



Making the Most of Solar in New Jersey

2021 NJLM Conference

November 17, 2021





Speakers

Mayor Robert Hudak
City of Manchester

Meghan Wren
Green Team
Downe Township

Ariane Benrey
Community Solar Program Coordinator
New Jersey Board of Public Utilities

Alex LoSpinoso
Chief of Staff
Director, Linden Economic Development Corp
City of Linden



What is Sustainable Jersey?

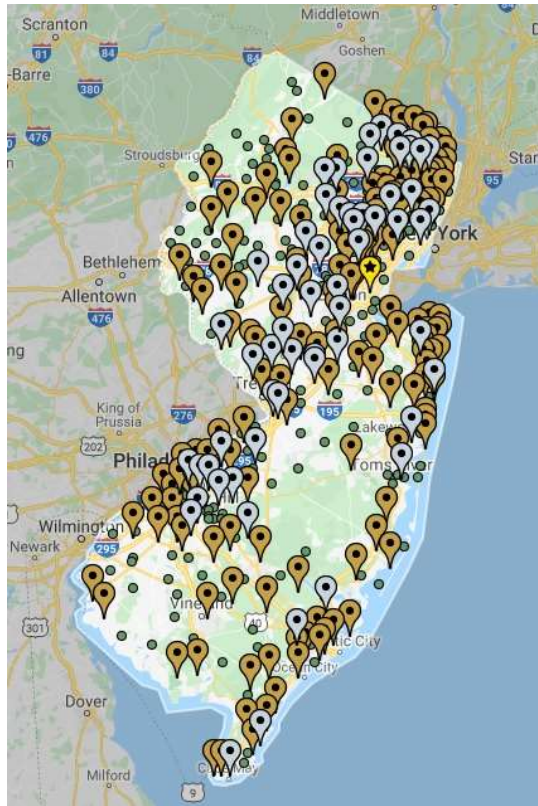
Certification program for municipalities and schools

- **Tools, resources, and guidance** to help municipalities and schools become more sustainable
- **Grants and funding** for municipalities and schools
- **Regional Hubs**

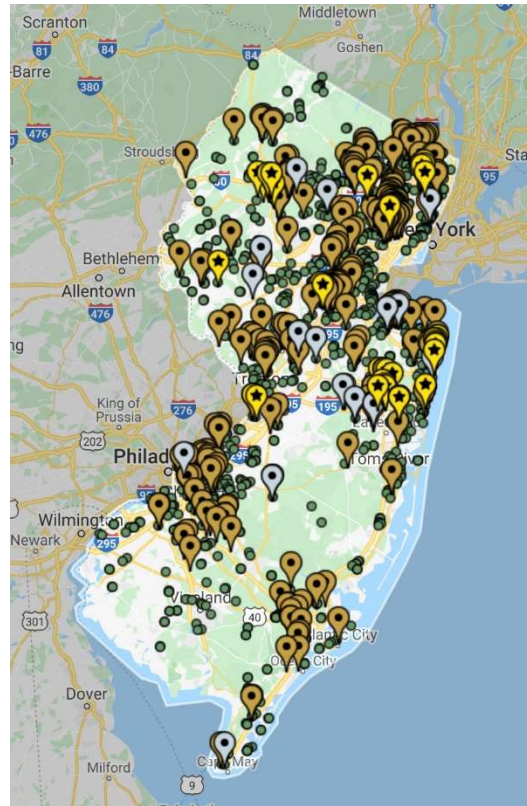




Program Participants



Municipal Program



Schools Program

Municipal Program

460 (81%) participating

219 Certified

- 155 Bronze
- 64 Silver

Schools Program

374 (~54%) districts participating

1025 schools participating

335 schools certified

- 292 Bronze
- 43 Silver



Sustainable Jersey Energy Actions

	Energy Efficiency	Renewable Energy	Alternative Fuel Vehicles
Municipal Operations	<ul style="list-style-type: none"> • Energy Efficiency for Municipal Facilities • Energy Tracking and Management 	<ul style="list-style-type: none"> • On-Site Geothermal System • On-Site Solar System +10 pt storage/resilience + 5 pt solar thermal • On-Site Wind System • Buy Renewable Energy 	<ul style="list-style-type: none"> • Fleet Inventory • Purchase Alternative Fuel Vehicles • Meet Green Fleet Targets
Community Energy Use	<ul style="list-style-type: none"> • Energy Assistance Outreach • Commercial Energy Efficiency Outreach • Residential Energy Efficiency Outreach 	<ul style="list-style-type: none"> • Make Your Town Solar Friendly • Municipally Supported Community Solar • Community-Led Solar Initiatives • Renewable Government Energy Aggregation R-GEA 	<ul style="list-style-type: none"> • Make Your Town Electric Vehicle (EV) Friendly • Public EV Chargers • Electric Vehicle Outreach



Sustainable Jersey Solar Actions

Municipal On-Site Solar

- Points based on percentage of electricity displaced by solar
 - +10 points for energy storage
 - + 5 points for solar thermal

Community-Led Solar Initiatives

- *Solarize* campaign
- Employee purchasing program
- Solar marketplace

Solar Thermal Case Study: Manchester, NJ

- Solar hot water system
- Can reduce water heating costs by 80%
- Hot water for police department:
 - 5 showers
 - 16 sinks



Manchester, NJ solar thermal installation



Make Your Town Solar Friendly

15-30 points

Supportive Solar Zoning Ordinance

- Adopt Solar Zoning Ordinance
- Amend Permitting Fee Ordinance



- Note: [Solsmart Silver](#) designation qualifies for 30 points for this action

Streamlined Permitting

- Post requirements online

Additional activities:

- Train first responders
- Cross-train codes and permitting staff
- Expedited permitting
- Offer narrow inspection timeframe
- Expedite or eliminate zoning review



SolSmart



- Points-based national certification program
- Solar planning, zoning, permitting, and outreach
- SolSmart Silver counts for Make Your Town Solar Friendly Action

solsmart.org

Get started with SolSmart!

Solar Statement to include

- Commitment to SolSmart certification
- Past solar achievement
- Solar goals
- Commitment to track solar metrics in your community



Image from www.solsmart.org.



Online Solar Permitting Tool



- Developed by National Renewable Energy Laboratory (NREL)
- Free for municipalities
- Automated plan review, code compliance check
- Online fee payment
- Can reduce permitting time by 5-10 days

solarapp.nrel.gov/



Image from NREL. solarapp.nrel.gov



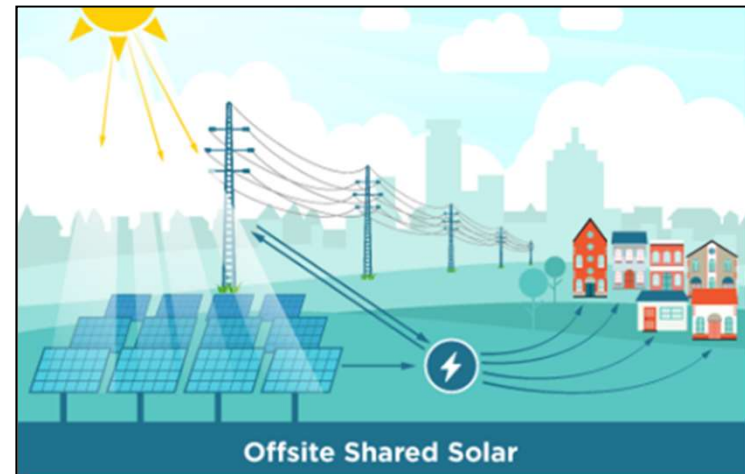
Community Solar

Solar installation with multiple subscribers

- Provides benefits of solar to those not able to install solar (renter, shade, cost)
- Each subscriber receives billing credits for section of larger solar array
- May offer higher savings for low- and moderate-income subscribers

Who can subscribe?

Renters
Businesses
Municipalities
Homeowners



Images from energy.gov/eere/solar/community-and-shared-solar



Municipally Supported Community Solar Action

15 points

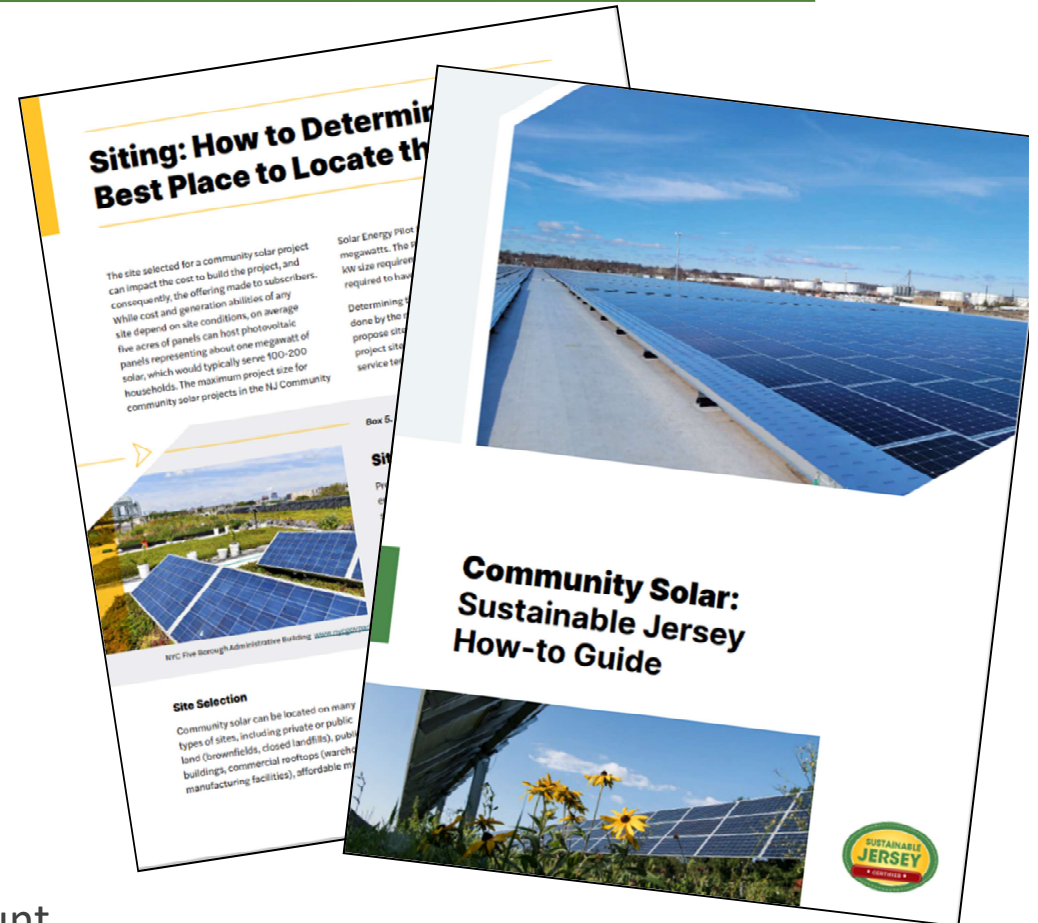
Municipal roles

- community criteria for project
- project ambassador
- outreach partner
- education / outreach campaign

10 additional points (at least TWO):

Municipal project support

- anchor subscriber
- site host
- workforce training
- low and moderate income discount
- energy efficiency services



Sustainable Jersey's
[Community Solar Resource Page](#)



Upcoming Energy Events

NJLM sessions

- **Municipal Fleet Electrification**
 - Thursday, 11/18
 - 10:45 am – Noon
 - Room 421

Sustainable Jersey Webinars

- **Community Energy Plan Grants: A Primer**
 - December 1, 2021, 1:00pm – 2:30pm
- **Make Your Town EV Friendly: New Statewide Model EV Ordinance, New Sustainable Jersey Actions, New Funding**
 - December 7, 2021, 1:00pm – 2:30pm
- **Creating a Community Energy Plan: Resources and Technical Assistance**
 - January 12, 2022, 1:00pm – 2:30pm
- **Funding for Transitioning Fleets to EVs**
 - January 26, 2022, 1:00pm – 2:30pm

Sustainable Jersey Supporters & Sponsors

Program Underwriters



Grants Program

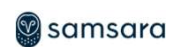


Corporate Sponsors

PLATINUM



GOLD



Making the Most of Solar in New Jersey – League Session

Energy Action: Make your town solar friendly Case Study

Downe Township Green Team
Meghan Wren, Chair



Downe Township, Cumberland County

Context...

5 Villages

1,399 population (2020)

1,585 population (2010)

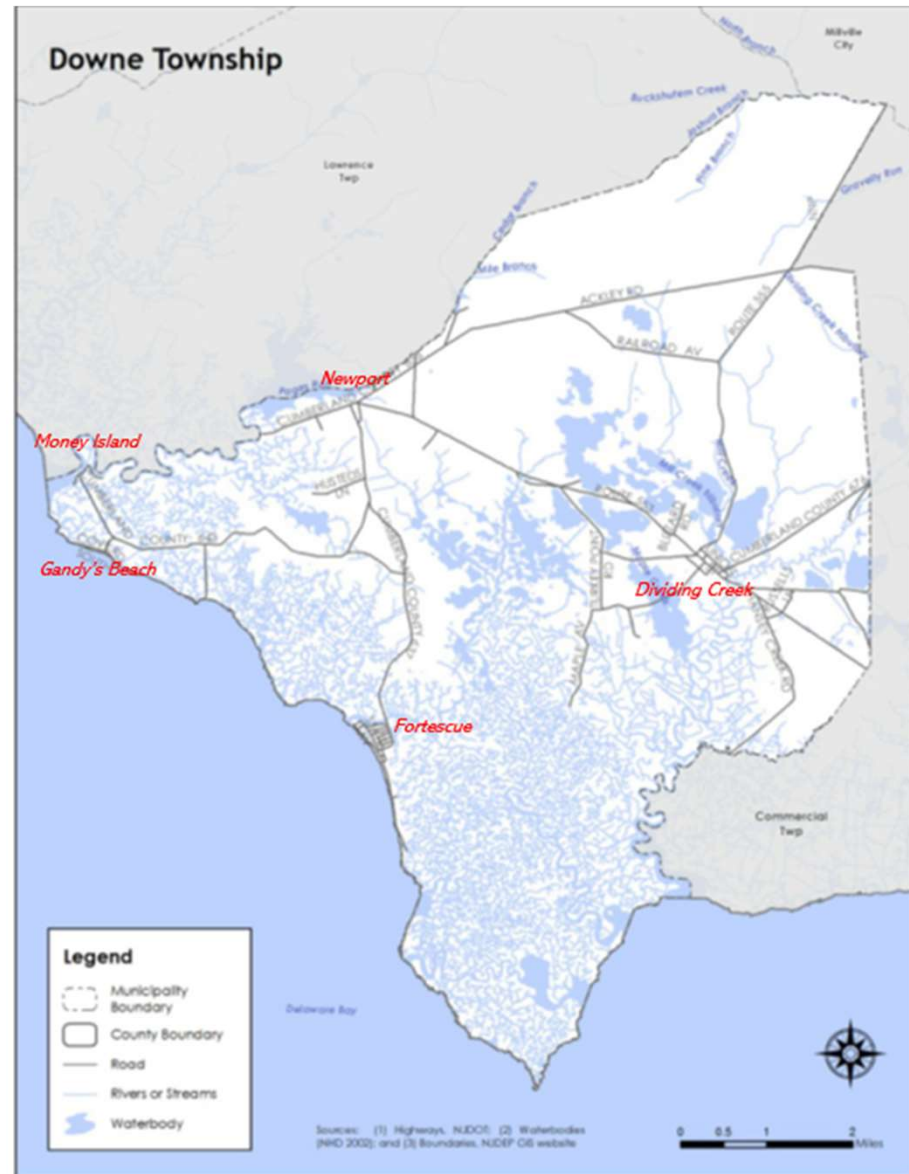


Figure 6 Adopted from Downe Township Hazard Mitigation Plan, 2016, pp CvC.5-6



DOWNE TOWNSHIP
Nature Lover's Paradise

3 waterfront beach towns:

Fortescue

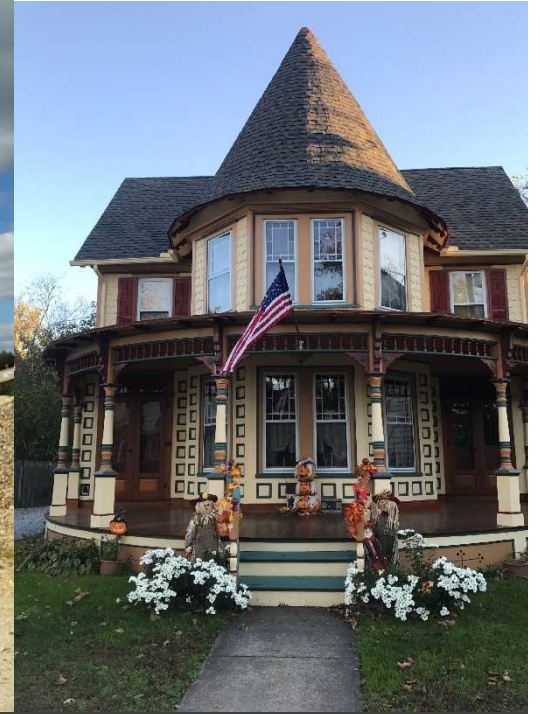
“Weakfish Capital of the World”

Gandy’s Beach

Money Island







More Downe Township: - Not just Beaches, Birds & Boats

Historic Villages

- Newport
- Dividing Creek

“Down home feel”

- Sand Plants
- Old Growth Forests
- Over 80% of land is preserved

(not on tax roles)





Sandy in Downe

>9% Loss of Ratables
30 homes lost in storm
277 of 1,000 damaged
23 Blue Acres Buy-outs



Why Get Certified?

It's FREE, voluntary and provides a roadmap for actions that improve communities.

[Learn More](#)

Sustainable Jersey's certified municipalities are national leaders in implementing solutions to key sustainability challenges. From efforts to reduce waste, cut greenhouse gas emissions, improve public health, stimulate local economies, increase resiliency and progress toward an equitable society, the actions completed by Sustainable Jersey communities have made a significant contribution.

Registration is free and grants are available. With over 455 communities in New Jersey registered, the Sustainable Jersey scene is bigger than ever. Don't miss your chance to:



Save money. Get money.

Sustainable Jersey towns and cities implement practices that lead to cost savings in energy, water and garbage bills. The program helps communities improve efficiency, cut waste and stimulate their local economies. Registered towns get special priority access and notification of incentives and grants, and are eligible for the Sustainable Jersey Grants Program which has provided over **\$5.6 million** for community based initiatives across New Jersey.



Gain access to training, tools and expert guidance.

Sustainable Jersey delivers the research, best practices and technical assistance you need to implement sustainable solutions for your community. Regular training workshops, webinars and regional hub meetings provide your town with connections to the leading experts in important municipal sustainability issues.



Create a better future. Conserve valuable resources.

We need everyone on board to build a common agenda for a sustainable New Jersey. As we face increasing environmental and social challenges, residents want to live in towns that are actively working to secure a sustainable future. The Sustainable Jersey actions cover a wide range of topic areas focusing on people, prosperity and the planet. By becoming a Sustainable Jersey certified town, you align your municipality with your community's values while saving your resources.



Get recognized. Promote your town.

Certified communities are promoted on our website, in our publications, in the media, and are honored at our annual luncheon held at the New Jersey League of Municipalities Conference. They also receive a customized Sustainable Jersey logo and press releases to highlight their accomplishments via their municipal communications channels.



Search Participating Municipalities & Approved Actions

Find green team contacts and learn how certified communities successfully completed Sustainable Jersey actions by using the search features below. You can filter by **certification status**, **action**, and **county**. For additional information about searching the map click [here](#).

460 Total Registered **224** Currently Certified **13,736** Actions Approved **1** Gold Star Awarded

MAP VIEW LIST VIEW

Filter This Map

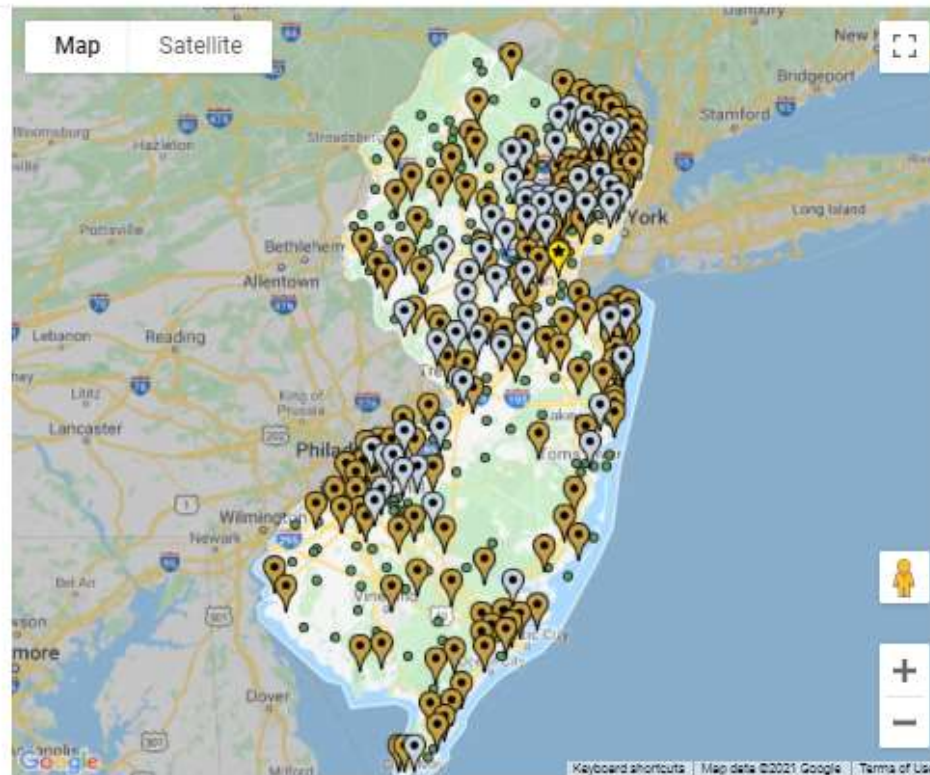
By Status

- Registered
- Bronze Certified
- Silver Certified
- Gold Stars Awarded
- Any Certified
- Any

Filter Reset

By Certified Action

- [Animals in the Community](#)
- [Arts & Creative Culture](#)
- [Brownfields](#)
- [Community Partnership & Outreach](#)
- [Diversity & Equity](#)
- [Emergency Management & Resiliency](#)



Downe Township

- Green Team established 7/8/2019
- Solar Friendly Ordinance 9/9/2019
- Bronze Certified 12/20/21



[Sustainable Jersey Report](#)

Energy

Make Your Town Solar Friendly

15 Points

Program Summary: The Township Committee passed the attached Solar Support Ordinance at its regular township meeting on September 9, 2019.

PDF: [MAKE YOUR TOWN SOLAR FRIENDLY DOCUMENTATION](#)



Municipal Dashboard

> Certification Overview

Why Get Certified?

2021 Certification Cycle

Search Participating Municipalities & Approved Actions

Registration Overview

Register a Municipality

Sign In

> Annual Awards

Resources

FAQs

Sign-In

Before you can access your municipality's application, register a municipality to participate in Sustainable Jersey, or use other special website features, you must sign-up for a Sustainable Jersey account or sign into an existing account.

Applying for a Grant or Submitting a Grant Report? Click [here](#).

Registering a School or District? Click [here](#).

Sign-In

Welcome back! Please enter your email and password below to sign in.

Email Address:

meghanewren@gmail.com

Password:

.....

[FORGOT PASSWORD?](#)

Sign in

Sign-up now to:

- Register a Municipality
- Be Added to a Municipal Profile
- Access a Municipal Dashboard
- Post Events to the Calendar
- Sign-up for Automatic Grant Notifications

Sign Up Now

Municipal Dashboard

> [Action Development](#)

[Priority & Prerequisite Actions](#)

[2021 Certification Cycle](#)

> [Gold Star Standards](#)

[Program Updates](#)

[Search Participating Municipalities & Approved Actions](#)

Resources

[Download Master Action Tracking Spreadsheet](#)

[Download Sustainable Jersey Brochure](#)

[Tour the Sustainable Jersey Website](#)

Actions

Sustainable Jersey actions are designed with flexibility to meet the varying needs of all municipalities. Actions are organized within action categories. Each action description below outlines steps for completion, certification points, resources, and municipal spotlights. Review the requirements to earn Bronze or Silver certification [here](#). Many actions have variable points, which means there are several ways to complete the action based on the work done. Access your municipality's application for certification through the [Municipal Dashboard](#).

Important Note: Due to changes in Chrome, some documents in Sustainable Jersey actions may not download after clicking on the link. The documents can still be downloaded in Chrome by **right clicking** on the link and selecting to **open it in a new tab or window**.

Search Actions

Type in a word(s) to identify all actions with that word(s) in the title

Mandatory
 Priority
 [Search Actions](#)
[Clear Search](#)

↑ BACK TO TOP	EXPAND ALL ↓	COLLAPSE ALL ↑
Animals in the Community	↓	
Arts & Creative Culture	↓	
Brownfields	↓	
Community Partnership & Outreach	↓	
Diversity & Equity	↓	
Emergency Management & Resiliency	↓	

Ordinance Supporting Solar Energy Systems

TOWNSHIP OF DOWNE
COUNTY OF CUMBERLAND, NEW JERSEY

ORDINANCE 2019-13

AN ORDINANCE SUPPORTING SOLAR ENERGY SYSTEMS

BE IT ORDAINED by the Township Committee of the Township of Downe, in the County of Cumberland and State of New Jersey,

SECTION 1 **PURPOSE OF ORDINANCE**

Facilitation of the construction, installation and operation of Solar Energy Systems in Township of Downe, subject to reasonable restrictions, which will preserve the public health, safety, and welfare, while also maintaining the character of the Township and avoid significant impacts to protected resources such as important agricultural lands, endangered species, high value biological habitats and other protected resources. It is the intent of this ordinance to encourage solar facilities that reduce reliance on fossil fuels, increase local economic development and job creation, reduce greenhouse gas emissions, assist New Jersey in meeting its Renewable Portfolio Standards, and/or promote economic development diversification.

SECTION 2 **DEFINITIONS**

A. *Solar Energy System-Accessory Use* - a solar energy system-accessory use consists of one (1) or more photovoltaic,

Action Support on SJ Website

Make Your Town Solar Friendly

15 Points 30 Points

Print Get PDF

<u>Why is it important?</u>	June 2017
<u>Who should lead and be involved with this action?</u>	Through zoning and permitting rules governing solar power, municipalities can influence how quickly solar power is adopted by local residents and businesses. Reducing "soft costs" related to zoning barriers and streamlining permitting and inspection processes can potentially lower the cost of solar installations and reduce unnecessary delays for consumers. This action awards points to municipalities for taking steps to make permitting processes and zoning rules supportive of solar energy, while balancing the aesthetic and safety concerns of each community. In addition, implementing this action may qualify a municipality for the SolSmart National Designation. (See "What to Submit" section below for further information on the SolSmart program.)
<u>Timeframe</u>	There are no prerequisites for this action. Municipalities may complete one or both sections of this action.
<u>Project costs and resource needs</u>	<ol style="list-style-type: none">1. Adopt a supportive solar zoning ordinance and adopt a permitting fee ordinance as recommended in the Sustainable Jersey Guidance for Solar Friendly Ordinances: 15 points.2. Streamline solar permitting processes and inspections: 15 points.
<u>What to do, and how to do it ("How to")</u>	<i>For silver certified communities this action can count toward a Gold Star in Energy. See the Gold Star Standard section of this action for more information.</i>
<u>What to submit to earn points for this action</u>	Why is it important?
<u>Gold Star Standard</u>	Sunlight is a 100% clean and renewable source of energy, and solar is one of the fastest-growing renewable energy alternatives in the country. A range of solar technologies capture energy from the sun for electricity or heating. Solar photovoltaic (PV) panels transform solar radiation directly into electricity. Solar thermal (or solar hot water) collectors capture the sun's energy as heat, and may be used to heat water for commercial and residential hot water needs, including for space heating.
<u>Spotlight: What NJ municipalities are doing</u>	
<u>Resources</u>	

Key Takeaways

- Utilize Sustainable Jersey Website Resources
- Support from Sustainable Jersey staff as needed
- Communications with Township staff/Officials
- Public Outreach
- Lead by example





New Jersey's Successor Solar Incentive (SuSI) Program

November 17, 2021

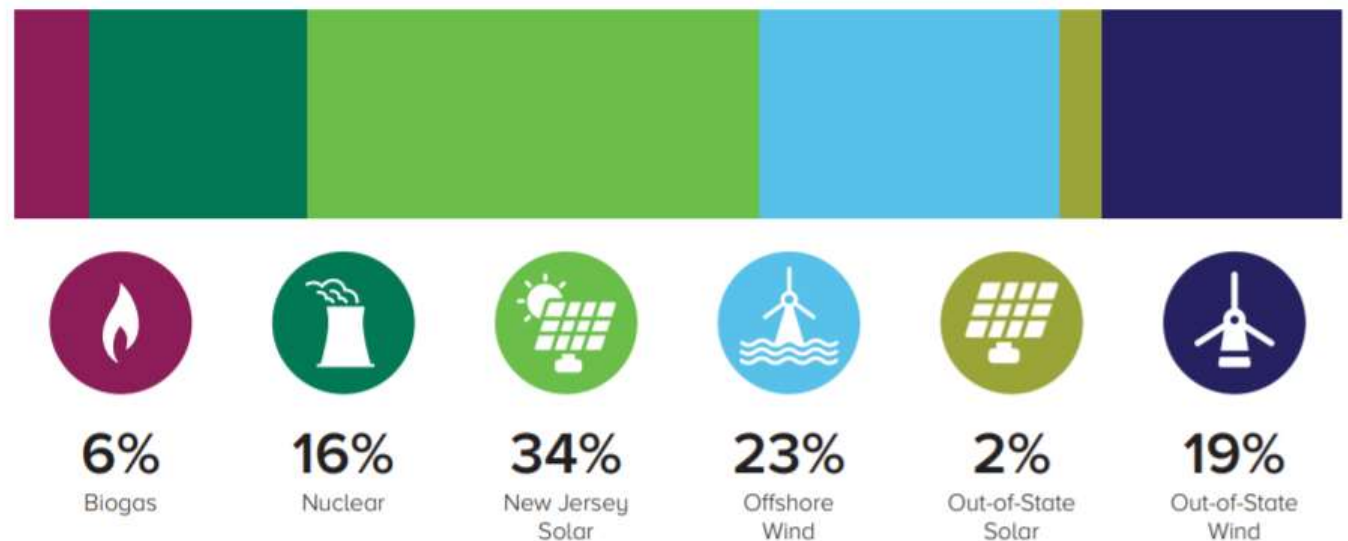
Lighting the Way to a Clean Energy Future

Background: 2019 Energy Master Plan

Goal: 100% clean energy by 2050

Modeling for the Integrated Energy Plan found that by 2050, New Jersey could most cost-effectively meet its electricity demand by building **32 GW of in-state solar**, 11 GW of offshore wind, and 9 GW of storage.

Supply Sources to Meet New Jersey's 100% Clean Energy Requirement in 2050



2019 EMP, p. 102

Background: New Jersey Solar Snapshot

- New Jersey is **7th in the United States for installed solar capacity**, and **1st** in the nation for installed solar per square mile.
- Current installed capacity: **3.7 GW**
 - Approx. 79% net metered, 21% grid supply
 - New! Community Solar
- The NJ solar industry provides nearly **5,400 jobs**.

Options for Going Solar

Net Metering

Community Solar

Grid Supply

**Remote
Net Metering**



Net Metering and Remote Net Metering

- Customers receive full retail credit on their electric utility bill for each kWh of electricity produced by their solar system over the course of a year.
 - > These credits can be “banked” when the solar system produces more electricity than the customer actually uses, and be used at a later time to offset electrical usage.
 - > At the end of the year (“annualized period”), the customer-generator will receive credit on their utility bill at the wholesale value of electricity for any excess generation that remains.
- Remote Net Metering enables public entities certified by the Board to act as a host customer for a solar system, who may allocate net metered credits to other public entities within the same electric public utility service territory.
 - > A public entity certified to act as a host customer may host a solar energy project with a capacity up to the total average usage of the electric public utility accounts for the host public entity customer.

Community Solar

- Community solar systems are typically remotely located solar arrays that are virtually divided among multiple participants (“subscribers”) by means of a credit on their utility bill.
 - > Community solar is intended to provide access to solar energy to renters as well as households institutions, or businesses whose roofs aren’t appropriate for solar installation.
- 150 community solar projects, representing 243 MW, have been approved by the Board as part of the Community Solar Energy Pilot Program (45 projects in the first solicitation; 105 projects in the second solicitation).
 - > The Pilot Program will now be converted to a permanent program, which will target 150 MW new capacity annually.

Solar Renewable Energy Certificate (SREC) Program

- **Legacy SREC Registration Program (SRP)**

- > The Clean Energy Act of 2018 directed the BPU to close the SRP to new registrations once 5.1% of the kilowatt-hours sold in the State were generated by solar electric power connected to the distribution system (known as the 5.1% Milestone).

- > On April 6, 2020, the Board determined that the 5.1% Milestone would be attained before May 1, 2020, and directed that the SRP close to new registrations on April 30, 2020.

- **Why close the SREC Program?**

- > The prior SREC Program has been successful at driving high numbers of solar installations in the state.

- > However, it was very expensive in part due to its “one-size-fits-all” structure and the financial uncertainty inherent in its variable, market-driven incentive values.

Transition Incentive Program

- **Solar Transition Incentive (TI) Program**

- > The TI Program was designed to provide a bridge between the Legacy SREC Program and the soon-to-be-established Successor Program.

- > The TI Program opened to new registrations on May 1, 2020, and closed on August 27, 2021.

- > Fixed, factorized incentives over 15 years.

Successor Solar Incentive (SuSI) Program

- **Goals:**

- > Drive a significant increase in installed solar capacity while prioritizing ratepayer affordability.

- > Tailor incentives to the needs of different projects, thereby enabling the continued growth of the solar industry at a lower cost to ratepayers.

- > Target: **double NJ's installed solar capacity** from 3.7 GW today to 7.4 GW by 2026, by installing **3.75 GW of new solar**.

- > Annual goal of installing 750 MW of new solar capacity, including targets for 300 MW of net metered solar, 150 MW of community solar, and 300 MW of grid supply solar.

- > Solar energy generates over 5% of New Jersey's current electricity needs; under the new SuSI Program, this percentage is expected to rise to approximately 10%.

- **Solar Act of 2021**

Successor Solar Incentive (SuSI) Program

The SuSI Program is comprised of two sub-programs:

- 1) **Administratively Determined Incentive (ADI) Program** which provides administratively set incentive values for net metered residential projects, net metered non-residential projects of 5 MW or less, community solar projects, and, for an interim period, projects previously eligible to seek conditional certification from the Board under Subsection (t).
- 2) **Competitive Solar Incentive (CSI) Program** will provide competitively set incentive values for grid supply projects and net metered non-residential projects greater than 5 MW. Board staff is currently working with stakeholders to develop the design of the CSI Program with the goal of holding the first solicitation by early-to-mid 2022.

ADI Capacity Blocks for Energy Year 2022

Market Segments	System Size	MWdc Capacity Blocks
1. Net-Metered Residential (All Sizes)	All Sizes	150 MWdc
2. Net-Metered Non-Residential (All Installation Types)	All sizes at or below 5 MWdc	150 MWdc
3. Community Solar LMI and Non-LMI	All sizes at or below 5 MWdc	150 MWdc
4. Interim Subsection (t)	All Sizes	75 MWdc (Interim Basis)

ADI Incentives Per Market Segment

Market Segments	Size MW dc	Incentive Value (\$/SREC II)	Public Entities (\$20 Adder) Incentive Value \$/SREC II
1. Net Metered Residential	All types and sizes	\$90	N/A
2. Small Net Metered Non-Residential located on Rooftop, Carport, Canopy and Floating Solar	Projects smaller than 1 MW	\$100	\$120
3. Large Net Metered Non-Residential located on Rooftop, Carport, Canopy and Floating Solar	Projects 1 MW to 5 MW	\$90	\$110
4. Small Net Metered Non-Residential Ground Mount	Projects smaller than 1 MW	\$85	\$105
5. Large Net Metered Non-Residential Ground Mount	Projects 1 MW to 5 MW	\$80	\$100
6. LMI Community Solar	Up to 5 MW	\$90	N/A
7. Non-LMI Community Solar	Up to 5 MW	\$70	N/A
8. Interim Subsection (t)	All types and sizes	\$100	N/A

SREC-II 15 Year Qualification Life



VISIT

NJCleanEnergy.com

NEWSLETTER

NJCleanEnergy.com/NEWSLETTER

LISTSERVS

NJCleanEnergy.com/LISTSERVS

[@NJCleanEnergy](https://twitter.com/NJCleanEnergy)





THANK YOU



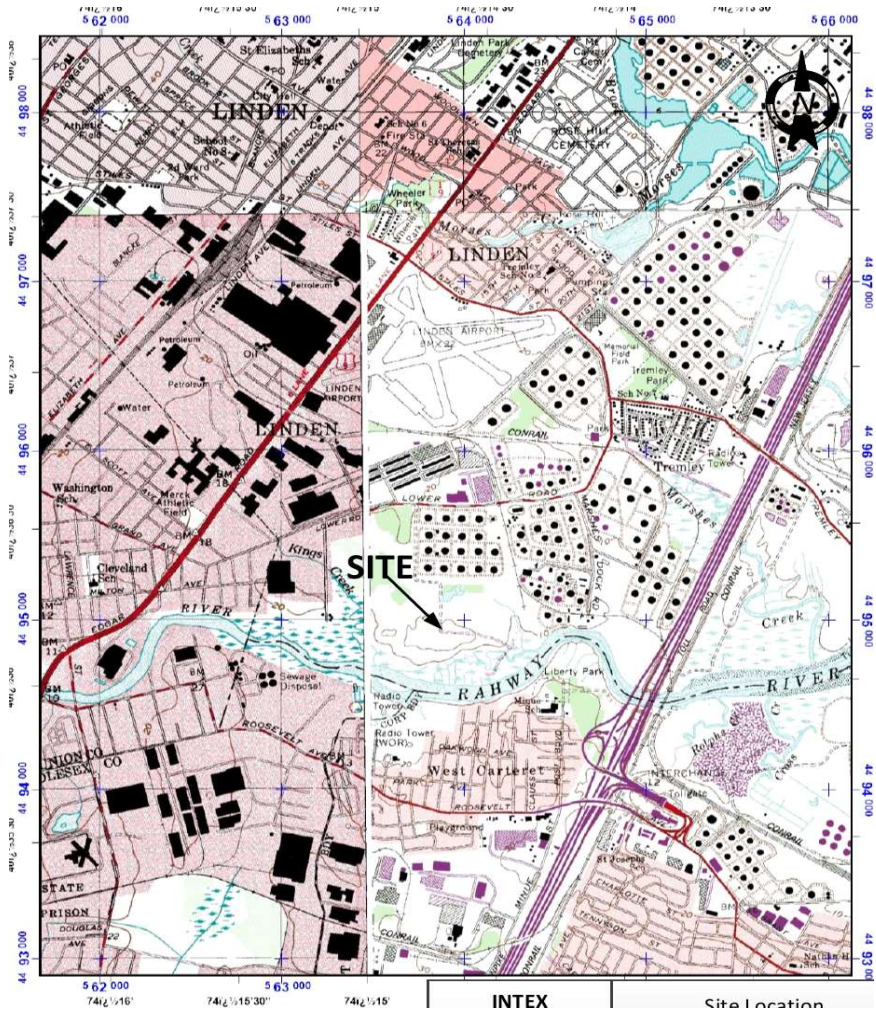


CITY OF LINDEN LANDFILL COMMUNITY SOLAR PROJECT

Presented by Alex Lospinoso

HISTORY OF LINDEN LANDFILL

- ▶ The Linden Landfill is located at 1451 Lower Road, Linden, NJ (Block 581, Lots 11.03 and 17) and consists of approximately 55 acres.
- ▶ The Landfill is owned by the City of Linden. It accepted waste until 2000. It is now properly closed in post closure care. The Landfill is located on land contiguous with the Rahway River.
- ▶ The Landfill mound of approximately 17 acres was found suitable for the siting of a solar array.



Site Location
Map



Google Earth
Image of
Leased Area
and
Utility/Access
Easement

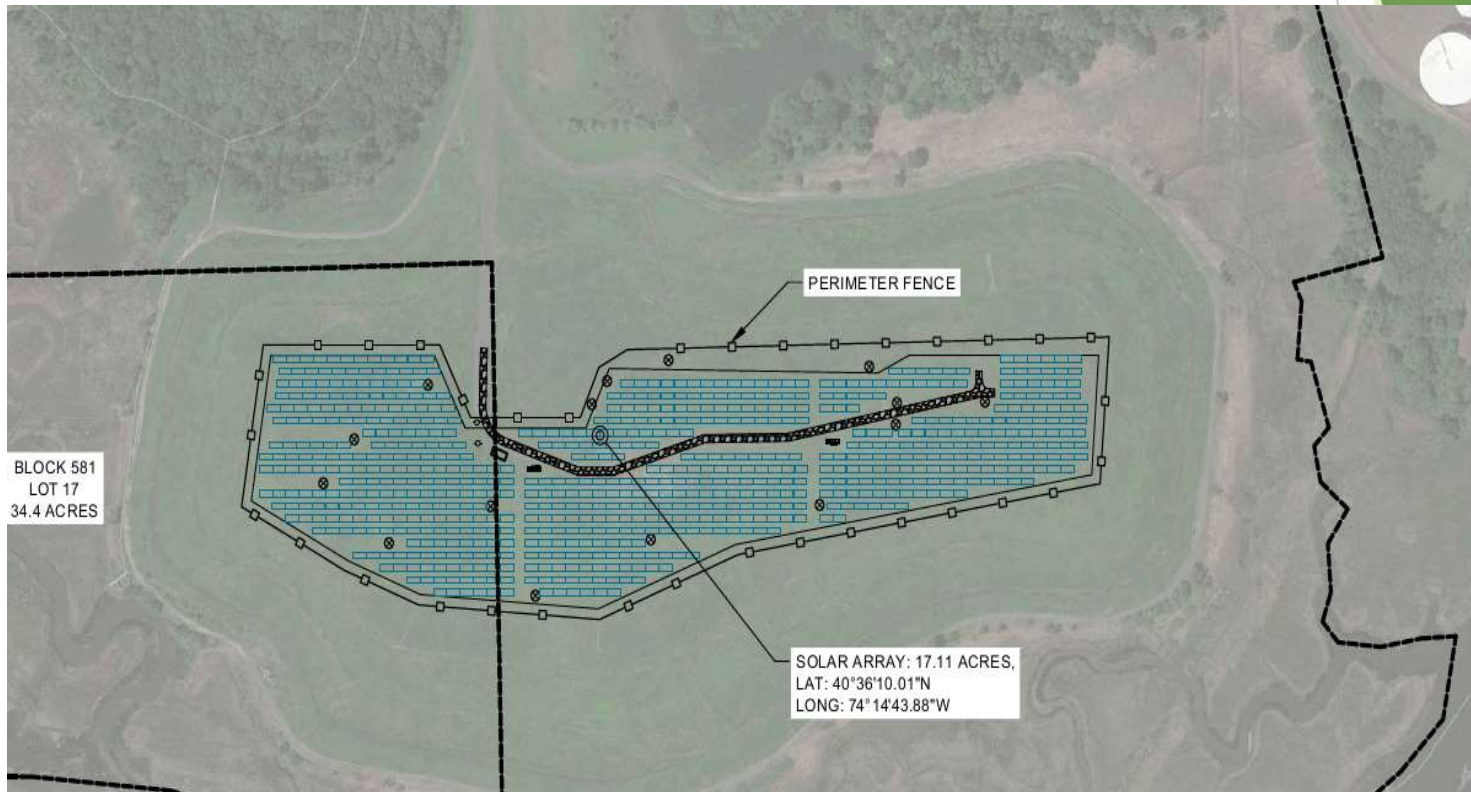
SOLICITATION OF BIDS

- ▶ The City issued a Request for Bid Proposals for “Lease of the Linden Landfill for Development of the Solar System” on June 11, 2019 and received seven (7) Responses
- ▶ The City ultimately awarded a ground lease for the development, construction and operation of a not to exceed 5 megawatt (MWdc) solar facility on the Landfill to Hathaway Solar, LLC an affiliate of CS Energy.
- ▶ The BPU approved the Community Solar Pilot Program at its March 29, 2019 meeting, and the Application Period for Program Year 1 was open from April 9, 2019 to September 9, 2019. **All information available at that time concerning the Community Solar Program was specifically referenced in the RFB.**

COMMUNITY SOLAR APPLICATION

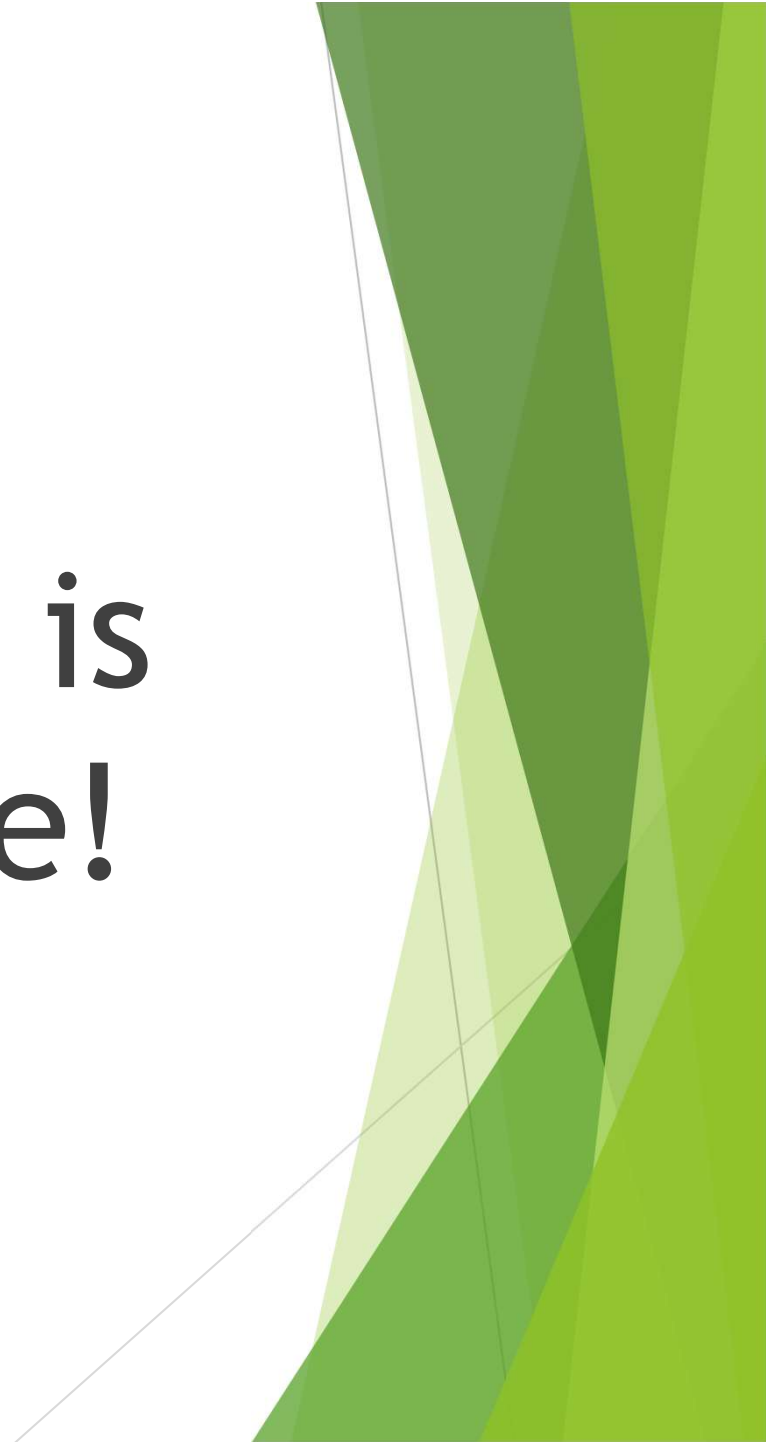
- ▶ Required Applicant (SOLAR DEVELOPER) to show “SITE CONTROL” - a form of the Lease with Linden was attached to the RFB and was submitted with the application
- ▶ Required a “LETTER OF SUPPORT” from the City of Linden, which stated in part, “the City is excited to collaborate with Hathaway to inform our residents on the benefits of the Project and connect our residents with Hathaway so they may participate in the community solar program”
- ▶ Linden’s Project was awarded into PHASE I of the Community Solar Pilot

CONCEPT PLAN



PROJECT STATUS

▶ **Construction is
Now Complete!**

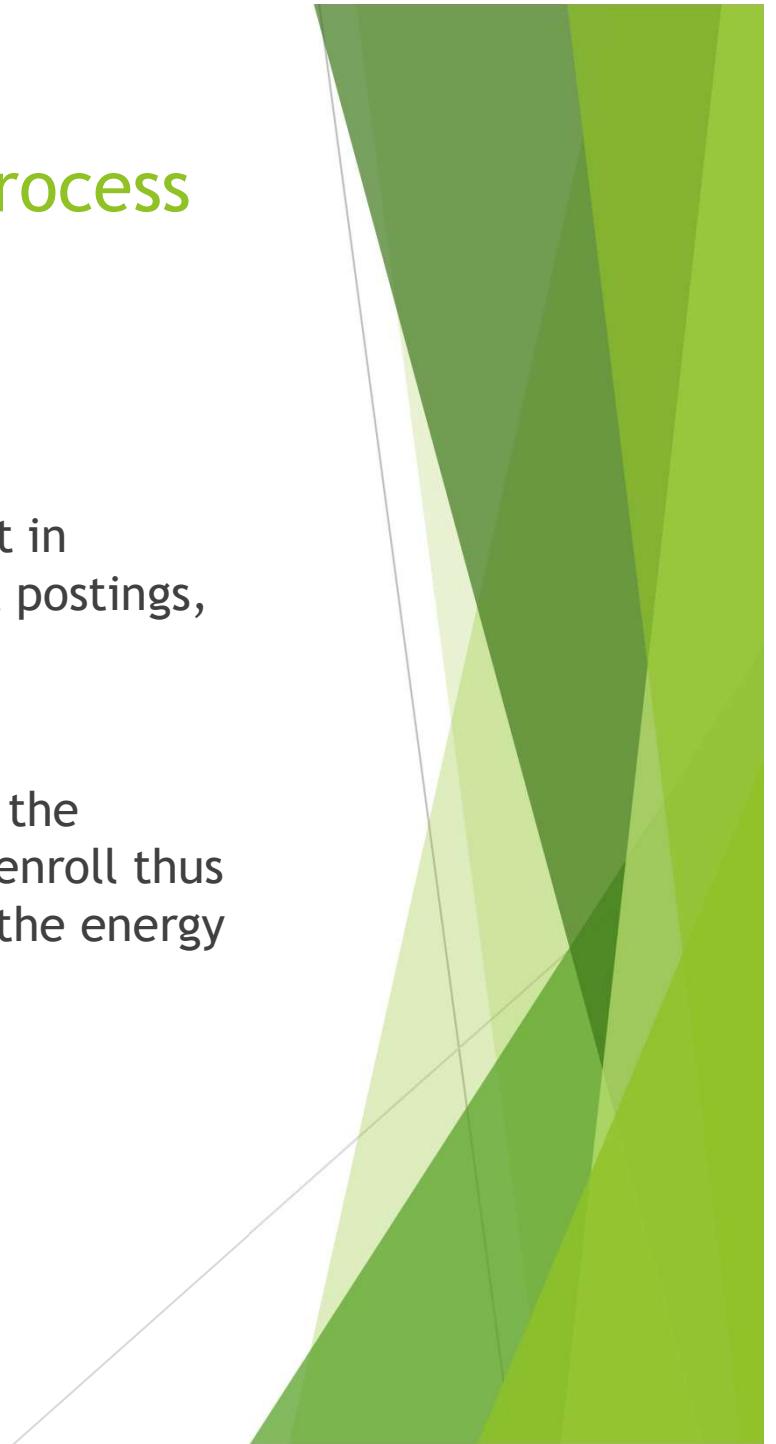


The Panels are placed!



Community Solar Subscription Process

- ▶ The City conducted variety of efforts to assist in subscriptions including mailings, social media postings, webinars and website promoting
- ▶ The solar company was solely responsible for the enrollment process to assist the residents to enroll thus they would be the entity that would provide the energy credits to the residents



A Letter Sent Out To the Residents from Mayor Armstead

Date, 2021

Name
Address
City, State Zip

Dear Name,

As you may know, the City of Linden has partnered with Navisun, a leading owner and operator of solar power facilities, to help you save money. Saving money on your electric bill is consistent with our overall efforts to lower your costs: We have succeeded in reducing your city taxes for five consecutive years and have worked with the Board of Education in reducing your school taxes for three consecutive years.

The Linden Hawk Rise Community Solar project is being built on our former landfill, cleaning up an eyesore while producing clean, carbon-free solar electricity.

PSE&G customers who live in Linden and adjacent municipalities will now be eligible for a 10-15% discount on their monthly electricity costs. There is no charge to sign up for this program and you can cancel any time without penalty.

You have to act quickly: The solar project will produce about 5.4 million kilowatt hours of electricity each year. This is only enough to offset the usage of **the first 600 households** that sign up.

Joining the Linden Hawk Rise solar project is easy: Go to NJLocalSolar.com or call (732) 847-4876. Please use PROMO code **LDA** to get a \$50 Visa gift card as a thank you for supporting green energy.

And if you have any questions, call my office at (908) 474-8493 and we'll put you in touch with the right people at Navisun.

With gratitude for your continued support for a cleaner and more affordable Linden,



Mayor Derek Armstead

SOLAR SYSTEM OPERATION AND MAINTENANCE

- ▶ City expects the Solar System to be fully operational by the end of the year
- ▶ City will receive lease payments for the duration of the term which is for 20 years at approximately \$250,000 per a year
- ▶ The Solar System will be operated and maintained by the solar company

Special Thanks to the Team Involved with this Project!

- ▶ Bhavini Doshi - Attorney from McManimon, Scotland & Baumann
- ▶ CME Engineering
- ▶ Joe Chrobak - Supervising Engineer from City of Linden
- ▶ Mayor Derek Armstead - City of Linden
- ▶ City of Linden Council Members

Any Questions?



MANCHESTER TOWNSHIP LANDFILL CLOSURE SOLAR ARRAY PROJECT

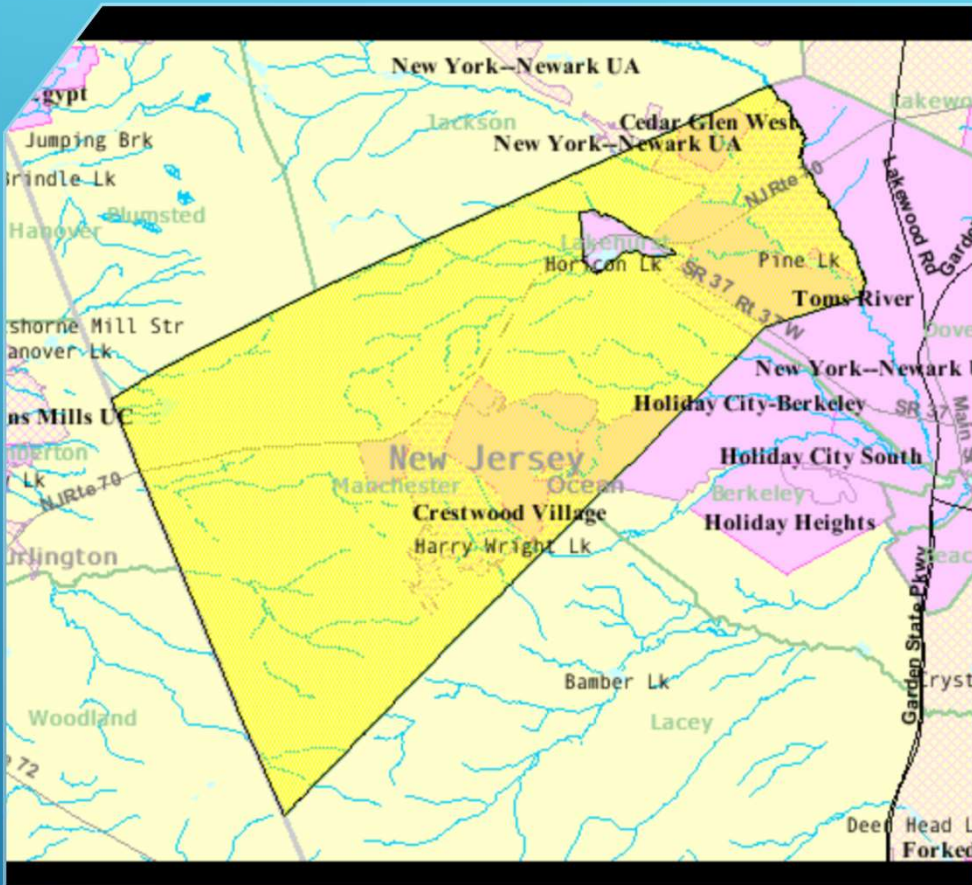
Hon. Robert Hudak, MPA, PP, AICP
Mayor of Manchester Township

Joseph Veni, CPWM, LEED AP
Supervising Engineer
Public Works & Utilities

Gary Sylvester, CPWM
Director of Building Department
Inspection Land Use & Planning



**MANCHESTER
TOWNSHIP**
OCEAN COUNTY, NEW JERSEY



Manchester Township Ocean County

Area^[1]

- **Total** 82.51 sq mi (213.70 km²)
- **Land** 81.42 sq mi (210.87 km²)
- **Water** 1.09 sq mi (2.83 km²)
1.32%

Area rank

9th of 565 in state
3rd of 33 in county^[1]

Elevation^[7]


154 ft (47 m)

Population (2010 Census)^{[8][9][10][11]}

- **Total** 43,070
- **Estimate (2019)^[12]** 43,723
- **Rank** 45th of 566 in state
5th of 33 in county^[13]
- **Density** 527.7/sq mi (203.7/km²)
- **Density rank** 442nd of 566 in state
28th of 33 in county^[13]

WRONG PLACE AT THE WRONG TIME

Original Solar Project – 2007

- Virtual Net Metering – Not an option
 - Loss of valuable recreation fields
 - Tree Clearing (Positive with a Negative)
 - Inefficient Buildings
 - Technology
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FIRST PRIORITY – ENERGY REDUCTION

Various Municipal Buildings

- Conversion T12 to T8 Florence Lighting fixtures
- Conducted an Energy Audit
- Replacement Boilers – Direct Install
- Daylighting Systems w/ photo and occ. sensors
- Solar Thermal
- NJCEP Rebate Incentive Totals - approx. \$175K

NEXT STEP...SOLAR

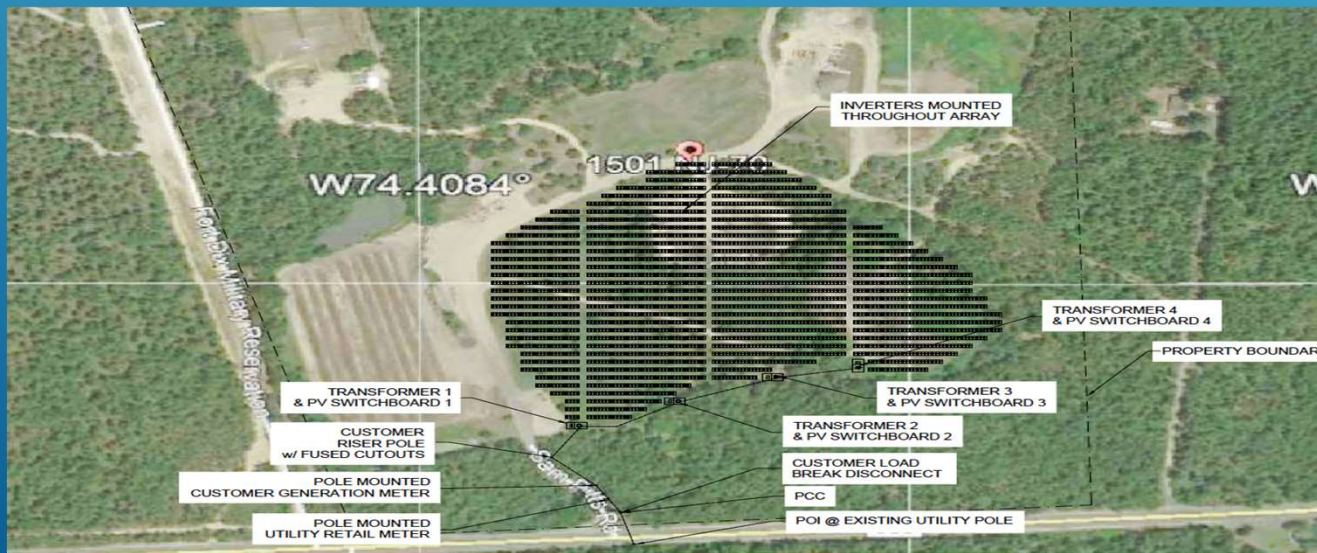
Hurdles

- \$\$ to cap landfill 2009
- Location – Rooftops/Tree Clearing

PROBLEM SOLVED


Team up with Nextgrid – Community Solar Program

- Nextgrid to pay to cap landfill per NJDEP Requirements
- Nextgrid to furnish and install 4.62 MW solar farm
- Nextgrid pays Township to lease land
- Landfill located in redevelopment zone which simplifies the procurement process for the developer



BENEFITS OF COMMUNITY SOLAR PROGRAM

Municipality

- Yearly Rent to Manchester \$352,600
 - Use the energy produced to power Township buildings
 - Total Compensation Over Life of System \$9,958,552
 - Greenhouse Gas Emissions – 955 Passenger Vehicles/year
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QUESTIONS
THANK YOU.





Thank you!

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