

# Technical Assistance for Municipal Energy Initiatives

New Jersey League of Municipalities Conference November 15, 2022

## Speakers

Presiding Mayor:
Gabriel Rodriguez
Town of West New York

#### **Brian Greenfield**

Deputy Director of Public Works, Howell Township

### **Nancy Quirk**

Sr. Energy Program Manager, Sustainable Jersey

#### **Keith Rella**

Public Information/Administration, Brick Township

#### Michelle Rossi

ESIP Coordinator, NJBPU

#### **Rosemarie Suarez**

Sustainability Coordinator, Town of West New York

## Introducing Sustainable Jersey

- Certification program for municipalities and schools in New Jersey
- Tools, resources, and guidance to help municipalities and schools become more sustainable
- Grants and funding for municipalities and schools
- Regional Hubs



## Sustainable Jersey Participants



Municipal Program



**Schools Program** 

## **Schools Program**

- 64% of NJ school districts participating
- 1056 schools participating
- 365 schools certified
  - 317 Bronze
  - 48 Silver

## **Municipal Program**

- 82% municipalities participating
- 465 municipalities participating
- 221 Certified
  - 151 Bronze
  - 69 Silver

## Participants Map Search

Find examples of documentation from certified towns and connect with municipal green teams

www.sustainablejersey.com/certification/search-participating-municipalities-approved-actions



## **Municipal Energy Actions**

	Energy Efficiency	Renewable Energy	Alternative Fuel Vehicles
Municipal Operations	<ul> <li>Energy Efficiency for Municipal Facilities</li> <li>Energy Tracking and Management</li> </ul>	<ul> <li>On-Site Geothermal</li> <li>On-Site Solar</li> <li>+10 pt storage/resilience</li> <li>+ 5 pt solar thermal</li> <li>On-Site Wind</li> <li>Buy Renewable Energy</li> </ul>	<ul> <li>Fleet Inventory</li> <li>Purchase Alternative Fuel Vehicles</li> <li>Meet Green Fleet Targets</li> </ul>
Community Energy Use	<ul> <li>Energy Assistance Outreach</li> <li>Commercial Energy Efficiency Outreach</li> <li>Residential Energy Efficiency Outreach</li> </ul>	<ul> <li>Make Your Town Solar Friendly</li> <li>Municipally Supported     Community Solar</li> <li>Solar Outreach</li> <li>Renewable Government     Energy Aggregation (R-GEA)</li> </ul>	<ul> <li>Make Your Town Electric Vehicle (EV) Friendly</li> <li>Public EV Chargers</li> <li>Electric Vehicle Community Outreach</li> </ul>

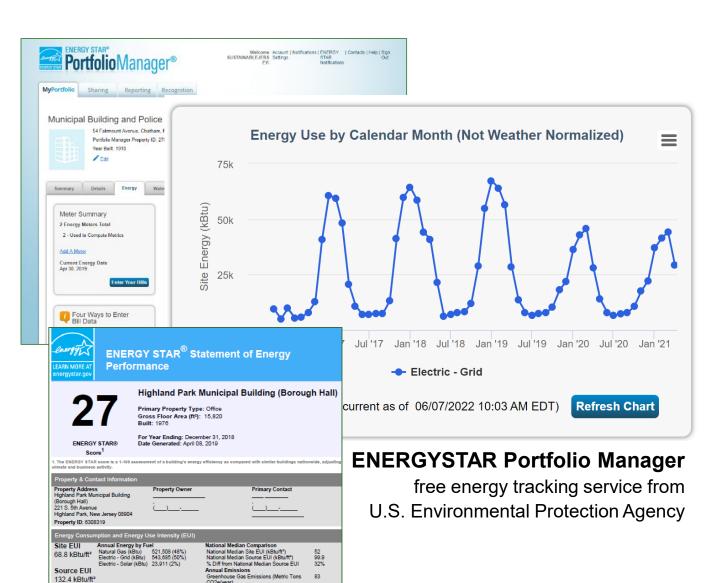
## **Energy Tracking & Management**

## For 10 points

- Building portfolio
- Most recent <u>twelve-months</u> of energy use data for all buildings

## For additional 10 points

- Benchmarking report for each building in the inventory
- Demonstrate <u>ongoing</u> Energy Tracking and Management system



## **Energy Efficiency for Facilities Action**





**5 points** - Audit on at least one building

10 points - Local Government Energy Audit (LGEA)

**15 points** - Significant upgrade work

20 points - LGEA on all buildings PLUS significant upgrade work

30 points - Efficiency upgrades; 10%-19% decreased energy use

40 points - Efficiency upgrades; 20%-29% decreased energy use

50 points - Efficiency upgrades; at least 30% decreased energy use

## NJCEP Incentives

- Local Government Energy Audits
- Energy Savings Improvement Program ESIP
- New Construction / Gut Rehab
- Combined Heat & Power & Fuel Cells



#### njcleanenergy.com/muni

sletters | Contact Us | Site Map

Search

RESIDENTIAL

COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT

RENEWABLE ENERGY

#### COMMERCIAL, INDUSTRIAL & LOCAL GOVERNMENT

HOME

**▼ PROGRAMS** 

▼ EXISTING BUILDINGS ENERGY EFFICIENCY

BENCHMARKING

LARGE ENERGY USERS PROGRAM

LOCAL GOVERNMENT ENERGY
AUDIT

UTILITY PROGRAMS

▼ NEW CONSTRUCTION ENERGY EFFICIENCY

> SINGLE MEASURE: SMARTSTART NEW CONSTRUCTION

MULTI MEASURE: CUSTOMER TAILORED

COMPREHENSIVE: PAY FOR PERFORMANCE

**▼ DISTRIBUTED ENERGY RESOURCES** 

COMBINED HEAT AND POWER FUEL CELL

DER MICROGRID FEASIBILITY
STUDIES

▼ OTHER/SPECIALIZED

ENERGY SAVINGS
IMPROVEMENT PROGRAM

#### Home » Commercial & Industrial

#### Local Governments, Schools and Non-Profits

#### Note: Select energy efficiency programs for existing buildings are transitioning to the utility companies

To learn more about this transition and for utility contact information, please visit this page.

NJCEP Pay for Performance (P4P) for existing buildings and NJCEP Direct Install will no longer accept applications starting July 1, 2021. All eligible applications accepted before that time will continue with NJCEP until final payment.

PSE&G customers who purchased electric or natural gas energy efficiency equipment prior to June 1, 2021 may be eligible for SmartStart Buildings (SSB) and/or Customer Tailored Energy Efficiency Program (CTEEP) rebates. For non-PSE&G customers, equipment purchased prior to July 1, 2021, may be eligible for SSB and CTEEP rebates.

For projects (single- or multi-measure) saving electricity and natural gas, aka "dual-fuel", where gas or electric service, but not both, are provided by PSE&C should continue to apply to NJCEP's SSB, CTEEP, and P4P existing buildings until the other utility programs launch.

NJCEP's SmartStart Buildings (SSB), Customer Tailored Energy Efficiency Program (CTEEP), and Pay for Performance (P4P) programs will remain available for new construction projects and major gut renovation projects only beginning on July 1, 2021.

Throughout New Jersey, residents and business owners are looking for ways to save energy and the environment - local governments and schools are no exception. New

#### Program Updates

Energy Efficiency Program
 Transition Update

Other updates posted

#### Program Literature



Applications and Brochures Download the Latest Program Materials

#### Find a Trade Ally

Select a contractor for an energy efficient upgrade today!



#### Success Stories



Library IV
Restaurant
New Lighting and HVAC
equipment for greater

#### Clean Energy Learning Center



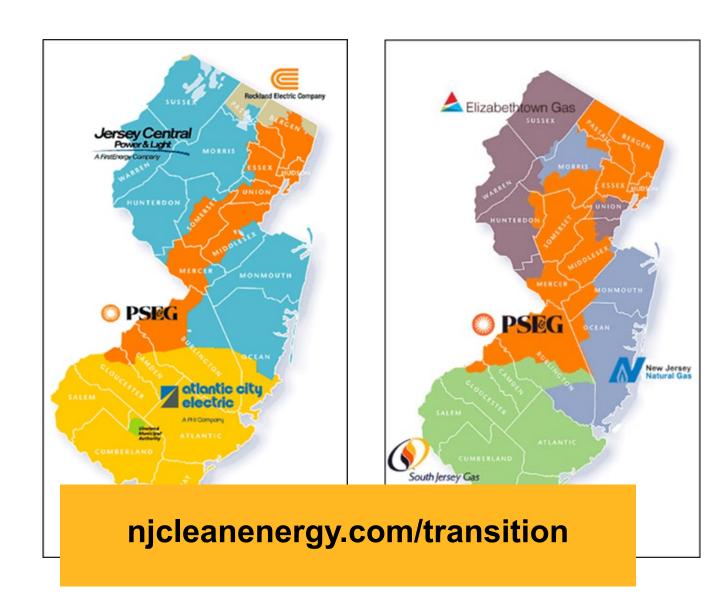
#### Local Govt and Schools



Find out what financial incentives are available today!

## **Utility Incentive Programs**

- Incentives vary by utility
- Contact your local natural gas and electric utilities





## Sustainable Jersey Energy Technical Assistance

## Sustainable Jersey Staff can help your municipality or school district with:

- Energy Tracking and Management
- Applying for Local Government Energy Audits (LGEAs)
- Applying for State and utility energy efficiency incentives
- Applying for NJCEP's Energy Savings
   Improvement Program

to learn about current technical assistance options open to your school or municipality.



## SJ-PSE&G Partnership Program



#### Three tracks

- Technical Assistance (TA)
- Residential Energy Efficiency Outreach
   Campaign
- Commercial Energy Efficiency Outreach
   Campaign

#### **Customized Outreach tools**

- Video
- Outreach campaign website
- PSE&G giveaways

- Robust TA and implementation support for upgrading municipal buildings
- Technical and financial support for community outreach campaigns
- Sustainable Jersey points

Sign up today at Booth # 103







## New Funding Cycle Announced!

- \$200,000 available for NJ municipalities participating in Sustainable Jersey
- \$2k, \$10k, and \$20k grants for sustainability projects and green team support

## Informational Webinar

1-2pm Thursday **December 8,** 2022

## Application Deadline

Friday
February 10,
2023

## Award Notifications

By early April 2023 with an event in early May 2023

#### Performance Period

**10k Grants:** 18 months

10 1110111110

**2k Grants:** 12 months

#### **Learn More & Apply**



## **Sustainable Jersey Underwriters and Sponsors**

#### **Program Underwriters**











#### **Grant Program Underwriters**



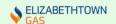


#### **Corporate Sponsors**















































## **Township of Brick**

Area total 32.22 sq.mi./25.61 sq.mi./Water 6.61 sq.mi.

Population (2020 Census) 73, 620 – 13th of 566 in NJ

53 miles of waterfront property 3,000 acres of preserved lands 32,043 Housing Units

\$61,317 Median Income \$28,860 Per Capita Income 4.5 % Poverty Rate 2.0 % Unemployment Rate

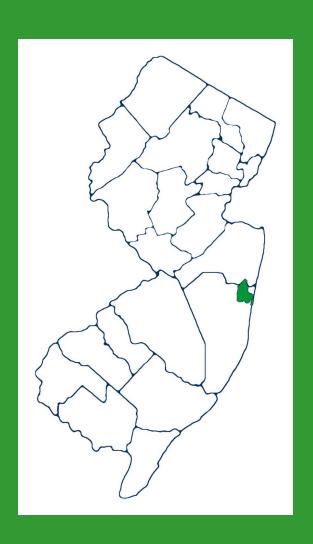


**Brick Township Reservoir** 

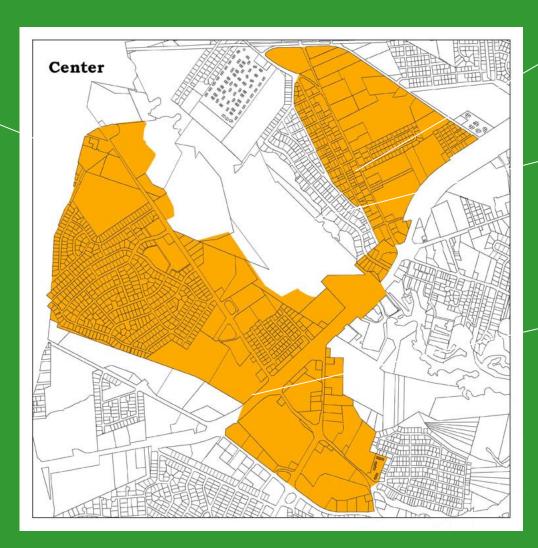


**Summerfest at Windward Beach Park** 

## **Township of Brick**



GSP<sub></sub>



Rt.88

Forge Pond – Drinking Water Source & Golf Course

-Rt. 70



# TOWNSHIP OF HOWELL

## **DIRECT INSTALL PROGRAM FOR (4) BUILDINGS**





## **DIRECT INSTALL**

- BRIAN GREENFIELD, DEPUTY DIRECTOR, HOWELL PUBLIC WORKS
  - HOWELL TOWNSHIP, MONMOUTH COUNTY
  - Pop. 52,000 (2019), AREA. 61 Sq. MILES
- IMPLEMENTATION OF THE DIRECT INSTALL PROJECT
  - PUBLIC WORKS GARAGE
  - LIBRARY
  - SENIOR CENTER
  - CRIMINAL JUSTICE BUILDING
  - PROJECTED OVERALL PAYBACK FROM SAVINGS IN 2.8 YEARS
  - ESTIMATED FIRST YEAR ENERGY SAVINGS OF \$50,465
- ENGINEERED SOLUTIONS
  - TOWN HALL OVER 200 kW
- ADDITIONAL MILESTONES

## PUBLIC WORKS GARAGE

- SIGNED AGREEMENT WITH LIMBACH
  - INSTALL TWO (2) NEW CARRIER RTU'S NATURAL GAS
  - INSTALLATION OF THREE (3) LOW FLOW SHOWER HEADS
  - INSTALL NINE (9) NEW WIFI PROGRAMAMBLE THERMOSTATS THAT WILL OPERATE NEW RTU'S AND (18) GAS FIRED UNIT HEATERS
  - INSTALL LED LIGHTING THROUGHOUT BUILDING
- PROJECTED CUSTOMER PAYBACK FROM SAVINGS IN 1.53 YEARS

ESTIMATED FIRST YEAR ENERGY SAVINGS OF \$35,857

## **LIBRARY**

- SIGNED AGREEMENT WITH LIMBACH
  - INSTALL TWO (2) NEW GAS FIRED BOILERS
    - DOMESTIC WATER STORAGE TANK
    - ELIMINATES NEED FOR OLD ELECTRIC WATER HEATER.
  - INSTALLATION OF LED LIGHTING THROUGHOUT THE BUILDING.
- PROJECTED CUSTOMER PAYBACK IN 2.2 YEARS

• ESTIMATED FIRST YEAR ENERGY SAVINGS OF \$10,153

## **SENIOR CENTER**

- SIGNED AGREEMENT WITH LIMBACH
  - INSTALL NEW CARRIER HIGH EFFICIANCY FURNACE AND CARRIER AIR CONDITIONER AND EVAPORATOR COIL
  - INSTALL THREE (3) NEW WIFI ENABLED HONEYWELL PROGRAMMABLE THERMOSTATS USING ROUTERS.
    - TWO (2) OF THE T-STATS WILL BE FOR 2 RTU UNITS THERE WERE REPLACED LAST YEAR
  - INSTALL 10 LOW FLOW SINK AERATORS
  - INSTALL LED LIGHTING
- PROJECTED CUSTOMER PAYBACK FROM SAVINGS IN 4.81 YEARS
- ESTIMATED FIRST YEAR ENERGY SAVINGS OF \$2932.00

## CRIMINAL JUSTICE BUILDING

- SIGNED AGREEMENT WITH LIMBACH
  - REMOVE EXISTING BOILER AND REPLACE WITH TWO (2) NEW ENERGY EFFICIENT NATURAL GAS FIRED UNITS INCLUDING AN INDIRECT WATER HEATER TANK
  - VFD'S WERE ALREADY INSTALLED ON THE TWO (2) HOT WATER PUMPS FOR THE BOILER THAT WERE EXISTING.
  - HONEYWELL WEB CONTROL SYSTEM ALREADY IN PLACE. ALL PROGRAMMING CAN BE DONE REMOTELY.
- PROJECTED CUSTOMER PAYBACK FROM SAVINGS IN 2.27 YEARS
- ESTIMATED FIRST YEAR ENERGY SAVINGS OF \$9,417

## ENGINEERED SOLUTIONS PROGRAM MUNICIPAL BUILDING

HOWELL HAS STARTED THE PROCESS OF MOVING FORWARD WITH AN AUDIT OF OUR MUNICPAL BUILDING, IT DID NOT QUALIFY FOR THE DIRECT INSTALL PROGRAM AS IT CONSUMES MORE THAN THE 200 KW THRESHOLD.

AN AUDIT WILL BE DONE TO IDENTIFY ENERGY EFFICIENT INVESTMENT OPPORTUNITIES TO VARIOUS SYSTEMS SUCH AS HVAC, MOTORS, AND LIGHTING.

HOWELL HAS ALSO STARTED TO EXPLORE AREAS THROUGHOUT TOWN TO INSTALL SOLAR.

## **ADDITIONAL MILESTONES**

THROUGH A GRANT FUNDED BY THE PSEG FOUNDATION AND THE SUSTAINABLE JERSEY GRANTS PROGRAM, OUR DPW DIRECTOR PAUL NOVELLO HAS WORKED CLOSELY WITH THE TOWNS GREEN TEAM TO ADD 4 WATER BOTTLE FILLING STATIONS TO OUR MUNICIPAL BUILDING.

HOWELL WAS SUCCESSFUL IN ACHIEVING THE "SILVER" LEVEL IN 2022.

A SPECIAL THANK YOU TO OUR EDF FELLOW NAKUL SANGOLLI AND LISA DOUD OF HOWELL'S GREEN TEAM IN MOVING HOWELL TO A GREENER TOMORROW.

## **CONCLUSION**

- IMPLEMENTATION OF THE DIRECT INSTALL PROJECT
  - PUBLIC WORKS GARAGE
  - LIBRARY
  - SENIOR CENTER
  - CRIMINAL JUSTICE BUILDING
- PROJECTED OVERALL PAYBACK FROM SAVINGS IN 2.8 YEARS
- ESTIMATED FIRST YEAR ENERGY SAVINGS OF \$50,465
- ENGINEERED SOLUTIONS



# New Jersey League of Municipalities: Sustainable Jersey Technical Assistance Panel 2022

Mayor Gabriel Rodriguez

Rosemarie Suarez, M.S., Sustainability Coordinator



## Table of Contents

- I. Introduction
- II. Sustainable Jersey Certified
- III. SJ Technical Assistance
- IV. Projects
- V. Acknowledgement



## Town of West New York

Population: over 52,000

Foreign born: 59.4%

76.1 % Hispanic or Latino

2ND Most densely populated municipality in the US.

Median Household Income: \$64,378

> Data: Census Bureau 2020- 2021



## Sustainable Jersey Certified and Reducing Carbon Footprint



- Bronze Certified in December 2020
- Sustainability Management Plan
- Electric Fleet Upgrade
- Direct Install Program







## Sustainable Jersey Technical Assistance

- Hogan Dwyer (Winter Spring)
  - Local Government Energy Audit Information (LGEA)
  - Fleet Inventory List
  - Building Emissions Reduction and Disclosure Ordinance
  - Energy Star Portfolio Manager
- Trevor Harper (Spring Summer)
  - Electrical Fleet Upgrade
  - Comfort Partners vs. Weatherization (PSE&G)
  - Meter Key





## Local Government Energy Audit

## Local Government Energy Audit (LGEA)

- DPW Garage
- Library
- Town Hall
- EMS
- SJ Points: Energy Efficiency for Municipal Facilities 5-50 Points

- Benchmark and track energy usage for the next 1 to 3 years.
- Properly reading the bills.
- NJCEP were in the middle of going through program changes.
- Contacted PSE&G on opportunities.
- Solution: Energy Star Portfolio Manager

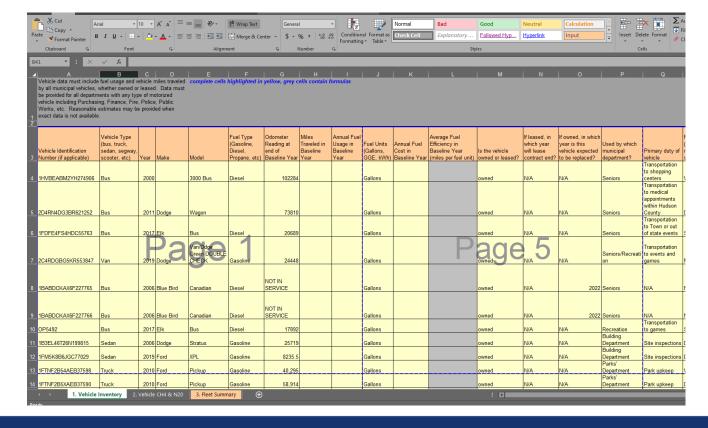


## Fleet Inventory

## Inventory

- Spreadsheet
- Breakdown Methane and Nitrous Oxide Emissions
- **SJ Points:** 10 Points

- Entering Data
- Tracking the mileage







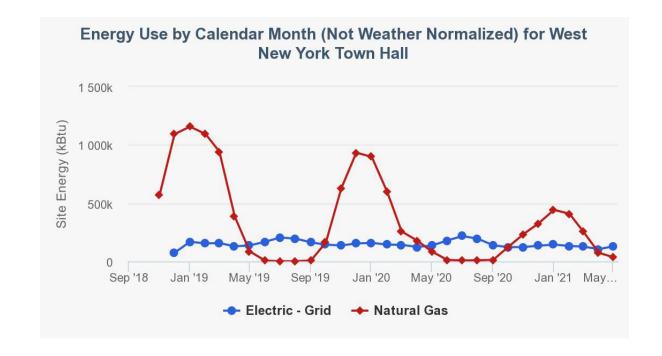


## Energy Star Portfolio Manager

## Energy Star Portfolio Manager

- Benchmark and track energy usage for 4 municipal buildings.
- SJ Points: Energy Tracking and Management 10-20 points

- Release and Authorize Utility Data Forms
- Create a meter key
- Set-up a profile for WNY
- Sent over step-by-step









## Fleet Upgrade

## Electrical Fleet Upgrade:

- **Problem:** Electrical service is at full capacity and additional loads cannot be connected to the system.
- Solution: Install second service (480 volts) and install solar panels on the roof
- **SJ Points:** Purchase Alternative Fuel Vehicles 5,10,15 Points Municipal On-Site Solar System 5-45 Points

- Energy Credits
- Upgrade and New Installation
- Net Meter (Electric meters do no register electricity in two directions)
- Solar Loan Programs
- Electric Vehicle Charging Program





## Fleet Upgrade: Mack Truck Demo









## Comfort Partners and Weatherization

### Comfort Partners vs. Weatherization (PSE&G)

- Comfort Partners: Dedicated to low income
  - Residents are eligible for up to \$6,000 per home but can get up to \$20,000 in energy efficiency upgrades.
- Weatherization Program
  - Low to moderate income
  - Residents are eligible for up to \$6,000 in energy efficiency upgrades and \$1,500 in home repairs.





# Thank You New Jersey League of Municipalities and Sustainable Jersey





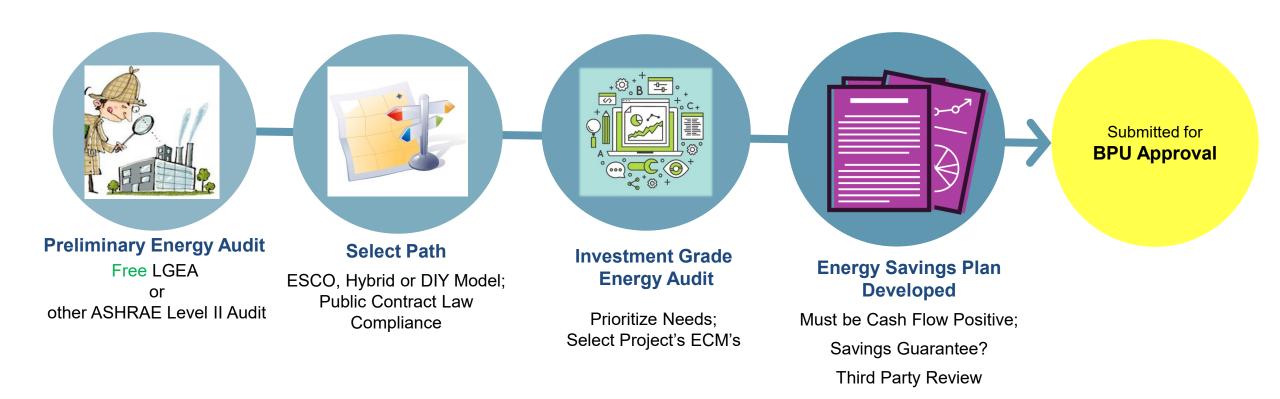
## Financing Mechanism: ESIP

#### **ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)**

- Energy Performance Contracting = NJ ESIP
- A creative tool and financing mechanism that allows public entities to make energy efficiency improvements without impacting their budgets
- Administered by the NJBPU
- Project is paid for with the value of its own energy savings
- 15 or 20 year pay back; self funding
- NJBPU Approved Incentive Programs
  - Utility or NJCEP
- Can be combined with Federal/State Pandemic Relief Funds (ESSER)
- No upfront capital expenses
- No referendum or impact to tax payers



## The ESIP Process







## CLEAN FLEET ELECTRIC VEHICLE INCENTIVE PROGRAM

www.NJCleanEnergy.com/EV

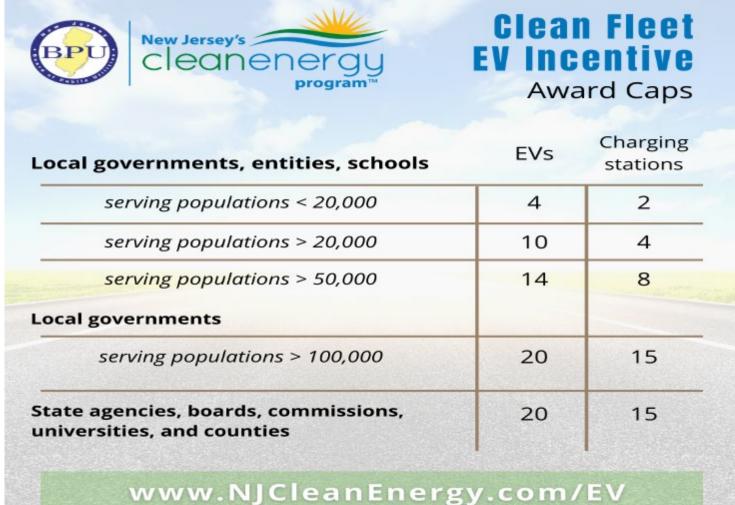
#### **Clean Fleet Incentive Amounts**

- \$4,000 for a Battery Electric Vehicle
- \$5,000 for a public Level 2 charger
- \$4,000 for a fleet Level 2 charger
- 50% (up to \$5,000) for the Make-Ready for any Level 2 charger
- 50% (up to \$50,000) for the Make-Ready and charger for a Fast Charger
- Questions? EV.programs@bpu.nj.gov



## CLEAN FLEET ELECTRIC VEHICLE INCENTIVE PROGRAM

www.NJCleanEnergy.com/EV





## **Energy Savings Improvement Program**

#### FOR MORE INFORMATION

#### Michelle Rossi

**ESIP** Coordinator

ESIP@bpu.nj.gov

o: 609.913.6295

c: 609.915.0903



## Thank You!

## **Nancy Quirk**

Sustainable Jersey quirkn@tcnj.edu

#### **Keith Rella**

Brick Township krella@twp.brick.nj.us

#### **Brian Greenfield**

Howell Township bgreenfield@twp.howell.nj.us

#### **Rosemarie Suarez**

Town of West New York rosezuares@westnewyorknj.org

#### Michelle Rossi

New Jersey Board of Public Utilities Michelle.Rossi@bpu.nj.gov