



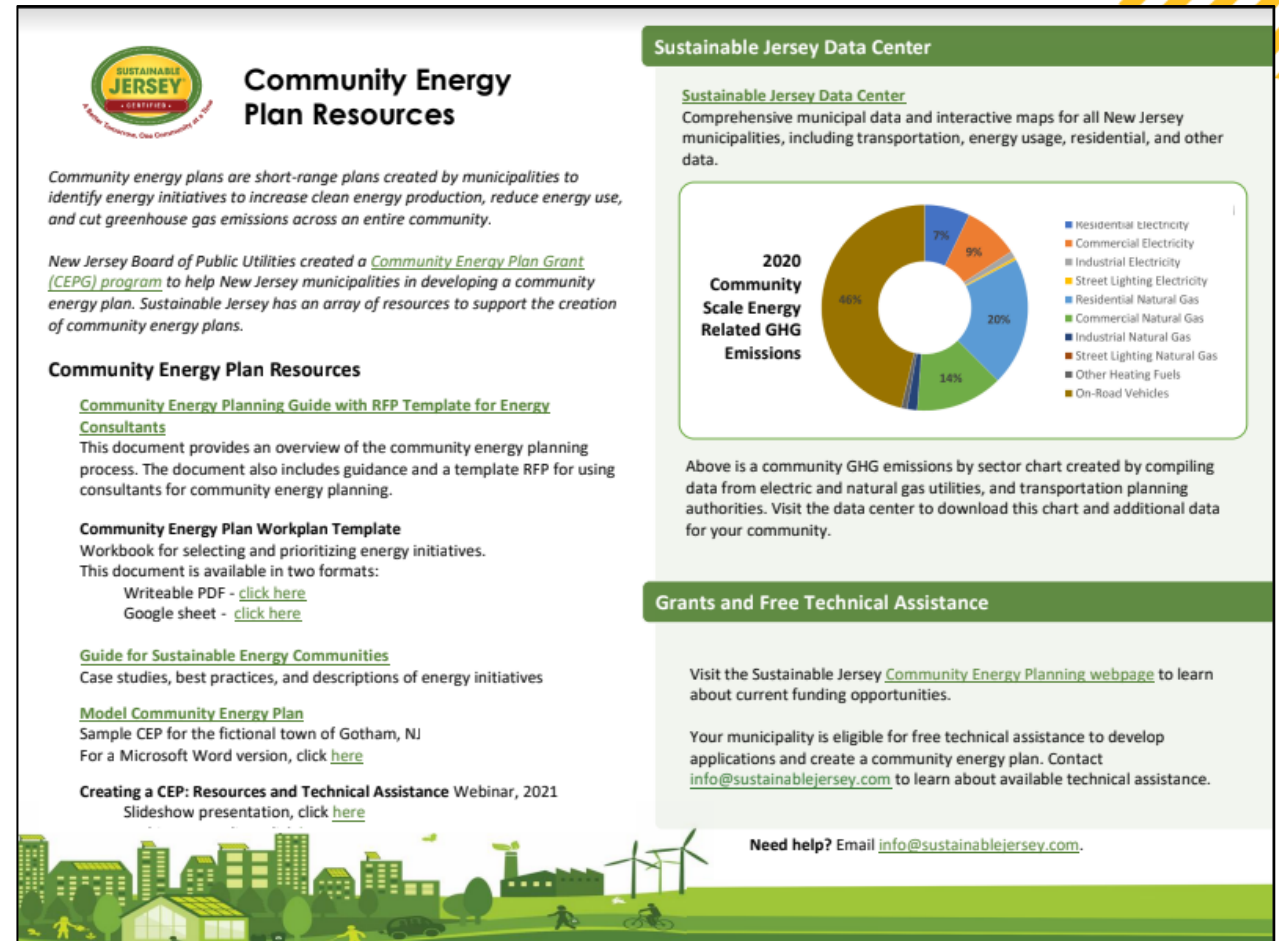
Community Energy Planning Renewable Energy Peer Event

February 5, 2025



Community Energy Plan Grants Program

- ❑ Funding program by the New Jersey's Board of Public Utilities (NJBPUB)
- ❑ To support all NJ municipalities in developing community-level energy plans that align with the strategies in New Jersey's Energy Master Plan
- ❑ Two planning grant award levels:
 - All New Jersey municipalities – eligible for **\$10,000** grant
 - Overburdened municipalities – eligible for **\$25,000** grant
- ❑ Sustainable Jersey, as a partner with the BPU Office of Clean Energy Equity, provides technical assistance for the program



Sustainable Jersey
A Better Tomorrow, One Community at a Time

Community Energy Plan Resources

Community energy plans are short-range plans created by municipalities to identify energy initiatives to increase clean energy production, reduce energy use, and cut greenhouse gas emissions across an entire community.

New Jersey Board of Public Utilities created a [Community Energy Plan Grant \(CEPG\) program](#) to help New Jersey municipalities in developing a community energy plan. Sustainable Jersey has an array of resources to support the creation of community energy plans.

Community Energy Plan Resources

[Community Energy Planning Guide with RFP Template for Energy Consultants](#)
This document provides an overview of the community energy planning process. The document also includes guidance and a template RFP for using consultants for community energy planning.

[Community Energy Plan Workbook Template](#)
Workbook for selecting and prioritizing energy initiatives.
This document is available in two formats:
Writeable PDF - [click here](#)
Google sheet - [click here](#)

[Guide for Sustainable Energy Communities](#)
Case studies, best practices, and descriptions of energy initiatives

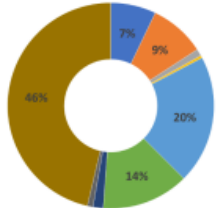
[Model Community Energy Plan](#)
Sample CEP for the fictional town of Gotham, NJ
For a Microsoft Word version, click [here](#)

[Creating a CEP: Resources and Technical Assistance Webinar, 2021](#)
Slideshow presentation, click [here](#)

Sustainable Jersey Data Center

[Sustainable Jersey Data Center](#)
Comprehensive municipal data and interactive maps for all New Jersey municipalities, including transportation, energy usage, residential, and other data.

2020 Community Scale Energy Related GHG Emissions



Sector	Percentage
Residential Electricity	46%
Commercial Electricity	7%
Industrial Electricity	9%
Street Lighting Electricity	20%
Residential Natural Gas	14%
Commercial Natural Gas	0%
Industrial Natural Gas	0%
Street Lighting Natural Gas	0%
Other Heating Fuels	0%
On-Road Vehicles	0%

Above is a community GHG emissions by sector chart created by compiling data from electric and natural gas utilities, and transportation planning authorities. Visit the data center to download this chart and additional data for your community.

Grants and Free Technical Assistance

Visit the Sustainable Jersey [Community Energy Planning webpage](#) to learn about current funding opportunities.

Your municipality is eligible for free technical assistance to develop applications and create a community energy plan. Contact info@sustainablejersey.com to learn about available technical assistance.

Need help? Email info@sustainablejersey.com.

Screenshot of Sustainable Jersey CEP Resource Sheet

sustainablejersey.com/fileadmin/media/Grants_and_Resources/Small_Grants/CEPG/CEPG_Resource_Page.pdf



Agenda

Solar 101

Tracey Woods, Sustainable Jersey

Planning Municipal Onsite Solar Projects

Mylena Guimaraes, Sustainable Jersey

Planning Remote Net Metering Projects

Poornima Gupta, Sustainable Jersey

Planning Community Solar Projects

Tracey Woods, Sustainable Jersey

Ordinance for Private Solar

Poornima Gupta, Sustainable Jersey

Planning Solar Outreach Campaigns

Eliza Messinger, Sustainable Jersey

Planning Geothermal Projects

Ryan Dougherty, GeoExchange



Types of Solar



Roof Mount Solar Panels

- Roof condition important
- Least cost per kilowatt hour

Perth Amboy Community Solar Project. 2021.
Image courtesy of New Jersey Board of Public Utilities.



Ground Mount Solar Panels

- Brownfields, landfill sites
- Moderate cost per kilowatt hour

NREL. Photo by Dennis Schroeder



Canopy Mount Solar Panels

- Panels suspended over parking lots or other uses of the ground space
- Highest cost per kilowatt hour

Solar Parking Canopy at The College of New Jersey



Floating Solar

- Solar arrays floating on a body of water
- Water treatment centers, man-made waterbodies

NREL. 2018. Floating Solar. Photo by Dennis Schroeder.
53994



Saving with Solar Net-Metering

Net-Metered Billing

- kWh produced by panels deducted from electric bill
- Extra production during high-production months is applied to other months

Net Metering Program					
Date	kWh delivered to you (IN)	kWh delivered to PSE&G (OUT)	Difference (NET)	kWh billed to you	Cumulative kWh
May 18	299	346	-47	0	-47
Jun 18	270	345	-75	0	-122
Jul 18	501	227	274	152	0
Aug 18	483	171	312	312	0

PSE&G Net-metering example bill.

How net-metering increases savings

- Billed cost of kWh to electric customer
- Amount paid by utility outside of net-metering
- Solar owners benefit more from reducing electric bill than from receiving payment for solar generation

New Jersey's Clean Energy Program Net-Metering Page.

<https://www.njcleanenergy.com/renewable-energy/programs/net-metering-and-interconnection>

* SEIA. <https://www.eia.gov/electricity/data/browser/>



Saving with Solar

Solar Renewable Energy Credits (SRECs)

Successor Solar Program - SREC II Administratively Determined Incentive (ADI) Program

- Project owner is issued 1 SREC for every 1000 kWh generated
- Set SREC price – no longer market driven
- Credits received for 15 years

REVISED ADI Incentives (NJ-SREC-IIs) Per Market Segment - Effective March 13, 2023

Market Segments	System Size MW (dc)	Incentive Values (\$/SREC-II)	REVISED SREC-II Value	*Public Entities ((\$20 Adder)
Net-Metered Residential	All Sizes	\$90	\$85	N/A
Small Net-Metered Non-Residential located on Rooftop, Carport, Canopy and Floating Solar	Projects smaller than 1 MW (dc)	\$100	\$110	\$130
Small Net Metered Non-Residential Ground Mount	Projects smaller than 1 MW (dc)	\$85	\$90	\$110
Large Net Metered Non- Residential located on Rooftop, Carport, Canopy and Floating Solar	Projects 1 MW to 5 MW (dc)	\$90	\$100	\$120
Large Net Metered Non-Residential Ground Mount	Projects 1 MW to 5 MW (dc)	\$80	\$85	\$105
Community Solar LMI	Up to 5 MW (dc)	\$90	No Change	N/A

***“Public Entity” is defined as a customer that is a State entity, school district, county, county agency, county authority, municipality, municipal agency, municipal authority, New Jersey public college, or New Jersey public university.*

New Jersey’s Clean Energy Program SuSI Page.

<https://www.njcleanenergy.com/files/file/TI%20Program/FY22/8A%20ORDER%20Successor%20Solar%20Incentive.pdf>



Purchasing Models

Direct Purchase

- Property owner pays for equipment and installation
- Property owner receives net-metering/bill credits and SRECs
- Property owner receives tax credits

Power Purchase Agreement

- Property owner leases roof to solar developer
- No cost to property owner for installation
- Property owner gets reduction in kWh rate on electric bill
- Solar developer receives SRECs and tax credits

Purchase with Loan

- Solar developer provides loan for cost of equipment and installation
- Property owner receives net-metering/bill credits and SRECs



Saving with Solar

Incentives and Tax Credits

Additional Incentives

NJBPU. Solar 4 All (coming)

NJBPU. Community Energy Planning Implementation Grant

NJEDA. Clean Energy Loans Program (not for Local Governments)

New Jersey Green Bank (not for Local Governments)

Tax Credits

Investment tax credit – 30% of eligible cost and up

Available to local governments and non-profits via the Direct Pay program



Install On-Site Municipal Renewable Generation

2.5 Install On-Site Municipal Renewable Generation							
Status in CEP:		Initiative Summary: Host a solar, wind, or geothermal project on municipal property to generate renewable energy for municipal facilities. Such projects can be leased from a developer or purchased and owned outright.					
Current Status:		Measures of Success:			Resources:		
If the municipality has undertaken this initiative in the past, provide a description of past activities.		(modify to suit your community) • Contract with a developer to buy or lease a renewable installation on municipal property • Implement outreach to illustrate benefits of renewable energy to the community using the municipal project			• Sustainable Jersey. Municipal On-Site Solar System • Sustainable Jersey. Municipal Wind Energy System • Sustainable Jersey. Municipal Geothermal Energy System • Sustainable Jersey. Direct Pay Tax Credits for Municipalities, School Districts, and Nonprofits • American Cities Climate Challenge. On-site Solar Procurement Guidance • New Jersey's Clean Energy Program. Renewable Energy webpage • U.S. DOE. Blueprint 3A: Solar & Storage – Power Purchase Agreements and Direct Ownership		
Potential Stakeholders:	Initiative lead:	Planned initiative start date	Anticipated initiative length:	Priority	Departments Involved:	Anticipated funding sources:	Obstacles/Barriers:
(modify to suit your community) • Renewable energy developer(s) • Public school district	Enter name of point person	Enter text	Enter text	Enter text	(modify to suit your community) • Purchasing staff • Business Administrator • Department of Public Works	Enter text	Enter text
Next steps (specific and tangible):							
(below are typical next steps for solar, modify to suit your community) 1) Identify appropriate hosting sites for the solar installation. Future site plans, historic building designation, and rooftop condition play a role in site potential. Optimal locations receive direct sunlight with little-to-no shading, have a southern exposure, and are close to the point of interconnection (e.g., where the utility meter is located). 2) Assess the site's solar potential to determine if the site has grid capacity to host a solar project of the size you are considering. Each electric utility has an interconnection capacity map showing available capacity. 3) Consider available incentive programs. Note: Because of the Inflation Reduction Act's Direct Pay Program, municipalities and other non-profits can now receive tax credits for Solar and other renewable energy projects, see the Sustainable Jersey Direct Pay webpage for more information. 3) Identify the purchasing model the municipality wants to utilize. Options include a direct purchase or a Power Purchase Agreement; however, using Power Purchase Agreements can impact the municipality's ability to receive Direct Pay tax credits, see the On-Site Solar action for details. 4) Issue a solicitation to select a vendor. 5) The selected vendor completes a detailed design, obtains permits and other needed approvals (including from the utility and the NJ Board of Public Utilities), procures the equipment, and installs the system.							



Solar Energy Options



Onsite Solar

Image: [CRCOG](#)



Remote Net Metering

Image: [DOE](#)



Community Solar

Image: [E&E News](#)



Solar Energy Options



Onsite Solar

Image: [CRCOG](#)



Remote Net Metering

Image: [DOE](#)



Community Solar

Image: [E&E News](#)



Best Practices

1. Project Start-up
2. Site Identification
3. Selecting an Ownership Model
4. Deciding on Resiliency Features
5. Soliciting Bids and Selecting a Vendor
6. Construction and Commissioning
7. Energy Tracking and Maintenance
8. Outreach and Education (optional)

Municipal Onsite Solar System

5 — 45 Points

[https://www.sustainablejersey.com
/actions/#open/action/108](https://www.sustainablejersey.com/actions/#open/action/108)



Best Practices

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Municipal Onsite Solar System

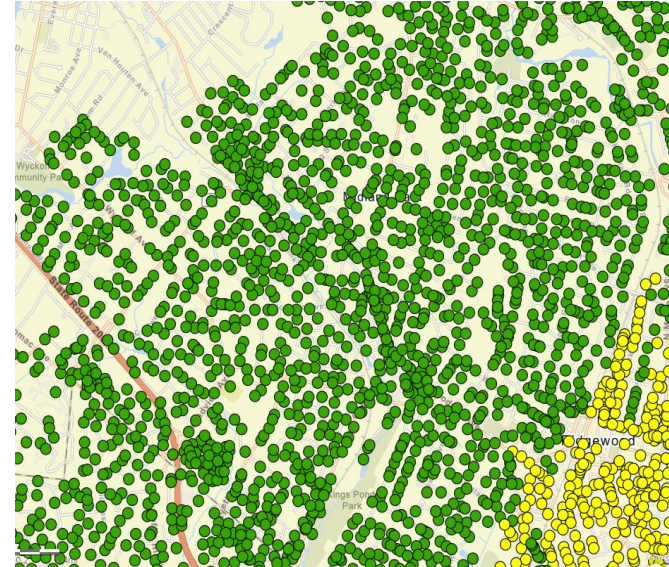
5 — 45 Points

[https://www.sustainablejersey.com
/actions/#open/action/108](https://www.sustainablejersey.com/actions/#open/action/108)



Best Practices

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Solar Available Capacity

The dots represent the estimated accommodation limit for that location:

 <100 kW AC;  100 to 1000 kW AC;  >1000 kW AC

Accessing Maps by Territory:

[Atlantic City Electric](#)

[Jersey Central Power and Light \(JCP&L\)](#)

[Orange and Rockland Electric](#)

[Public Service Electric and Gas \(PSE&G\)](#)



Best Practices

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Purchasing Models

- 1 Direct Purchase**
- 2 Power Purchase Agreement**
- 3 Purchase with Loan**



Best Practices

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Image: [DOE](#)



Best Practices

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On-site Solar Request for Proposal (RFP) Template

Overview: The goal of this on-site solar RFP template is to provide local governments with an easily modifiable on-site solar RFP. For cities and counties required to use their local government's RFP template, the material in this on-site solar template should be easily transferable to your city or county RFP template.

For additional guidance on how RFP processes and documents may need to be updated due to COVID, please download the American Cities Climate Challenge Renewables Accelerator's 2020 addendum to this document, [Adaptations for On-site Solar Procurement in 2020 and Beyond](#).

Instructions: You may use or modify this template in whatever way is most helpful (e.g., copy certain lines or sections into your City/County's mandatory RFP template, or treat the entire document like your draft RFP). We do not expect credit or citation for any of this material.

If you would like to customize some or all of the text in this document, please follow the directions below:

1. Read each section using the comments on the right as helpful guidelines.
2. Utilize Microsoft Word's replace all function (Ctrl/Command + H) to find "City/County" and replace

[American Cities Climate Challenge](#)



Best Practices

1. Project Start-up
2. Site Identification
3. Selecting an Ownership Model
4. Deciding on Resiliency Features
5. Soliciting Bids and Selecting a Vendor
6. **Construction and Commissioning**
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8. Outreach and Education (optional)

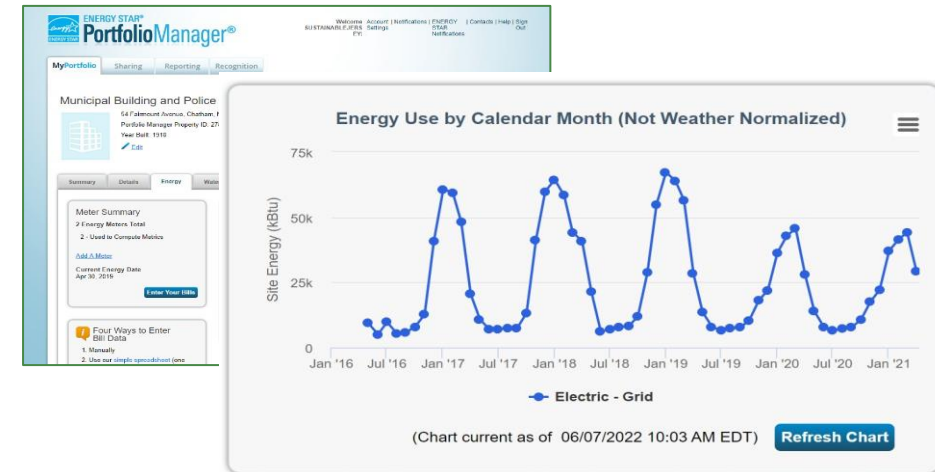


Image: [DOE](#)



Best Practices

1. Project Start-up
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5. Soliciting Bids and Selecting a Vendor
6. Construction and Commissioning
7. **Energy Tracking and Maintenance**
8. Outreach and Education (optional)



[ENERGY STAR PortfolioManager](https://energy.gov/eere/buildings/energy-star-portfolio-manager)



Best Practices

1. Project Start-up
2. Site Identification
3. Selecting an Ownership Model
4. Deciding on Resiliency Features
5. Soliciting Bids and Selecting a Vendor
6. Construction and Commissioning
7. Energy Tracking and Maintenance
8. **Outreach and Education (optional)**



Image: [Green.org](https://www.green.org/)



Further Research

1

Solar Feasibility study
as part of CEPG

2

Apply for Sustainable
Jersey Small Grants
for solar feasibility
study

3

Apply for LGEA, which
includes a solar
feasibility study



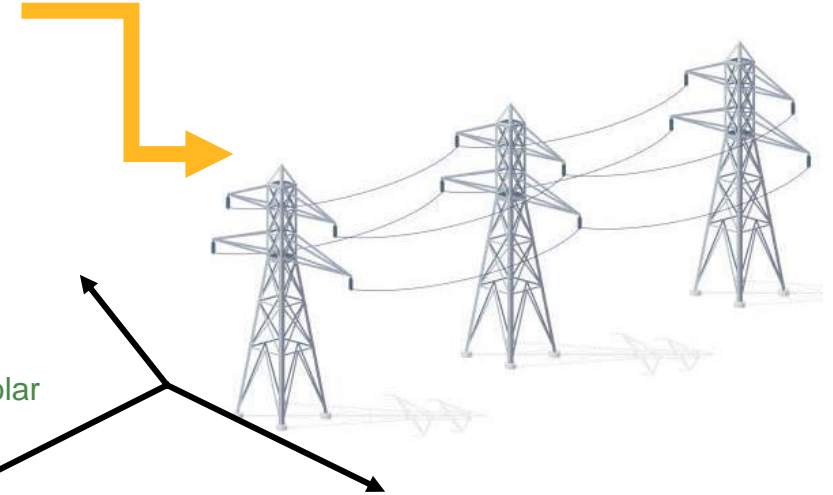
About Remote Net Metering

- For local governments only
- Allows local government to place solar panels at one site but receive credits on the utility bill for another site owned by local government
- Site of the panels and the site receiving the billing credit must be in the same electric utility territory



Top. Municipal facility that can host the solar panels but has limited energy usage

Host site generates solar electricity



Credits shared with other sites



Bottom 1. 2. Other government sites, having high energy usage but unsuitable to host the solar panels, can receive credits from the excess generation at the host site.

Note: All images sourced from Google Images and used for representational purposes only.



Remote Net Metering Application

- **Minimum project size** – no minimum
- **Maximum project size** – up to 5 MW
- **Incentive** – SREC-II valued at \$90/MWh
- **Energy Year 2025 Capacity Block** – 50 MW per year
- **Registration** – first-come, first-served basis
- **Application** – coming soon
- **Project deadline** – 18 months
 - *Except projects located on contaminated site or landfill : 24 months*

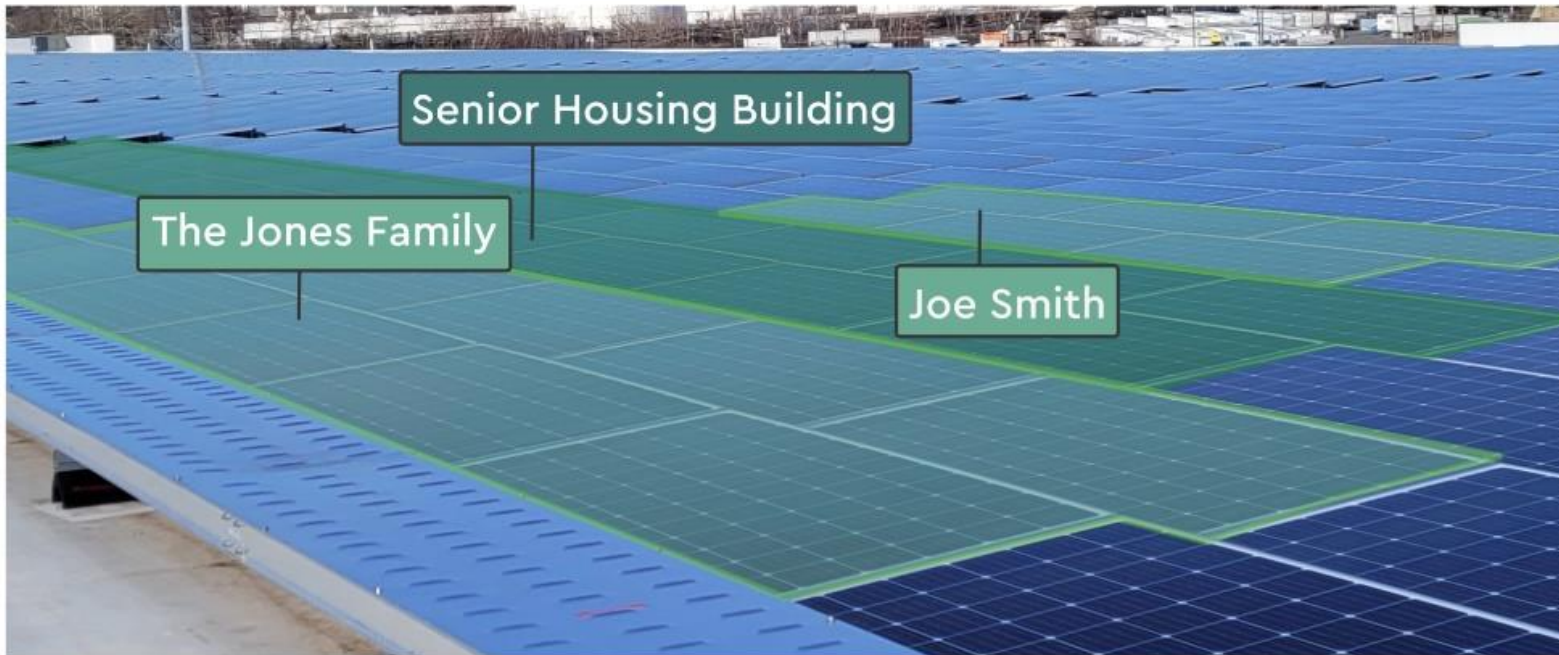


Image source: NREL. [Solar Research](#)

NJCEP. [Remote Net Metered Solar Facilities](#) webpage

NJCEP. Remote Net Metering Training Feb 6, 2025; 2:00 to 3:00 pm [Register](#)

What is Community Solar?



The image above demonstrates how solar generation from a large solar array can be shared between multiple electrical accounts.

Original Image: NJBPU. 2021. Perth Amboy Community Solar Project; overlaid with example subscriber types.

Large solar installation with multiple subscribers

- Provides benefits of solar to those who are not able to install solar (renter, shade, cost)
- Each subscriber receives billing credits for section of larger solar array

Steps to Join a Community Solar Project

STEP 1 Enroll in a Community Solar Project

- Potential subscriber selects a community solar project

STEP 2 Receive the savings on your electric bill

- The subscription fee is typically a set percentage of the credit

Note: Projects created during pilot phase of New Jersey Community Solar have 12 months to convert to consolidated billing

EXAMPLE ELECTRIC BILL WITH COMMUNITY SOLAR

Charges for electric service before community solar	\$200.00
Community solar bill credit (credit will vary each billing cycle depending on how much electricity was generated)	-\$100.00
Community solar subscription fee (the billing credit with the percentage reserved as customer savings* deducted, in this example = 20%)	\$80.00
Total payable by customer:	\$180.00

* The percentage of the community solar bill credit that is retained by the customer as a savings is determined by the community solar subscription contract.

The percent of savings provided are based on the information communicated to us by the project developers. Remember to always review your subscription contract and understand the contract terms in order to confirm the most up-to-date and accurate information.

Example electric bill showing community solar bill credit with consolidated billing

CS Project Finder

New Jersey Community Solar Project Finder includes:

- Overview of New Jersey Community Solar Program
- Database of project accepting subscribers
- Community solar FAQs

SustainableJersey.com/communitysolar



New Jersey Community Solar Project Finder



Enter your zip code to see projects serving your community:

Enter your zip code to see a list of community solar projects that are available in your municipality.

Some zip codes may not overlap perfectly with municipal boundaries. Community solar project sign-ups are by municipality, please check the chart to verify your eligibility.

Community solar subscribers can only subscribe to a project located in their electric utility service territory.

Not sure what some of the terms included in the chart below mean? See the [glossary of common community solar terms](#).

Project Name Subscriber Organization Developer Project Description	Link to Project Website	Date Project Operational	Eligibility Requirements	Estimated Percent Customer Savings*	Subscription Contract Terms	Electric Utility Service Territory	Municipalities Served by Project
Emerald City Solar Subscriber Organization: Subscribex LLC Project Developer: Solar Builder, Inc. Project Description: 3.3 MW Solar array on Sesame Street	Click here for more information and sign up.	projected to be operational 02/25/2023	Credit check required? NO Automated payment required (credit/debit card)? YES Is project open to residents who live in master-metered buildings? YES	All customers 20% LMI customers 25%	Subscription contract length: 1 year Deposit or subscription fee: None Is there a fee to leave project during contract period? No fee to leave the project with 30-day notice Does percentage of savings change over life of contract? NO	Atlantic City Electric	Emerald City, West Emerald City
Good Guys Solar for All Subscriber Organization: Subscribex LLC Project Developer: Solar Builder, Inc. Project Description: 2.3 MW Solar array on Emerald City Brownfield Site	Click here for more information and sign up.	operational since 1/1/2023	Credit check required? NO Automated payment required (credit/debit card)? YES Is project open to residents who live in master-metered buildings? NO	All customers 15% LMI customers 20% Emerald City Seniors 20%	Subscription contract length: 2 years Deposit or subscription fee: None Is there a fee to leave project during contract period? No fee to leave the project with 30-day notice Does percentage of savings change over life of contract? NO	PSE&G	Emerald City, South Gotham
Gotham Solar Project	Click here for more	operational since 7/1/2022	Credit check required? YES	All customers 10%	Subscription contract length: 2 years	PSE&G	Gotham, South Gotham

LMI Automatic Enrollment

Coming in 2025

- Projects owned by a municipality or county, or which have a municipality or county as their subscriber organization would be able to automatically enroll residents.
- Public entity may select residents to enroll, and 80% of the capacity must be LMI.
- Residents must have the opportunity to opt-out of subscribing.
- Consolidated billing is a prerequisite to automatic enrollment.



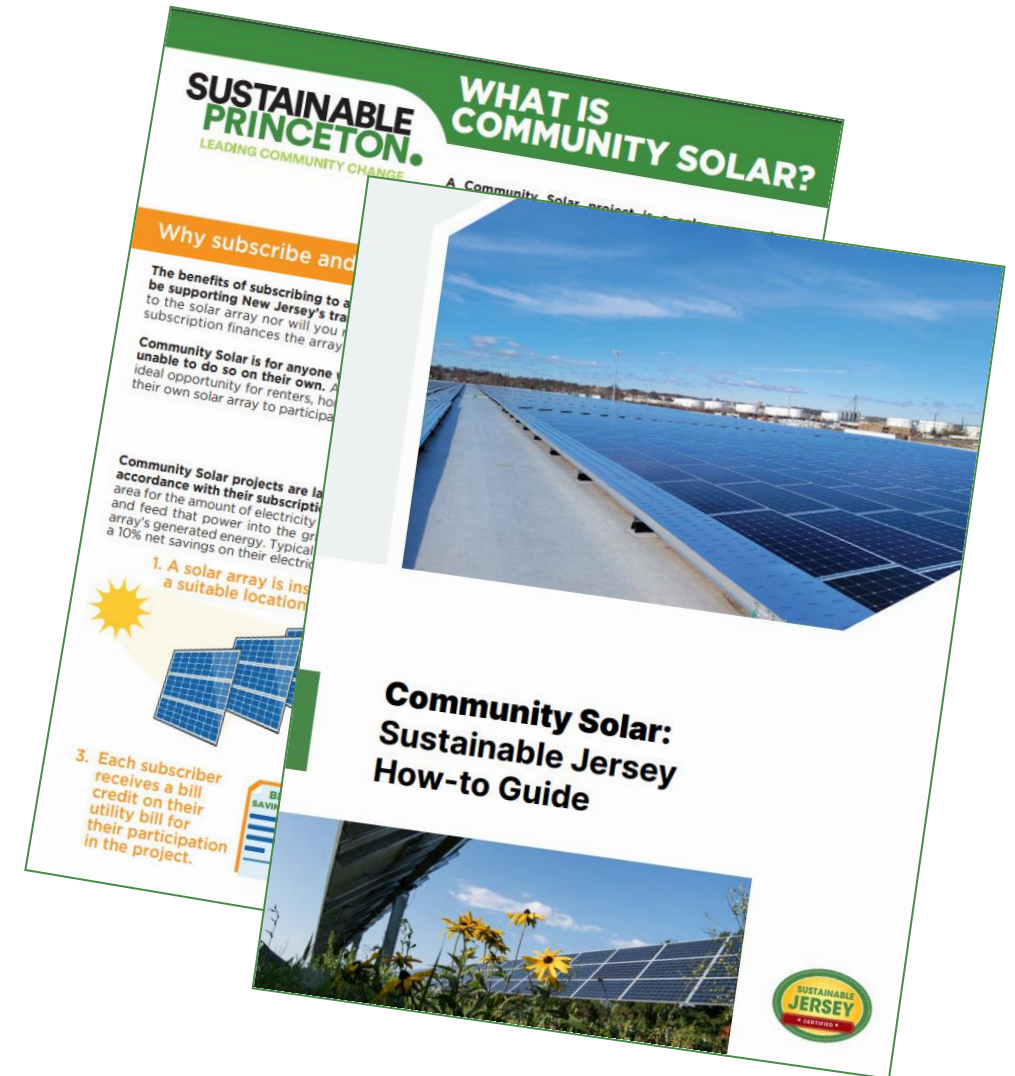
Linden Hawk Rise Solar, Linden – Navisun



Tri-County Landfill Solar Farm, Delanco – Soltage/AC Power

Community Solar Resources

- Sustainable Jersey Community Solar How-To Guide
- Sustainable Jersey Certification Program action- Municipally Supported Community Solar
- Sustainable Princeton
 - Community Solar Factsheet
 - Subscriber Tip Sheet



All resources can be found at sustainablejersey.com/fileadmin/media/Actions_and_Certification/Actions/Energy/Community_Solar_Resources.pdf



Adopt Supportive Zoning and Permitting for Private Solar

2.1 Adopt Supportive Zoning and Permitting for Private Solar							
Status in CEP:		Initiative Summary: Provide clear guidance/standards for solar developers and limit barriers to solar adoption such as lengthy permitting and multiple reviews. Amend the permitting fee structure of the ordinance that specifies the permitting fee structure for solar as described in the Sustainable Jersey Guidance Document.					
Current Status:		Measures of Success:			Resources:		
If the municipality has undertaken this initiative in the past, provide a description of past activities.		(modify to suit your community) <ul style="list-style-type: none">• Pass solar-friendly ordinance• Expedite/eliminate zoning permit• Establish flat fee for permitting			<ul style="list-style-type: none">• Sustainable Jersey. Guidance for Creating a Solar Friendly Ordinance• Sustainable Jersey. Make Your Town Solar Friendly action• U.S. DOE. Sol Smart webpage		
Potential Stakeholders:	Initiative lead:	Planned initiative start date	Anticipated initiative length:	Priority	Departments Involved:	Anticipated funding sources:	Obstacles/Barriers:
(modify to suit your community) <ul style="list-style-type: none">• Resident organizations (e.g., homeowners associations)• Local businesses/business associations• Historic Preservation Commission	Enter name of point person	Enter text	Enter text	Enter text	(modify to suit your community) <ul style="list-style-type: none">• Planning Staff• Legal Department• Zoning Official• Code Enforcement	Enter text	Enter text
Next steps (specific and tangible):							
(below are typical next steps, modify to suit your community) 1) Review the resources identified above (Sustainable Jersey Guidance for Creating a Solar Friendly Ordinance document, SolSmart). Note: There are links to how to use these documents in the Make Your Town Solar Friendly action. 2) Schedule meeting with municipal officials and stakeholders identified to explain the reasoning of the ordinance. 3) Meet with Historic Preservation Commission to determine whether there will be restrictions on solar PV installations in historic districts that will require review. If design guidelines, siting restrictions, or review requirements exist, they should be laid out explicitly in the ordinance to ensure that a clear and understandable review process is known to the applicant. 4) Adopt the municipality's solar ordinance. Amend the permitting fee structure of the ordinance that specifies the permitting fee structure for solar as described in the Sustainable Jersey Guidance Document. 5) Communicate to the community by posting this information on the municipal website and providing a point of contact.							



Adopt Supportive Zoning and Permitting for Private Solar



Image source: NJDEP. Clean Energy. [Solar](#)



Adopt Supportive Zoning and Permitting for Private Solar

Make Your Town Solar Friendly:

How to earn points

Option B (15 points)

Permitting and inspections focused:

- Post permit requirements online;
AND
- Implement at least TWO additional activities –
 - Train First Responders
 - Implement Expedited Permit Process
 - Offer Narrow Inspection Appointment Window
 - Expedite or Eliminate Zoning Permit Requirement
 - Amend Permitting Fees Ordinance

Option A (15 points)

Zoning focused:

- Adopt a supportive solar zoning ordinance;
AND
- Amend permitting fee ordinance

Submitting both options actions can earn a total of 30 points

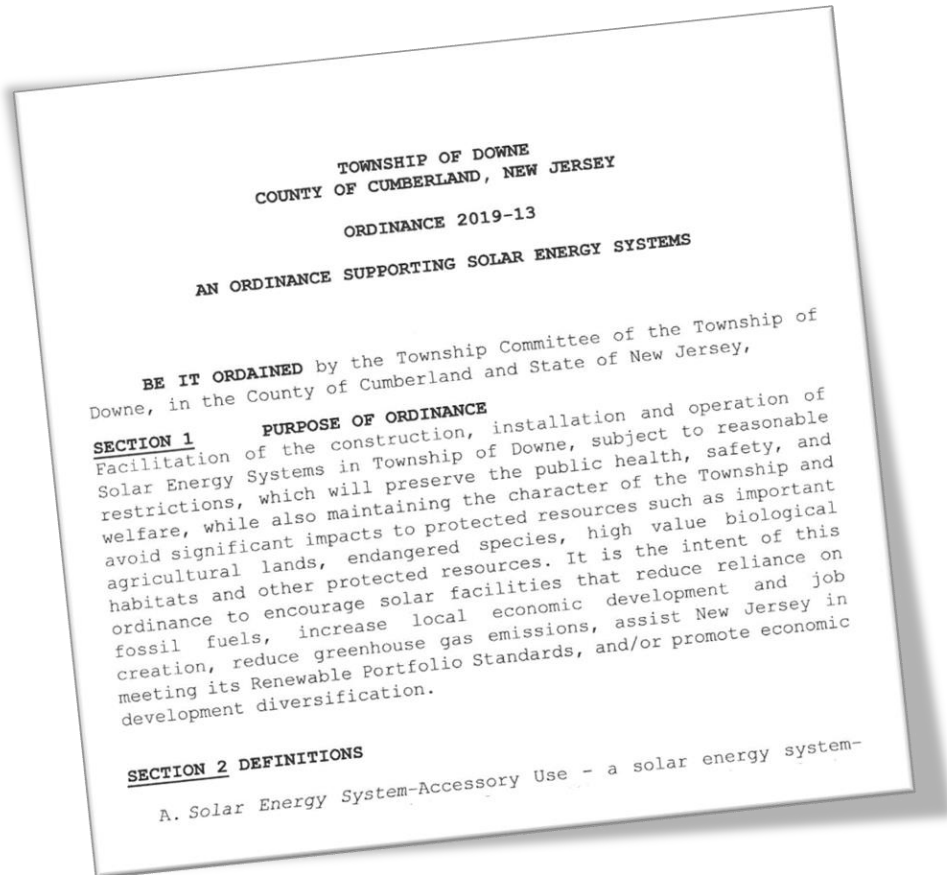
The diagram consists of two large, thick, curved arrows. One is orange and curves from the top left towards the center. The other is red and curves from the bottom left towards the center. They both point towards a central yellow circle containing text.

For silver certified communities this action can count toward a Gold Star in Energy.

A grey five-pointed star with a green outline and a drop shadow. The text inside is written in a green, slightly slanted font.



Adopt Supportive Zoning and Permitting for Solar



Spotlight: Ordinance Supporting Solar Energy Systems. Township of Downe, Cumberland County

Developing a Supportive Solar Ordinance

- Step 1: Create an Ordinance Team
- Step 2: Solar 101
- Step 3: Check compatibility with Municipal Master Plan
- Step 4: Determine the scope and location for the solar ordinance
- Step 5: Craft the Ordinance
[Sustainable Jersey Guidance for Solar Friendly Ordinances](#)
- Step 6: Obtain approval from the Governing Council
- Step 7: Create community awareness



Adopt Supportive Zoning and Permitting for Solar

Historic Preservation

- Work with the Historic Preservation Commission on solar PV restrictions in historic districts.
- Clearly define guidelines, restrictions, and review processes in the ordinance.
- Provide design recommendations for solar installations on historic properties.
- Balance historic preservation with support for solar adoption.



Gothic Revival House, Vermont: The historic house from the front retains its historic character (left). The solar collectors were installed on the sloped roof over a new access ramp at the rear of the property and are not visible from the street (right). **Source:** [Solar Panel on Historic Properties. National Park Services](#)

Design guidelines for installing solar on historic properties:

✂ [Implementing Solar PV Projects on Historic Buildings and in Historic Districts. National Renewable Energy Laboratory](#)

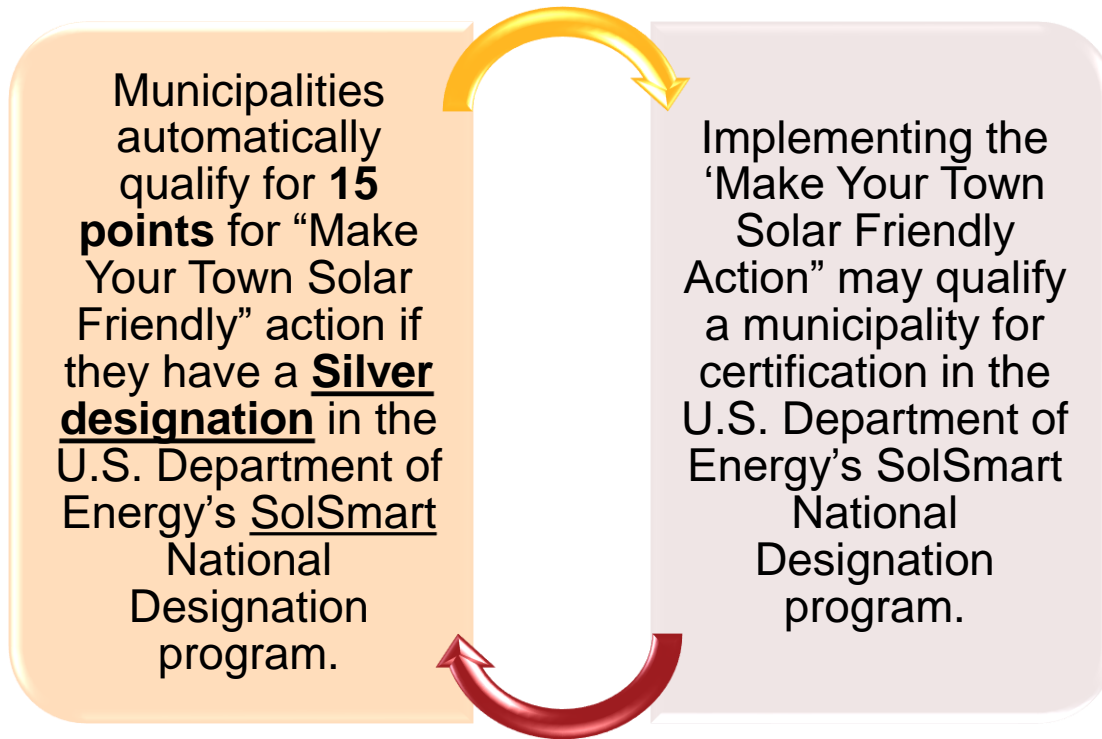
✂ [Installing Solar Panels on Historic Buildings. North Carolina Solar Center](#)

✂ [Solar Panels on Historic Properties. National Park Service](#)



Adopt Supportive Zoning and Permitting for Private Solar

Complementary Recognition with SolSmart



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

For more information check out the solarapp.nrel.gov/



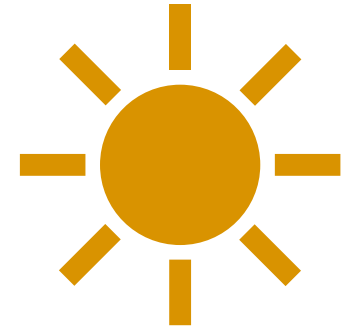
Overcoming Barriers to Solar Adoption

Barriers:

- Time
- Technological Difficulty
- Feelings of Risk - scams
- Finances

Benefits to Municipal Leadership:

- Increase “energy literacy” of community
- Band together for better deals
- Ensure quality
- Social Acceptance
- Helps low-income people access solar





Solar Outreach Action

10 Points:

Community-Led Solar Purchasing Program Examples

- Solarize Campaign for Residents
- Solarize Program for Business
- Online Solar Marketplace
- Employee Benefit Program
 - CEPG Initiative 2.7

5 Additional Points:

- Activities to Promote Solar
- Municipal Incentives for Solar





Creating a Solar Landing Page

Items to Include:

- About Solar Energy
- Zoning
- Permitting
- Inspection
- Owning your own system
- Community-owned options
- Financing
- Municipality's solar systems
- Solar Checklist

Examples:

- Sustainable Princeton
 - [Renewable Energy Options](#)
 - [Solar for Homes](#)
- [La Crescent, MN: Solar Landing Page](#)

Getting Started with Solar Landing Page

This webpage contains information about solar energy in La Crescent. La Crescent is part of the SolSmart program, a national designation program through the Department of Energy. SolSmart is a national recognition program which encourages cities to make it faster, easier, and more affordable to grow solar energy.

About Solar Energy

Solar energy can be used to generate electricity, to provide hot water, and to heat, cool, and light buildings. Minnesota is a great place for solar energy. Believe it or not, much of the Midwest has the same solar potential as Tallahassee, FL and Houston, TX! Through a combination of utility rebates and new technology, solar electricity continues to become more affordable and a more common part of our energy system.





What is a Solarize Campaign?

- A solar purchasing program where a group of customers jointly purchase solar arrays from the same vendor
- As more customers join the project the price per panel drops for all the participants
- Used nation-wide

What are the Benefits?

- Ensures quality
- Cost effective and more efficient
- Good for low and moderate income residents

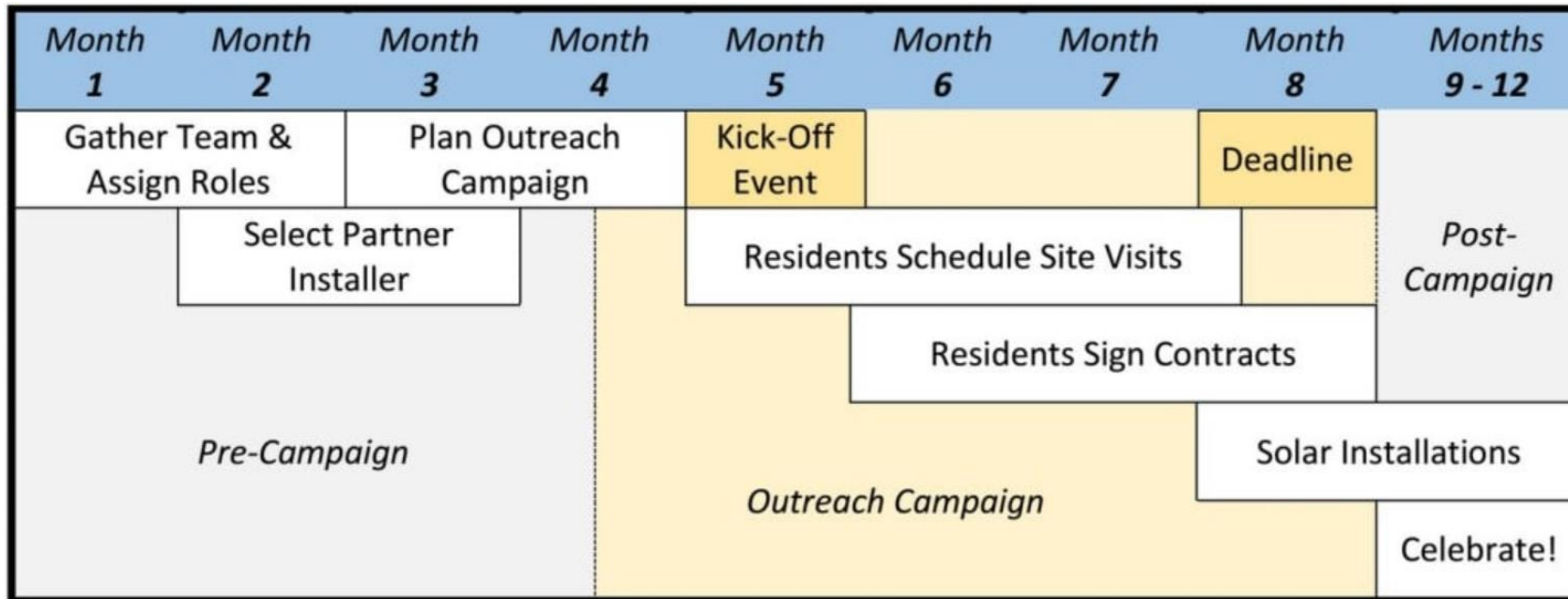
TIER 1	TIER 2	TIER 3	TIER 4	TIER 5	TIER 6	TIER 7	TIER 8
\$3.01	\$2.98	\$2.95	\$2.92	\$2.87	\$2.82	\$2.75	CURRENT TIER! \$2.65
(0-100kW)	(101-200kW)	(201-300kW)	(301-400kW)	(401-500kW)	(501-600kW)	(601-700kW)	(701-800kW+)

[Example of a campaign website: Solar CrowdSource website for 12 communities in North Carolina](#)



Planning Steps for a Solarize Program

- Municipality selects solar vendor via competitive process
- Outreach campaign is implemented
- Sign up period is opened for a set timeframe
- Early program participants become ambassadors for the program because more participants = lower price for all participants



Resources:

- [Solarize Model Guide](#)
- [NY Solarize Guide](#)
- [Month-by-Month Campaign Guide](#)

Case Studies:

- [Huntington, NY](#)
- [Brooklyn, NY](#)



Solar Marketplace

Site where residents can get price quotes from vendors

- Drives decision-making
- Add this resource to solar landing page

Maplewood's Solar Marketplace page

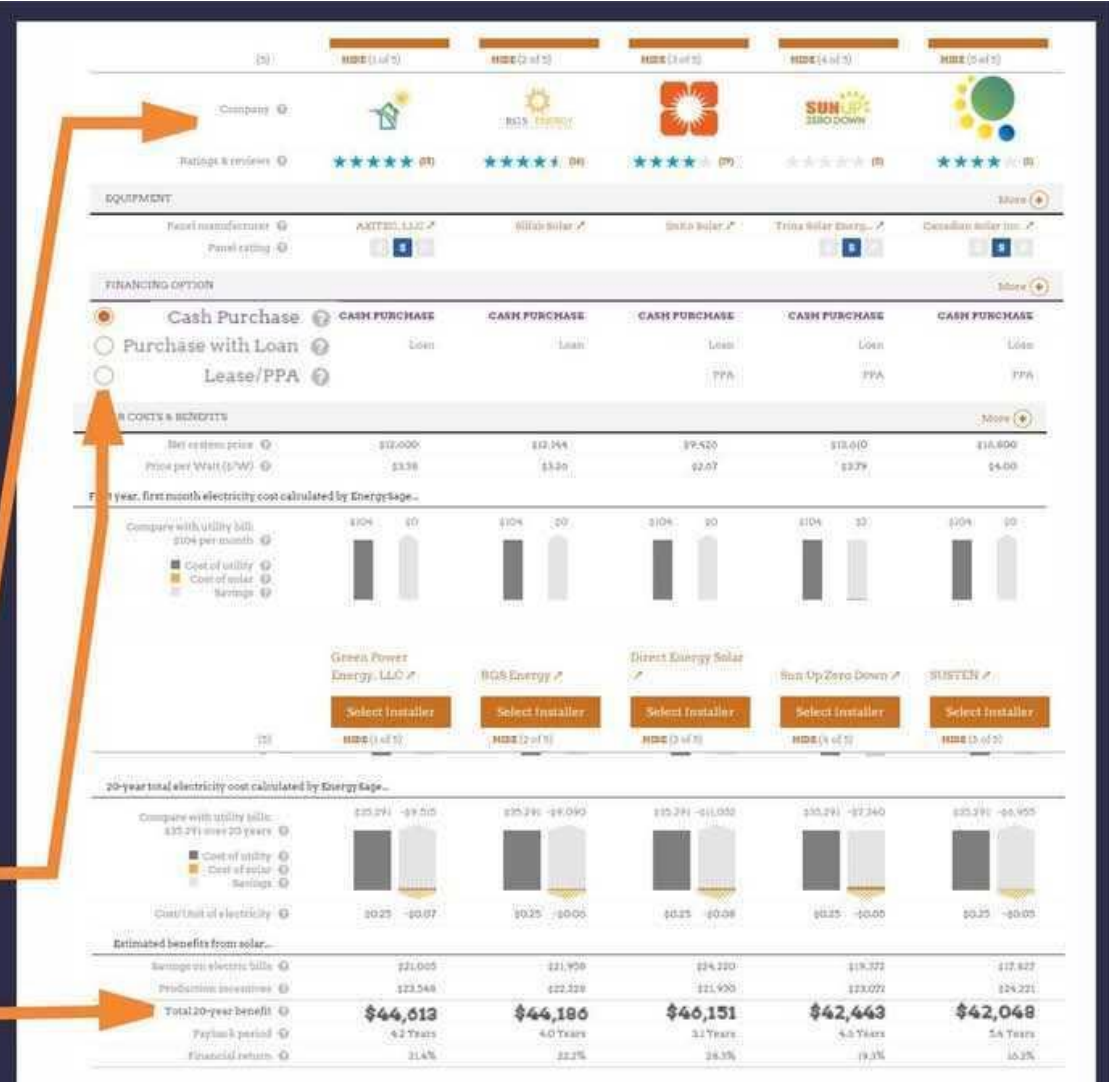
Maplewood Solar Challenge Estimates look like this!

These are real screen shots of a quote comparison page for a standard size house in the Hilton Neighborhood of Maplewood.

The program is managed by EnergySage, an online solar marketplace that was developed with funding and support from the U.S. Department of Energy. All the contractors go through a screening process, and you can see user ratings.

You can easily toggle between the three payment options to see how much you will pay and how much you earn over the course of 20 years with each option.

Look at the savings! Again this is a standard size, south facing roof in the Hilton Neighborhood!



Sign up for free at maplewoodsolar.org



Initiatives 2.10 & 2.11

Community Solar Outreach

2.11 Support Community Solar as Outreach Coordinator							
Status in CEP:		Initiative Summary: Use municipal resources and networks (mailing lists, websites, etc.) to educate the community about community solar in general and the details of local projects (e.g., subscription rates and requirements).					
Current Status:		Measures of Success:			Resources:		
If the municipality has undertaken this initiative in the past, provide a description of past activities.		(modify to suit your community) <ul style="list-style-type: none"> Local community solar information posted to municipal website Community solar promoted by outreach partners via their networks 			<ul style="list-style-type: none"> Sustainable Jersey. Municipally Supported Community Solar action Sustainable Jersey. New Jersey Community Solar Project Finder Sustainable Jersey. Community Solar: Sustainable Jersey How-To Guide U.S. DOE. Blueprint 3B: Community Solar 		
Potential Stakeholders:	Initiative lead:	Planned initiative start date	Anticipated initiative length:	Priority	Departments Involved:	Anticipated funding sources:	Obstacles/Barriers:
(modify to suit your community) <ul style="list-style-type: none"> Community solar developers Local media Affordable housing organizations 	Enter name of point person	Enter text	Enter text	Enter text	(modify to suit your community) <ul style="list-style-type: none"> Communications team Mayor's office 	Enter text	Enter text
Next steps (specific and tangible):							
<p>(below are typical next steps, modify to suit your community)</p> <p>1) The outreach team will work with the elected body to decide what criteria community solar projects should meet to be included in the municipal community solar outreach campaign (see Municipally Supported Community Solar action for more details).</p> <p>2) Decide if the outreach team will work to promote one or more specific projects or conduct a more general outreach and education campaign.</p> <p>3) Develop relevant and up-to-date outreach materials to distribute. If you are working with a specific project, the subscriber organization may have outreach materials to help your campaign. The New Jersey Community Solar Project Finder is an outreach tool that features all the community solar projects.</p> <p>4) Create an outreach campaign plan:</p> <ul style="list-style-type: none"> List existing community events that Community Solar outreach could be included in Consider social media and other outreach channels Identify outreach partners, like community organizations and business organizations 							



Planning a Community Solar Outreach Campaign

Types of Community Solar Outreach Campaigns

- Outreach and Education Campaign
 - Ideal for municipalities that want to remain vendor neutral
 - Feature Tool: [New Jersey Community Solar Project Finder](#)
- Project(s) featured in outreach campaign
 - Often subscriber organizations project will provide assistance with outreach program costs, like mailing
- Project Ambassador
 - Local leader reaches out to potential site owners about community solar options



The image above demonstrates how solar generation from a large solar array can be shared between multiple electrical accounts.

Original Image: NJBPU. 2021. Perth Amboy Community Solar Project; overlaid with example subscriber type



Solar Outreach

[Glen Rock Community Solar Article](#)

WHAT IS COMMUNITY SOLAR?

Community solar gives everyone the opportunity to share the benefits of clean, renewable energy without the need to install expensive solar panels. That means both homeowners and renters are eligible for the program, whether they live in a house or in an apartment.

Community Solar projects are located on commercial rooftops, multi-family residential buildings, landfills, parking lot canopies, or other sites good for large solar arrays.

The power generated by these solar panels is credited to the subscriber's electric bills.

- **Communication Channels:**
 - Newsletters
 - Social media
 - Partnering with trusted community messengers
- Events
- Targeted outreach
 - ✓ Homeowners
 - ✓ Apartment Buildings
 - ✓ Businesses

Ground Source Heat Pumps:

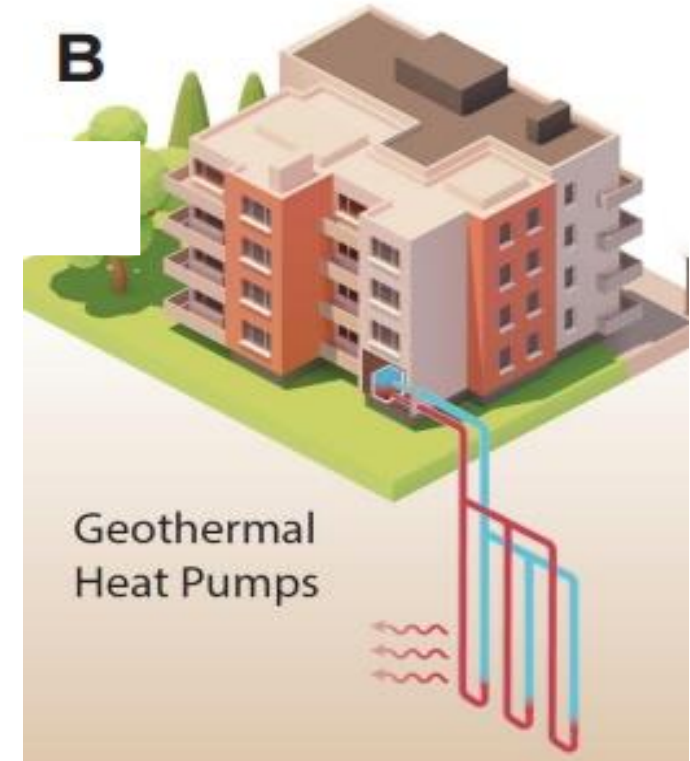
A Pathway to Municipal Decarbonization in New Jersey

Ryan Dougherty, GeoExchange



Geothermal (ground source) heat pumps (GHPs)

- GHPs use buried loops of pipe filled with water and non-toxic antifreeze
- These pipes transfer heat to/from the ground
 - The stable temperature of the earth makes GHPs the most efficient heating and cooling system available
- GHPs can result in significant utility bill savings
- GHPs can work anywhere
- While older buildings may require retrofits to enable GHP installations, GHPs provide benefits to both new and existing buildings alike



Source: *Pathways to Commercial Liftoff: Geothermal Heating and Cooling*, U.S. Department of Energy



Significant Incentives Available

- Federal tax credit: 30% of project cost
 - +10% for domestic content
 - +10% in “energy communities”
 - Must meet prevailing wage and apprenticeship requirements for full credit
- Federal tax deduction (section 179D): \$5.36/ sqft
 - Available to developer/architect
- Utility programs:
 - Replacing electric heating: Up to \$500 per ton
 - Replacing gas/oil: Up to \$6,500 per ton
 - New construction: Up to \$2.50 / sqft, plus GHG reduction bonuses



Geothermal Resources

- Select Examples:
 - School Districts: [Neptune Township Schools](#), [Ocean Township School Greenhouse](#)
 - Universities: [Rutgers](#), [Stockton](#), [Princeton](#)
 - Municipal: [South Orange Village](#), [Parsippany-Troy Hills Township](#)
- Trends: Networked Geothermal Systems
 - PSE&G and New Jersey Natural Gas both exploring networked geothermal systems
 - Many university and campus installations
- Resources:
 - [NJ DEP Geothermal Baseline Report](#)
 - [U.S. DOE Pathways to Commercial Liftoff Report](#)



Questions?





Upcoming CEPG Events

- **2/7/2025:** [How to Get your CEPG Grant](#)
- **2/19/2025:** [Unveiling the Sustainable Jersey Purchasing Resource Center for Schools and Municipalities](#)
- **4/2/2025:** [Bringing the Benefits of Direct Pay \(Elective Pay\) Program to New Jersey's Local Governments and Tax-Exempt Entities](#)

2025 NEW JERSEY

SUSTAINABILITY SUMMIT



SAVE THE DATE

MAY 9, 2025, 8:00AM - 4:00PM

BELL WORKS, HOLMDEL, NEW JERSEY

MORE INFORMATION COMING SOON

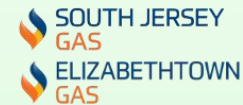


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Thank You