

Solar Opportunities in NYS, Jefferson County and the North Country

NYSERDA's Programs – Frank Mace

Sustainable CUNY NYSolar Smart – Nick Pasco

April 23, 2014



NYSERDA

New York State Energy Research & Development Authority

Goal: To help the NY Public to increase energy efficiency, save money, use renewable energy and reduce reliance on fossil fuels. Work to protect the environment and create clean-energy jobs.

- Work with and within all civilian sectors in NYS
- Work with and within all energy markets in NYS
- Funded through energy use rate payers
- Governed by the Public Service Commission (PSC)



NYSolar Smart Team

Goal: Grow all aspects of solar energy industry in all of NYS

- Led by the City University of New York (CUNY)
- Work under two Main Grants
 - Department of Energy (DOE) SunShot Initiative - Rooftop Solar Challenge II (Federal Level)
 - New York State - NY-SUN Initiative (State Level)
- State Partners: NYSERDA, New York Power Authority (NYPA); municipalities around the state; and more than 30 organizations representing utility companies, installers, government agencies and industry leaders.

Solar Project Funding Opportunities

NYSERDA:

- PON 2112 – Solar PV, Open enrollment
- PON 2589 – Solar PV, Competitive Incentives
- PON 2149 – Solar Thermal, Open enrollment

New York State:

- Income Tax Credit - 25% of project cost - max., \$5000
- PV systems are exempt from State sales tax
- **PV systems are exempt from local sales tax
- **Prevention of the reassessment of the property based upon the addition of a PV system for 15 years out

**Depends on Municipality

Solar Project Funding Opportunities – Cont.

Federal:

- Income Tax Credit – 30% of Project Costs, no max.
- Full depreciation of commercial systems within five years

Federal, US Dept. of Agriculture Development:

- Loan Options: Provides guarantees to commercial lenders who make loans to rural small businesses or agricultural producers for energy projects. The rates and terms of these loans are negotiated between the lenders and the borrowers.

- Grant Options – 25% of projects costs up to \$500,000
- Combination of Loan and Grant Options

PON 2112 – Main NYS Solar Incentive

PON 2112 - The Solar PV program often referred to as the “Standard Offer” PV Program. Participation through Eligible Installer/Contractors who submit all of the paperwork to NYSERDA

Two Tier Incentive structure \$1.00/ Watt up to 50kW, \$0.60/Watt for additional capacity up to 200kW with residential systems capped at 25kW

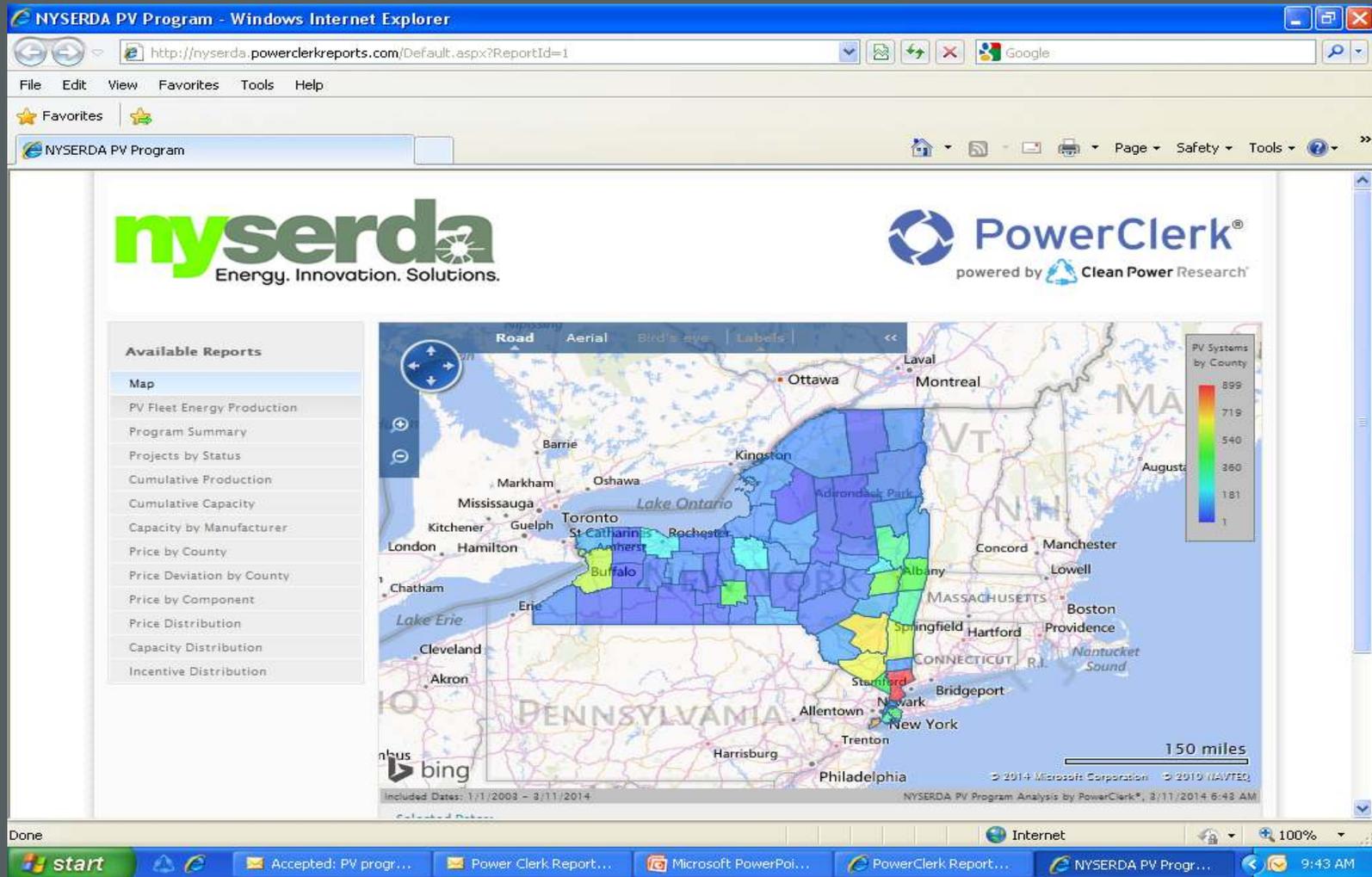
System Size

- Residential up to 25kW
- Non Residential up to 200kW
- Farms up to 100kW may retain residential meter classification
- Add on systems are allowed and funded up to new cap (existing residential 7kW can add 18kW)
- Systems sized up to 110% of annual usage

PON 2112 – Continued

- Incentive is established at the time NYSERDA receives the application
- Each utility meter may qualify for a system
- TSRF (Total Solar Resource Fraction) which is the percentage of sunlight that the solar array will receive, calculated as the actual vs. ideal conditions
- A TSRF of 80% or greater receives the full incentive. A TSRF of 79% would only receive 79% of the full incentive.
- Incentives are administered through NYSERDA approved contractors.
- Different Buying Options are allowed to receive incentives
- NYSERDA incentives are subject to change

PON 2112 – Program Statistics



<http://nyserda.powerclerkreports.com/Default.aspx?ReportId=1>

Solar Systems “Buying” Options

- Many different financial models and each model can be unique to installers/developer/financer
 - Outright Purchase
 - Leasing Contract
 - Power Purchase Agreement (PPA)
 - Leasing and PPA with buyout options
- Metering Considerations
 - Net-metering: Reconciliation of energy use with grid at point of use
 - Remote/Virtual Net-metering: Reconciliation of energy use with grid at multiple meters or with remote meters

Solar System Outright Purchase

- Buying a system to own it for entire working life. – 20 to 25 years
- Best option with regards to system payback and purchased energy offset
- Requires upfront cost
 - Lump sum from end user
 - Loan through installers
 - Loan through new NYSERDA Program
 - On-bill financing loan through new NYSERDA Program
- Maintenance of system left to system owner
- Aside of loan commitment...No contracts

GJGNY Financing

Green Jobs - Green NY (GJGNY) is a separate NYSERDA Program

Financing is now available for residential PV systems on existing homes that participate in PON 2112.

There are two different loan products: - Very similar to Mortgage Loan

- On-Bill Recovery Loan
 - 3.49% interest rate
 - Payment for Solar System on utility bill
- Smart Energy Loan
 - 3.99% interest rate or 3.49% with automatic withdrawal
 - Standard Loan arrangement

Other “Buying” Options

- Leasing Contract - Lease terms depend on contract
 - Length of contract established, typically 5,10,15,20 years
 - Initial down payment of \$X
 - The higher the down payment, the lower the monthly payment for the duration on contract
 - Options to continue, purchase or eliminate lease offered at terms, contract dependent
- Power Purchase Agreement (PPA)
 - PPA Structure – Financer : Developer/Solar Installer : End user
 - End user agrees to have solar installed by installer
 - Installer receives financing from Financer
 - End user signs PPA with Financer
 - Financer contracts Installer to install system and maintain system

The NY Sun Competitive Program

The NY Sun Competitive PV program for systems over 200kW.

- Performance based incentives
- Bonuses for strategic locations as identified by the utility with maximum project and team awards.
- Competitive program is offered a few times per year. (Most recent was PON 2589)

Solar Thermal – Hot Water Supply

PON 2149 - Solar Thermal Program (ST)

- Incentives are paid to contractors
- \$1.50/ kWh displaced
- Maximum \$4000 residential / \$25,000 non residential
- Similar tax credits as PON 2112
- GJGNY financing available soon
- Non residential PON 2293

Solar Related PON's

PON 2033: “Clean Energy On-the-Job Training”

PON 2721: “Cleaner Greener Communities”

PON 2672: “Photovoltaic Balance-of-System Cost Reduction”

PON 2841: “Workforce Development and Training for Renewable Energy and Advanced Technologies”

***PON 2697: NY-Sun PV Balance of System Training and Education Program**

Decision makers , town officials, code officials, first responders

PSC Case # 03-E-0188

Potential Changes Coming to PV Programs - NYSERDA filed a petition with the Public Service Commission January 6, 2014 requesting:

- Authorization of \$ 960M of new funding
- Authorization of PSE&G LI (LIPA) residential and small commercial participation in a statewide program
- Megawatt (MW) Block program designed to achieve 3 Gigawatts (GW) of PV capacity

Current Funding Opportunities

NYSERDA:

<http://www.nyserda.ny.gov/Funding-Opportunities/Current-Funding-Opportunities.aspx>

USDA:

<http://www.rurdev.usda.gov/Home.html>

Federal and Overall Summary:

<http://www.dsireusa.org/>

Sustainable CUNY

<http://www.cuny.edu/about/resources/sustainability/nyssolar.html>

NYS Solar Policy and Solar News

<http://ny-sun.ny.gov/>

General Information about Solar in NYS

<http://www.dec.ny.gov/energy/43231.html>



NYSolar Smart in Jefferson County

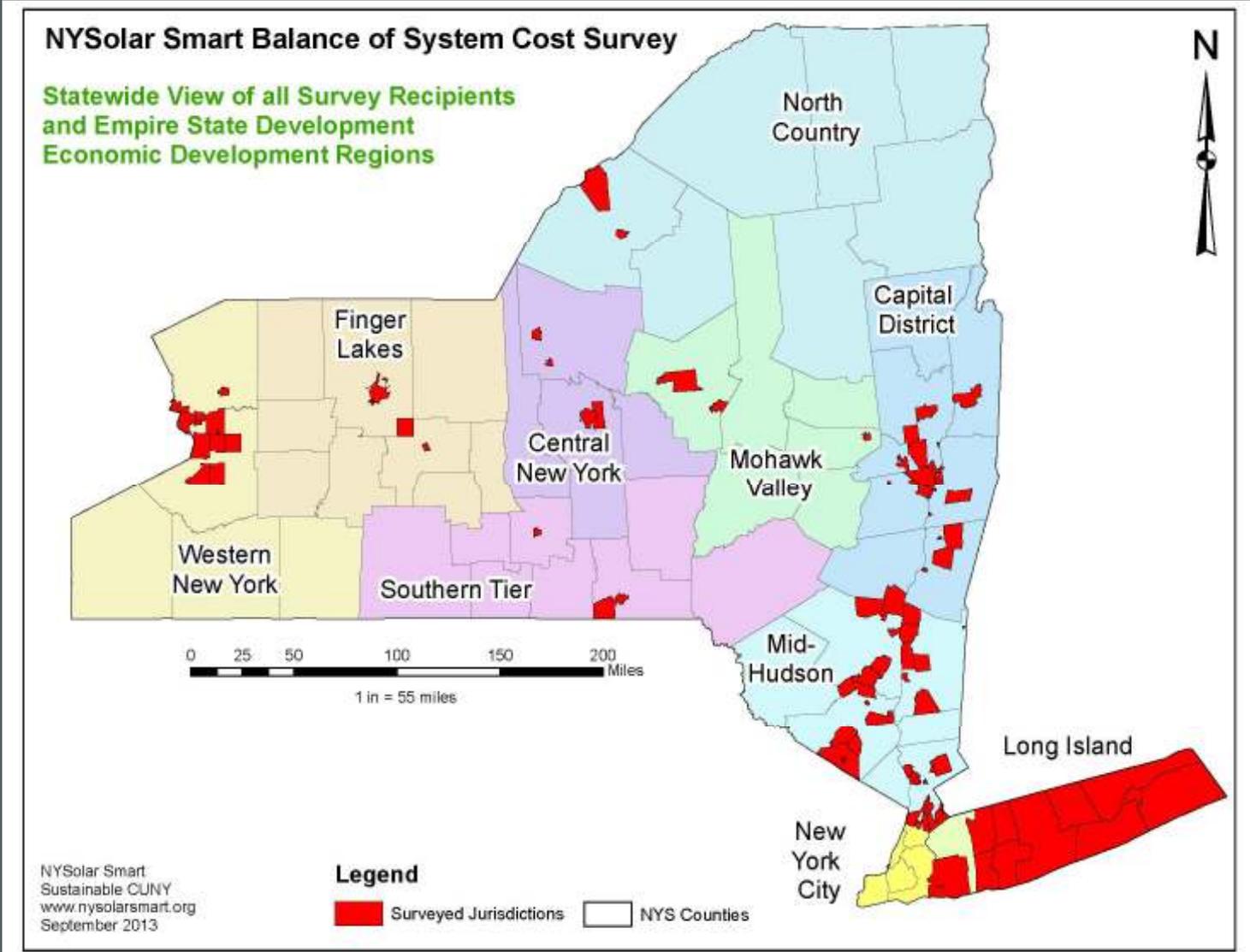
Goal: To reduce costs all across NYS.

Done through outreach, recommendations, working groups and trainings.

- Solar Permitting Process – NYS Unified Solar Permit
- Planning & Zoning (P & Z) Improvements
- Training for Jurisdiction Officials

Survey,
Benchmark
and Analyze

NYSOLAR SMART

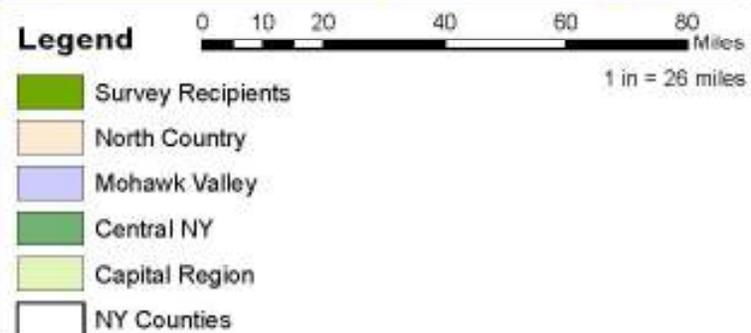
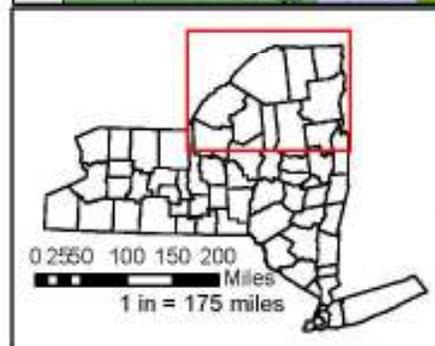
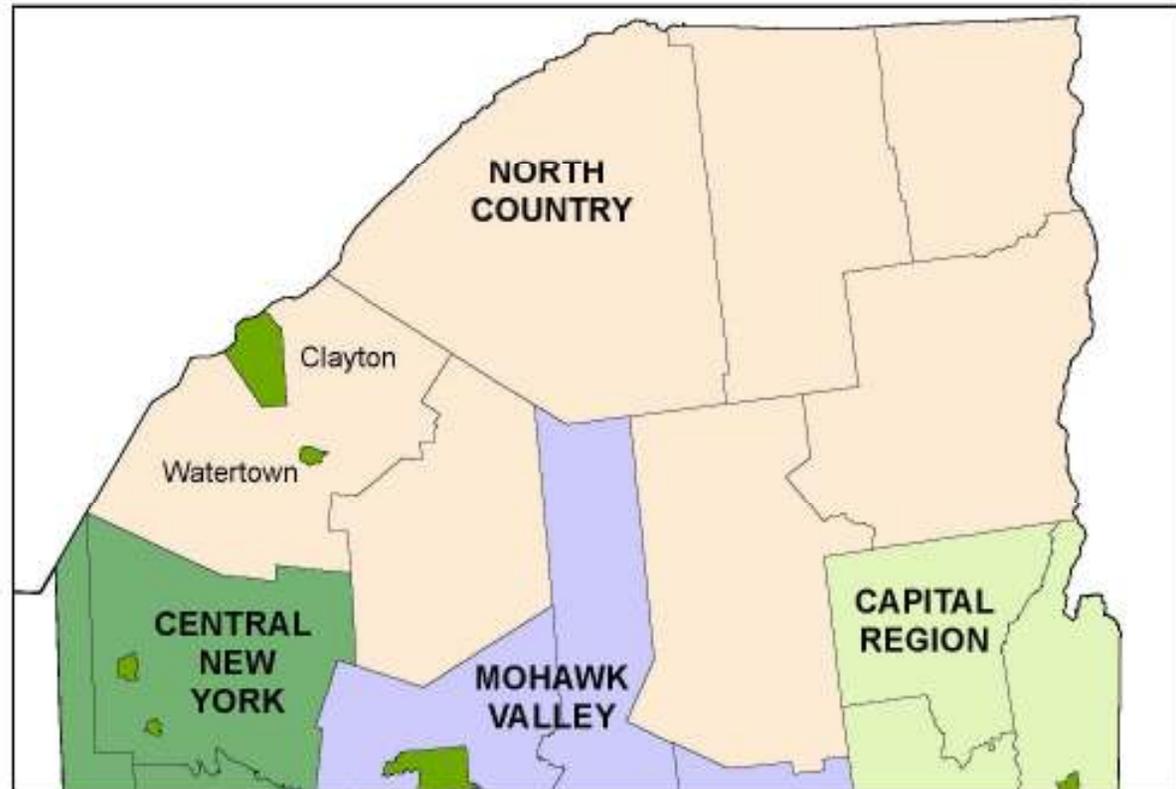




NY Solar Smart
Sustainable CUNY
www.nysolarsmart.org
September 2013

Survey,
Benchmark
and Analyze

NYSolar Smart Balance of System Cost Survey Survey Recipients in The North Country





NYS Unified Solar Permit

Enhancing consistency and transparency in processes statewide

- Standardized permit for simple systems that are 12 kW or smaller
- Solar-specific permit form that uses plans and diagrams required by NYSERDA and/or utility
- Asks for property information, as well as information on equipment and mounting system
- Checklist to ensure that systems fall within certain parameters and comply with local and state codes
- *Working with municipalities interested in adopting expedited permit form and process*

NYS Unified Solar Permit - Benefits



Municipalities

- Show your community is open for solar business
- Receive incentive under NYSERDA's Cleaner, Greener Communities
- Removes barriers to local economic development, and add solar jobs

Building Departments

- Utilizing a standardized form will increase the quality and accuracy of applications received from installers
- As the number of solar installations increases, this enables building departments to gather all necessary information to ensure safety of installation.

Solar Industry

- Simplify and streamline permitting
- Increases consistency and transparency in permitting
- Ensure that fair, flat fees are set for small-scale installations
- Use same plans for municipality, utility, and NYSERDA



Permitting Improvements – Next Steps

- Review NYS Unified Streamlined Permit Initiative with fellow decision makers and officials
- Consider modifying current permitting practices to utilize new NYS Permit
- Personalize the Permit form for individual jurisdiction – Logo, fee, local licenses, etc.
- Formally adopt with town resolution, building department letter of approval, or other method
- Apply to NYSERDA Cleaner, Greener Communities program to receive \$2,500 or \$5,000 incentive



Permitting Improvements – Next Steps

- NYS Ombudsmen are available to aid in adoption process and any solar related questions
- Nick Pasco, Adam Schnell, Amy Heinemann, Justin Strachan
New York State Solar Ombudsmen
NYSolar@cuny.edu
(518)300-3575
- Nick Pasco, nick.pasco@cuny.edu, 518-791-5085
- Adam Schnell, adam.schnell@cuny.edu, 518-292-5127
- **For info on customizing the permit form and a link to the form: <http://ny-sun.ny.gov/Local-Community-Tools>**



P & Z Improvements

Provide uniformity and consistency throughout jurisdictions

How?

Creating a NYS Model Solar Zoning Ordinance through our Planning and Zoning Working Group

- Lead by Sustainable CUNY
- 11 Jurisdictions offering input and recommendations
- Subject matter expertise from Pace Law School- Land Use Law Center



Planning and Zoning WG Goals

- **Planning and Zoning Working Group Goals**
 - Increase transparency by eliminating ambiguity
 - Provide solar friendly language
 - Provide Solar “by right” or “as of right”
 - Increase solar access rights
 - Offer alternative height and setback exemptions
 - Solar as an accessory use in all districts
 - Create specific language for historic districts
 - Offer Solar Ready Zoning



Should I adopt Model Solar Language?

- Do you want to increase transparency and specificity within your zoning ordinance?
- Is increasing access to solar PV systems important to you?
- Do you want to contribute in creating uniformity within NYS?
- Do you want to lower the time and cost associated with installing solar?

Zoning Improvements – Next Steps



If your interested in participating in the adoption of a Model Solar Zoning Ordinance please contact our NYS Solar Ombudsman, Adam Schnell.

Contact Info

E-Mail: Adam.Schnell@Cuny.edu

Phone: 518-292-5127



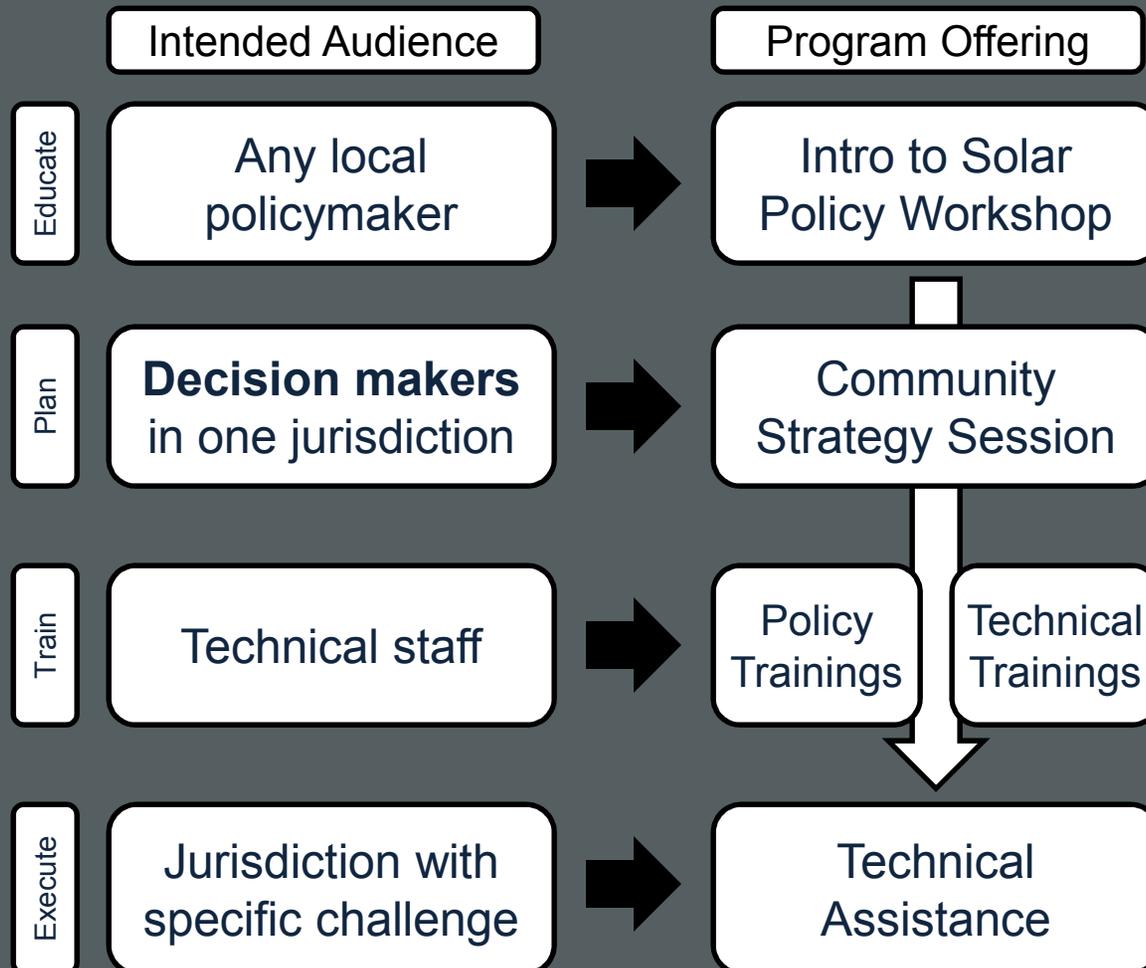
NY-Sun PV Trainers Network

Program Goals:

1. To inform local **decision makers** of solar market opportunities for their jurisdiction.
2. To maximize technical assistance requests for support in reducing soft costs & market barriers.
3. Compliment and leverage NYSERDA's activities, NY-Sun, NYSolar Smart and DOE SunShot.



Program Structure



Takeaways:

- Menu of options designed to aid jurisdictions at any point across the spectrum
- Guidance available for those that need more support
- Targeted TA for those with a clear objectives



1. Intro. To Solar Policy Workshop



Topics covered:

Introduction to solar.

Why local governments should promote solar.

Barriers to solar adoption.

Planning, zoning, and permitting best practices.

Expanding financing options for solar PV.

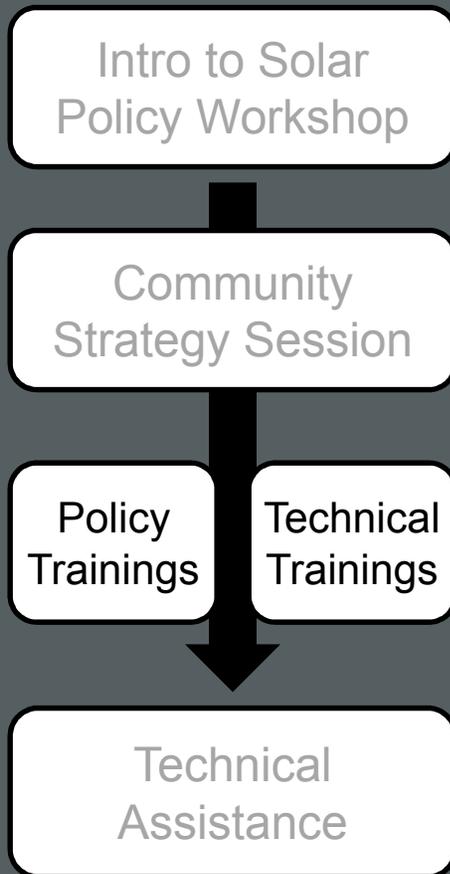
Making it easier to go solar with Solarize.

Barriers and strategies to adopting best practices.



3. Policy and Technical Trainings

Sample Trainings:



| Audience | Workshop | Trainer |
|---------------------------------|---|-----------|
| Planners | Solar in the Comprehensive Plan | Policy |
| | Adopting a Local Solar Ordinance | Policy |
| Administrators | Running a Solarize Program | Policy |
| | Expanding Solar Financing Options | |
| Code Officials & Plan Examiners | Streamlining Reviews for Standard Solar Installations | Policy |
| Code Officials & Inspectors | Advanced Code Training | Technical |
| First Responders | Fire and Rescue Training | Technical |
| Plan Examiners | Solar for Engineers and Architects | Technical |



Questions

NYSERDA Contacts:

Frank Mace - fwm@nyserda.ny.gov – 518 - 862-1090 ext. 3433

Marci Brunner - mlb@nyserda.ny.gov – 518- 862-1090 ext. 3415

Jim Quirk - jmq@nyserda.ny.gov – 518 - 862-1090 ext. 3300

CUNY Contacts:

Nick Pasco – nick.pasco@cuny.edu – 518-791-5085

Adam Schnell – adam.schnell@cuny.edu – 518-292-5127

Amy Heinemann – amy.heinemann@cuny.edu – 212-346-8577

General Contact - nysolar@cuny.edu – 518-300-3575