



**NYSERDA**

# **Municipal Clean Energy Leadership**

**A New Energy Vision for New York**

**OCPF Annual Planning Symposium**

**March 2, 2017**

**Chris Carrick**

Energy Program Manager, Central New York Regional Planning and Development Board



# The CNY RPDB



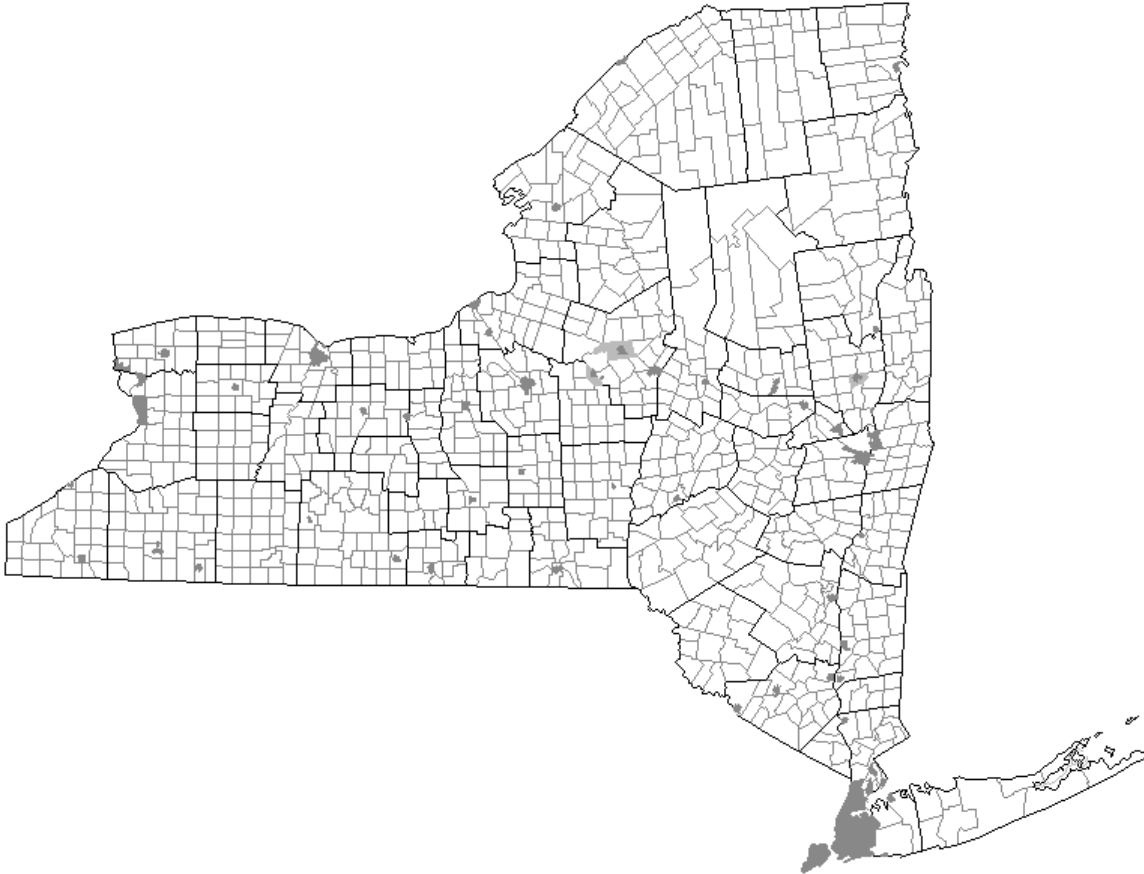
- Public agency established in 1966 by Cayuga, Cortland, Madison, Onondaga, and Oswego Counties
- Provides a range of services to Central New York communities with a focus on:
  - Community Development (Comprehensive Planning)
  - Economic Development
  - Environmental Management
  - Information and Research Services
  - Transportation Planning
  - **Energy Management**



# New York's Energy Policy

- Under Governor Cuomo, the State is restructuring its energy regulatory environment and clean energy programs through a strategy called **Reforming the Energy Vision**, or REV.
- The **Clean Energy Fund**, or CEF, is a 10-year, \$5 billion funding commitment to support the development of clean energy markets and innovation.
- The **Clean Energy Standard**, or CES, is a state mandate for 50% of New York's electricity consumption to come from renewable energy sources by 2030.

# New York's Local Governments



# Clean Energy Communities Program

*An inter-agency effort to drive clean energy action and energy literacy in local governments and communities across the state.*

- Administered by a dedicated NYSERDA staff team working in close collaboration with the Governor's Office, the New York Power Authority (NYPA), the Department of Public Service (DPS) and the Department of Environmental Conservation (DEC).
- The CEC program will streamline municipal and community access to state energy programs, resources, and tools.
- The CEC program will design and provide clean energy resources that resonate with local leaders based on i) the impact certain actions have on economic development, GHG emissions reductions, and energy cost savings, and ii) locally identified priorities and needs.

# Clean Energy Communities Program

An open enrollment program that provides **rewards and recognition** to local governments that demonstrate clean energy leadership

**STEP 1: BECOME A CLEAN ENERGY COMMUNITY** by completing four out of ten high-impact actions designed to save money, foster a vibrant economy, and improve the environment. At least two actions must be completed after August 1, 2016.

**STEP 2: ACCESS GRANT FUNDING** of up to \$250K with no local cost share to support additional clean energy projects.

**Dedicated local coordinators** are available to assist communities as they implement high-impact actions including free on-demand technical support, step-by-step guidance, case studies, model ordinances, RFPs, etc.

# Clean Energy Communities Grants Available

Municipality size by Population	Tier 1 Awards		Tier 2 Awards	
Large (40,000+)	2	\$250,000	2	\$150,000
Small/Medium (0-39,999)	4	\$100,000	10	\$50,000

- Must submit documents to demonstrate completion of **4 of 10 High Impact Action items** and be designated a Clean Energy Community
- Grants awarded on a first come, first served basis
- Must submit online grant application within 3 months of becoming a Clean Energy Community

# CEC Grant Selection Criteria

Proposed project must earn a minimum of 50% of the selection criteria points:

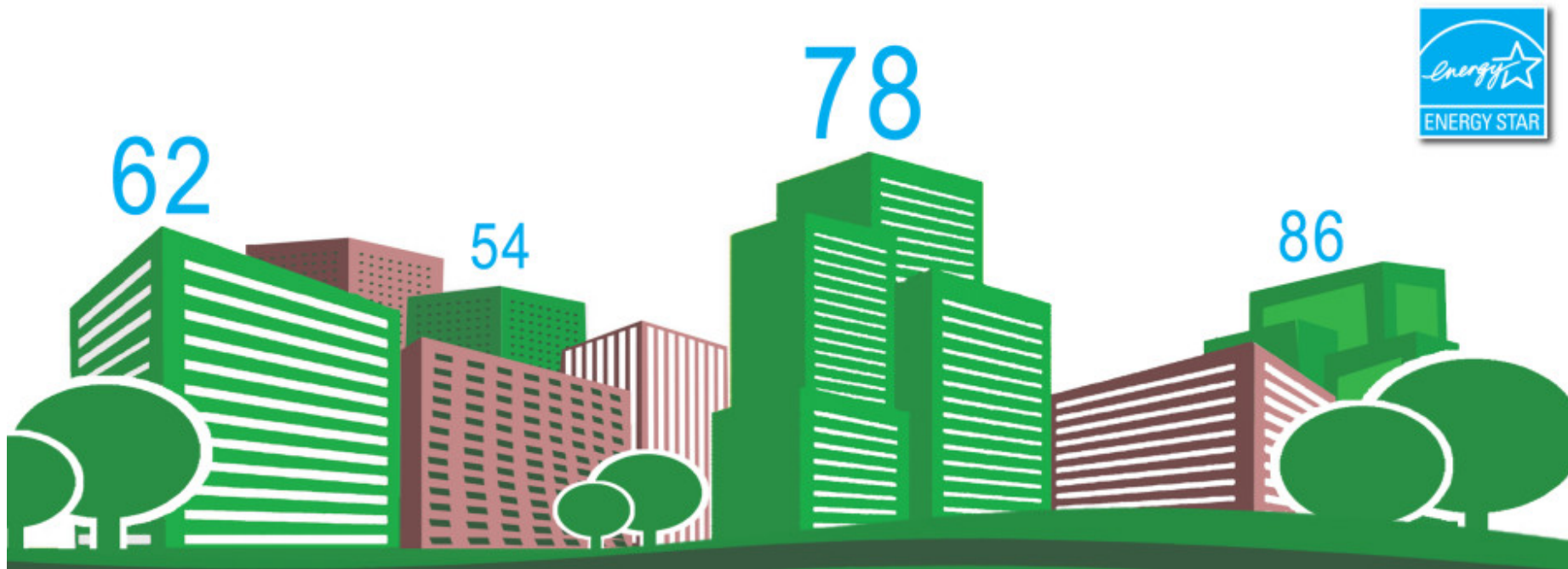
- Reasonable timeframe for project proposed (25 points)
- Positive direct impact on energy use/GHG emissions (15 points)
- Other sustainability benefits (15 points)
- Efforts made to collaborate with other municipalities and transfer knowledge (15 points)
- Innovative and/or replicable approach (15 points)
- Leverage public/private dollars and/or generate economic development benefits (15 points)



# 10 High-Impact Actions

1. **Benchmarking**
2. Clean Energy Upgrades
3. LED Street Lights
4. Clean Fleets
5. Solarize
6. Unified Solar Permit
7. Energy Code Enforcement Training
8. Climate Smart Communities Certification
9. Community Choice Aggregation
10. PACE Financing





# EPA Portfolio Manager

Energy Usage Report

2 WFC

225 Liberty Street, New York, NY 10281

March 4, 2011

Owner: Building Owner

Year Built: 1987

Square Footage: 6,666 sf

Analysis Period: 12/1/2006 - 12/1/2007

**ENERGY STAR**  
**PortfolioManager™ Score**

Your Building's Score

**94**

Average Score For Your District

**64**

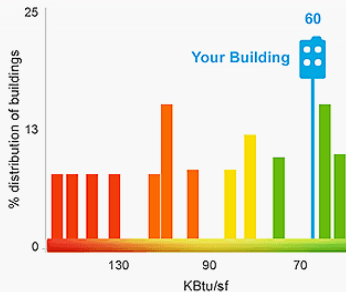
**Total Carbon Footprint:**

**27,109,373 lbs/year**

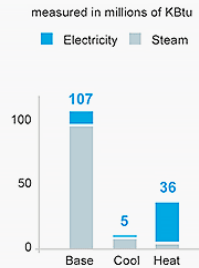
The total building energy is converted to one consistent unit (Btus) to allow for comparison with other buildings. Display of carbon emissions accounts for the environmental impact of the site energy used and considers the source fuel for electricity.

## Annual Site Energy Consumption

How You Compare to Your District

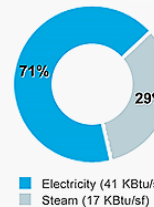


Total Energy By Use



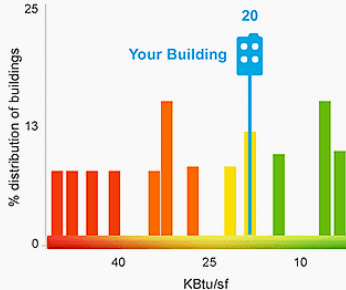
Total Site Energy Consumption

142,150,096 KBtu (58 KBtu/sf)

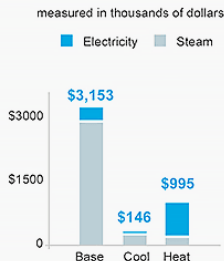


## Annual Carbon Emissions

How You Compare to Your District

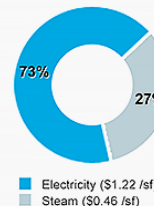


Total Cost By Use



Total Cost

4,123,730.71 (\$1.68/sf) (\$868.34/occupant)



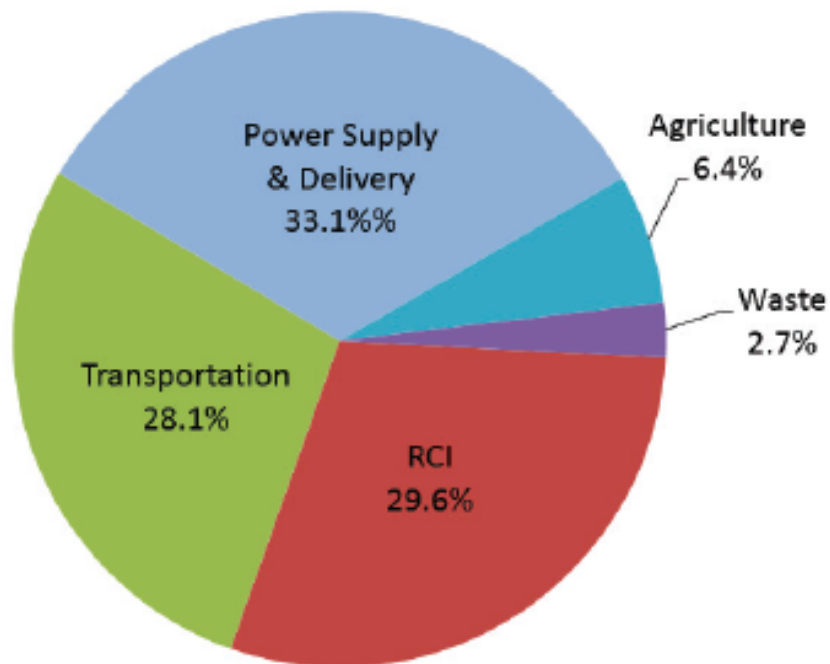
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5. Solarize
6. Unified Solar Permit
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8. Climate Smart Communities Certification
9. Community Choice Aggregation
10. PACE Financing

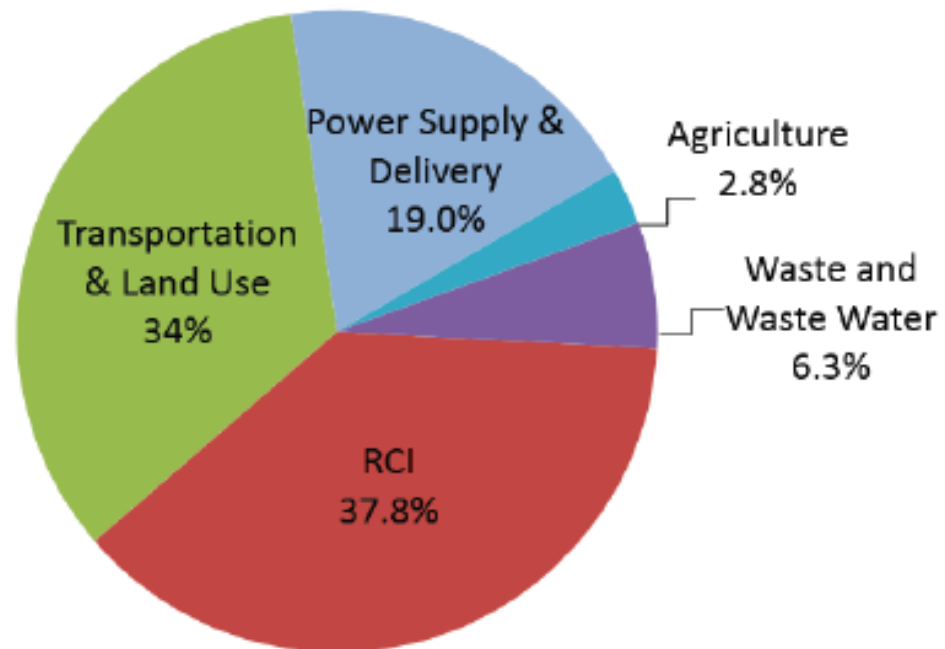


# 2014 GHG Emissions by Sector: NY and US

## U.S.



## NY



# Energy Saving Upgrades – Preble



# 10 High-Impact Actions

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# City of Los Angeles, before and after LED Street Light Project





## CNY Bright Lights Initiative

### Summary of Utility-Owned LED Streetlight Analyses

**19**

Participating Municipalities

**5,693**Total Cobra Head Streetlights  
(23 - 1,685 streetlights per muni)**\$158**Average Buyout Cost Per Lamp  
(\$48 - \$400)**\$12,430**Average Annual Savings  
(\$635 - \$54,044)**7.1 years**Average Project Payback  
(2.3 - 14.5 years)**CNYBRIGHTLIGHTS****NYSERDA**

# Village of Minoa LED Street Light Project



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# Examples of Electric Vehicles

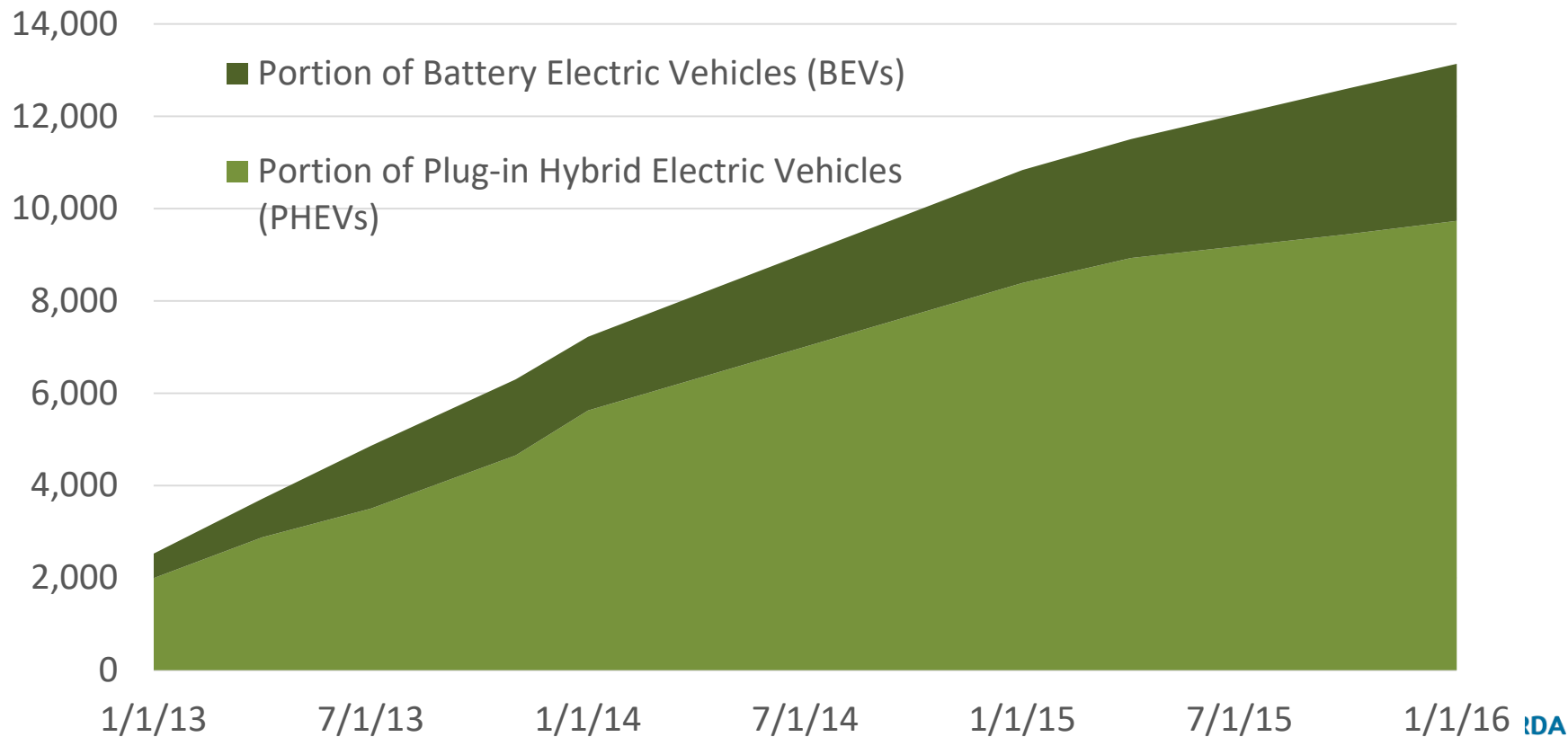


**Chevy Bolt Battery Electric Vehicle**

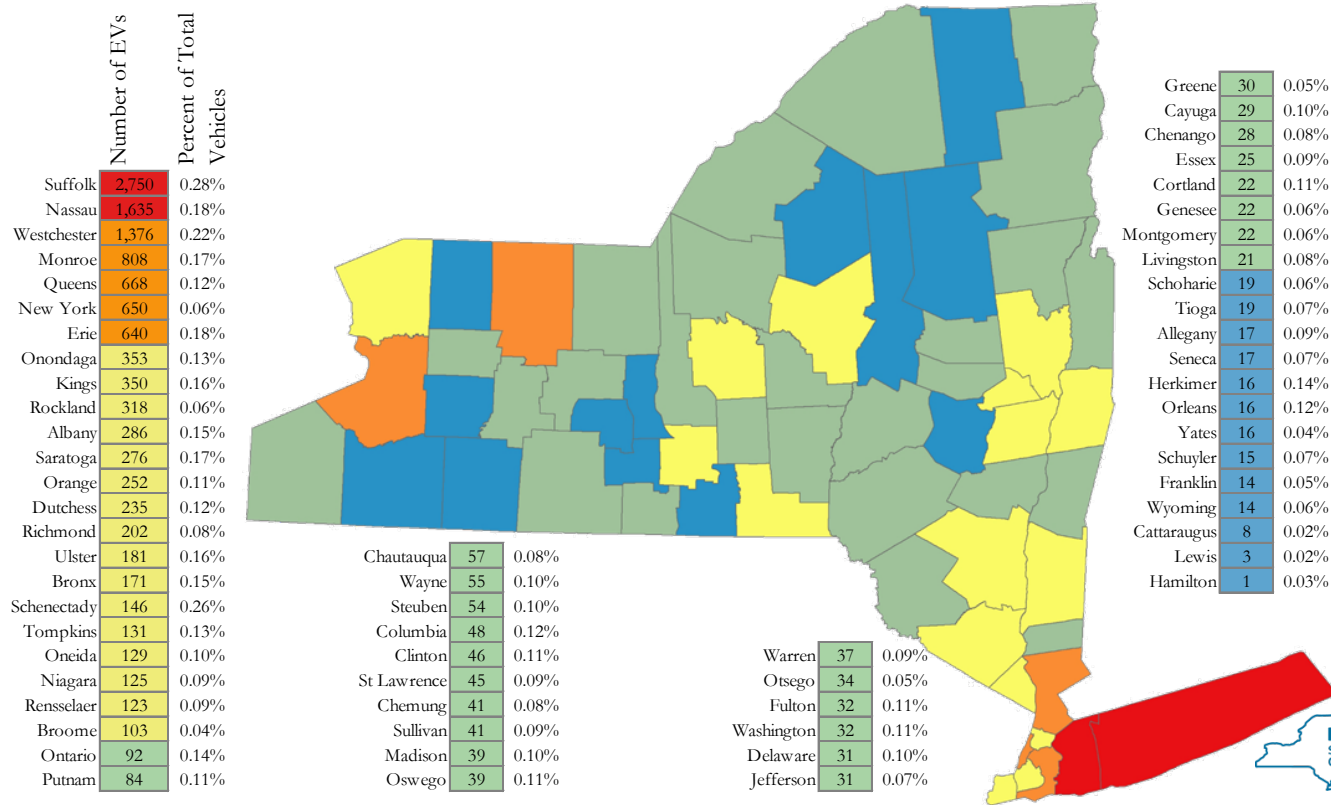


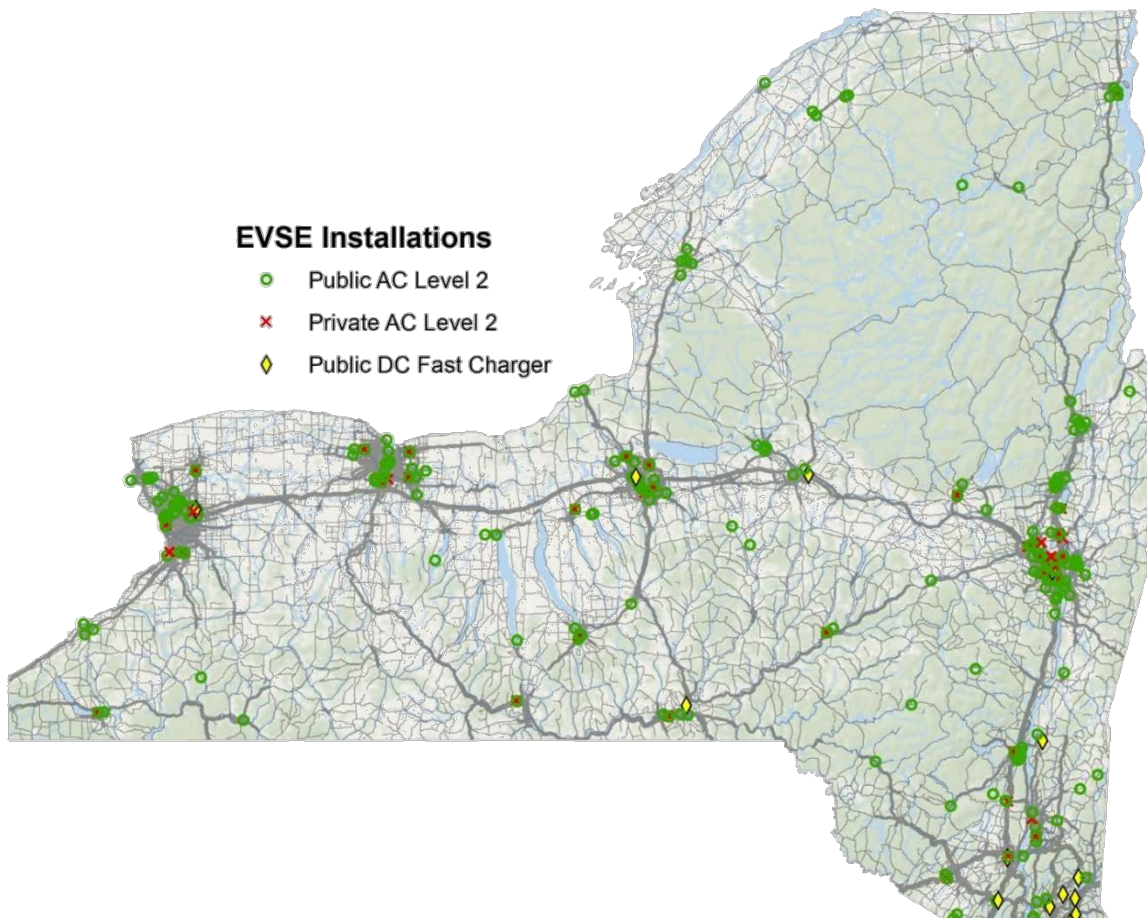
**Chevy Volt Plug-in Hybrid Electric Vehicle**

## Total Registered EVs in New York State



# BEVs and PHEVs by County





# Charging Stations in Central New York



Onondaga Lake Park, Liverpool NY



Skaneateles Village Hall



# Charging Stations in Central New York



Destiny USA, Syracuse

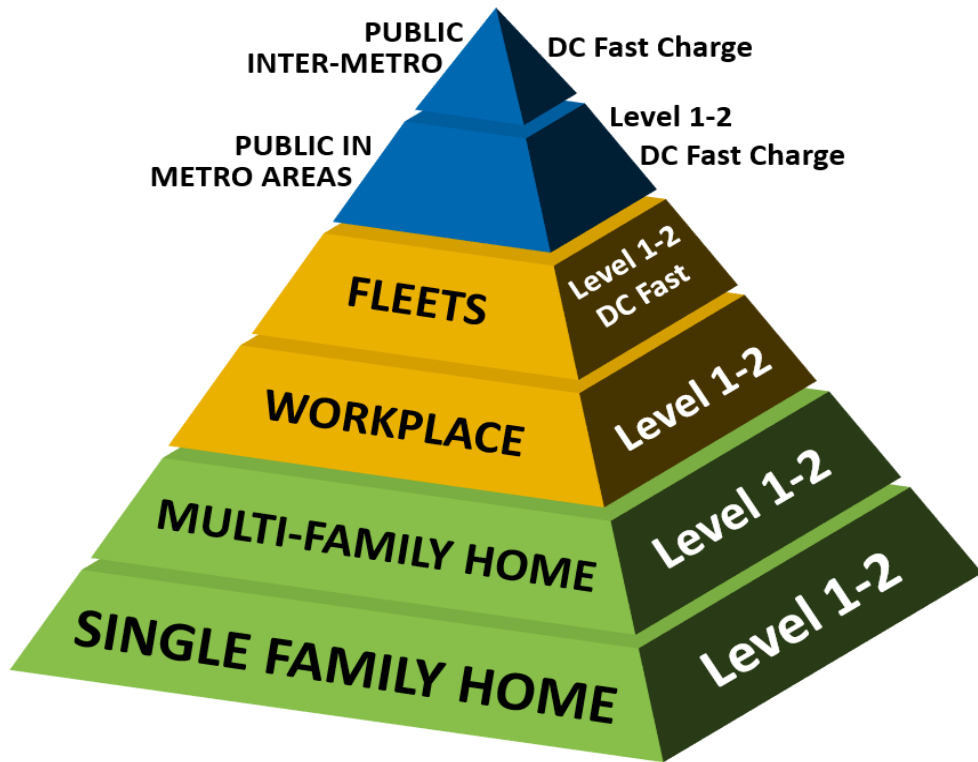


Chili's, Liverpool and Dewitt



Central New York  
**Electric Vehicle  
Charging Station  
Plan**





Level 2 Charging Station

# EV Charging Station Installation





**Village of Fayetteville  
Mill Street Municipal Parking Lot**



**Dewitt Town Hall**



**Syracuse Center of Excellence**



**Township 5 Shopping Center in Camillus**



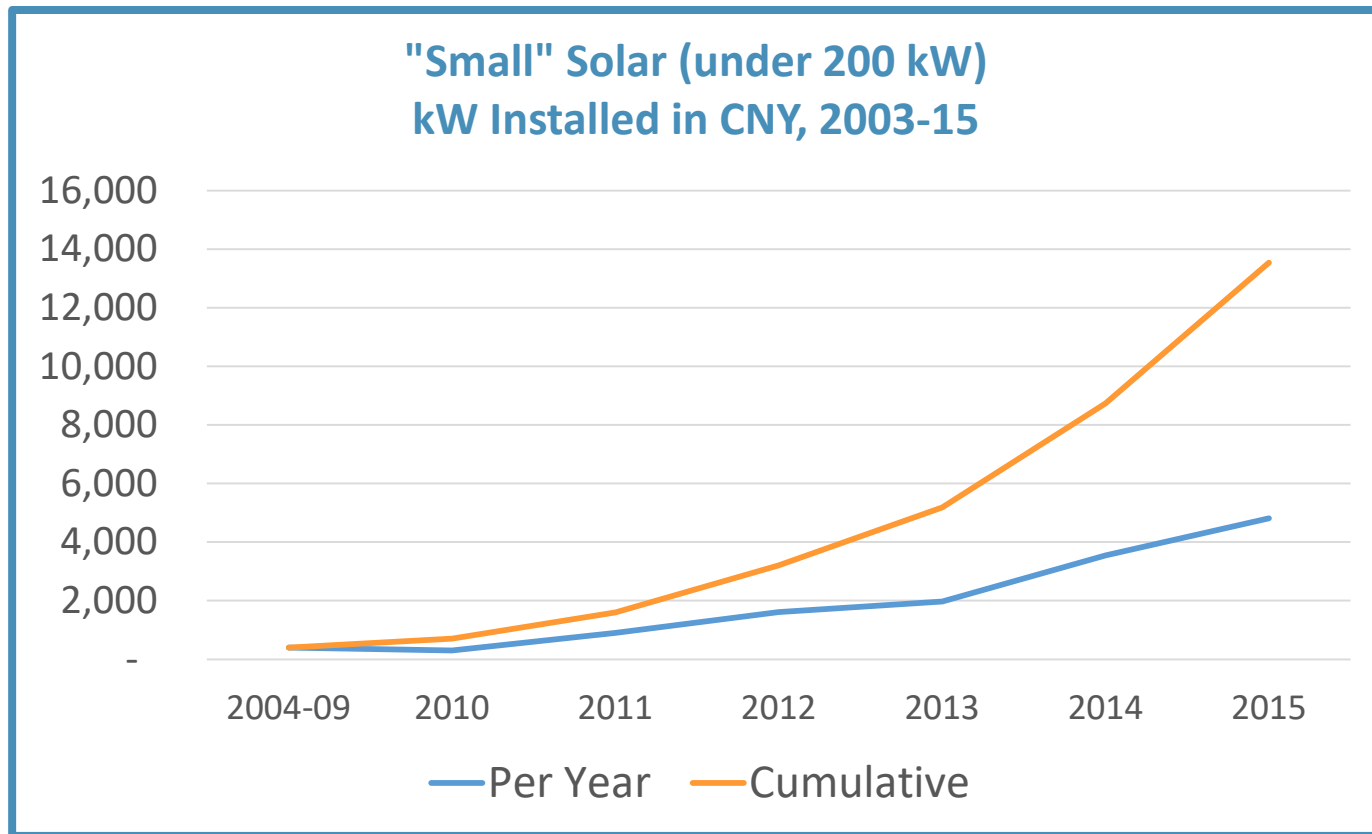
**Great Northern Mall in Clay**

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## Central New York Installed Solar



Source: Open NY database



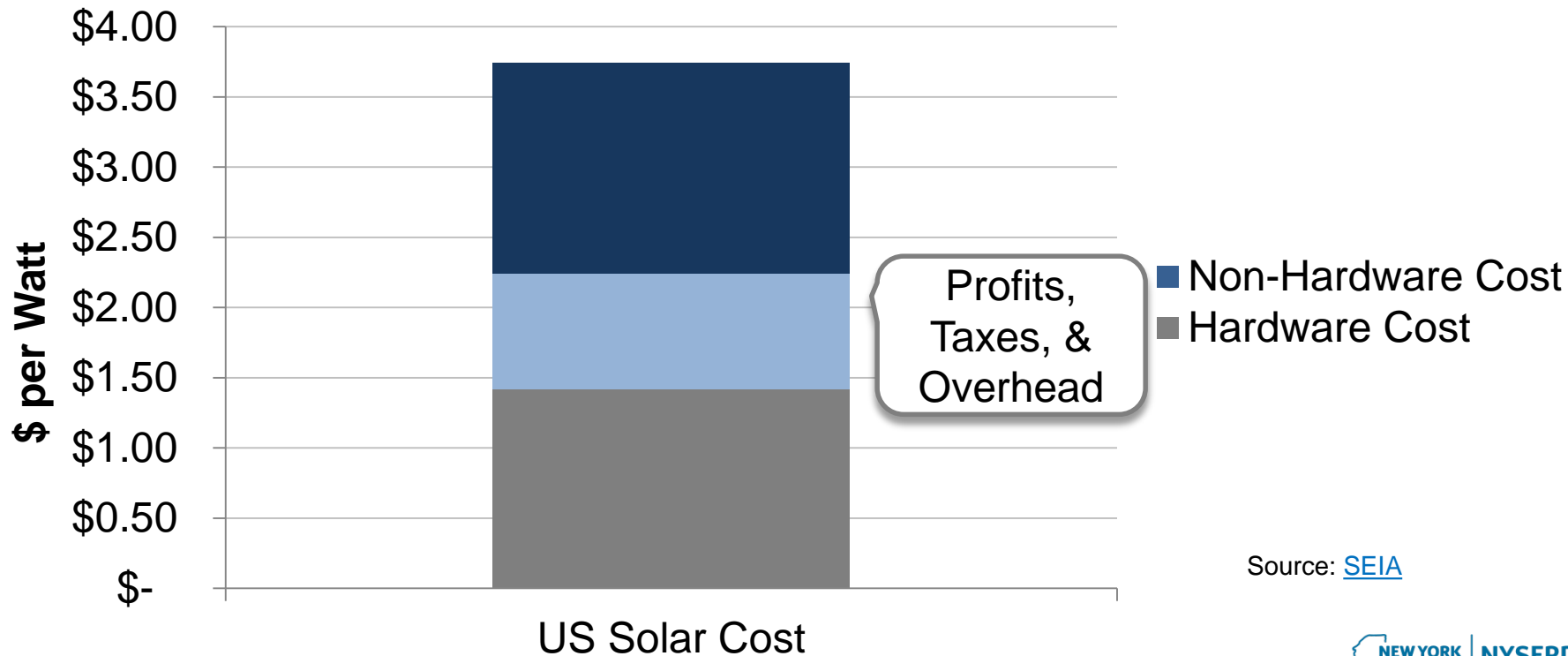
NYSERDA

# GROWTH OF NEW YORK SOLAR POWER

Region	Total Installed Through 2011		Total Installed Through 2016		Percent Increase in Megawatts Installed	Percent Increase in Projects Installed
	Megawatts Installed	Projects Installed	Megawatts Installed	Projects Installed		
Capital Region	8.5	899	113.26	8,365	1,043 percent	744 percent
Central New York	1.6	178	23.56	1,731	1,246 percent	836 percent
Finger Lakes	2.1	249	37.38	1,870	1,487 percent	603 percent
Long Island	37.8	4,938	214.23	24,428	460 percent	414 percent
Mid-Hudson	12.1	1,305	162.74	14,125	1,164 percent	944 percent
Mohawk Valley	1.2	140	26.95	1,790	1,597 percent	1,005 percent
New York City	6.4	361	88.42	7,348	1,102 percent	1,719 percent
North Country	1.1	177	13.98	1,063	827 percent	432 percent
Southern Tier	2.1	390	29.23	2,113	1,182 percent	426 percent
Western New York	5	352	33.88	2,093	554 percent	481 percent
<b>Total</b>	<b>77.9</b>	<b>8,989</b>	<b>743.65</b>	<b>64,926</b>	<b>795 percent</b>	<b>615 percent</b>



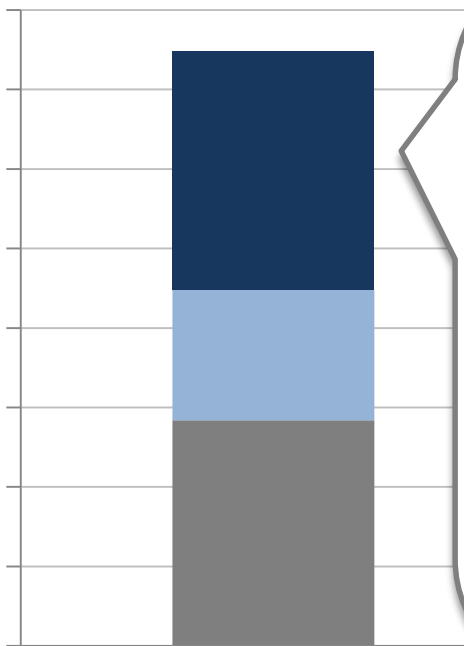
# US Solar Costs



Source: [SEIA](#)

# US Solar Costs

\$ per Watt



US Solar Cost

\$ per Watt



German Solar Cost

## Solar Soft Costs

- Other Paperwork
- Permitting & Inspection
- Financing Costs
- **Customer Acquisition**
- Installation Labor

# SolarizeCNY

- Grassroots, community based effort
- Throughout the five county Central New York region
- A growing **movement**
  - Reduce our use of non-renewable energy sources
  - Shift our region to clean, sustainable energy sources
  - Dramatically increase the adoption of solar energy



# How SolarizeCNY Helps

High upfront cost



Volume discount

Complexity



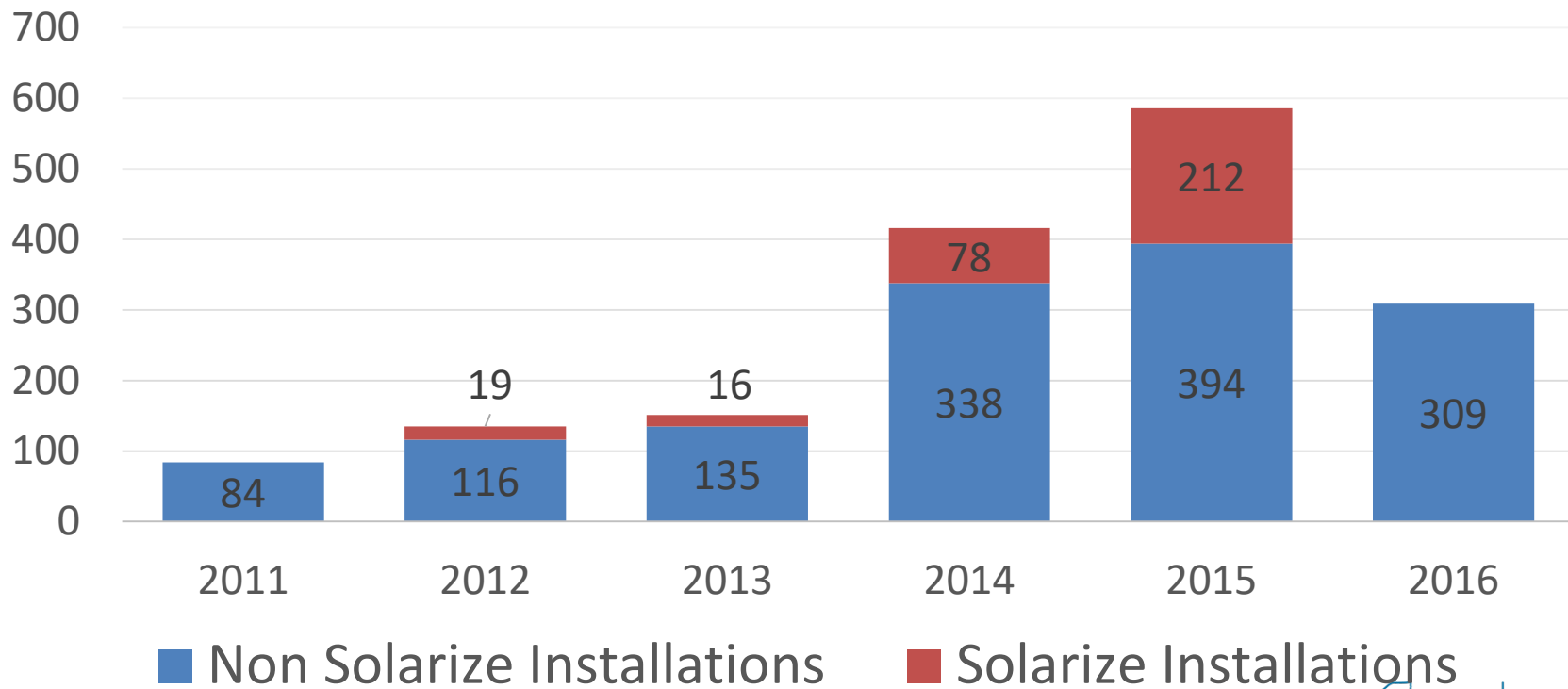
Installer selection,  
community outreach

Customer inertia



Limited-time offer

# The Impact



■ Non Solarize Installations

■ Solarize Installations

# Cumulative Impact in Central New York

Customer Savings



**\$1.5 million**

Economic Impact



**\$13 million**

Jobs Created



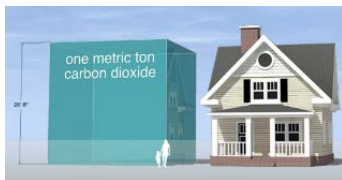
**80**

Market Impact

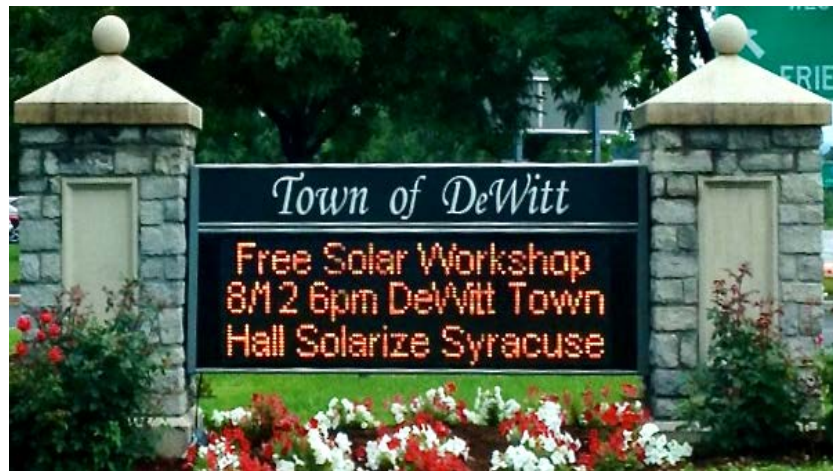


**1/3 of region's  
residential PV**

Carbon Reduced



**2,400 metric tons**



# SolarizeCNY – Go Green in 2017





# Ways You Can Participate

Sponsor



Go Solar



Volunteer



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# NYS Unified Solar Permit

For simple small-scale installations

Developed by CUNY, NYSERDA, NYPA

Based on industry standards

Municipally-defined review timeline

Municipally-defined permit fee

NYSERDA incentive of \$2,500 – \$5,000 for permit adoption

Appendix A. Unified Residential Solar PV Permit Application

**PERMIT APPLICATION**  
NY State Unified Solar Permit

Unified solar permitting is available statewide for eligible solar photovoltaic (PV) installations. Municipal authorities that adopt the unified permit streamline their process while providing consistent and thorough review of solar PV permitting applications and installations. Upon approval of this application and supporting documentation, the authority having jurisdiction (AHJ) will issue a building and/or electrical permit for the solar PV installation described herein.

**PROJECT ELIGIBILITY FOR UNIFIED PERMITTING PROCESS**

By submitting this application, the applicant attests that the proposed project meets the established eligibility criteria for the unified permitting process (subject to verification by the AHJ). The proposed solar PV system installation:

Yes  No 1. Has a rated DC capacity of 25 kW or less.  
 Yes  No 2. Is not subject to review by an Architectural or Historical Review Board. (If review has already been issued answer YES and attach a copy)  
 Yes  No 3. Does not need a zoning variance or special use permit. (If variance or permit has already been issued answer YES and attach a copy)  
 Yes  No 4. Is mounted on a permitted roof structure, on a legal accessory structure, or ground mounted on the applicant's property. If on a legal accessory structure, a diagram showing existing electrical connection to structure is attached.  
 Yes  No 5. The Solar Installation Contractor complies with all licensing and other requirements of the jurisdiction and the State.  
 Yes  No 6. If the structure is a sloped roof, solar panels are mounted parallel to the roof surface.

For solar PV systems not meeting these eligibility criteria, the applicant is not eligible for the Unified Solar Permit and must submit conventional permit applications. Permit applications may be downloaded here: [BUILDING DEPARTMENT WEBSITE] or obtained in person at [BUILDING DEPARTMENT ADDRESS] during business hours [INDICATE BUSINESS HOURS].

**SUBMITTAL INSTRUCTIONS**

For projects meeting the eligibility criteria, this application and the following attachments will constitute the Unified Solar Permitting package.

- This application form, with all fields completed and bearing relevant signatures.
- Permitting fee of \$[ENTER FEE HERE] payable by [ENTER VALID PAYMENT METHODS, if checks are allowed INCLUDING WHO CHECKS SHOULD BE MADE PAYABLE TO]
- Required Construction Documents for the solar PV system type being installed, including required attachments.

Completed permit applications can be submitted electronically to [EMAIL ADDRESS] or in person at [BUILDING DEPARTMENT ADDRESS] during business hours [INDICATE BUSINESS HOURS].

**APPLICATION REVIEW TIMELINE**

Permit determinations will be issued within [TIMELINE] calendar days upon receipt of complete and accurate applications. The municipality will provide feedback within [TIMELINE] calendar days of receiving incomplete or inaccurate applications.

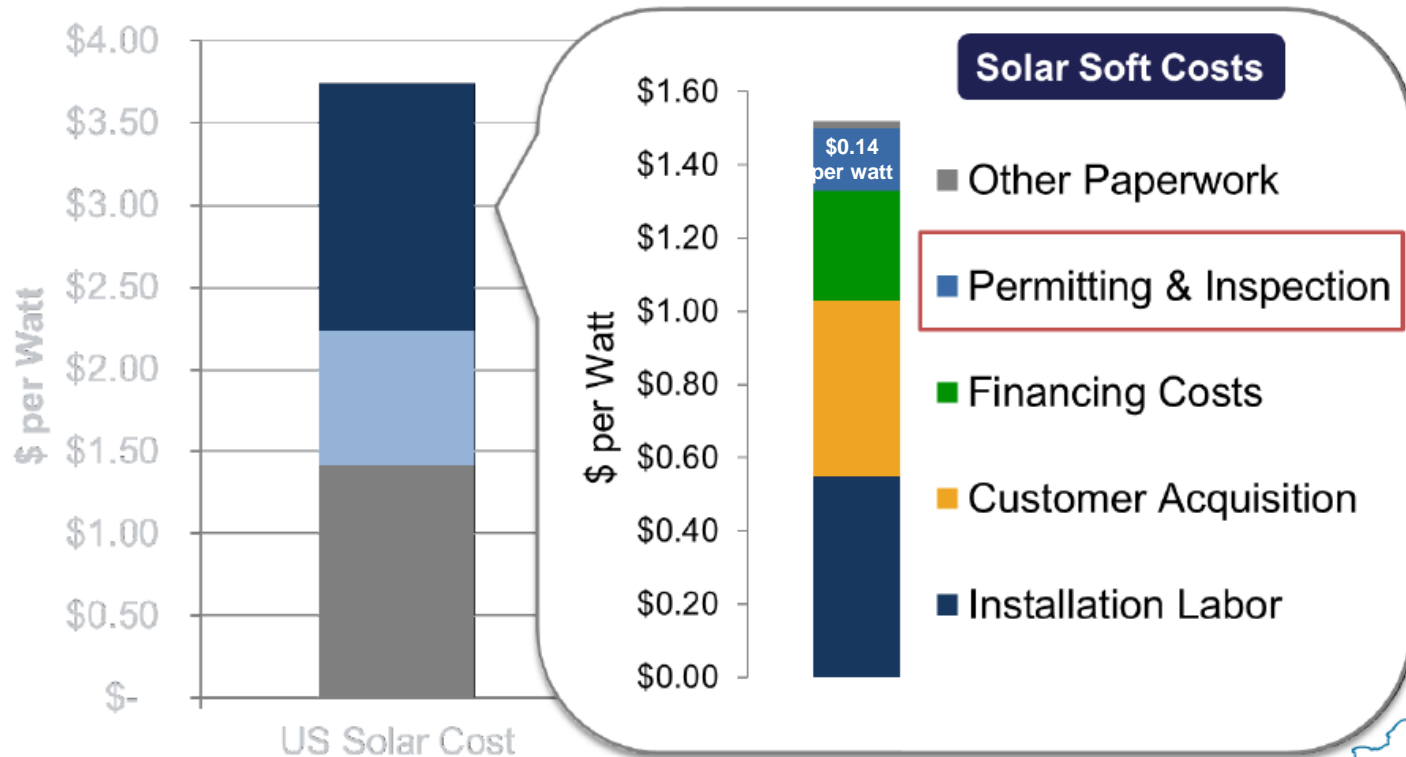
**FOR FURTHER INFORMATION**

Questions about this permitting process may be directed to [MUNICIPAL CONTACT INFORMATION].

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# Permitting Costs



# NYS Unified Solar Permit

## Central NY Adoptees

- 1) Aurelius Town
- 2) Aurora Village
- 3) Baldwinsville Village
- 4) Brutus Town
- 5) Canastota Village
- 6) Cato Village
- 7) Cazenovia Town
- 8) DeRuyter Town
- 9) DeWitt Town
- 10) East Syracuse Village
- 11) Fabius Town
- 12) Fair Haven Village
- 13) Fayetteville Village
- 14) Fenner Town
- 15) Genoa Town
- 16) Georgetown Town
- 17) Granby Town
- 18) Hamilton Town
- 19) Ira Town
- 20) Lacona Village
- 21) LaFayette Town
- 22) Lebanon Town
- 23) Lenox Town
- 24) Lincoln Town
- 25) Liverpool Village
- 26) Manlius Village
- 27) Marcellus Town
- 28) Marcellus Village
- 29) Mentz Town
- 30) Minetto Town
- 31) Minoa Village
- 32) Montezuma Town
- 33) Morrisville Village
- 34) Nelson Town
- 35) Oneida City
- 36) Orwell Town
- 37) Oswego City
- 38) Owasco Town
- 39) Parish Town
- 40) Parish Village
- 41) Pompey Town
- 42) Port Byron Village
- 43) Pulaski Village
- 44) Redfield Town
- 45) Richland Town
- 46) Sandy Creek Town
- 47) Sandy Creek Village
- 48) Scipio Town
- 49) Sennett Town
- 50) Skaneateles Town
- 51) Tully Village
- 52) Union Springs Village
- 53) Victory Town
- 54) Volney Town
- 55) Weedsport Village
- 56) Williamstown Town

# Tools and Resources

## PV Trainers Network

The PV Trainers Network provides a number of on-site training courses and one-on-one technical assistance to communities. <https://training.ny-sun.ny.gov/>

## NYSERDA's Solar Guidebook for Local Governments

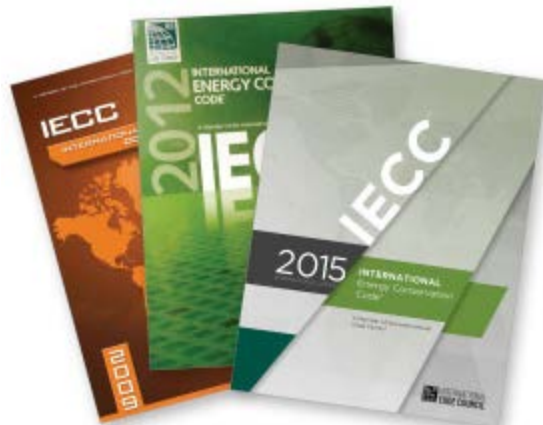
The guidebook includes a wealth of resources for becoming a solar-friendly community including the New York State Unified Solar Permit Application and Field Inspection Checklist. It includes topics such as rooftop solar access requirements for firefighters and first responders, information on the Real Property Tax Law 487 exempting solar PV systems, a fact sheet for Agricultural Districts, a fact sheet for landowners considering solar leases, Information on land use planning and a model solar energy law.

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## Building Energy Codes





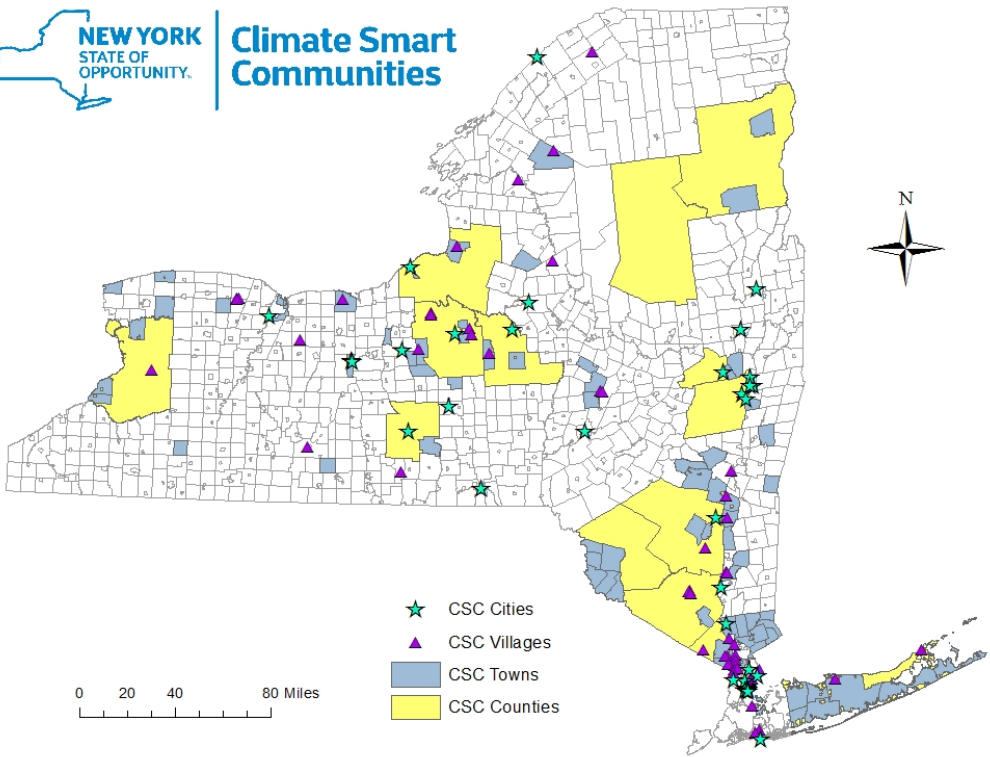
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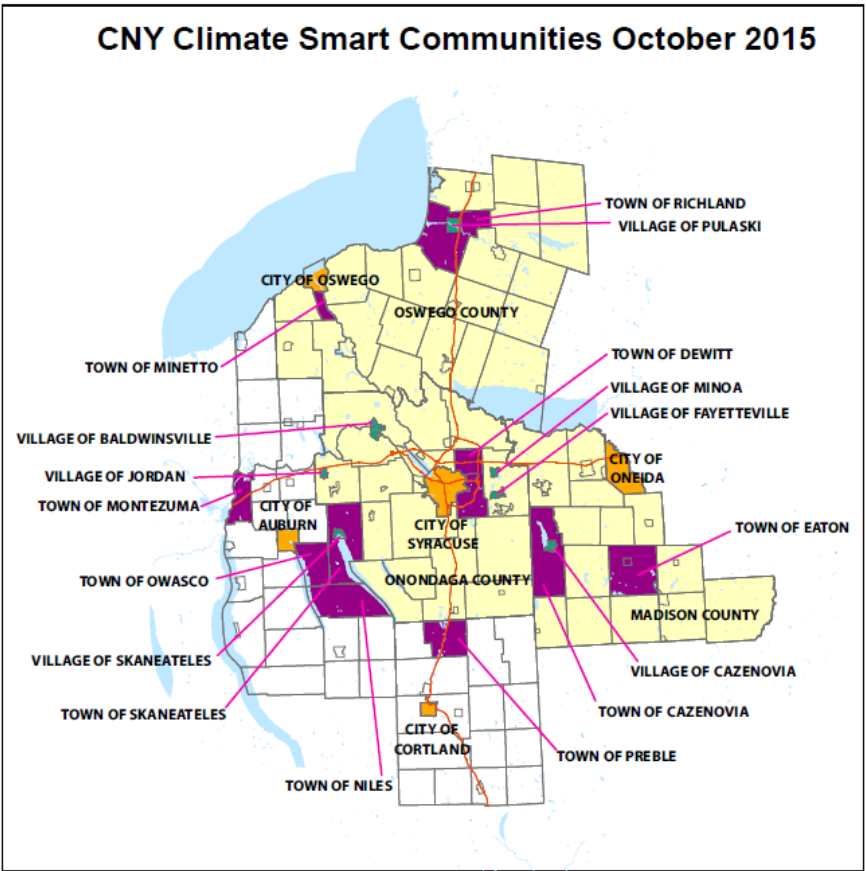




# Climate Smart Communities



- ★ CSC Cities
- ▲ CSC Villages
- CSC Towns
- CSC Counties



### Communities that have adopted the CSC pledge

- Villages
  - Towns
  - Cities
  - Counties
- 0 4.75 9.5 19 Miles

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**OPT UP TO 100% RENEWABLE ENERGY NOW!**

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FINALLY, THERE'S A  
**SMARTER ENERGY CHOICE**  
for the climate and your budget.

**check your options**



**NYSERDA**

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# PACE Advantages Over Conventional Loan

- No Money Down
- Longer (20-year) term
- Repayment transfers with ownership
- Low interest rates
- Interest is tax deductible
- Lower transaction costs



# Cortland Standard

© 2014 Cortland Standard



Serving Cortland and surrounding communities since 1867

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## Cortland Property Owners Could Finance Energy Upgrades Through State Program

Thursday, November 20, 2014



**ENERGIZE NY™**  
**FINANCE**

The City of Cortland is considering joining a state funded program that would help private property owners with low cost financing to make energy efficiency upgrades and install renewable energy systems.

The city is looking to become a member of the Energy Improvement Corporation. The EIC is a subdivision of the state Environmental Facility Corporation.

The agency is offering an Energize NY Finance program, Cortland Administrator Mack Cook says by joining the group private property owners can obtain financing to install new energy efficient lighting, insulation, HVAC systems, smart controls, fuel conversion, windows, and doors. The program

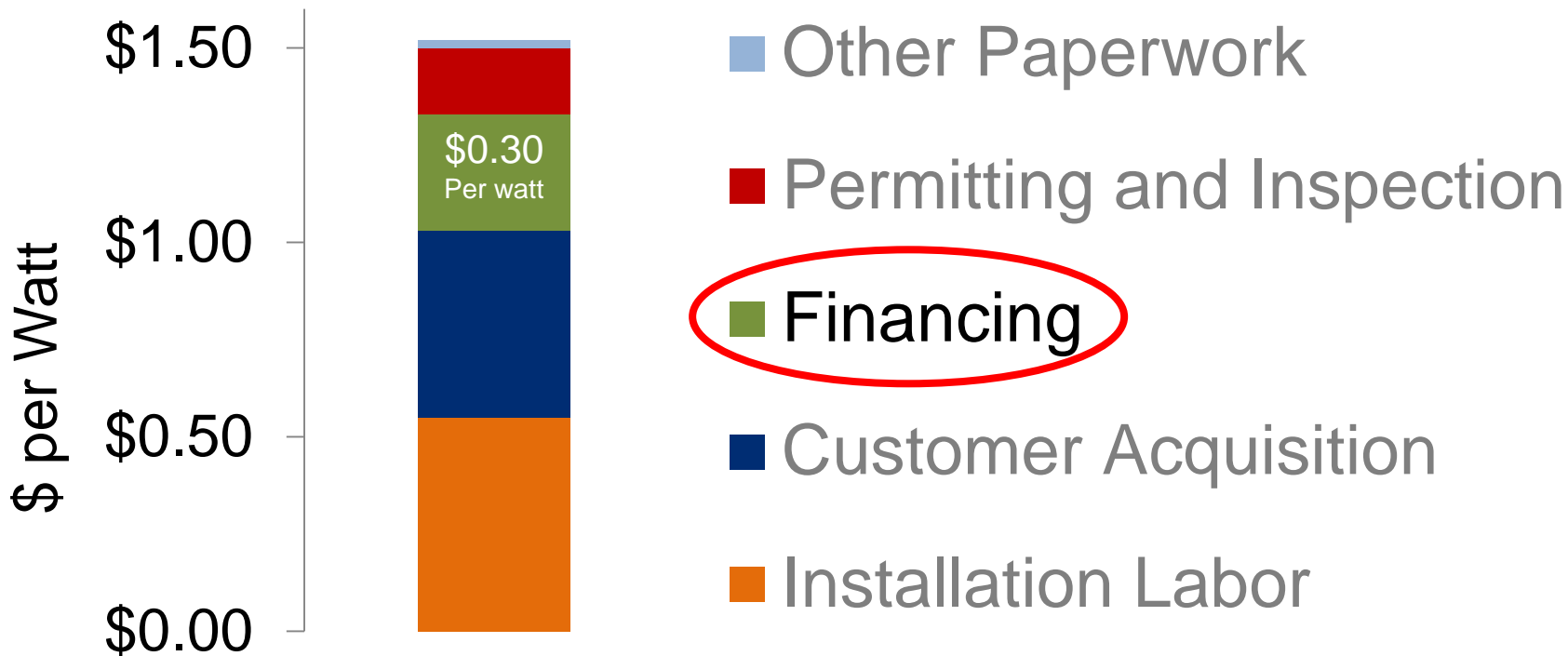
also offers financing to install solar, thermal, and wind energy systems.

The state has over \$70 million dollars to finance these improvements. Property owners that tap into the financing repay the loan through their property taxes, it is not a mortgage or a lien. If the property sells the financing transfers to the new property owner. Interest rates on the loan are between 3.75% and 6.75% with 5 to 20 year terms.

Cook says this program comes at no cost to the city and will help spur investment in local properties which can eventually lead to increase property assessments and higher revenue for the city.



**NYSERDA**





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# Municipal Leadership



**DeWitt Town Hall**  
50 kW



**Onondaga County  
Metro Water Board Reservoir**  
2,000 kW



**Schenectady County  
Recycling and Composting Center**  
600 kW

# Next Steps

- Visit <https://www.nyserda.ny.gov/cec> for more information
- Reach out to CNY RPDB for assistance in pursuing action items
- Submit documentation for action items already complete at <https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Communities/Submit-Action-Items-Documentation>

# Contact

Chris Carrick

*Central New York Regional Planning and Development Board*

*(315) 422-8276, ext. 213*

[ccarrick@cnyrpdb.org](mailto:ccarrick@cnyrpdb.org)

[www.cnyrpdb.org](http://www.cnyrpdb.org)

[www.cnyenergychallenge.org](http://www.cnyenergychallenge.org)

[www.solarizecny.org](http://www.solarizecny.org)



Central New York Regional Planning & Development Board

