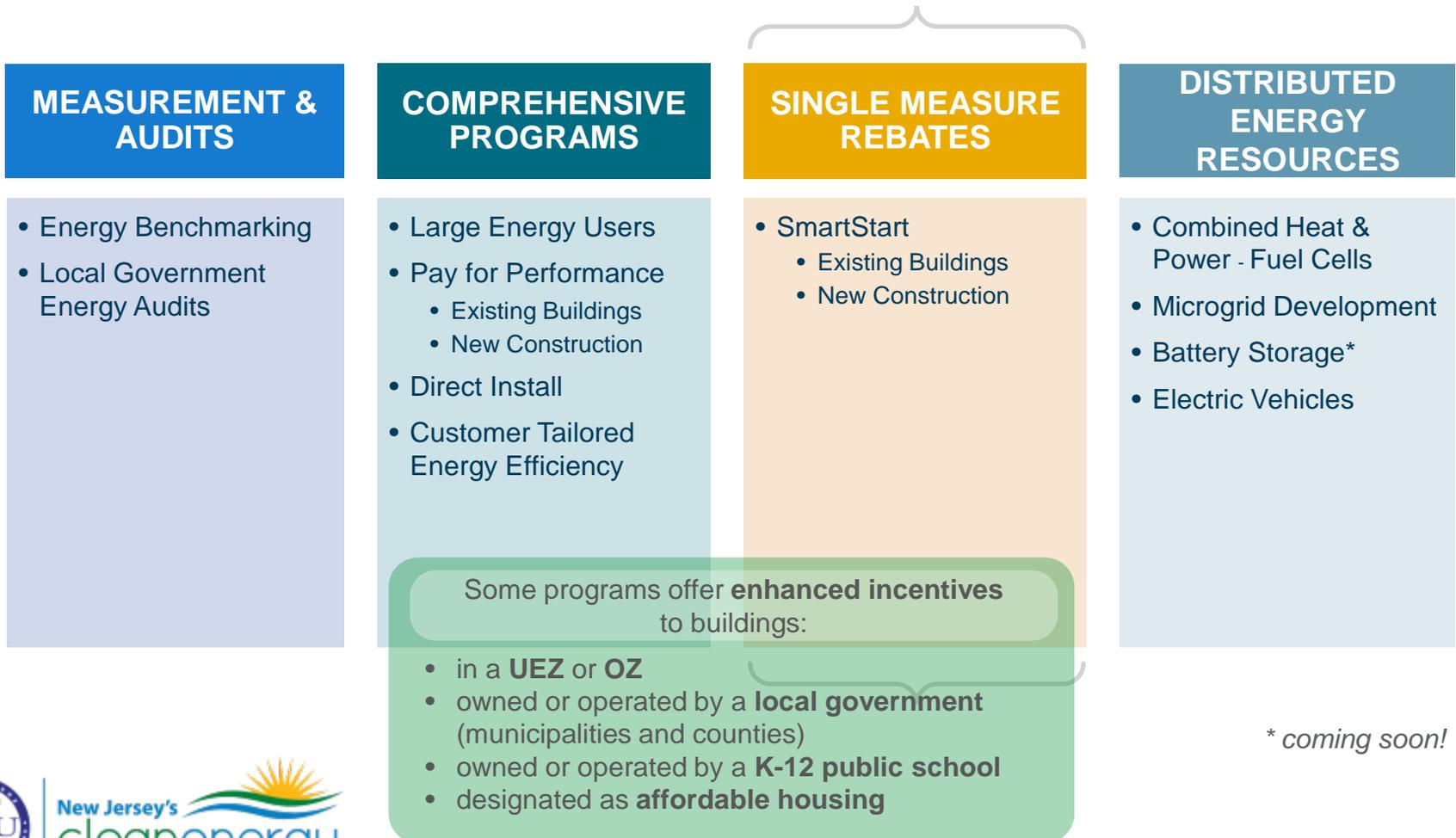
[NJCleanEnergy.com/CTEEP](http://NJCleanEnergy.com/CTEEP)



Same incentive values as SmartStart

# C&I Portfolio of Programs

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



# 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:

### ENHANCED INCENTIVES

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



## CUSTOM INCENTIVES

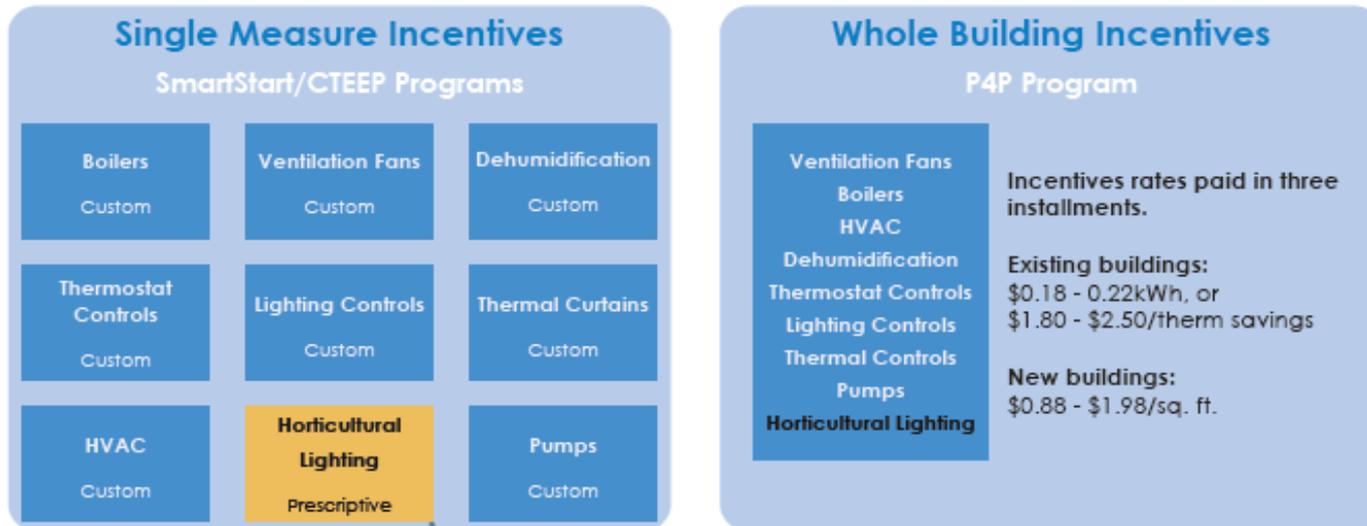
- New or innovative technologies proven to be cost-effective and not listed as prescriptive
- Must meet code for retrofit projects or exceed code for new construction
- Project pre and post inspection required

# New: Indoor Horticulture

NJCleanEnergy.com/SSB and NJCleanEnergy.com/CTEEP



**SmartStart/CTEEP Prescriptive incentives** are now available to indoor horticultural lighting retrofits or new construction. In addition, and **SmartStart/CTEEP Custom incentives** continue to include new or innovative technologies proven to be cost-effective and not listed as prescriptive. The whole building **Pay for Performance** Program is also available:



Apply using a single application through the Customer Tailored EE Program (CTEEP)

**Custom Incentives:**  
 Lesser of \$0.16/kWh, \$1.60/therm savings, 50% project cost, buy-down to 1.0 year payback

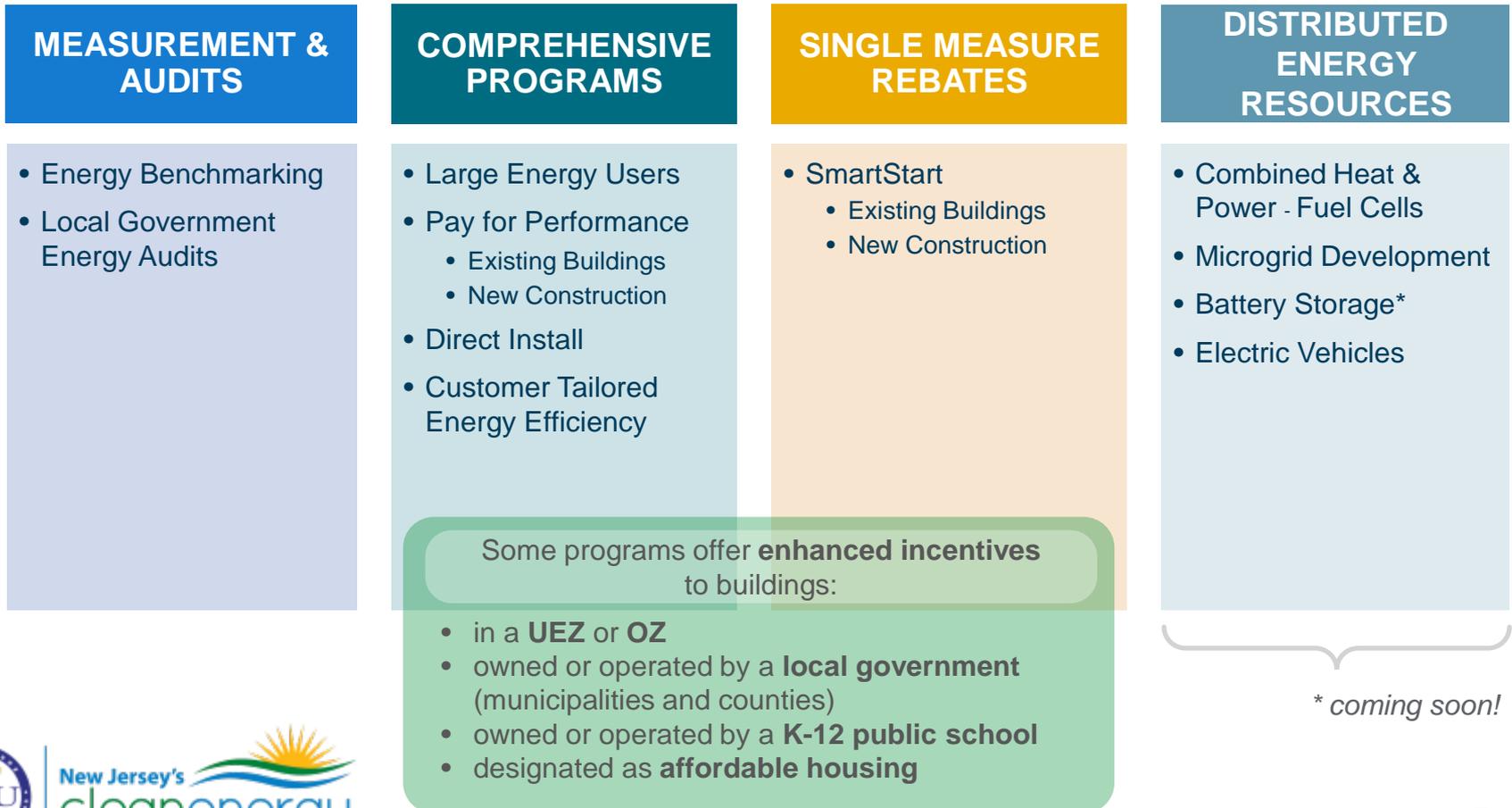
## Prescriptive Horticultural Lighting Rebates

Facility Type and Runtime Hours:	LED Fixture <500 Watts	LED Fixture >=500 Watts
DLC-listed LED for use in indoor grow facilities (>3,000 hours/year)	\$150/fixture	\$250/fixture
DLC-listed LED for use as supplemental lighting in indoor grow facilities that primarily use natural sunlight (<3,000 hours/year)	\$50/fixture	\$200/fixture

Existing building projects, not including lighting, which are located in Urban Enterprise Zones or Opportunity Zones may be eligible for an enhanced incentive.

# C&I Portfolio of Programs

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



# 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)

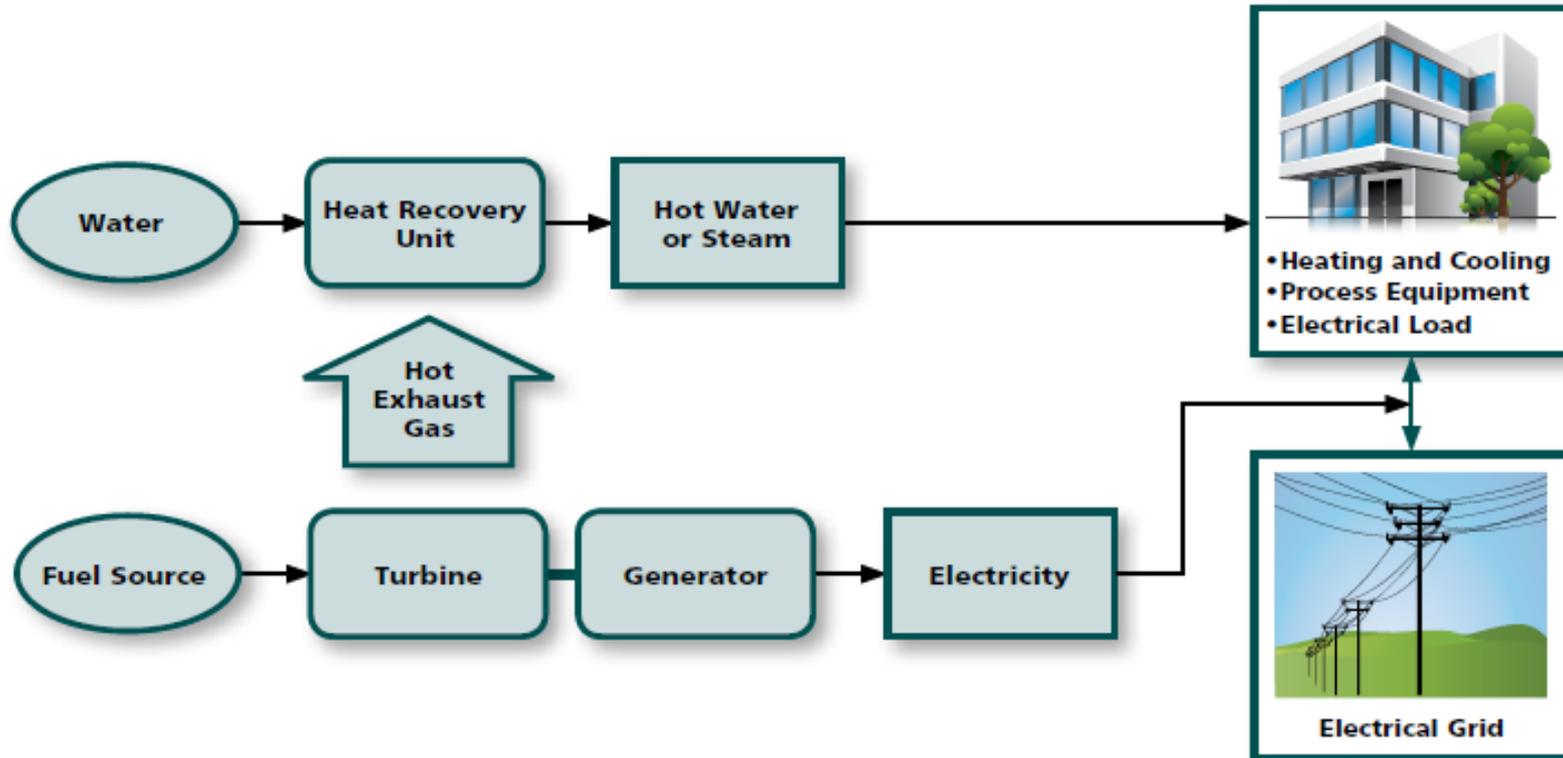
## INCENTIVE LEVELS

- 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



# Combined Heat & Power - Fuel Cells

DISTRIBUTED  
ENERGY

NJCleanEnergy.com/CHP

Eligible Technology	Size (Installed Rated Capacity)	Incentive (\$/Watt) <sup>(5)</sup>	% of Total Cost Cap per project	\$ Cap per project	
CHP powered by non-renewable or renewable fuel source, or a combination <sup>(4)</sup> : <ul style="list-style-type: none"> <li>• Gas Internal Combustion Engine</li> <li>• Gas Combustion Turbine</li> <li>• Microturbine</li> </ul>	≤500 kW <sup>(1)</sup>	\$2.00	30-40% <sup>(2)</sup>	\$2 million	
	>500 kW – 1 MW <sup>(1)</sup>	\$1.00			
	Fuel Cell with Heat Recovery (FCHR)	>1 MW – 3 MW <sup>(1)</sup>	\$0.55	30%	\$3 million
		>3 MW <sup>(1)</sup>	\$0.35		
Fuel Cell without Heat Recovery (FCwoHR)	Same as above <sup>(1)</sup>	Applicable amount above	30%	\$1 million	
Waste Heat to Power (WHP) <sup>(3)</sup> Powered by non-renewable fuel source. Heat recovery or other mechanical recovery from existing equipment utilizing new electric generation equipment (e.g. steam turbine)	≤1 MW <sup>(1)</sup>	\$1.00	30%	\$2 million	
	>1 MW <sup>(1)</sup>	\$0.50	30%	\$3 million	

+critical facility/blackstart bonus of 25%

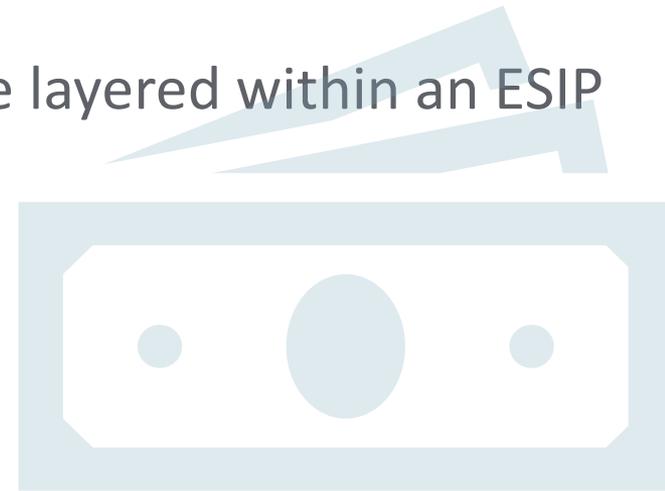
# FINANCING FOR GOVERNMENT AGENCIES



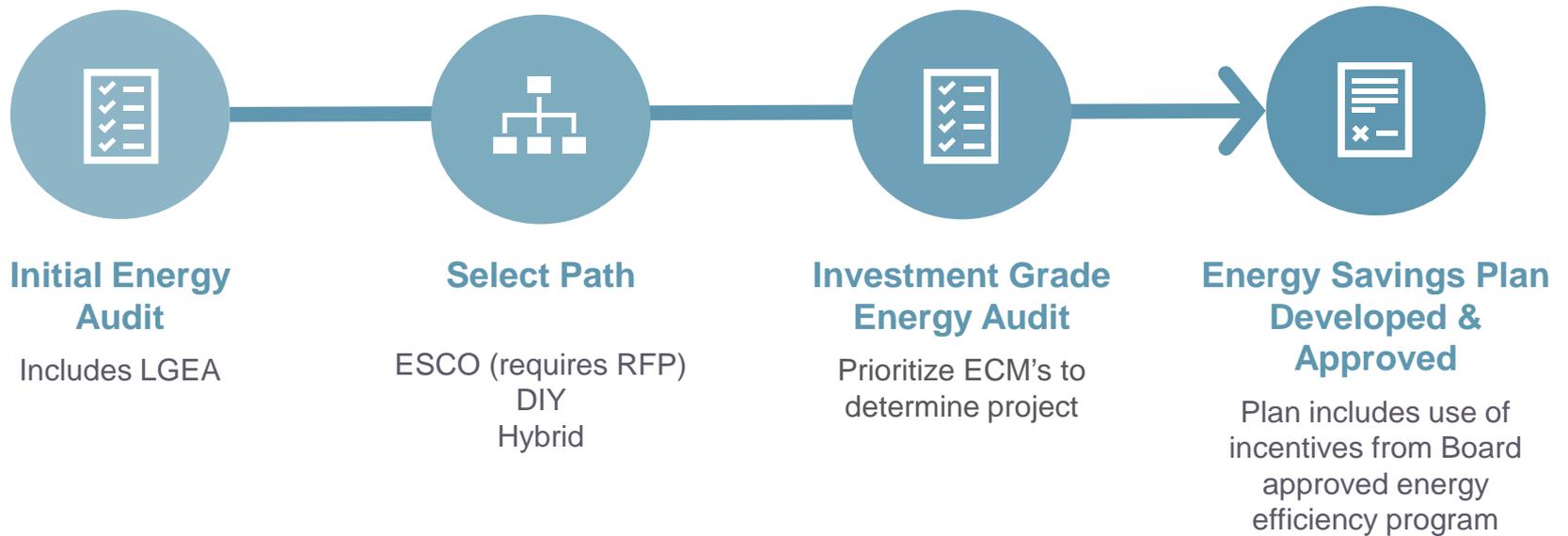
# Financing Mechanism: ESIP

## 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





# RESIDENTIAL PROGRAMS

# Residential Portfolio of Programs

NJCleanEnergy.com/RESIDENTIAL

## HOME PERFORMANCE W/ ENERGY STAR®

- Whole-house and safety solutions for existing homes
- Air sealing, insulation, heating and cooling upgrades
- Up to a \$4,000 rebate + 0% financing up to \$10,000 or .99% up to \$15,000

## WARMADVANTAGE & COOLADVANTAGE

- Stand-alone rebates for heating and cooling systems
- Furnaces, boilers, water heaters, central air conditioners, mini-splits, heat pumps, etc.



## ENERGY EFFICIENT PRODUCT REBATES

- Includes ENERGY STAR® certified refrigerators, dryers, washers, air purifiers, dehumidifiers, room air conditioners
- Refrigerator/freezer recycling and lighting discounts



## RESIDENTIAL NEW CONSTRUCTION

- Builders work with a rater to properly certify the homes to ENERGY STAR® certified or Zero Energy Ready Home levels



## COMFORT PARTNERS

- A FREE program including lighting upgrades, hot water conservation, replacement of fridges and thermostats, insulation upgrades and heating and cooling maintenance **for income eligible families**

Some programs offer enhanced incentives for homes located in an UEZ, low to moderate income and affordable housing units

# 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)

## LISTSERVS

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Trade Ally:  
[NJCleanEnergy.com/SIGNUP](http://NJCleanEnergy.com/SIGNUP)*

**THANK YOU**

