



Navigating the Community Solar Application

Sustainable Jersey Webinar
May 15, 2019

Featured Webinar Speaker

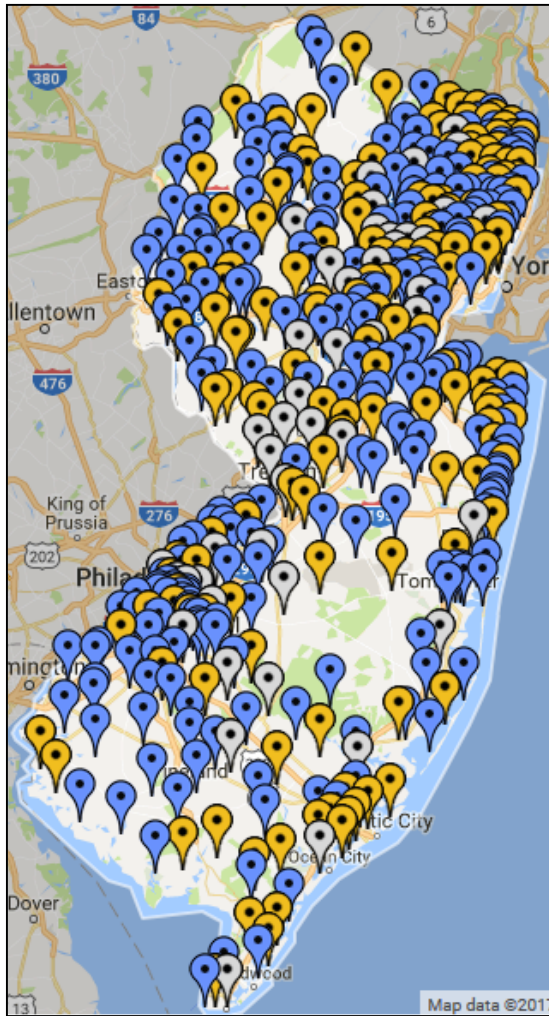
- Ariane Benrey
Program Administrator
New Jersey Board of Public Utilities

What is Sustainable Jersey?

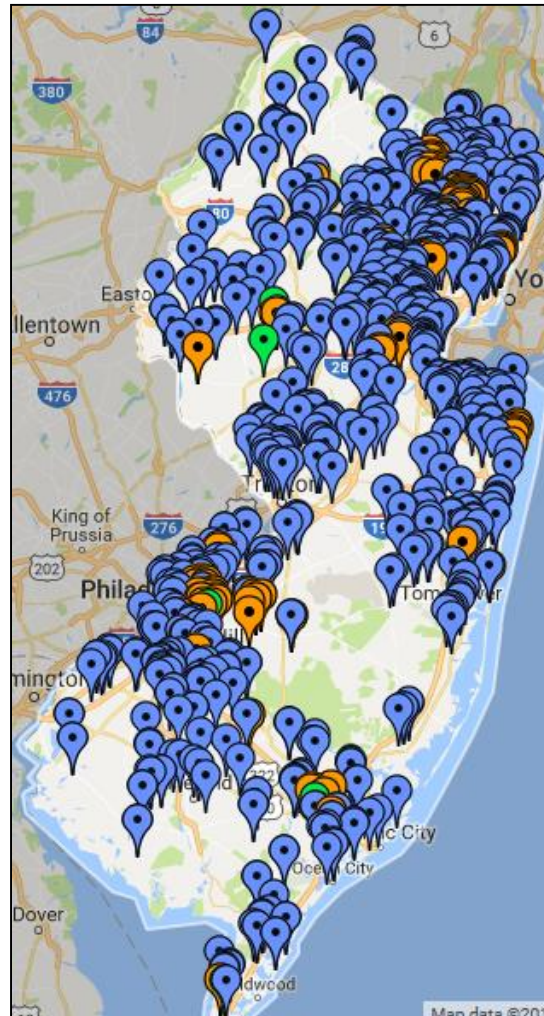
- Certification program for municipalities and schools
 - **Tools, resources, and guidance** to help municipalities and schools become more sustainable
 - **Grants and funding** for municipalities and schools
 - **Regional Hubs**



Program Participants



Municipal Program



Schools Program

Municipal Program

450 (80%) participating

- 203 Municipalities Certified

Schools Program

330 Districts (~50%)

863 Schools

- 242 Schools Certified



Municipal Program Energy Actions

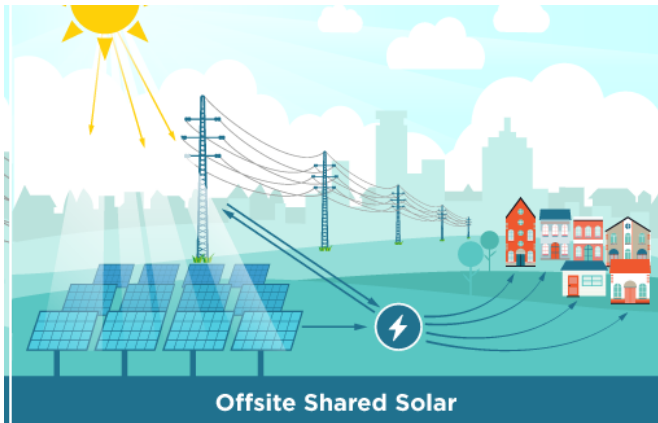
	Climate Planning and Energy Efficiency	Renewable Energy	Alternative Fuel Vehicles
Municipal Operations	<ul style="list-style-type: none">• Municipal Carbon Footprint• Energy Tracking and Management• Energy Efficiency for Municipal Facilities	<ul style="list-style-type: none">• On-Site Solar Energy• On-Site Geothermal• On-Site Wind Energy• Purchase Renewable Energy	<ul style="list-style-type: none">• Fleet Inventory• Purchase Alternative Fuel Vehicles (AFV)
Community Energy Use	<ul style="list-style-type: none">• Community Carbon Footprint• Climate Action Plan• Residential Energy Efficiency Outreach• Commercial Energy Efficiency Outreach	<ul style="list-style-type: none">• Wind Ordinance• Renewable GEA• Make Your Town Solar Friendly• Community-Led Solar Initiatives	<ul style="list-style-type: none">• Make Your Town EV Friendly• Public EV Chargers

Gold Star Standard in Energy

- Municipal Operations
 - Municipal buildings
 - Fleet management
 - Operations (landscaping, energy/water conservation, etc.)
 - Route optimization
 - Green building training
- Community Wide
 - Make Your Town EV Friendly
 - Public Electric Vehicle Chargers
 - Make Your Town Solar Friendly
 - Community Led Solar Initiatives
 - Residential Energy Efficiency
 - Commercial Energy Efficiency



Community Shared Solar



Images: www.nrel.gov/docs/fy11osti/49930.pdf
www.energy.gov/eere/solar/community-and-shared-solar

Community Benefits of Community Solar

- Expand access to solar in the community
- Energy savings for municipal operations
- Energy savings for residents
- Local generation of clean energy
- Local job creation
 - local workforce development
- Community pride



Community Shared Solar

- Potential Municipal Roles
 - Educating (potential) subscribers
 - Municipality as anchor subscriber
 - Municipality as site host (lease payment for rooftop or parking lot)
- Who can subscribe?

Any metered customer in an electric service territory

 - Renters
 - Businesses
 - Municipalities
 - Homeowners
 - Institutions
 - Non profits
 - Schools
 - ...

Municipal Roles

- Zoning
 - large scale ground mount solar
 - large scale rooftop solar
 - reduce zoning barriers
- Permitting
 - help developers understand local permitting requirements
 - permitting fee structure to incentivize community solar



betterbuildingsolutioncenter.energy.gov/sites/default/files/attachments/On_Site_Solar_Decision_Guide.pdf

Siting Community Solar

- Size of community solar project
 - 1 MW is about 5 acres
 - 2 MW can serve 200-400 households
- Location of community solar project
 - Private land
 - Public land
 - Public buildings
 - Commercial rooftops
 - Warehouses
 - Manufacturing facility
 - Large commercial complex
 - Affordable Multifamily Housing



betterbuildingsolutioncenter.energy.gov/sites/default/files/attachments/On_Site_Solar_Decision_Guide.pdf

Solar Siting Analysis Tools

<https://www.nj.gov/dep/aqes/solar-siting.html>



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Bronze





New Jersey's Community Solar Energy Pilot Program

May 15, 2019

DISCLAIMER

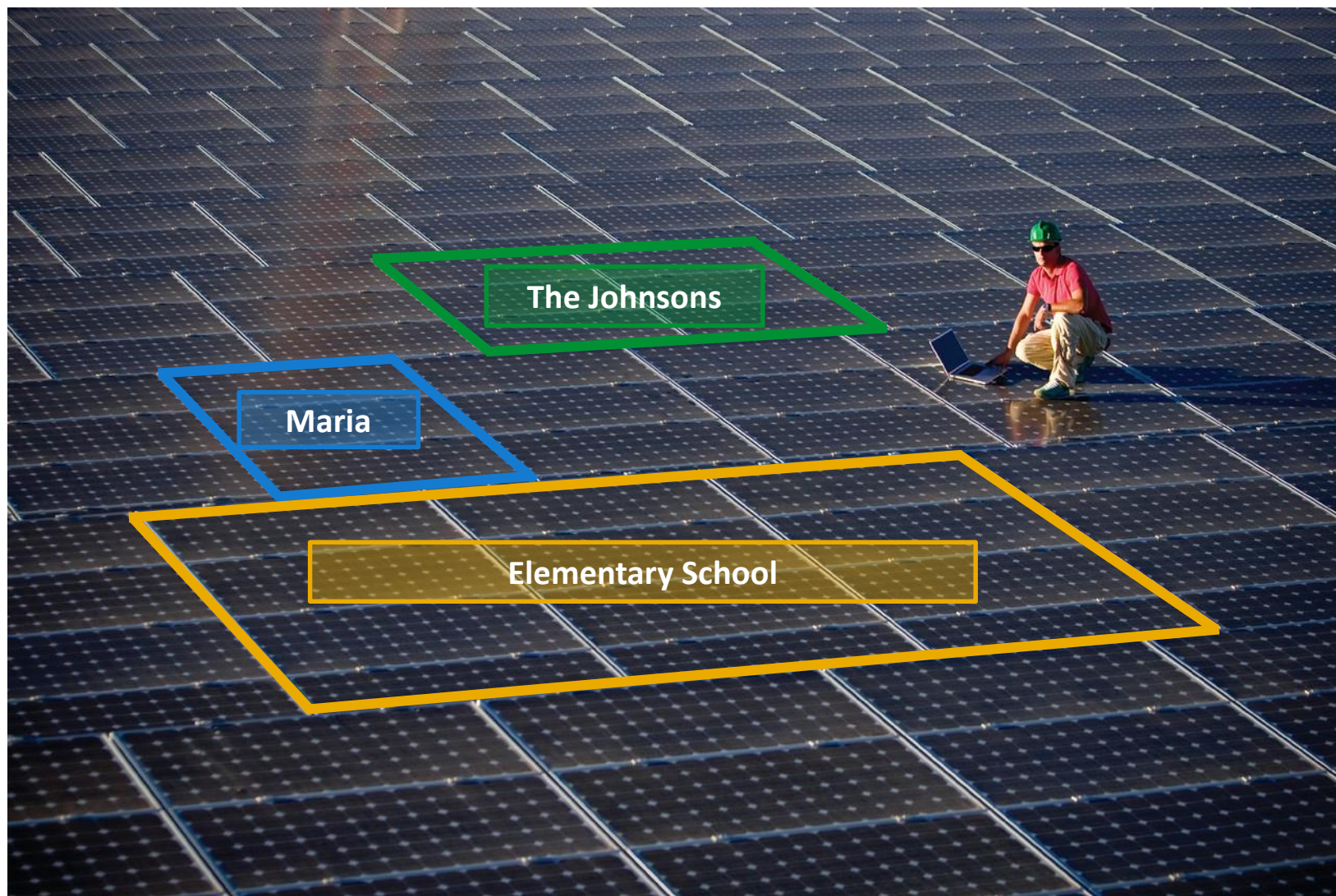
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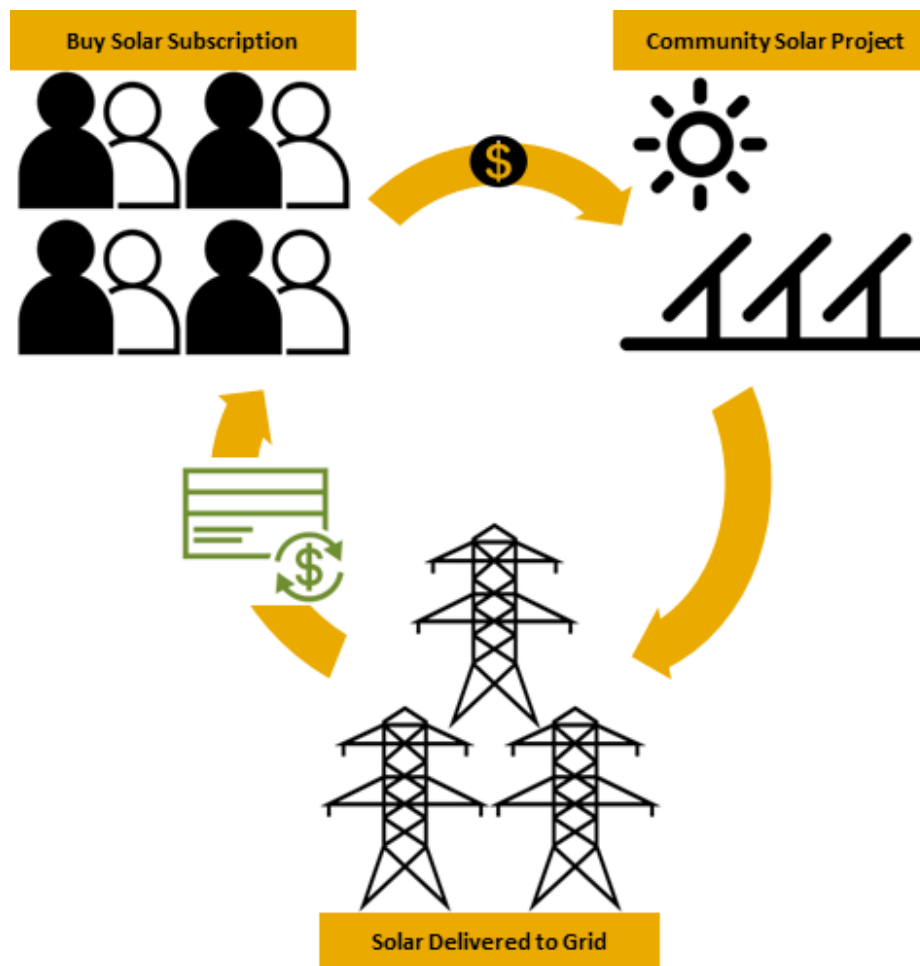
Agenda

1. Overview of the NJ Community Solar Energy Pilot Program
2. Pilot Program Application Process
3. Helpful Resources

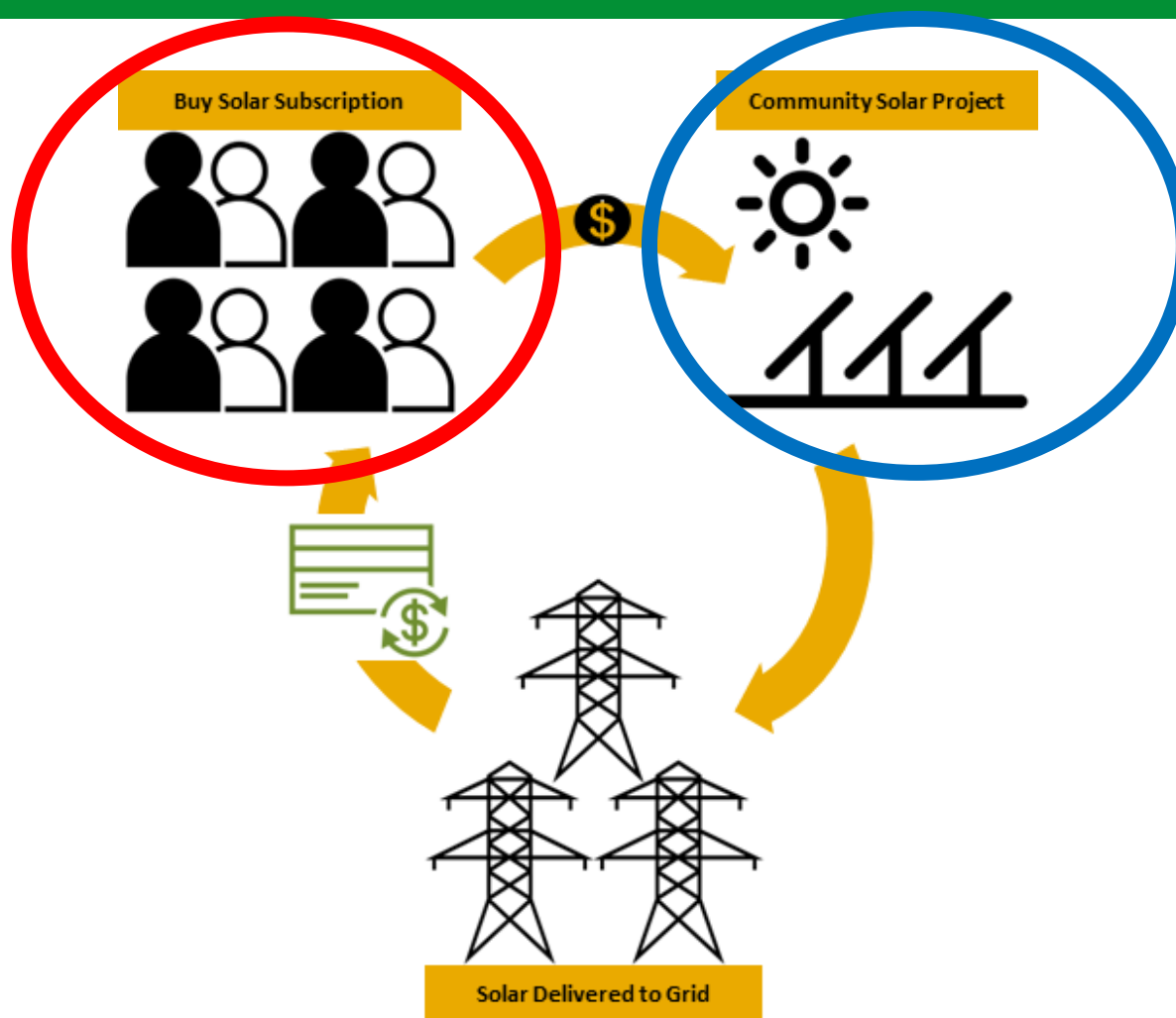
Community Solar



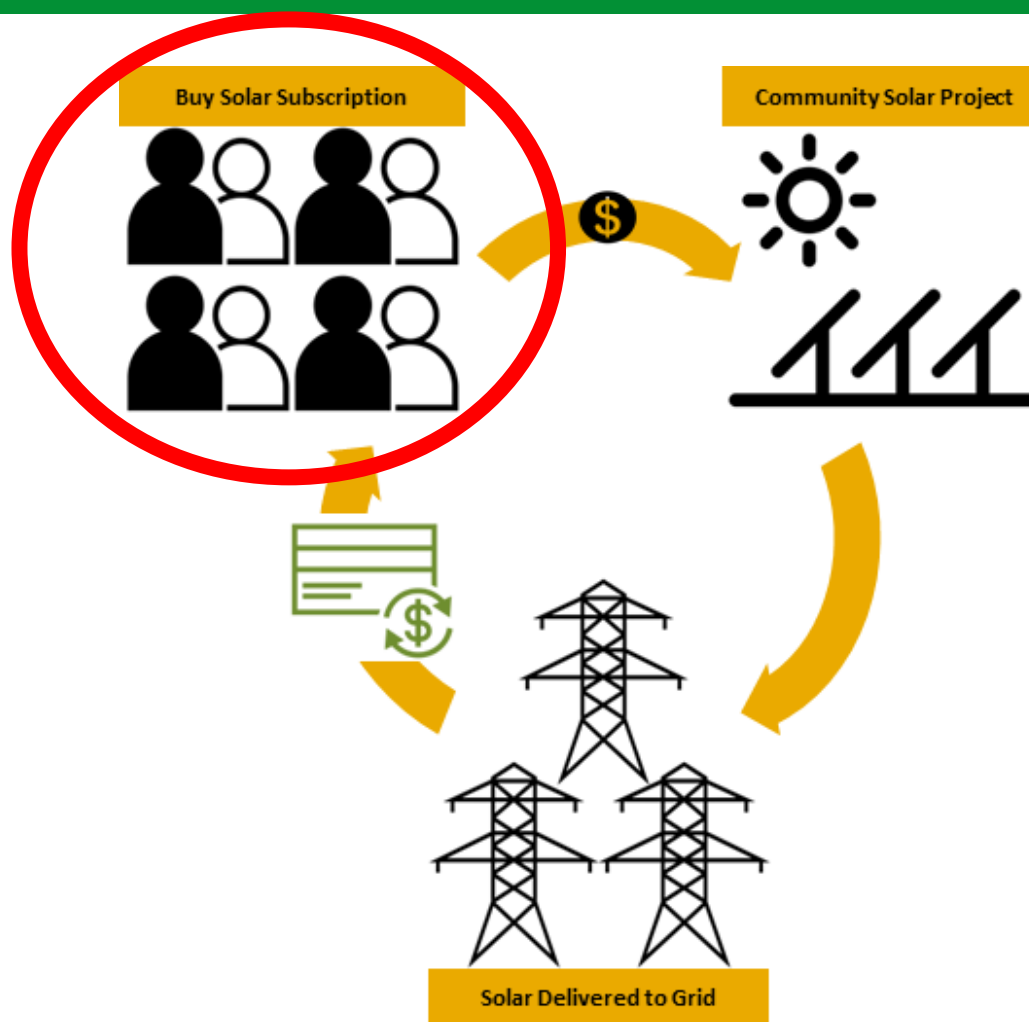
Participating in Community Solar



Participating in Community Solar



Participating in Community Solar



Community Solar Subscribers

- A larger, remotely located solar array or facility that is virtually divided among multiple participants (“subscribers”) by means of a credit on their utility bill.
- Participation can be in the form of:
 - **Ownership:** buying a share or portion of the community solar project or panels
 - **Subscription:** buying a portion or share of the electric output produced by the community solar project

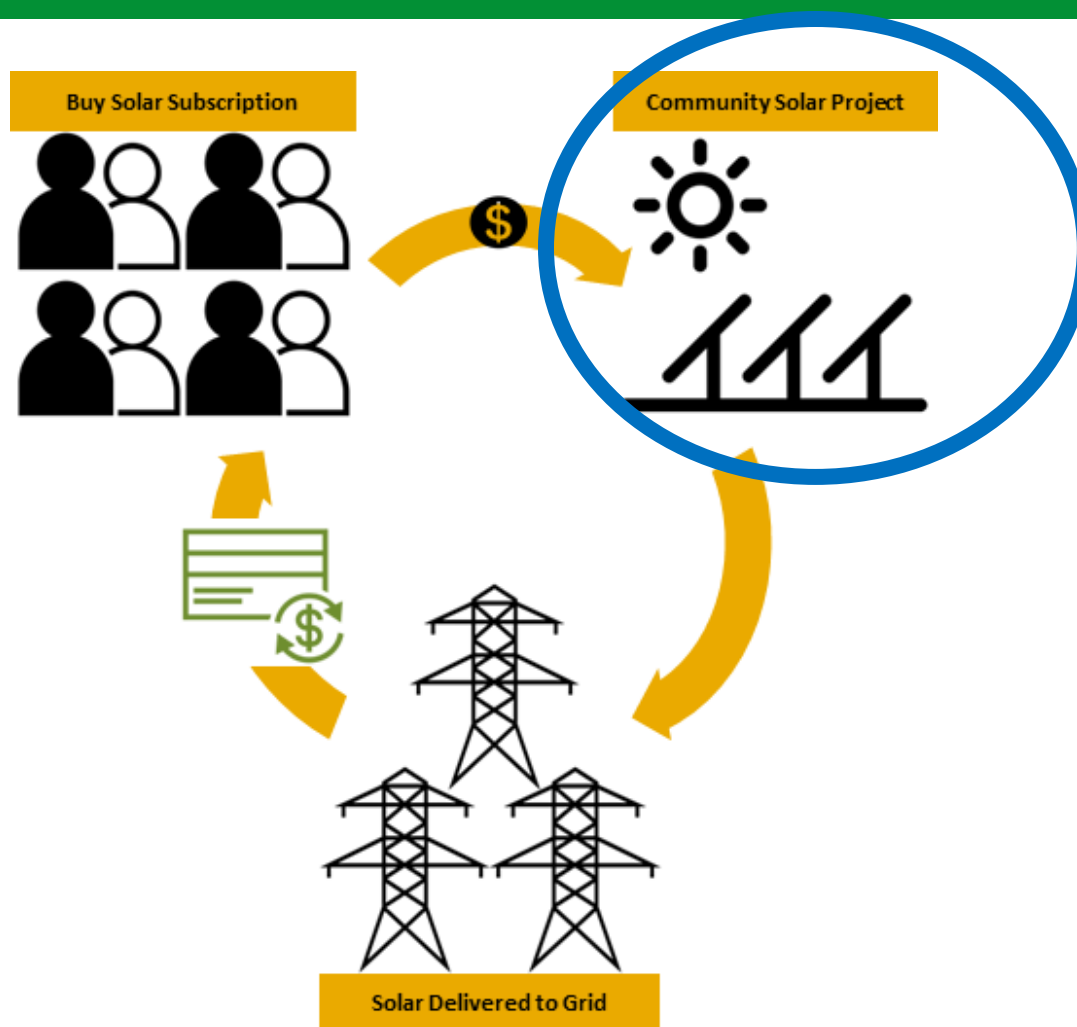
Program Goals

- Enable access to solar energy for electric utility customers who have previously been unable to go solar.
- Enable low-and moderate-income households and environmental justice communities to access clean energy and save on their electricity bills.
- Pursue local clean energy development that is tied to the communities without materially compromising the preservation of open space or protected lands in New Jersey.

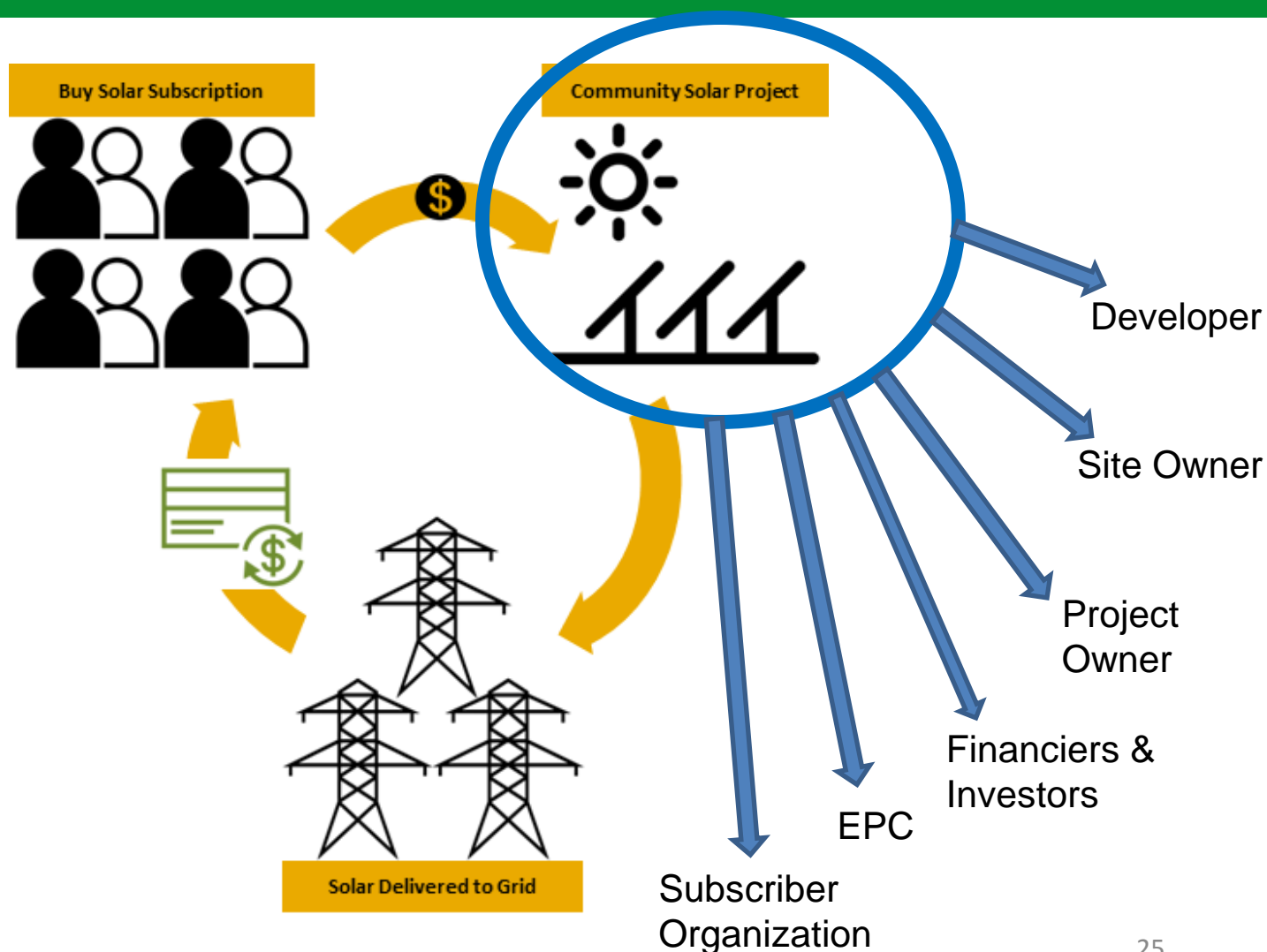
Participation Potential Benefits

- Participate in locally-generated solar energy.
- Support local jobs and community development.
- Potential savings on your electric bill (depending on contract).

Participating in Community Solar



Participating in Community Solar



Pilot Program Characteristics

Structure

- 3-year Pilot Program
- Projects selected via an application and competitive scoring
- Application Period: April 9, 2019 – September 9, 2019

Size

- Individual community solar project maximum size: 5MW
- Annual capacity limit: 75MW for PY1, at least 75MW PY2&3
- Min. 10 subscribers, max. 250 subscribers per 1MW capacity

Siting

- Projects may have subscribers anywhere in the EDC service territory
- Prohibition of community solar on preserved farmland
- Preference for projects on brownfields, landfills, areas of historic fill, etc.

Credit Value

- Bill credit set at retail rate, minus non-bypassable charges
- Bill credits can be carried over from month-to-month for one year

Low & Moderate Income (LMI) Access

- At least 40% of program capacity reserved for LMI projects
- LMI project: at least 51% project capacity subscribed by LMI participants
- Option for further 10% reserved for LI projects

Application Form

- Application Form for Program Year 1 released on March 29, 2019
 - Application Period Opens: April 9, 2019 at 9:00 A.M.
 - Application Period Closes: September 9, 2019 at 5:00 P.M.
- Application Form available at:
<http://njcleanenergy.com/renewable-energy/programs/community-solar>
- FAQs available at: <http://njcleanenergy.com/renewable-energy/programs/community-solar/FAQs>

Application Form Section A

- Section A: Application Form Requirements, Instructions, Terms and Conditions
 - Minimum Qualification Requirements
 - Instructions for Completing the Application Form
 - Terms and Conditions: Evaluation of Applications, Milestones and Follow-Up, and other Special Considerations

Application Form Section B

- Section B: Community Solar Project Description
 - Contact Information
 - Proposed Community Solar Facility Characteristics
 - Proposed Community Solar Facility Siting Information
 - Subscriptions and Subscribers
 - Community Engagement
 - Proposed Project Cost
 - Other Benefits
 - Special Authorizations and Exemptions

Application Form Sections C and D

- Section C: Certifications
- Section D: Appendix
 - Product Offering Questionnaire
 - Required Attachments Checklist
 - Evaluation Criteria

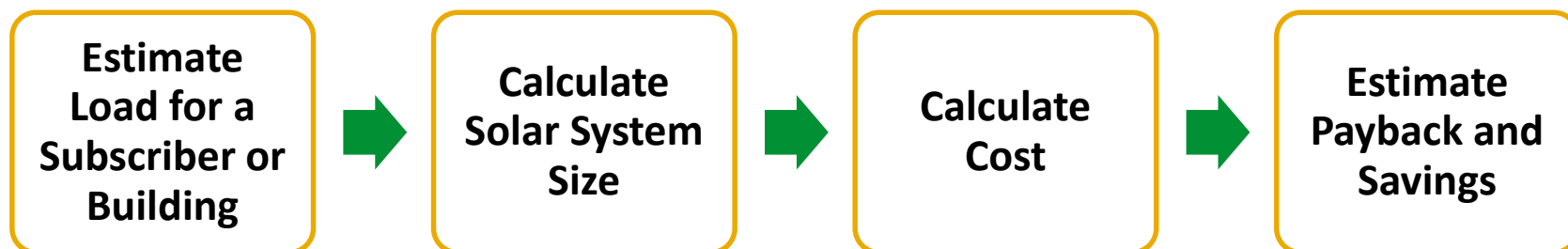


Evaluation Criteria	Max. Points
Low- and Moderate-Income and Environmental Justice Inclusion Higher preference: LMI project	30
Siting Higher preference: landfills, brownfields, areas of historic fill, rooftops, parking lots, parking decks Medium preference: canopies over impervious surfaces (e.g. walkway), areas designated in need of redevelopment No Points: preserved lands, wetlands, forested areas, farmland Bonus points for: landscaping, land enhancement, pollination support, stormwater management, soil conservation	20 Max. possible bonus points: 5
Product Offering Higher preference: guaranteed savings >10%, flexible terms* Medium preference: guaranteed savings >5% No Points: no guaranteed savings, no flexible terms* *Flexible terms may include: no cancellation fee, short-term contract	15
Community and Environmental Justice Engagement Higher preference: partnership with municipality, partnership with local community organization(s), partnership with affordable housing provider Medium preference: letter of support from municipality, project owner is a government and/or public and/or quasi-public entity, project owner is an affordable housing developer	10
Subscribers Higher preference: more than 51% project capacity is allocated to residential subscribers	10
Other Benefits Higher preference: Provides local jobs/job training, demonstrates co-benefits (e.g. paired with storage, micro-grid project, energy audit, EE measures)	10
Geographic Limit within EDC service territory Higher preference: municipality/adjacent municipality Medium preference: county/adjacent county No Points: any geographic location within the EDC service territory.	5

Minimum number of points: 30

Solar 101: How to Estimate the Amount of Solar, Space & Cost for a Community Solar Project

Who is Your Customer?



Estimating Load

For residential loads the electric bill and natural gas heating bills are the best source for usage and costs

Or you can use Energy Calculators

www.pseg.com/home/save/manage_costs/tips_tools.jsp

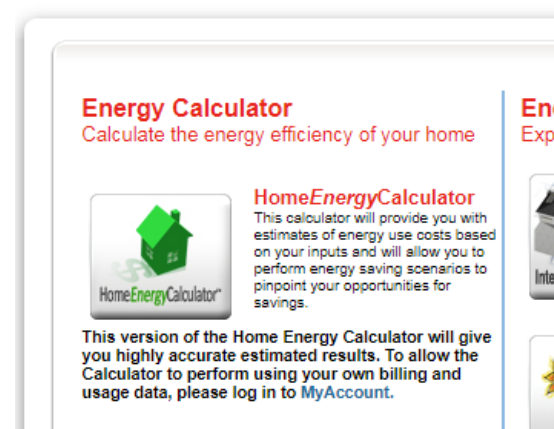
Home Energy Calculator

<http://c03.apogee.net/clients/?utilityid=pseg>

Fill in question on Home type/age, insulation, windows, HVAC, HWH, Refrig/Freezer, TV, Kitchen ...

For a Deeper Analysis

<https://scout.energy.gov/baseline-energy-calculator.html>



Energy Calculator
Calculate the energy efficiency of your home

HomeEnergyCalculator
This calculator will provide you with estimates of energy use costs based on your inputs and will allow you to perform energy saving scenarios to pinpoint your opportunities for savings.

This version of the Home Energy Calculator will give you highly accurate estimated results. To allow the Calculator to perform using your own billing and usage data, please log in to [MyAccount](#).

Solar Panels Factoids & Rules of Thumb

- <https://pvwatts.nrel.gov/pvwatts.php>

Average sizes

- 17.5 or 21 sq. ft. per panel

Panel Efficiencies

- 250 to 350 watts per panel
- 17 watts per sq. ft.

System Capacity Factor

- 1,200 kWh per KW per year





<https://www.solarpowerauthority.com/how-much-does-it-cost-to-install-solar-on-an-average-us-house/>

1 MW GM solar: 4 to 5 acres

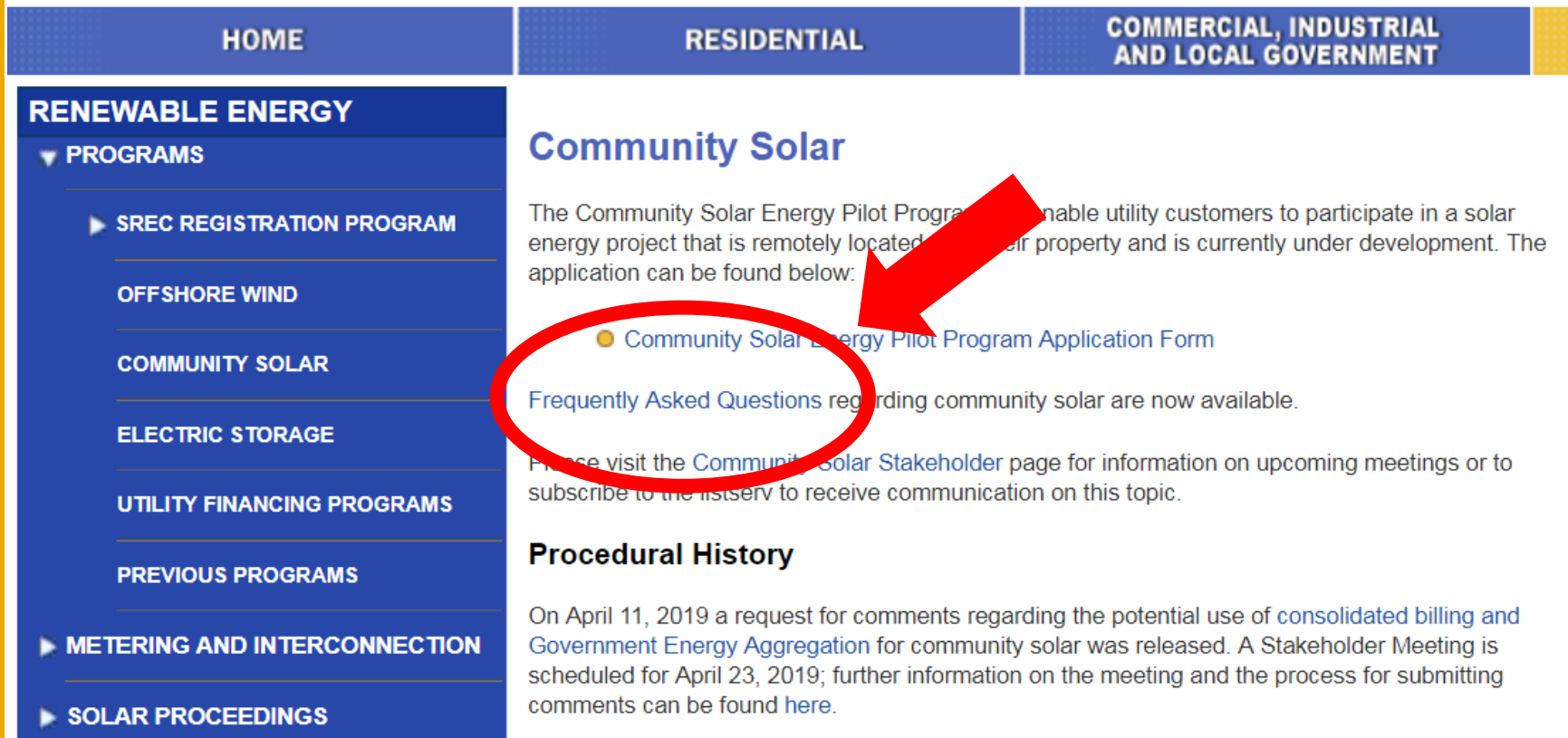
Approximately 50 to 30%
usable space



<https://realestate.usnews.com/real-estate/articles/what-homebuyers-should-know-about-solar-panels>

NJ CEP Website and FAQs

<http://njcleanenergy.com/renewable-energy/programs/community-solar>



HOME RESIDENTIAL COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT

RENEWABLE ENERGY

- ▼ PROGRAMS
 - ▶ SREC REGISTRATION PROGRAM
 - OFFSHORE WIND
 - COMMUNITY SOLAR
 - ELECTRIC STORAGE
 - UTILITY FINANCING PROGRAMS
 - PREVIOUS PROGRAMS
 - ▶ METERING AND INTERCONNECTION
 - ▶ SOLAR PROCEEDINGS

Community Solar

The Community Solar Energy Pilot Program enables utility customers to participate in a solar energy project that is remotely located from their property and is currently under development. The application can be found below:

- [Community Solar Energy Pilot Program Application Form](#)

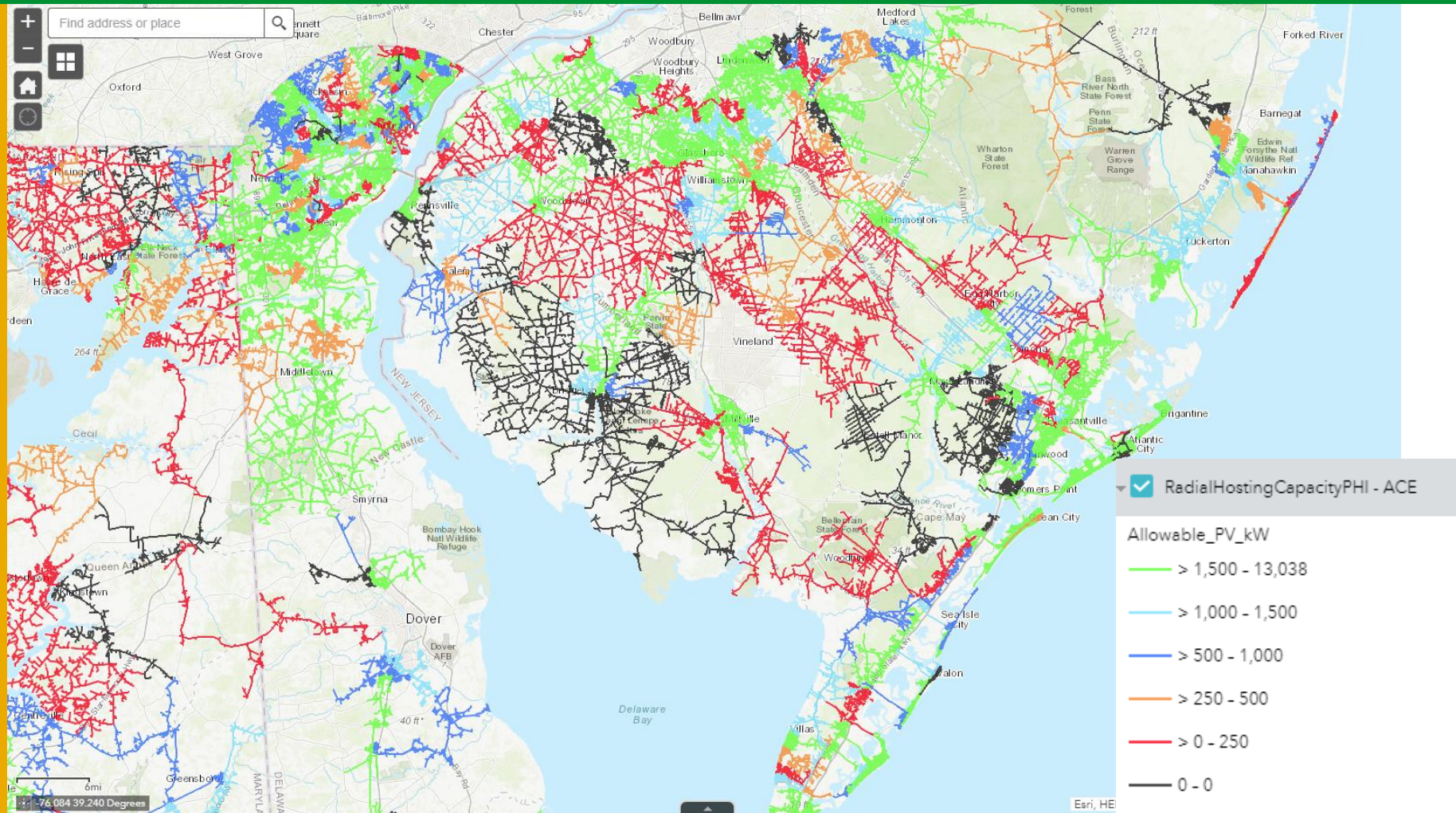
[Frequently Asked Questions](#) regarding community solar are now available.

Please visit the [Community Solar Stakeholder](#) page for information on upcoming meetings or to subscribe to the listserv to receive communication on this topic.

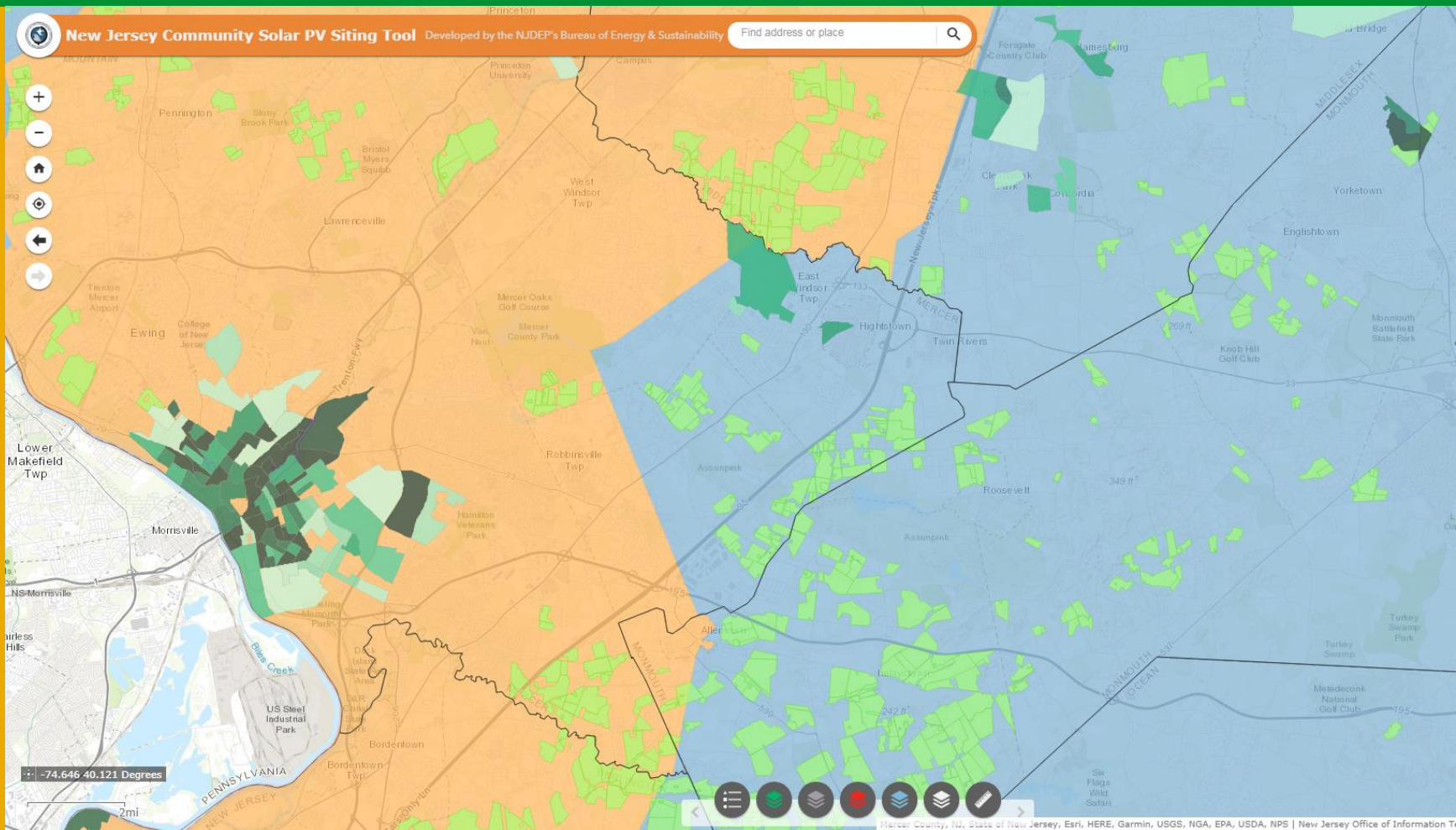
Procedural History

On April 11, 2019 a request for comments regarding the potential use of [consolidated billing](#) and [Government Energy Aggregation](#) for community solar was released. A Stakeholder Meeting is scheduled for April 23, 2019; further information on the meeting and the process for submitting comments can be found [here](#).

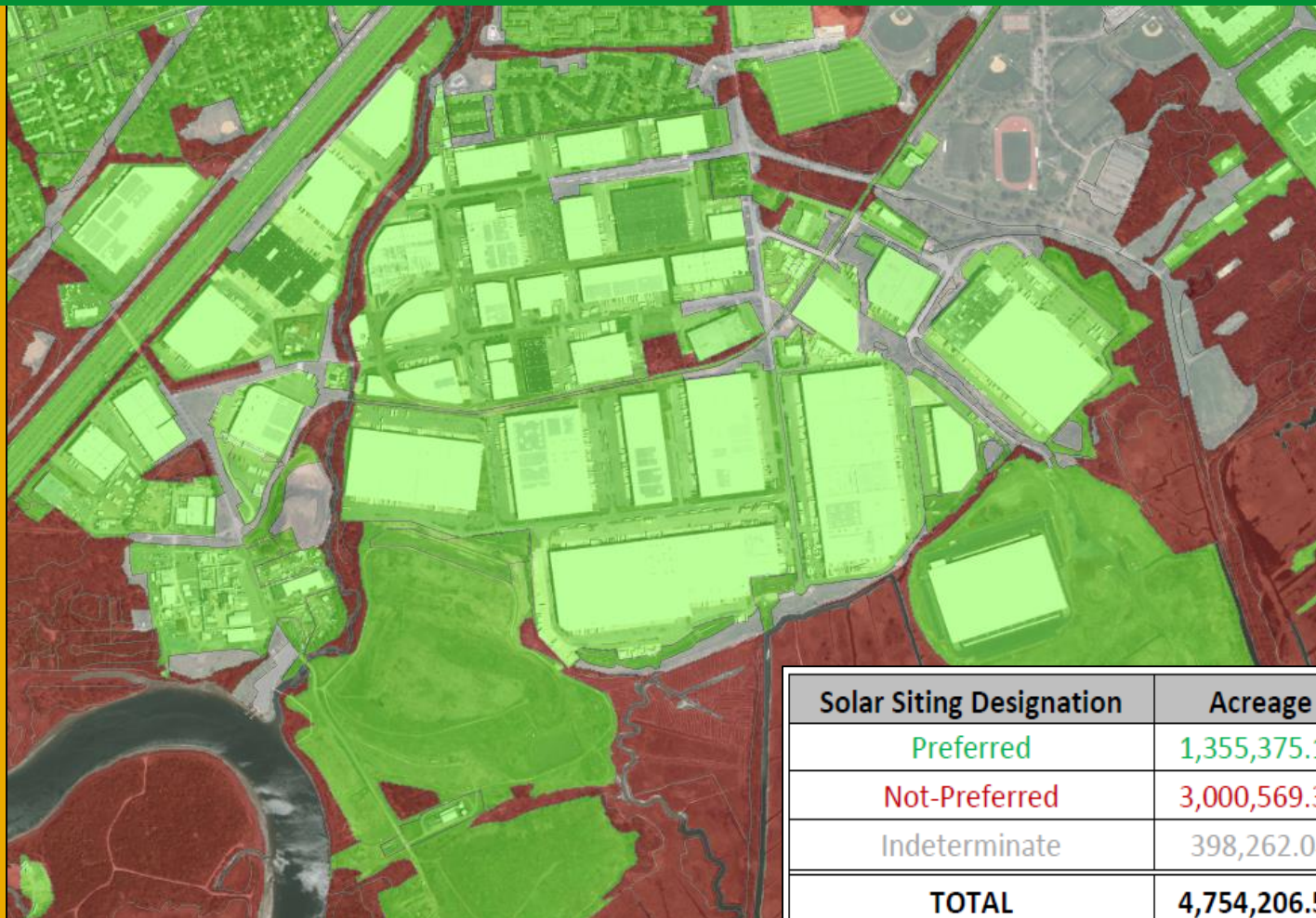
ACE Hosting Capacity



NJDEP PV Solar Siting Tool 2019



NJDEP Solar Siting Analysis 2017 Update



Solar Siting Designation	Acreage	Sq. Mi	% Total
Preferred	1,355,375.11	2,117.77	29%
Not-Preferred	3,000,569.36	4,688.39	63%
Indeterminate	398,262.04	622.28	8%
TOTAL	4,754,206.51	7,428.44	100%

NJDEP GIS Links

- NJDEP Bureau of Energy & Sustainability PV Siting Tool:
<https://www.state.nj.us/dep/ages/solar-siting.html#cstool>
- NJDEP Bureau of Energy & Sustainability GIS Webpage:
<https://www.state.nj.us/dep/ages/gis.html>
- NJDEP Bureau of Energy & Sustainability GIS Data Downloads:
<https://www.state.nj.us/dep/ages/gisdownloads.html>
- NJDEP Open Data: <https://gisdatanjdep.opendata.arcgis.com>



FOR MORE INFORMATION

Visit: NJCleanEnergy.com

<http://njcleanenergy.com/renewable-energy/programs/community-solar>

Contact: communitysolar@njcleanenergy.com

Stay Informed: Sign up for community solar updates by emailing webmaster@njcleanenergy.com

@NJCleanEnergy



Upcoming Events

[Countdown to Certification Webinar](#)

May 29, 2019

1:00 pm to 2:00 pm

[Going for Energy Gold Workshop](#)

May 31, 2019

9:30 am to 12:00 pm

The College of New Jersey, Education Building Room 212

2000 Pennington Road, Ewing, NJ 08628

[2019 New Jersey Sustainability Summit](#)

June 14, 2019

8:30 am to 4:30 pm

Bell Works

101 Crawfords Corner Road, Holmdel, NJ 07733