



# *New Jersey State Planning Commission*

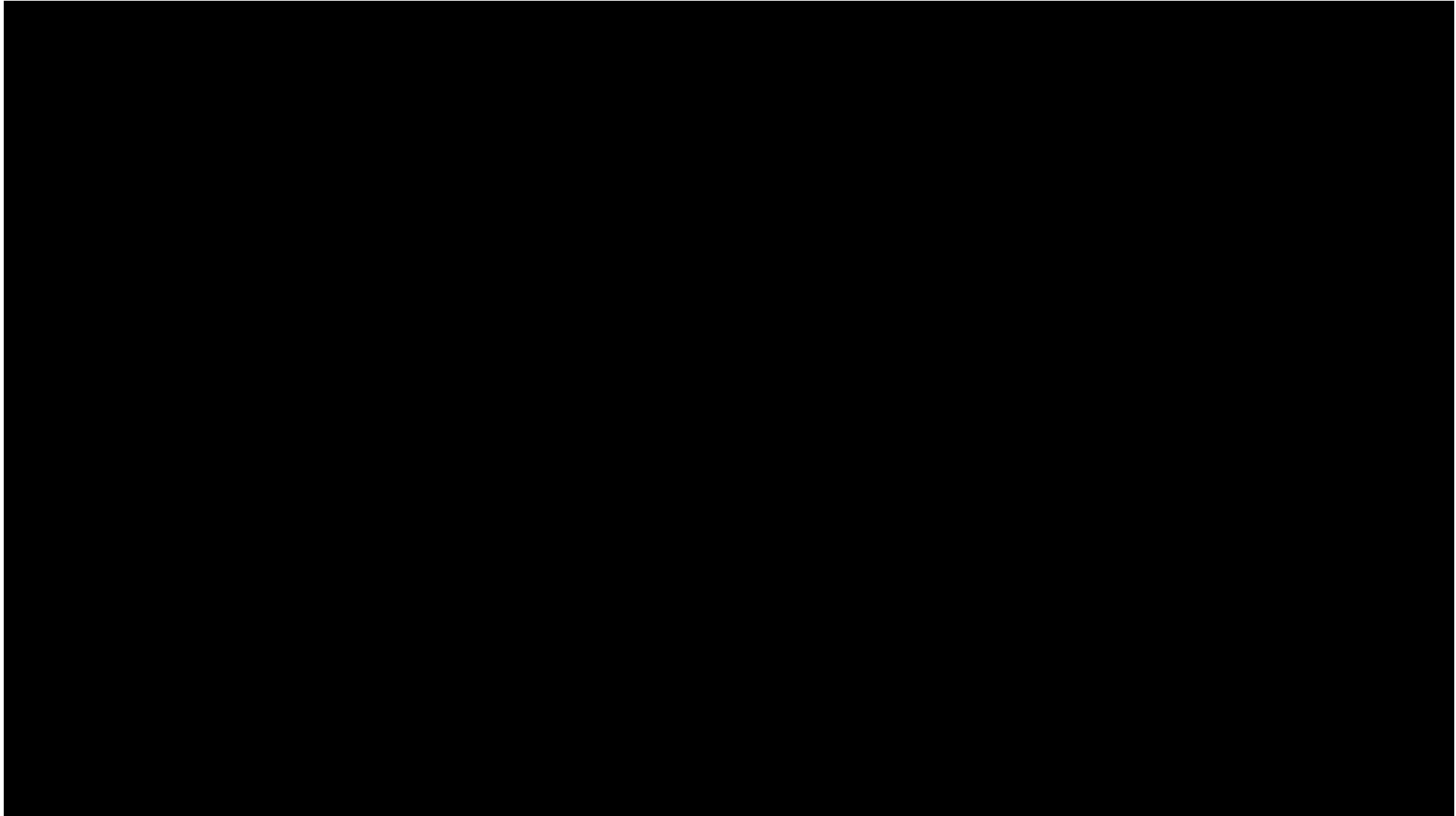


February 3, 2021

## New Jersey's Clean Energy Program™

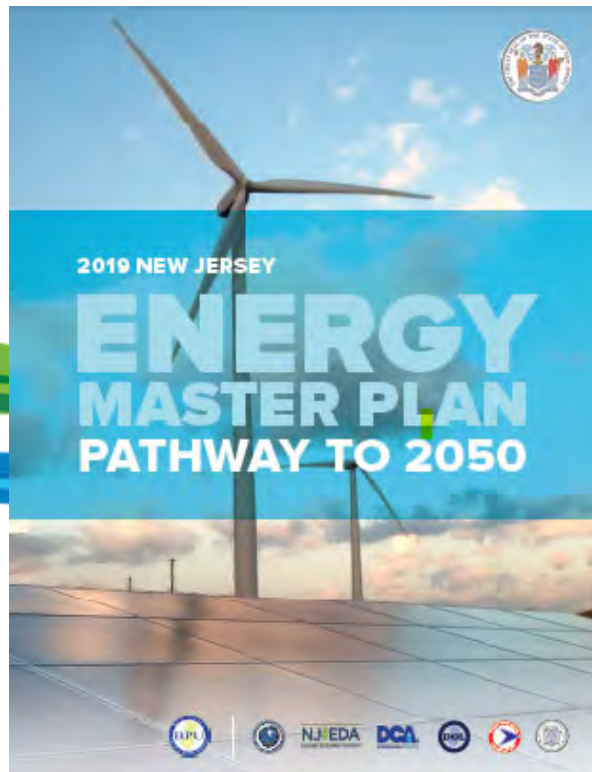
**Lighting the way to New Jersey's Clean Energy Future**

# Lighting the way to a Clean Energy Future



# NJ ENERGY MASTER PLAN

[www.nj.gov/emp](http://www.nj.gov/emp)



# Energy Master Plan (EMP)

[www.nj.gov/emp](http://www.nj.gov/emp)

- The Energy Master Plan was released on January 27, 2020
- Received significant stakeholder engagement throughout the process
- Comprehensive roadmap to meet our goals
- Seven Strategies to get New Jersey to 100% Clean Energy by 2050

# EMP: Overarching Goals

[www.nj.gov/emp](http://www.nj.gov/emp)

- 100% clean energy by 2050
- reduce GHG emissions by 80 percent from 2006 levels by 2050 under the Global Warming Response Act (GWRA) – 80/50 standard
- Stronger and Fairer NJ



# EMP: The Seven Strategies

[www.nj.gov/emp](http://www.nj.gov/emp)

1. Reduce Energy Consumption and Emissions from the Transportation Sector
2. Accelerate Deployment of Renewable Energy and Distributed Energy Resources
3. Maximize Energy Efficiency and Conservation and Reduce Peak Demand
4. Reduce Energy Consumption and Emissions from the Building Sector



# EMP: The Seven Strategies (cont.)

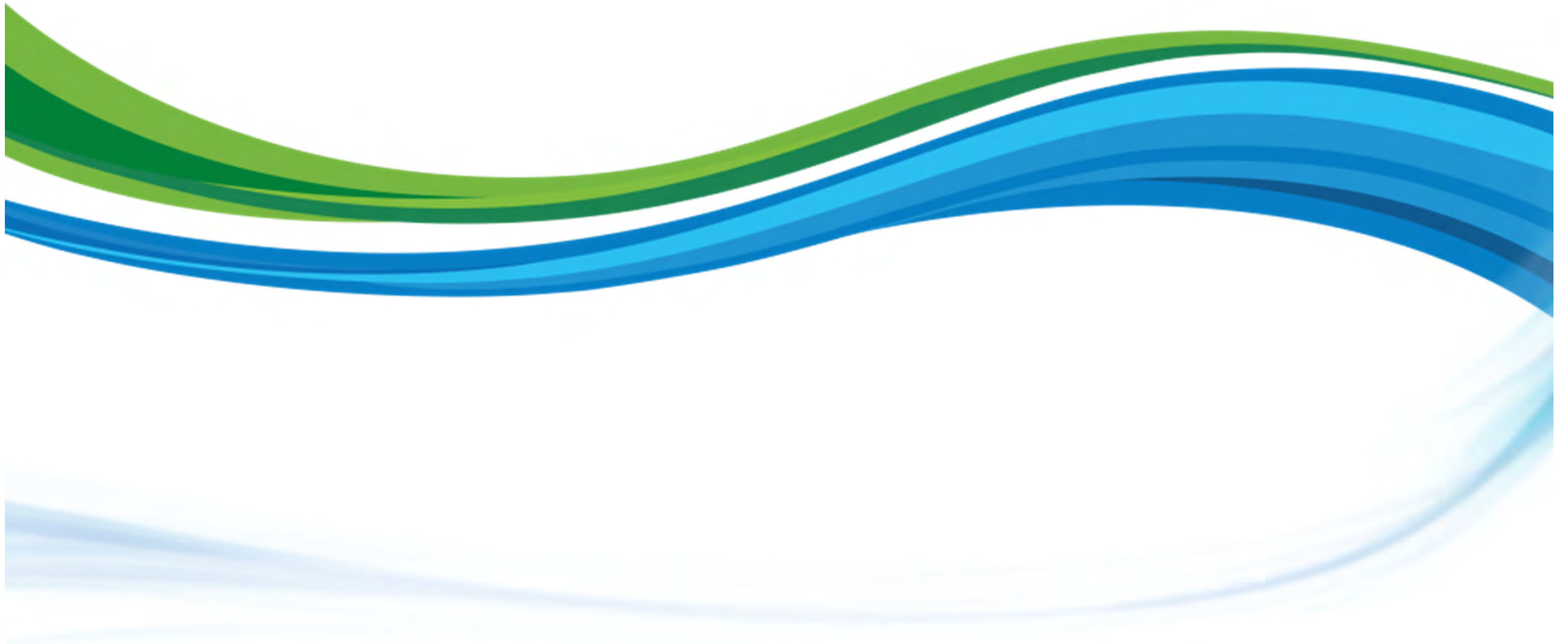
[www.nj.gov/emp](http://www.nj.gov/emp)

5. Decarbonize and Modernize New Jersey's Energy Systems
6. Support Community Energy Planning and Action with and Emphasis on Encouraging Participation by Low- and Moderate-Income and Environmental Justice Communities
7. Expand the Clean Energy Innovation Economy





# PROGRAM HIGHLIGHTS





# 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

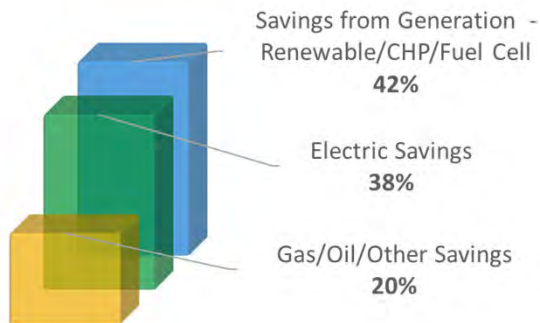


# Program Performance...

FY19 data



**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

FY19 data

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



# 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

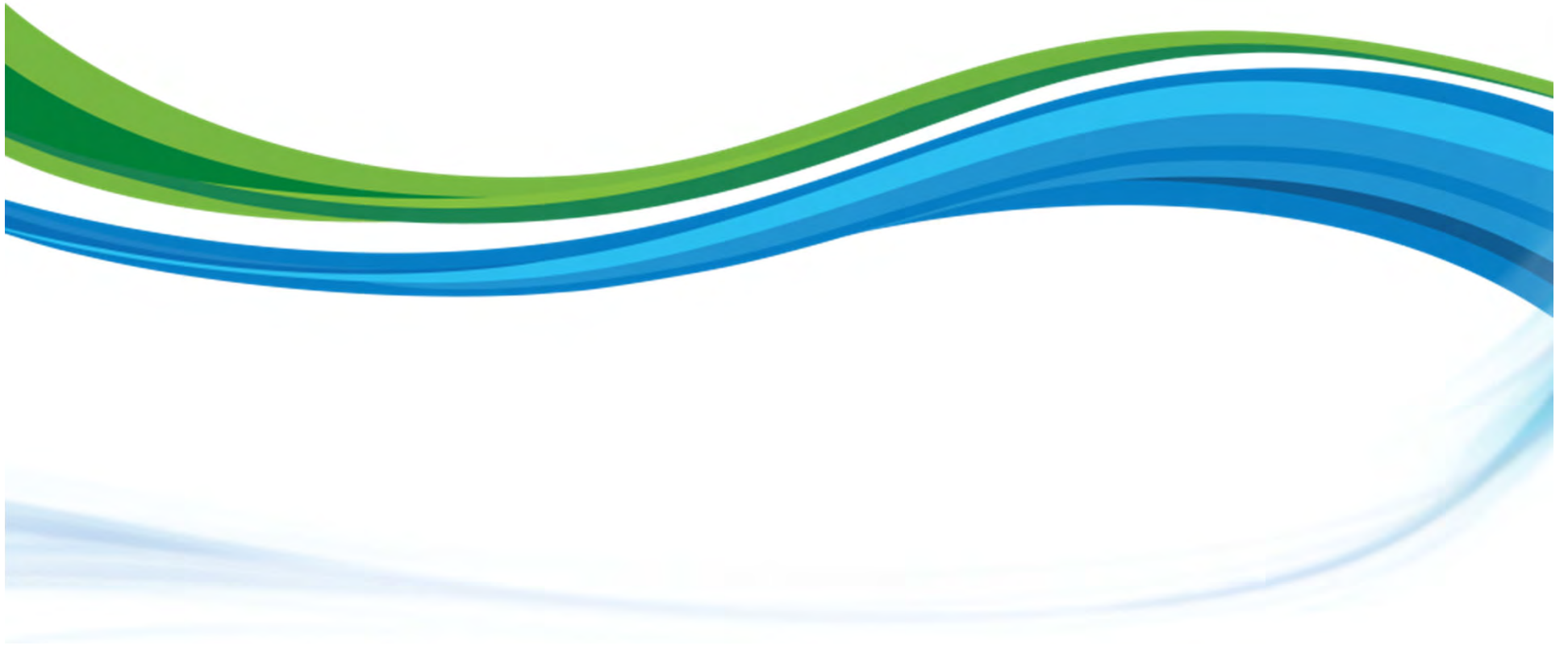
- New Construction Homes
- Existing Homes
- Energy Efficient Products
- Trade Allies



*\* coming soon!*



# RENEWABLE ENERGY



# NJ Offshore Wind

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

- Goal: 7500 MW by 2035
- Ørsted's 1100 MW Ocean Wind project was awarded in June 2019
  - Largest award for a single project in the United States
  - Generate \$1.17 billion in economic benefits
  - Create an estimated 15,000 jobs
  - Power approximately 500,000 homes

# Solar Transition Incentive (TI) Program

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

- The TI program is a bridge between the legacy SREC Program and a to-be-determined successor incentive program
- The TI program consists of fixed-price, 15-year Transition Renewable Energy Certificates (TRECs)



# Solar TI Program: TREC Factors

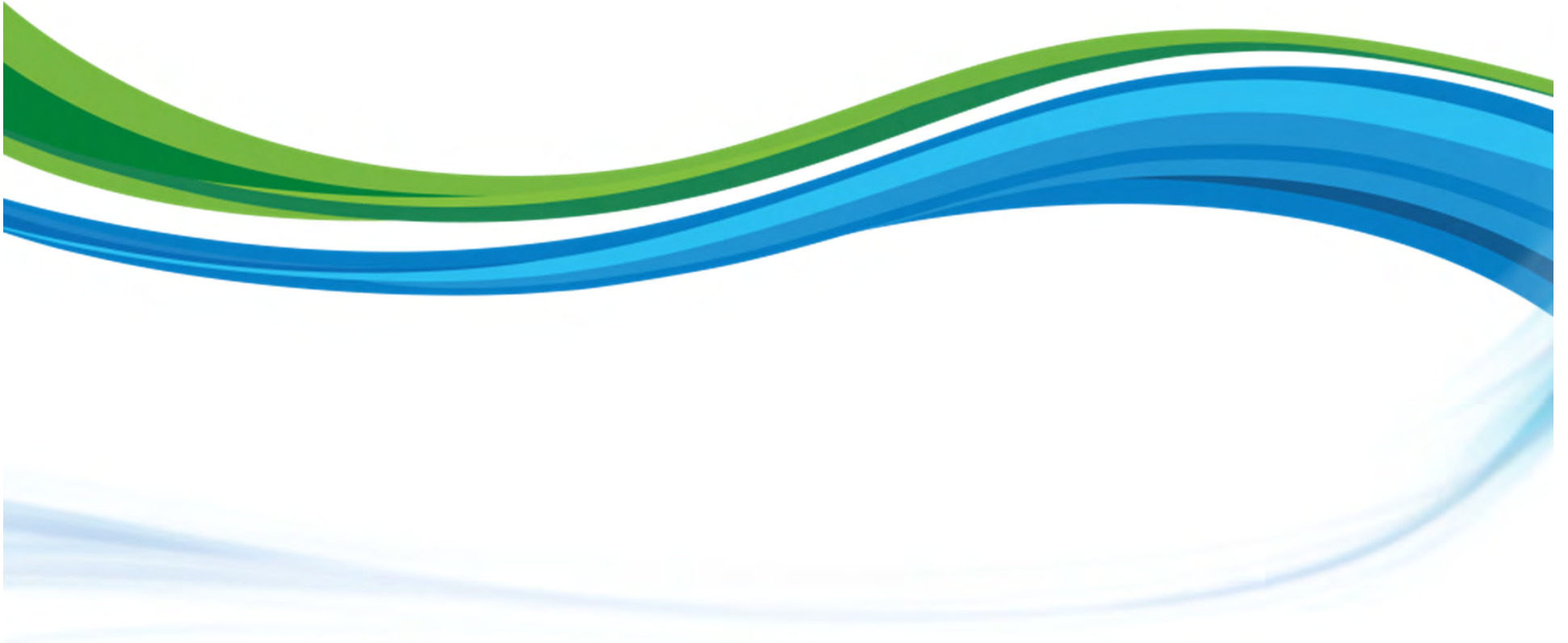
[NJCleanEnergy.com/TI](http://NJCleanEnergy.com/TI)

- The Transition Incentive structures the TREC factors to allow for differentiated financial incentives for different types of solar installations
- TREC factors are factored by project type:

<b>Project Type</b>	<b>Factor</b>
Subsection (t): landfill, brownfield, areas of historic fill	1.0
Grid supply rooftop	1.0
Net metered non-residential rooftop and carport	1.0
Community solar	0.85
Grid supply ground mount	0.6
Net metered residential ground mount	0.6
Net metered residential rooftop and carport	0.6
Net metered non-residential ground mount	0.6

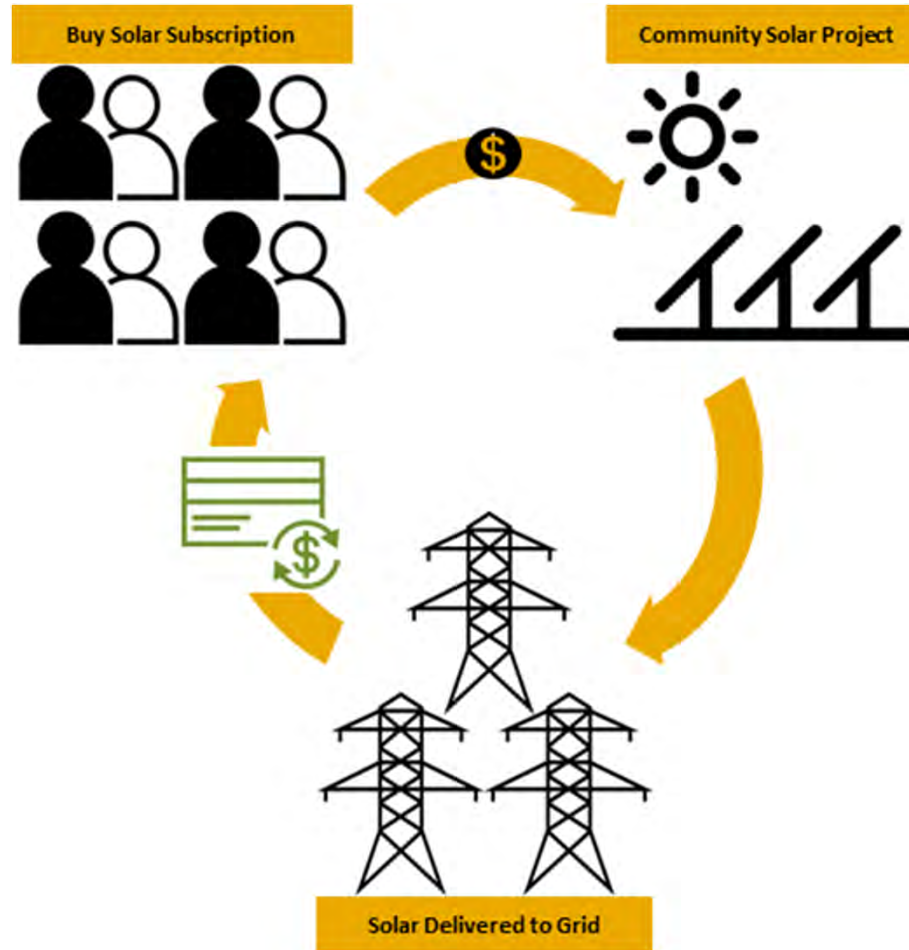


# COMMUNITY SOLAR



# Community Solar

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



# Community Solar: Find your fit

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



**Subscribers:** individual entities who get solar power



**Developer:** primary group organizing the solar project



**Host Site:** location where solar project is installed



**Utility:** electricity provider where solar project is installed



**Installer:** expert that installs the solar project



# Community Solar: Get started

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

## Potential role of government or business entities:

- Become an “anchor” subscriber for a community solar project
- Provide land/rooftop for siting of a solar array
- Conduct a competitive procurement on behalf of the community

## Potential role of affordable housing:

- Become an “anchor” subscriber for a community solar project
- Put all Low and Moderate Income (LMI) properties into a community solar project

# Community Solar: Subscribers

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

## Participation can be in the form of:

- **Ownership:** buying a share or portion of the community solar project or panels
- **Subscription:** buying a portion or share of the electric output produced by the community solar project

# COMMUNITY ENERGY PLANS



# Community Energy Plan Grant

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

## Localizing the Energy Master Plan Goals



**ENERGY USE**



**TRANSPORTATION  
PLANNING**



**LAND USE**



**WATER  
MANAGEMENT**



**WASTE  
MANAGEMENT**





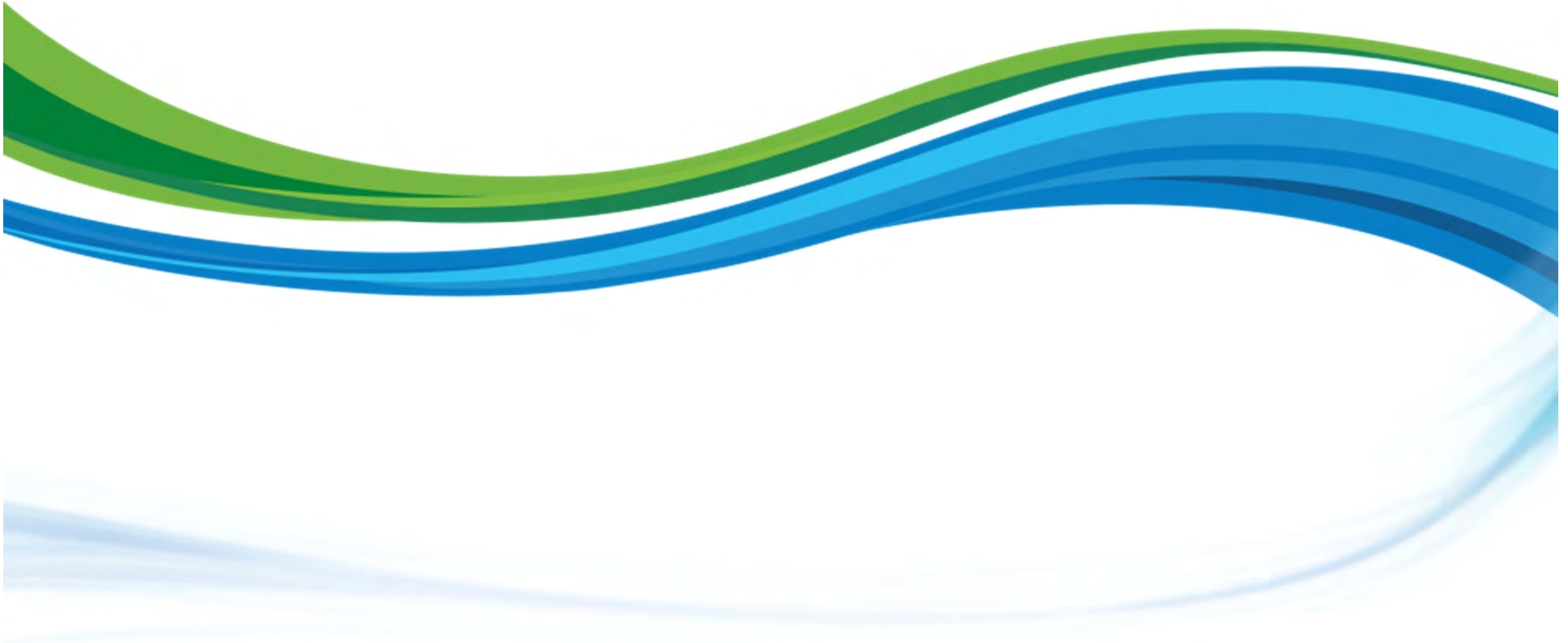
# Community Energy Plan Grant

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

- Planning grant
- Look at energy use as a whole
  - Residential
  - Business
  - Government
- Identify areas for improvement
- Create a plan to reduce energy use, increase renewables and meet the EMP goals
- Application is available at [NJCleanEnergy.com](http://NJCleanEnergy.com)
- Grants are based on population size

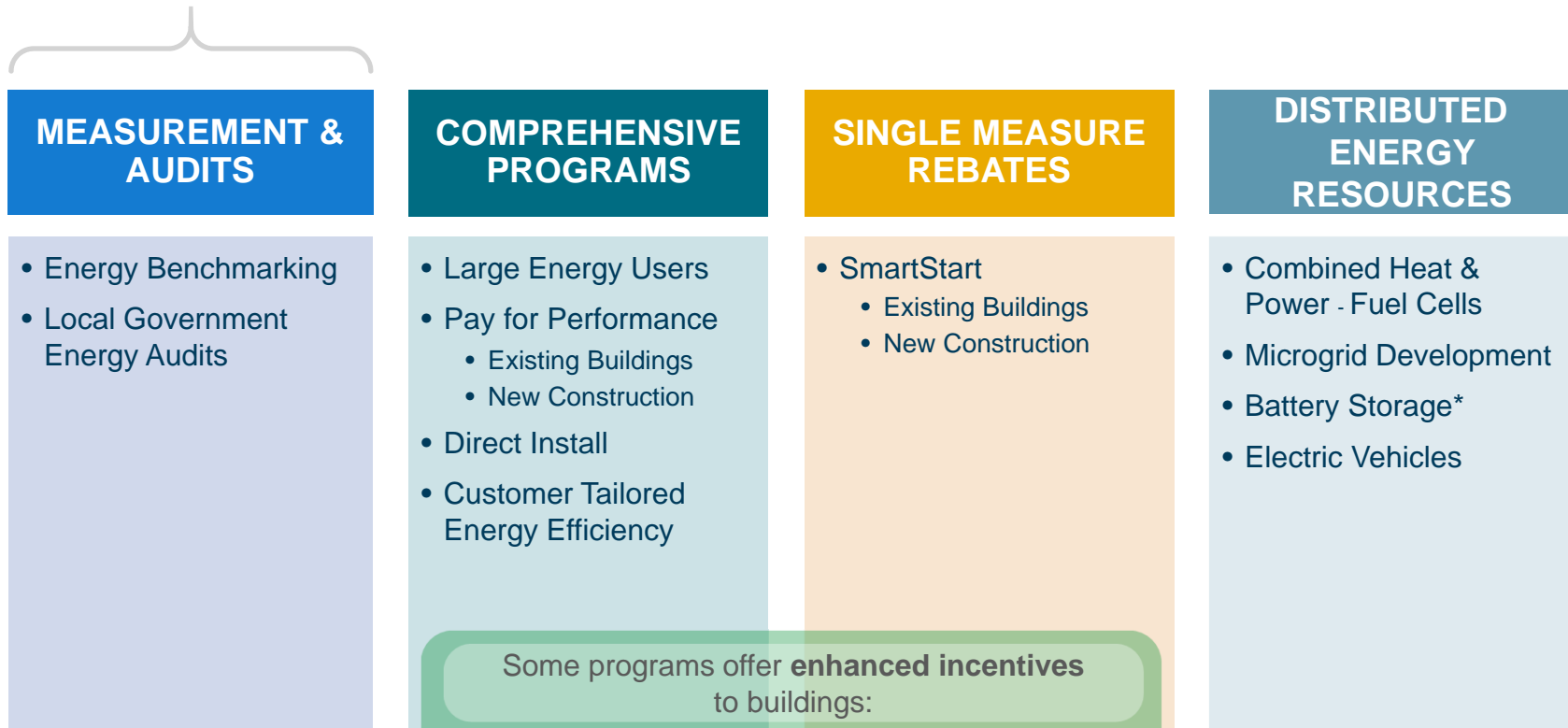


# C&I PROGRAMS



# C&I Portfolio of Programs

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



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**

*\* coming soon!*



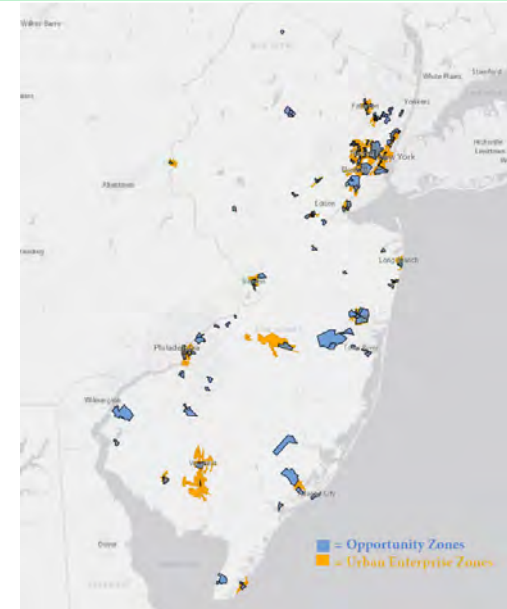
# Enhanced Incentives

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**



Eligibility Basis	Criteria
<ul style="list-style-type: none"> <li>➤ <b>Located in an Urban Enterprise Zone (UEZ)</b></li> </ul>	<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>
<ul style="list-style-type: none"> <li>➤ <b>Located in an Opportunity Zone (OZ)</b></li> </ul>	<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>



# 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	46	50
Site Energy Intensity <sup>1</sup> (kWh/sf)	85.9	82.2
Source Energy Intensity <sup>2</sup> (kWh/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, this score is slightly below average when compared to other warehouses/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: <https://www.eportmanager.gov/efm/efmportal/>  
 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.

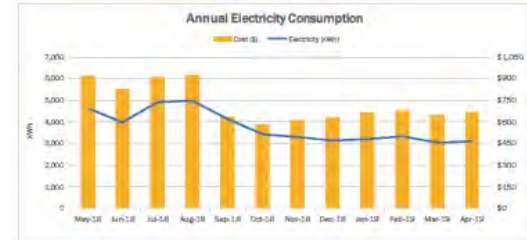
#### Carbon Emissions:

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 18 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.

Category	Electricity Use Description	Example Building	Area of Concern Scale
	USAGE	Annual Usage (kWh)	45,114
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

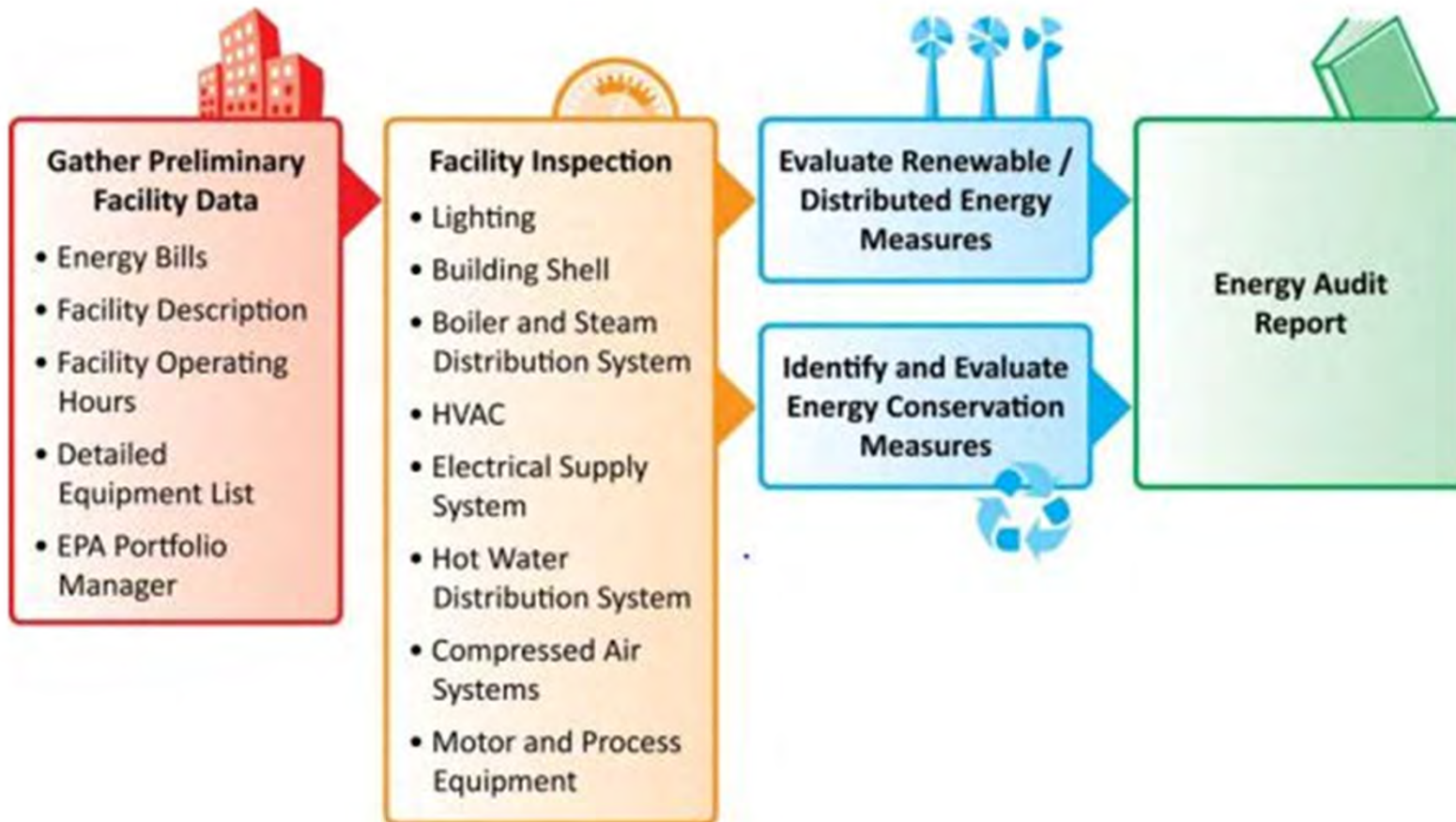
\* Inquire about the waivers available to buildings  $\leq$ 200kW average



# Local Government Energy Audit

MEASUREMENT &  
AUDITS

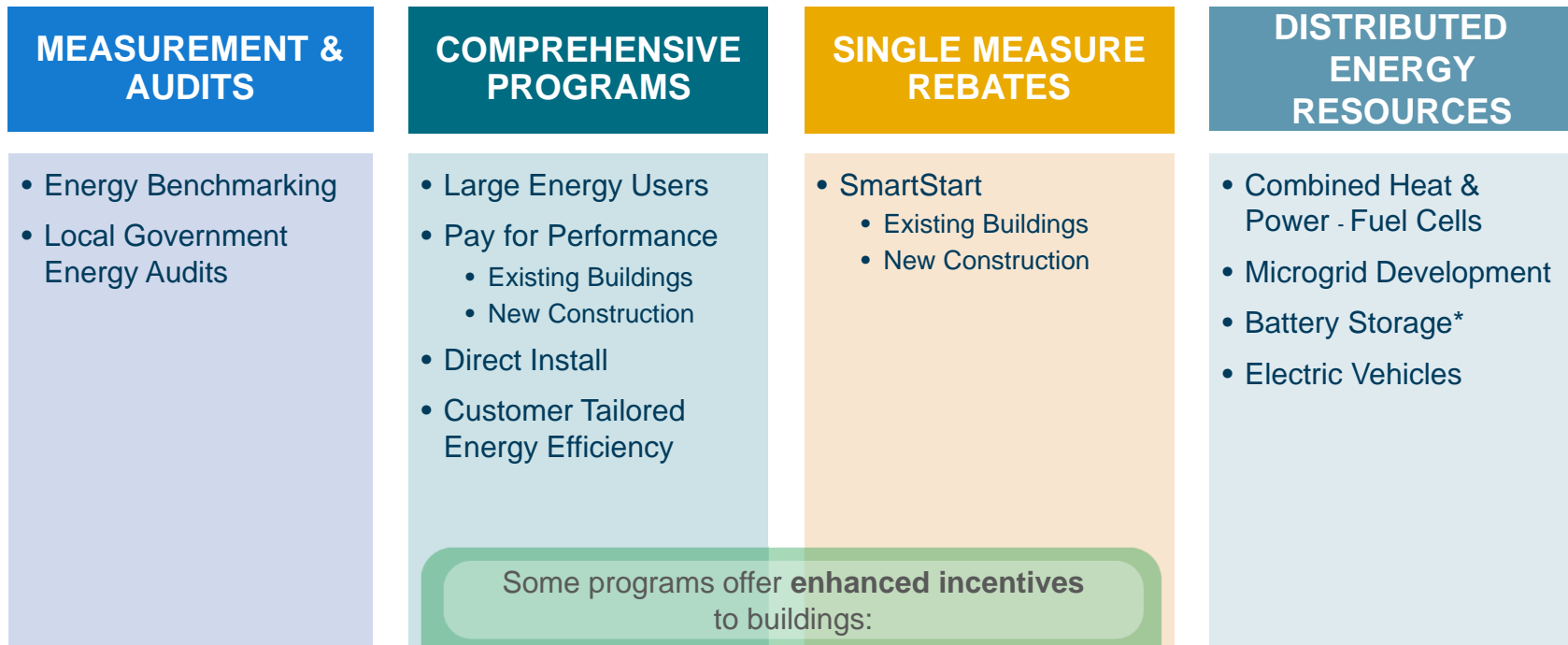
[NJCleanEnergy.com/LGEA](http://NJCleanEnergy.com/LGEA)





# C&I Portfolio of Programs

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



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**

*\* coming soon!*

# 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



## Program Enrollment

Submission and  
Approval of Application



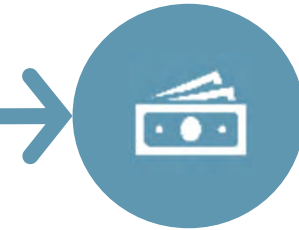
## Submission of Draft Energy Efficiency Plan

Reservation of  
Incentives (optional)



## Submission of Final Energy Efficiency Plan

Commitment of  
Incentives



## Confirmation of Installation

Incentives Paid



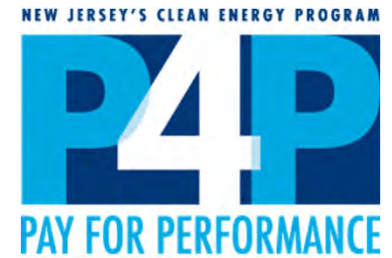
# Pay for Performance

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

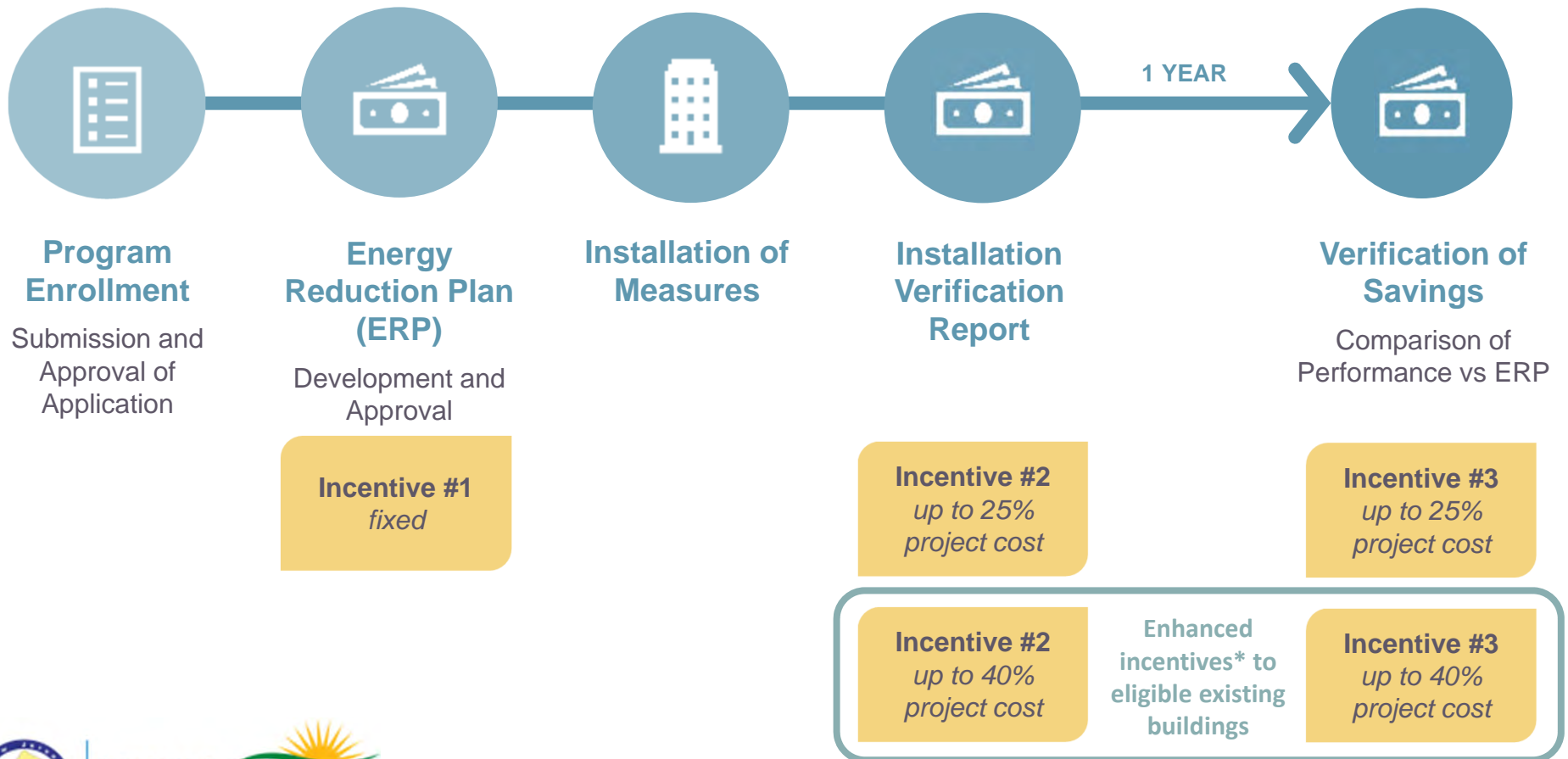
\* Enhanced incentives are available to existing buildings in a UEZ/OZ, K-12 public school, local governments (municipalities and counties), or designated as affordable housing



# 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](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](http://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

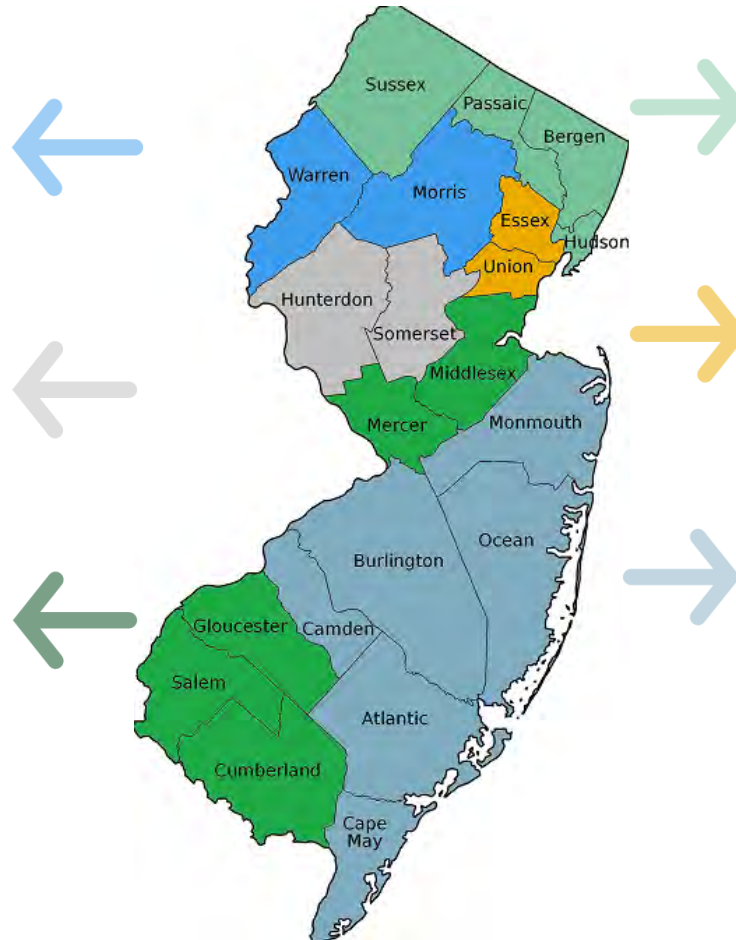
Justin Avallone  
845-401-6253  
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### CMC Energy Services, Inc.

Ben Altomari  
888-331-5891  
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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

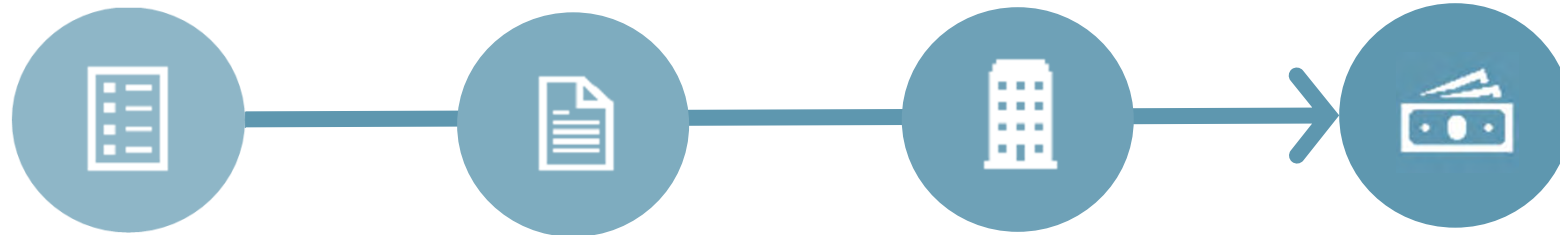
## INCENTIVE CAP

- 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)



## Scoping Session

One-on-One customization with program staff

## Energy Efficiency Plan

Application Approval

## Installation of Measures

## Confirmation of Installation

Incentives\* Paid

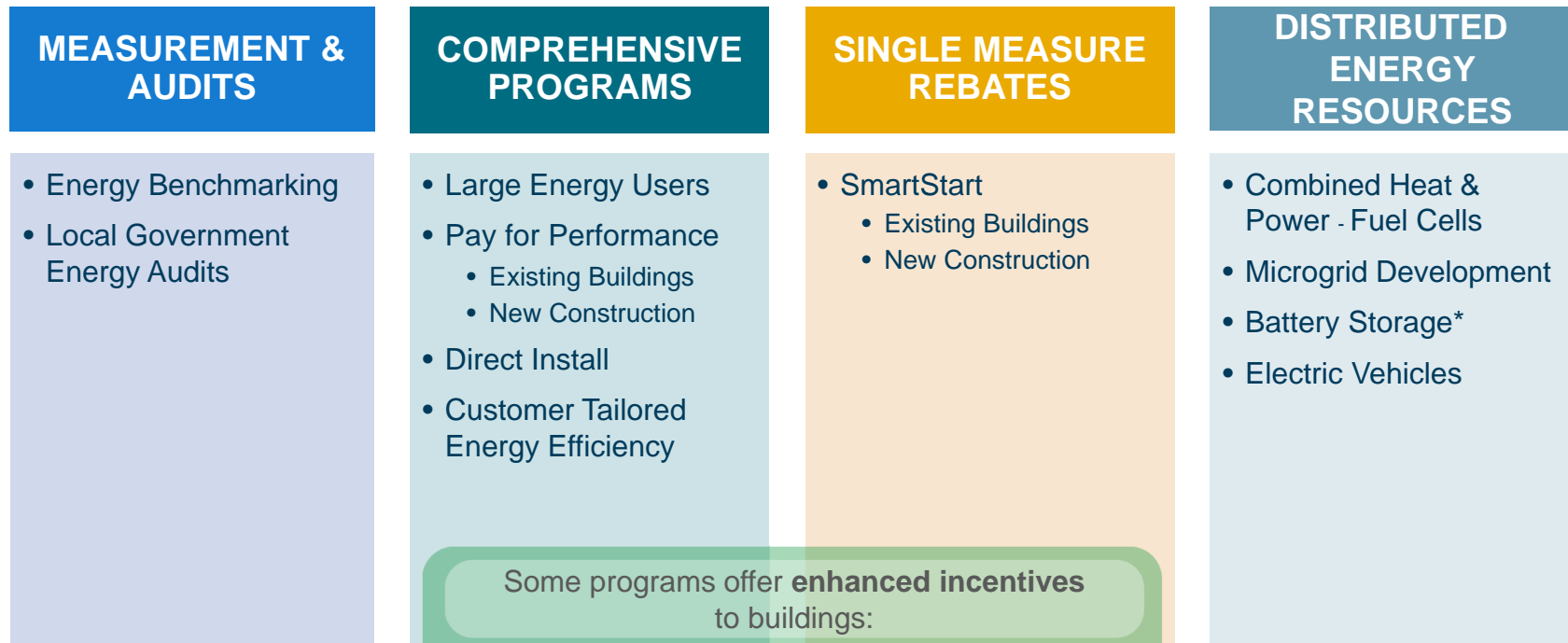
Same incentive values as SmartStart



\* 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

# C&I Portfolio of Programs

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



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

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

*\* coming soon!*



# 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

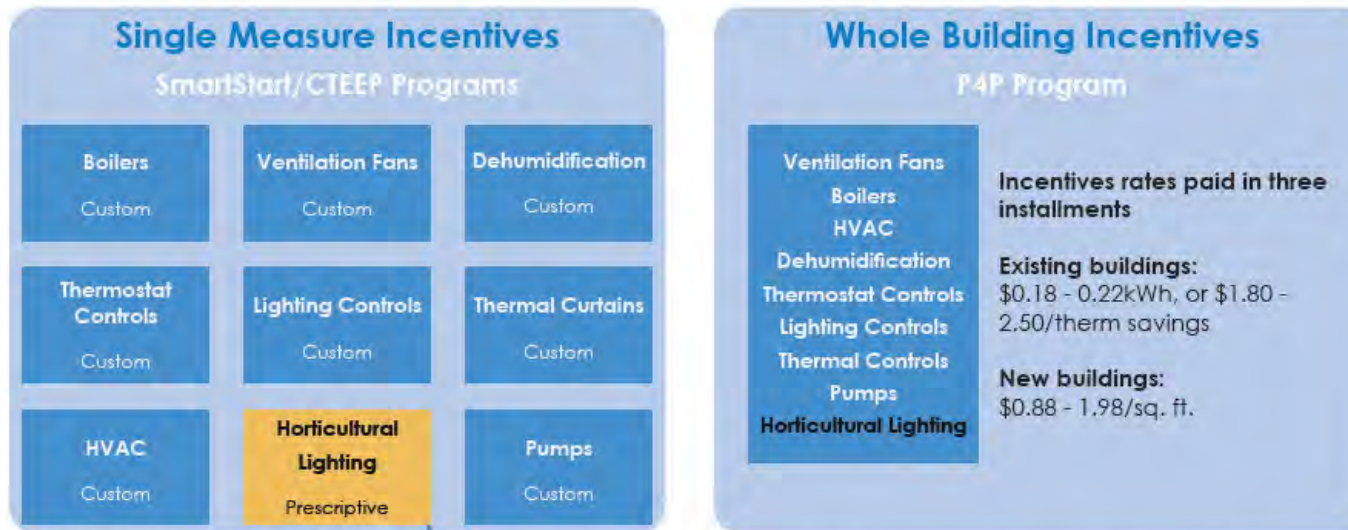


# New: Indoor Horticulture

NJCleanEnergy.com/SSB and NJCleanEnergy.com/CTEEP



SmartStart/CTEEP Prescriptive incentives are now available to indoor horticultural lighting retrofits or new construction. In addition, 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 on 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

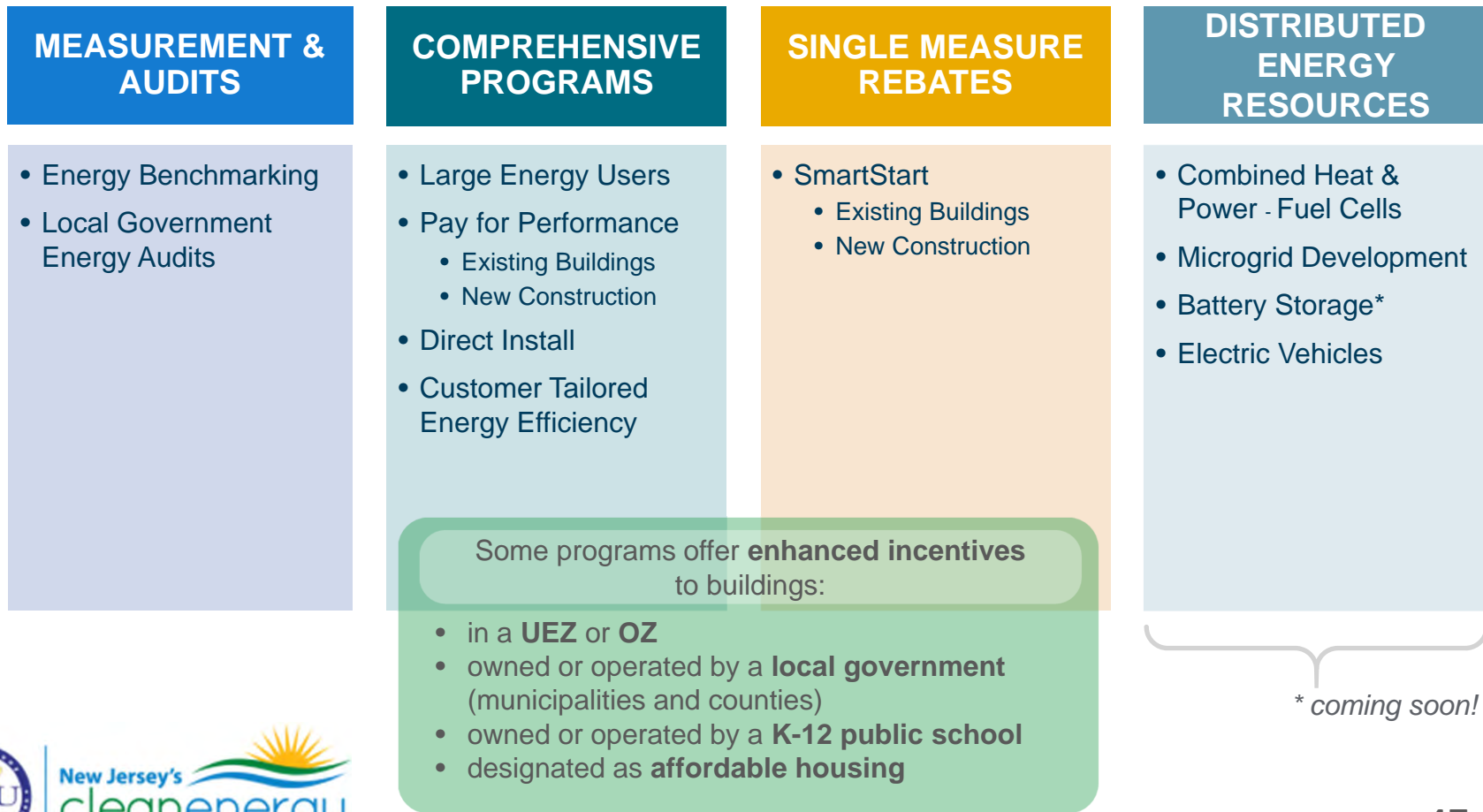
## Prescriptive Horticultural Lighting Rebates

Facility Type and Runtime Hours:	LED Fixture Wattage <500	LED Fixture Wattage >500
DLC- listed LED for use in Indoor Grow Facilities (>3000 hours/year)	\$150/fixture	\$250/fixture
DLC-listed LED for use as supplemental lighting in Indoor Grow Facilities that primarily use natural sunlight (<3000 hours/year)	\$50/fixture	\$200/fixture

Existing building projects located in Urban Enterprise Zones or Opportunity Zones may be eligible for double the 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

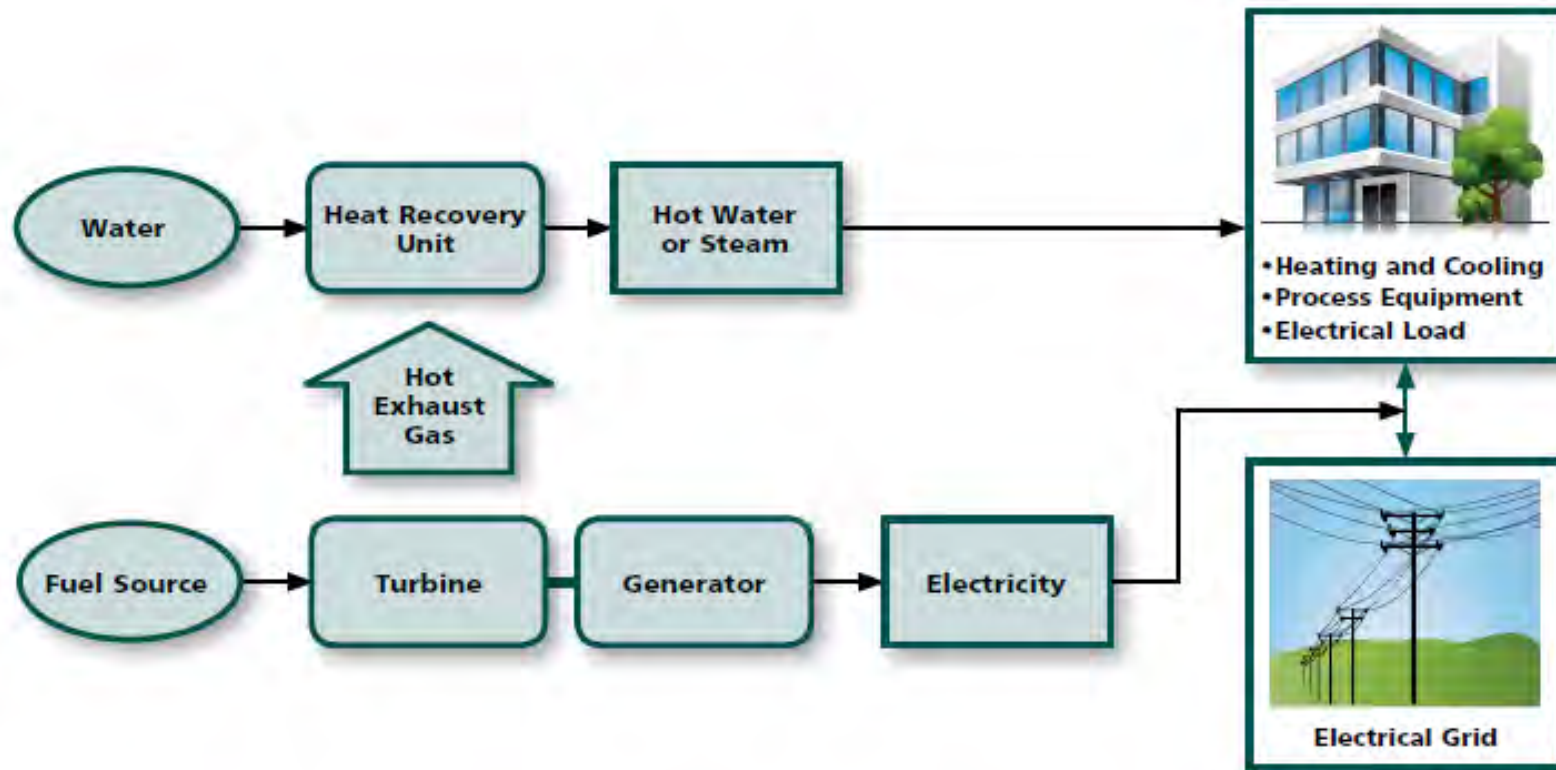
- CHPs and FC with HR have a project cap of \$2M - \$3M
- 25% bonus for critical facilities with black-start/islanding capabilities
- Up to 30% incentive bonus for CHP using biofuel
- FC without HR have a project cap of \$1M



# 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%



# Microgrids

DISTRIBUTED  
ENERGY

- NJBPU Town Center Distributed Energy Resources (TCDER) Microgrids Program
  - TCDER Microgrid is a cluster of critical facilities within a municipal boundary that may also operate as shelter for the public during and after an emergency event or provide services that are essential to function during and after an emergency situation. These critical facilities are connected to a single or series of DER technologies that can operate while isolated and islanded from the main grid due to a power outage
- Board funded 13 feasibility studies
- Feasibility studies completed and being reviewed

# Microgrids

DISTRIBUTED  
ENERGY

- EDCs fully engaged in program
- Barriers to TCDER Microgrids
  - Regulatory
    - ROW crossings
    - Tariff structures
  - Funding
- To address funding issue, Board, with NJIT and Rutgers, received DOE Grant of \$300,000 for a microgrid financing study
  - Result will be a public “financing tool” for use by microgrid developers
  - Study begun in 2020 to be completed within 2 years

## Commitment to Resiliency

- The Clean Energy Act also requires the Board to conduct an Energy Storage Resource analysis for submission to the Governor and the Legislature. In doing so, the Board is required by law to consult with various stakeholders, including PJM
- Rutgers (RU-LESS) was retained to complete the study

- Study addressed :
  - Resiliency
  - Effects on ratepayers
  - Impacts on renewable energy and EVs
  - Optimal amount of storage
  - Technologies
  - Optimal points of entry (customer sited, utility scale)
  - Cost-benefit



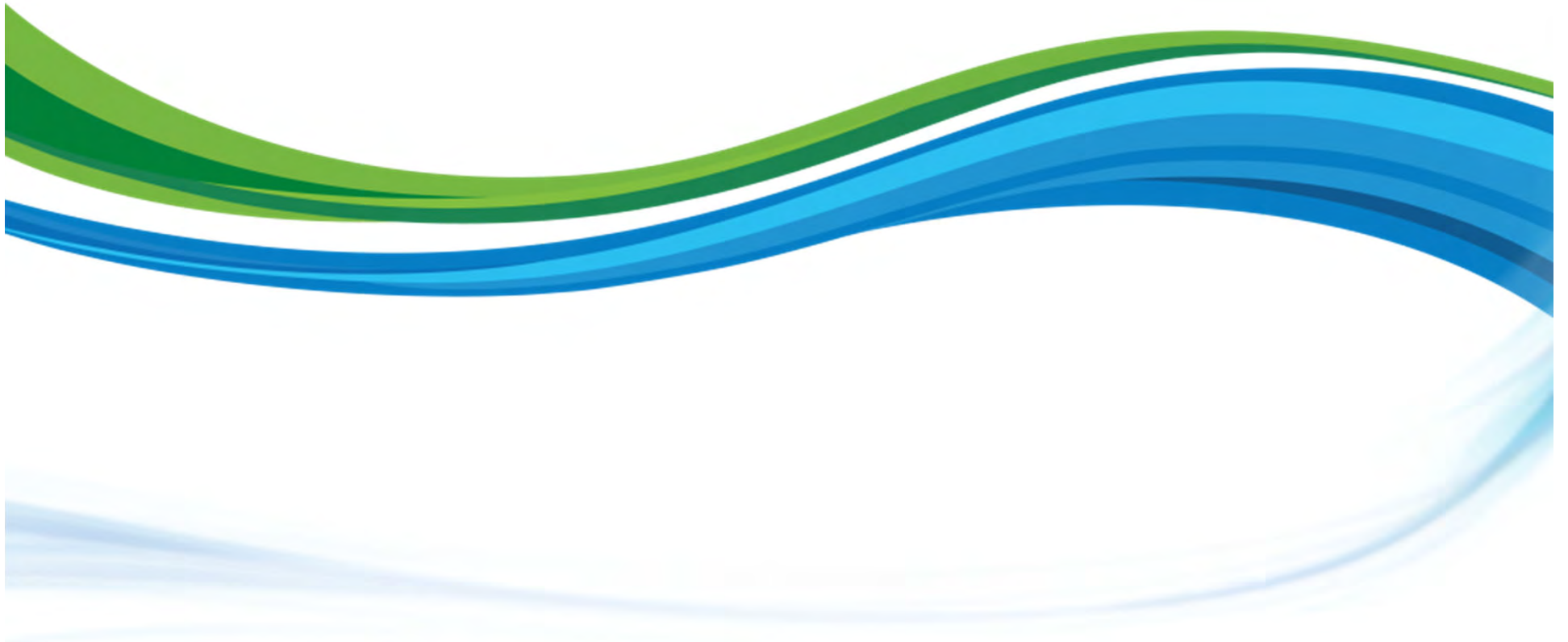
# Energy Storage

DISTRIBUTED  
ENERGY

- Final report accepted by the Board in June 2019
- CEA requires Board to initiate a proceeding within six months of completion of report to establish a process and mechanism for achieving energy storage goals
- Straw proposal being developed



# ELECTRIC VEHICLES



# EVs in the Energy Master Plan

- The EMP's first strategy and goal is: **“Reduce Consumption and Emissions from the Transportation Section”**
- Goal of 330,000 light duty electric vehicles by 2025
- Charging infrastructure
- State light-duty fleet
- Increase transportation options, encourage new options
- Decrease “Vehicle Miles Traveled”
- Reduce Port emissions



# The Electric Vehicle Law (S2252)

- Signed on January 17, 2020 by Governor Murphy, this law establishes the following goals:
  - At least 330,000 EVs on New Jersey roads by December 31, 2025 at least 2 million EVs by December 31, 2035
  - At least 85% of all new light duty vehicles sold or leased in the State shall be EVs by December 31, 2040
  - By December 31, 2025, there must be 400 DC Fast Chargers and 1,000 Level Two chargers available to the public

# The Electric Vehicle Law (S2252)

In addition:

- By December 31, 2025, at least 15% of multi-unit dwellings must have a combination of Level One, Level Two, or charger ready (“Make Ready”) parking spaces
- By December 31, 2025, 20% of all franchised overnight lodging establishments shall be equipped with EV chargers for routine electric vehicle charging by guests of the establishment
- By December 31, 2025, at least 25% of State-owned non-emergency light duty vehicles shall be plug-in electric vehicles
- By December 31, 2024, at least 10% of the new bus purchases made by the New Jersey Transit Corporation shall be zero emission buses
- The percentage of zero emission bus purchases shall increase to 50% by December 31, 2026 and 100% by December 31, 2032 and thereafter

# Charge Up New Jersey

ChargeUp.NJCleanEnergy.com

- Developed in accordance with the EV Law, which dedicated \$30M annually for the Plug In Electric Vehicle Fund, for 10 years
- New Jersey residents can receive an incentive of up to **\$5,000** when they purchase or lease a new electric vehicle in the State of New Jersey
- The online portal to apply for this post-purchase incentive launched on May 27, 2020
- Point of Sale incentive - Coming Soon

[www.ChargeUp.NJcleanenergy.com](http://www.ChargeUp.NJcleanenergy.com)



# Charge Up New Jersey

ChargeUp.NJCleanEnergy.com

## Additionally, the vehicle must:

- Be a new battery electric or plug-in hybrid electric vehicle; and
- Have an MSRP\* of less than \$55,000



*\*MSRP cap refers to the final Manufacturer's Suggested Retail Price of the vehicle.*

# EVs for Underserved Communities

- This grant from the U.S. Department of Energy is focused on how to enhance EV adoption in urban areas and in underserved communities
- The project is currently researching EV car-sharing options and Plug-in Electric Vehicle (PEV)-based ride hailing options for urban areas

# Clean Fleet Electric Vehicle Incentive Program

- Electric vehicles are now included on the State Purchasing Contract under Award T0099
- Clean Fleet Electric Vehicle Incentive Program
  - Designed to encourage local and state governments to add EVs to their fleet
    - \$4,000 per battery electric vehicle (maximum of 2); and
    - \$1,500 for one Level-Two EV charging station
  - Grants awarded on rolling basis until June 2021, or until funding expended
- Questions? [EV.programs@bpu.nj.gov](mailto:EV.programs@bpu.nj.gov)

# Public Charging

- After public input was received on a Straw Proposal released in May 2020, the BPU created minimum standards for utility filings on light duty, public charging.
- Public charging is: available 24-7, on public land, community locations and traffic corridors, is accessible to all EV users and has prices visibly displayed.
- Utilities must submit a plan by February 28, 2021 which must include:
  - Application process for program for utilities to pay for “Make Ready”
  - Preference for private ownership and operation of public chargers
  - Utilities can apply to own and operate in areas of “last resort”
  - Address concerns about demand charges

# FINANCING FOR GOVERNMENT AGENCIES





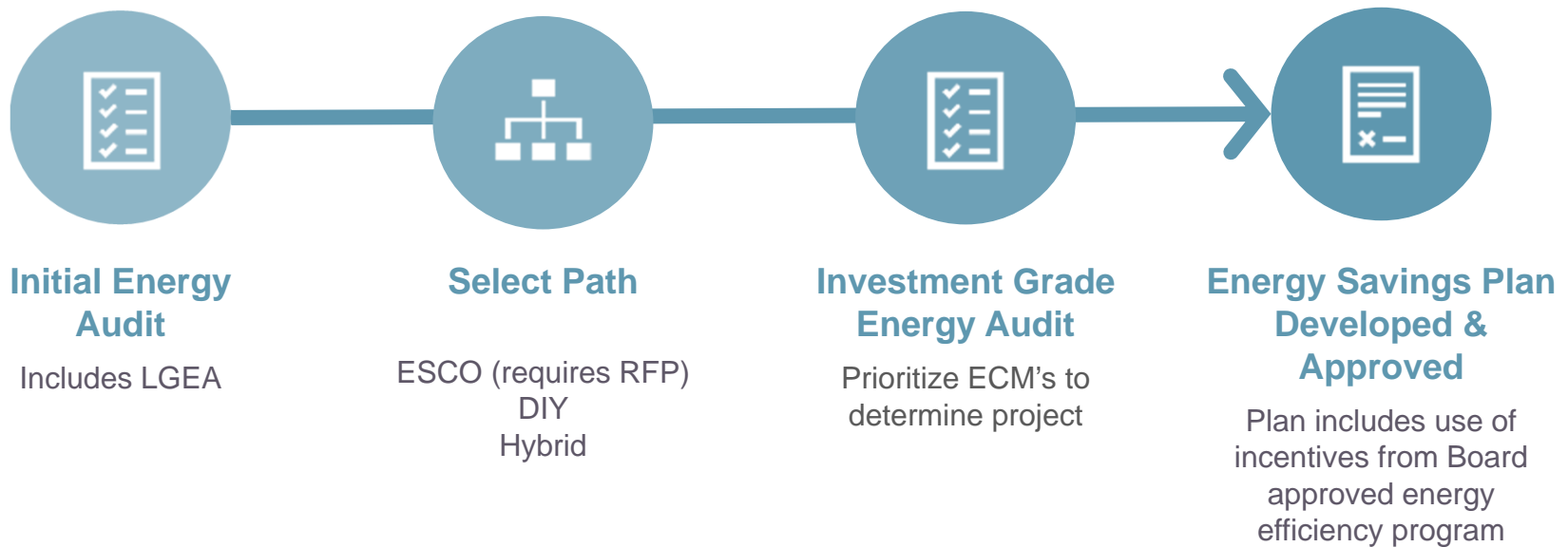
# Financing Mechanism: ESIP

## 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



# Energy Savings Improvement Program (ESIP)

## FOR MORE INFORMATION

**Michelle Rossi**

ESIP Coordinator

ESIP@bpu.nj.gov

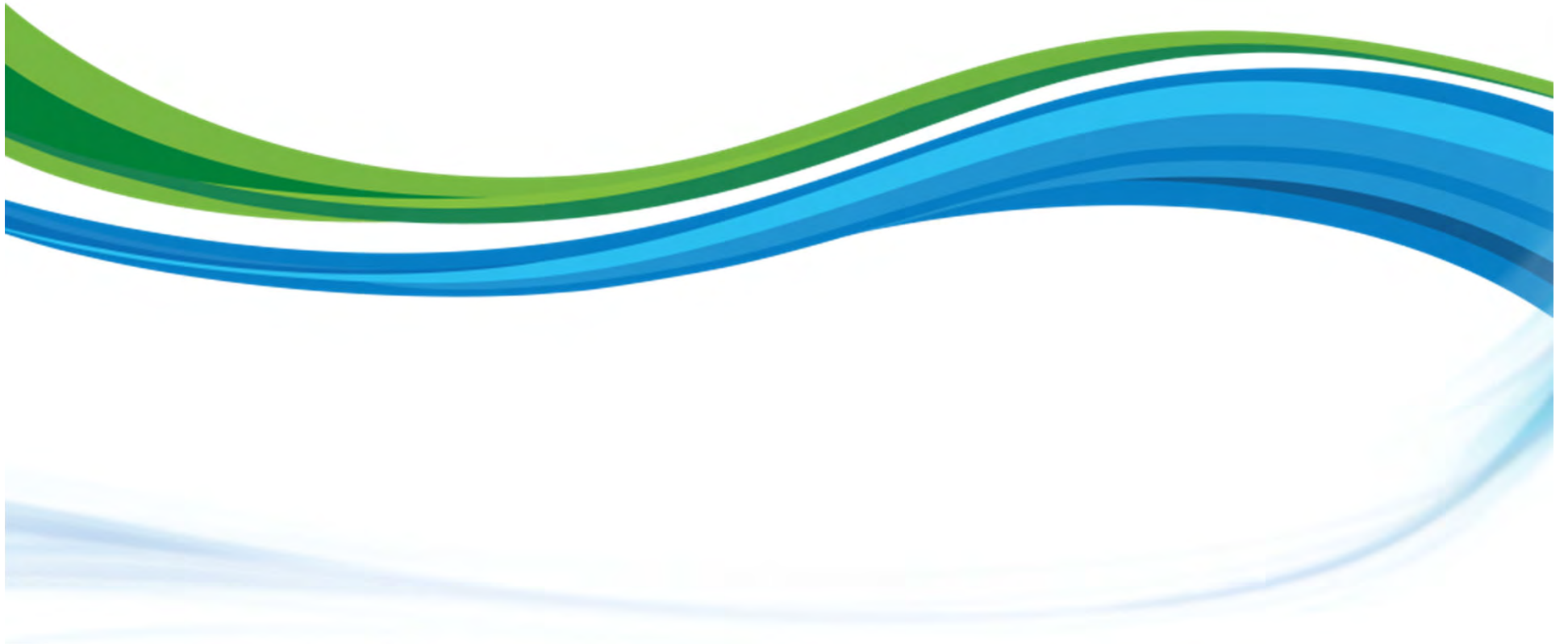
o: 609.633.9641

c: 609.915.0903





# 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

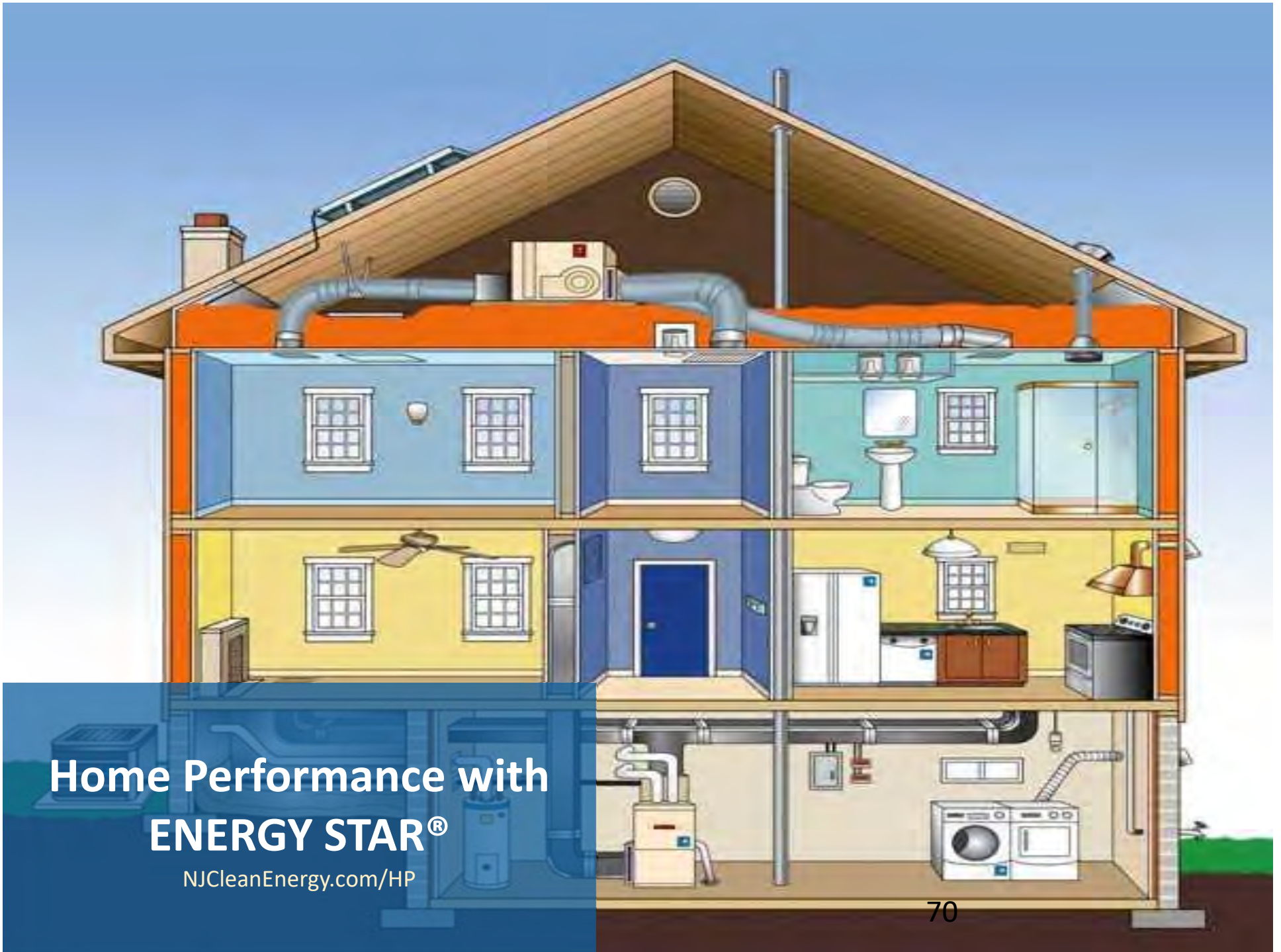


## COMFORT PARTNERS

- 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





Home Performance with  
**ENERGY STAR®**

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

# What is Home Performance?

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

HOME PERFORMANCE  
WITH ENERGY STAR®

- Provides whole-house energy assessments and comprehensive energy efficient upgrades for existing homes
- Addresses comfort, indoor air quality, health & safety, and energy usage problems
- The program uses specially trained/certified Building Performance Institute (BPI) GoldStar contractors



# Benefits for Homeowners

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

HOME PERFORMANCE  
WITH ENERGY STAR®

- Removes Dust and Allergens
- Eliminates Drafts
- Creates More Comfortable Home
- Reduces Asthma and Sinusitis
- Eliminates Moisture and Mold
- Reduces High Utility Bills
- Addresses Climate Change
- Creates Energy Independence





# Steps to Participation

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

HOME PERFORMANCE  
WITH ENERGY STAR®

1. Select a participating NJ Program BPI GoldStar Contractor  
[NJCleanEnergy.com/HP](http://NJCleanEnergy.com/HP)
2. Schedule a Home Assessment (fee for assessment may apply as per contractor)
3. Assessment identifies possible Health & Safety Issues and Energy Improvements
4. Review contractor recommendations and incentive level
5. GoldStar contractor installs the recommendations & performs test-out

# The Home Assessment

NJCleanEnergy.com/HP

HOME PERFORMANCE  
WITH ENERGY STAR®



## Combustion Appliance Testing

- Diagnostic equipment is used to test the conditions of your heating system, hot water heater and oven
- Testing results determine opportunities for upgrades

## Visual Inspection of the Home

- Air sealing opportunities
- Insulation opportunities
- Possible health and safety issues

## Blower Door Test



New Jersey's  
**cleanenergy**  
program™

# Incentives

NJCleanEnergy.com/HP

HOME PERFORMANCE  
WITH ENERGY STAR®

Incentives based on Total Energy Savings for single-family homes (1-4 units) & townhomes

**\$2,000 up to \$4,000 cash incentive**

Plus:

- 0% Interest loan up to \$10,000 or
- 0.99% interest loan up to \$15,000
- Up to \$1,000 Urban Enterprise Zone (UEZ), low to moderate income bonus or affordable housing bonus



# 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



# WARM Advantage and COOL Advantage

NJCleanEnergy.com/WARM and NJCleanEnergy.com/COOL

WARM Advantage &  
COOL Advantage

## Heating and Cooling System Rebates

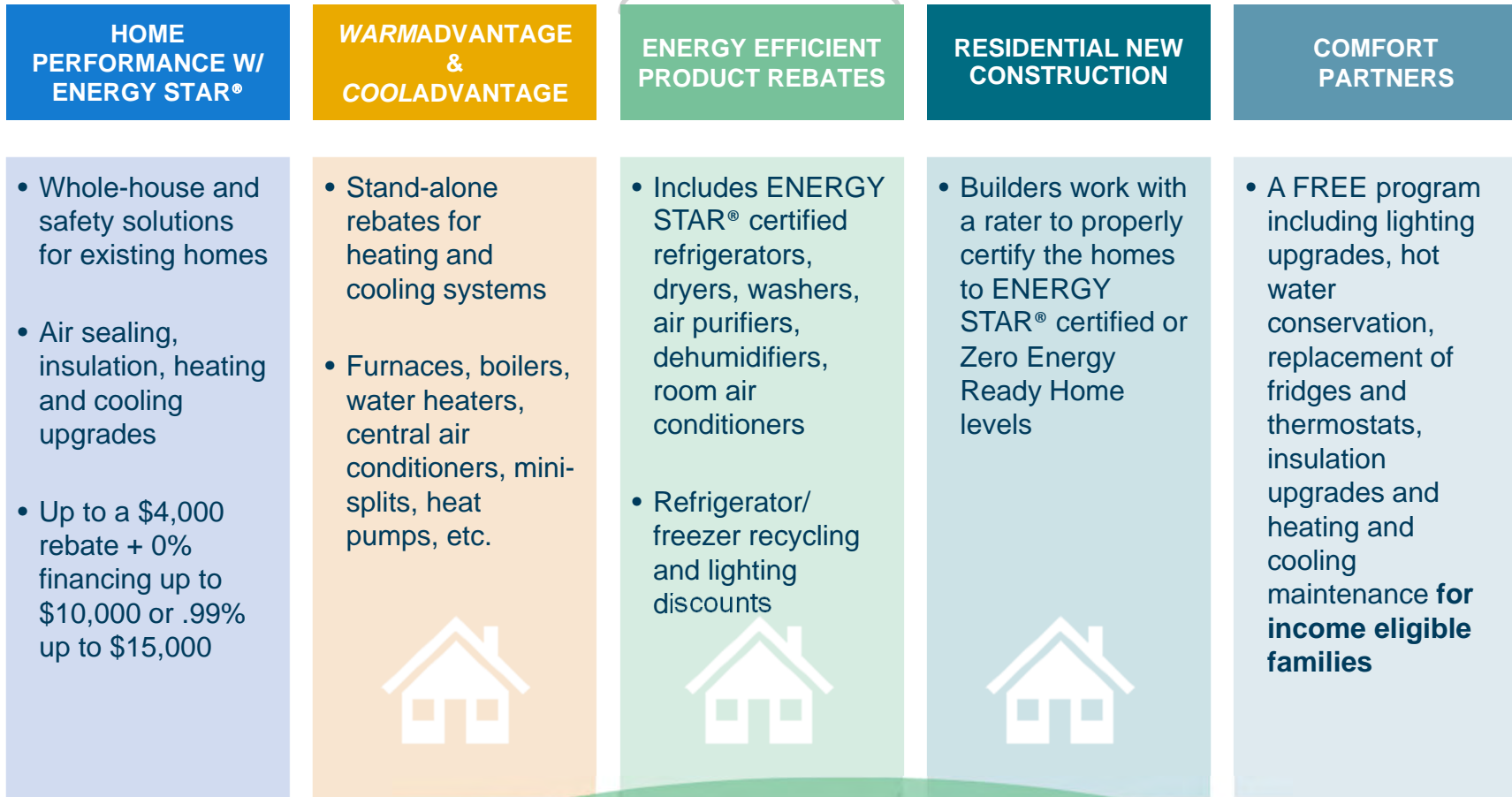
- Central AC Units (\$500 or \$300)
- Central Air Source Heat Pump (Up to \$1,000)
- Mini-Split A/C (\$500)
- Air-to-Water Heat Pump (\$2,000)
- Mini-Split Cold Climate Air Source Heat Pump (CCASHP) (up to \$2,000)
- Gas and Oil Furnaces (\$250 or \$500)
- Gas and Oil Boilers (\$300)
- Gas/Propane Water Heaters (\$300)
- Electric Heat Pump Water Heater (\$750)
- Combination Boiler/Furnace and Water Heater (\$700 or \$950)
- Urban Enterprise Zone (UEZ), LMI or affordable housing Bonus of \$200



per Unit ( may receive only one bonus incentive)

# Residential Portfolio of Programs

NJCleanEnergy.com/RESIDENTIAL



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



# Appliance Rebates

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

EE PRODUCT  
REBATES

- \$50 or \$75 rebates on select clothes washers and refrigerators
- \$100 or \$300 rebates for select dryers
- Rebates on ENERGY STAR certified Air Purifiers (\$50)  
Dehumidifiers (\$25) Room ACs (\$15)
- Ask retailers for more information or visit:
  - [NJCleanEnergy.com/CLOTHESWASHERS](http://NJCleanEnergy.com/CLOTHESWASHERS)
  - [NJCleanEnergy.com/DRYERS](http://NJCleanEnergy.com/DRYERS)
  - [NJCleanEnergy.com/FRIDGEREBATE](http://NJCleanEnergy.com/FRIDGEREBATE)
  - [NJCleanEnergy.com/APPLIANCES](http://NJCleanEnergy.com/APPLIANCES)
- Eligible products lists are included on each page
- Visit your local retailer for discounts on ENERGY STAR certified lighting and showerheads



# Appliance Recycling

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

EE PRODUCT  
REBATES

- Recycling for old, inefficient refrigerators and freezers
- FREE pick-up and a \$50 rebate
- Room air conditioners and dehumidifiers can be recycled during the fridge/freezer pick-up appointment for an additional \$25 rebate each
- Approximately 95% of each appliance is recycled
- Schedule appointments online at [NJCleanEnergy.com/RECYCLING](http://NJCleanEnergy.com/RECYCLING)

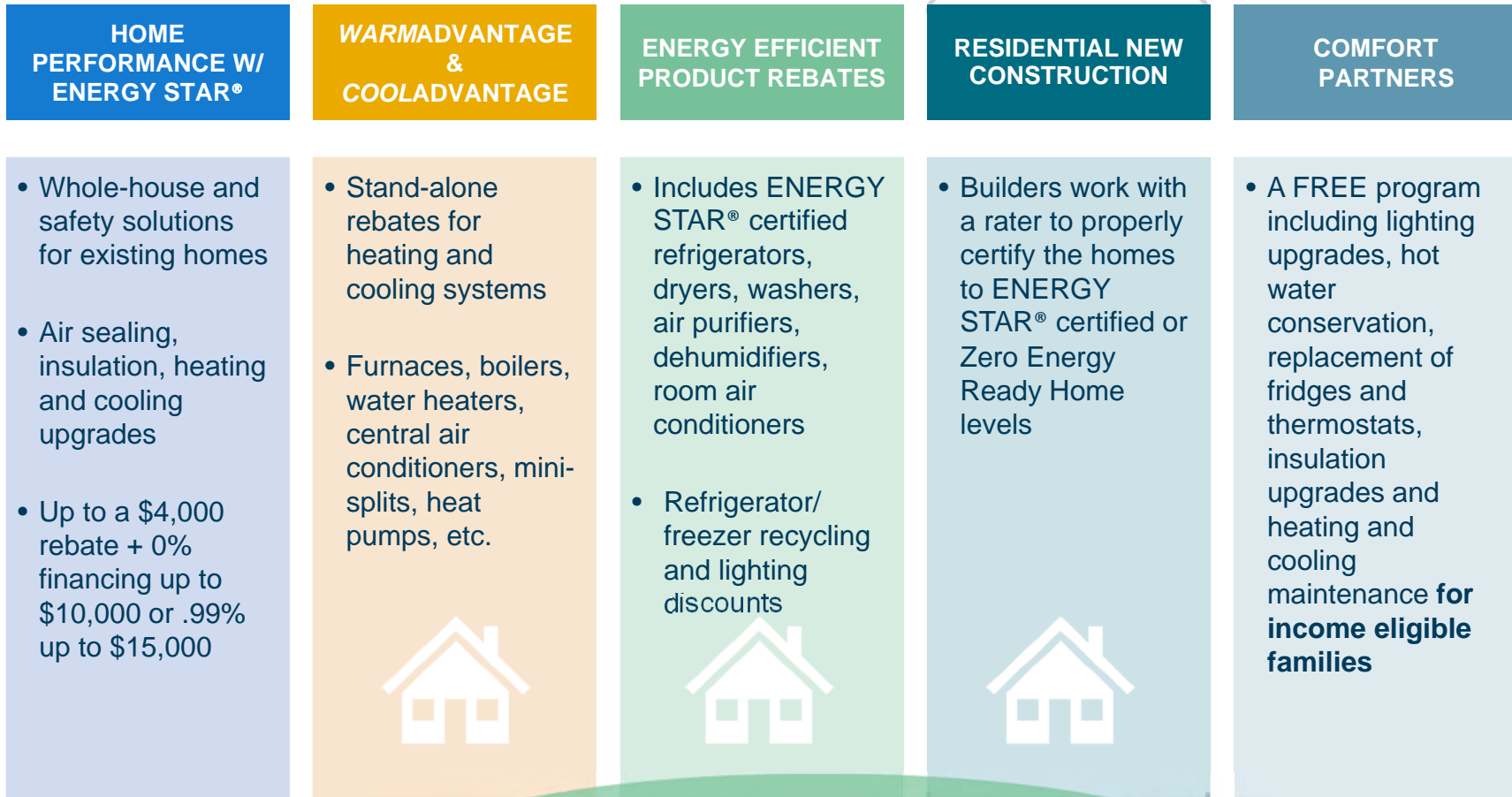


New Jersey's  
**cleanenergy**  
program™



# Residential Portfolio of Programs

NJCleanEnergy.com/RESIDENTIAL



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



# Residential New Construction Overview

RESIDENTIAL NEW  
CONSTRUCTION

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



**New Construction or reconstruction (gut rehab)**



**Demand for power is less**



**Operates more efficiently**



**15%-50% more Energy Efficiency and can save  
\$200-\$400 yearly**



# Benefits of an Energy-Efficient Home

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

RESIDENTIAL NEW  
CONSTRUCTION

- Homes are designed and built to standards well above other homes on the market today
- Builders work with Rating Companies credentialed through the Residential Energy Services Network (RESNET) to build or reconstruct homes to energy efficient standards
- Builders receive incentives for certified ENERGY STAR Homes, Zero Energy Ready Home and Multi-Family High Rise Homes



# Features of an Energy Efficient Home

RESIDENTIAL NEW  
CONSTRUCTION

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

- A complete thermal enclosure system, includes:
  - Comprehensive air sealing
  - Quality-installed insulation
  - High-performance Windows
- High Efficiency HVAC Systems
- Energy-efficient Lighting and Appliances
- For more information:  
[NJCleanEnergy.com/RNC](http://NJCleanEnergy.com/RNC)



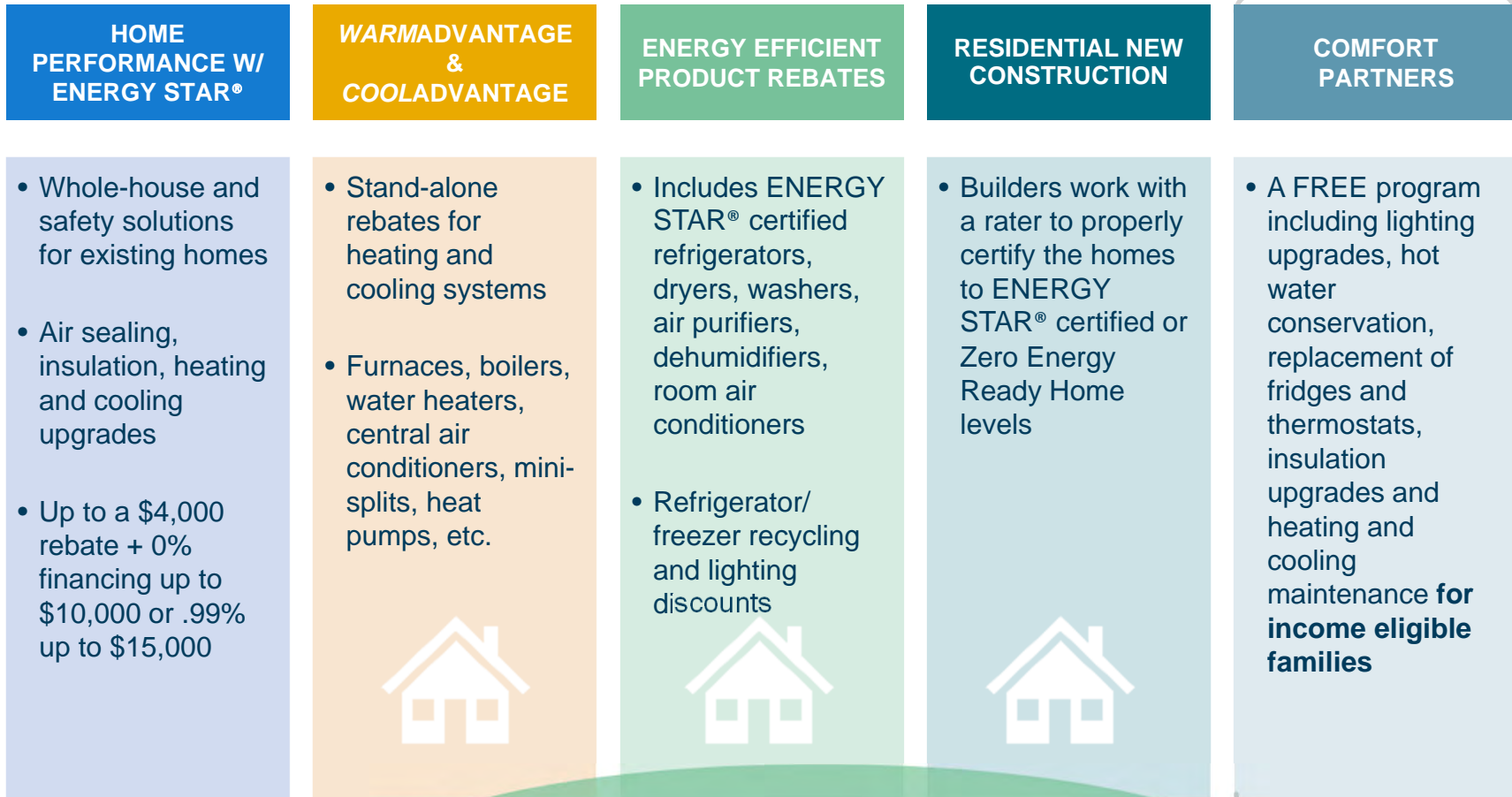
# Residential Bonus Incentives

Existing Program	Urban Enterprise Zone (UEZ)	Low to Moderate Income (LMI)	Affordable Housing
WARM/COOL	\$200	\$200	\$200
Residential New Construction	\$500	N/A	Only for Single Family and Multi-Single \$500
Home Performance (depends on tier of program)	\$500, \$750, or \$1,000	\$500, \$750, or \$1,000	All Building Types \$500, \$750, or \$1,000

Each program only permits residents to receive one of the above incentives.

# Residential Portfolio of Programs

NJCleanEnergy.com/RESIDENTIAL



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



# Comfort Partners Overview

NJCleanEnergy.com/CP

COMFORT PARTNERS

This free, energy-saving and education program is geared to low-income homeowners who have an income at or below 250% of the federal poverty guidelines.

Eligible participants may receive free installation by a Building Performance Institute (BPI) certified contractor of the following (on a home specific basis):

- Energy efficient lighting
- Hot water conservation measures (water heater insulation, water heater pipe insulation and energy-saving showerheads and aerators)
- Replacement of inefficient refrigerators and thermostats
- Insulation upgrades (attic, wall, etc.)
- Blower-door guided air sealing, duct sealing and repair
- Heating/cooling equipment maintenance

For assistance in  
paying utility bills:

<https://www.bpu.state.nj.us/bpu/assistance/programs/>





# ADDITIONAL WAYS TO SAVE





# Assistance Programs

To help meet your energy needs there are state and federal programs:

- Winter Termination Program
- Universal Service Fund (USF) Program
- The Low-Income Home Energy Assistance Program
- Lifeline Program
- Comfort Partners Program
- Temporary Relief of Utility Expenses (TRUE)
- New Jersey Statewide Heating Assistance and Referral Energy Service, Inc. (NJSHARES)



Call your utility company to inquire about their support.

# Energy Savings Tips – Part 1

- Regulate heating and cooling systems
- Set the temperature 8 degrees lower when you are asleep or away in the winter
- Set the temperature 7 degrees higher when you are away and 4 degrees higher when you are asleep in the summer
- Turn on the ceiling fan to improve airflow and create gentle breezes
- Turn fans and lights off when you're not in the room



# Energy Savings Tips – Part 2

## Let the heat in or out:

- **Block out heat in the summer** by keeping blinds or curtains closed during the day (especially on south-facing windows)
- **Let the heat in on winter days** by opening them



# Energy Savings Tips – Part 3

## Use less hot water:

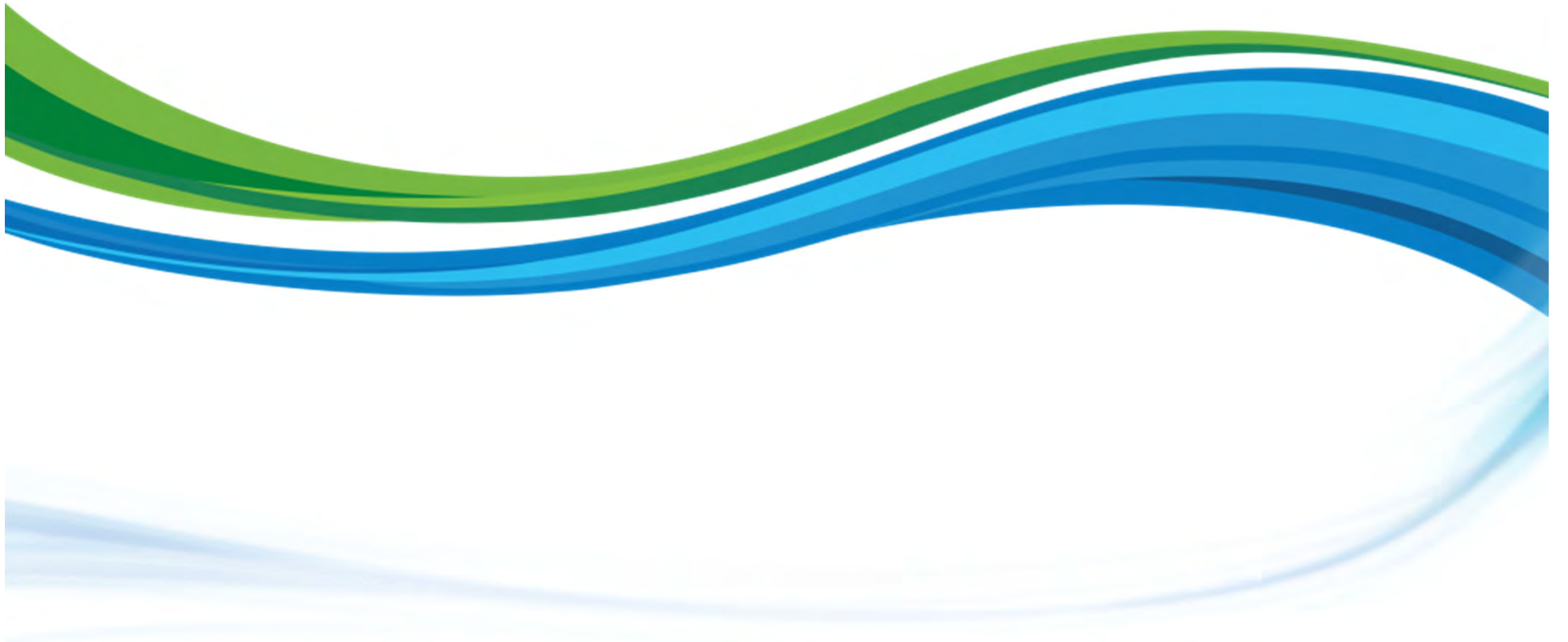
Fact: Water heating accounts for around 12% of a family's utility bill

- Lower water heater temperature from 150° to 120°
- Wash your clothes in cold water
- Take a short shower instead of a bath
- Install low-flow showerheads and faucets
- Fix leaks





**MORE INFORMATION**



# Clean Energy Learning Center

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

- Online education tool – courses and videos
- Audience is building owners and managers, design professionals, energy professionals, contractors, builders, code officials, homeowners, and NJCEP representatives



# Visit Us Today

**BOOTH  
XX**

**Which program is right for you?**  
Visit us today to get started.

# 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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**THANK YOU**



# More Information

**KEN SHEEHAN**

Business Ombudsman

[Ken.Sheehan@bpu.nj.gov](mailto:Ken.Sheehan@bpu.nj.gov)

**VISIT**

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

**NEWSLETTER**

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

**LISTSERVS**

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



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