CNY RPDB Energy Management Team

Goal: maximize the region's energy resources by increasing the efficiency of residential and commercial buildings, curtailing energy demand, increasing the use of renewable energy, and accelerating the deployment of advanced energy technologies.



Michael Boccuzzi CSC Coordinator



Erica Herman EnergySmart CNY Energy Advisor



Amanda Mazzoni Energy Program Manager



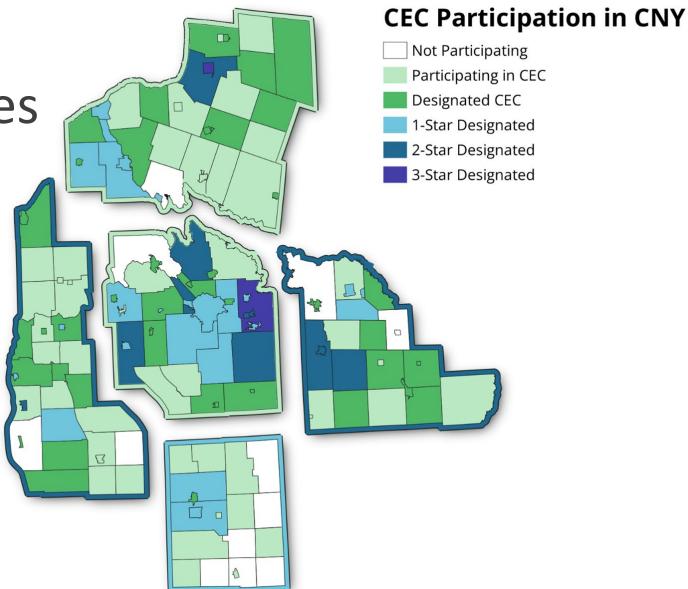
Lindsay Speer EnergySmart CNY Director



Isabel Willson CEC Coordinator

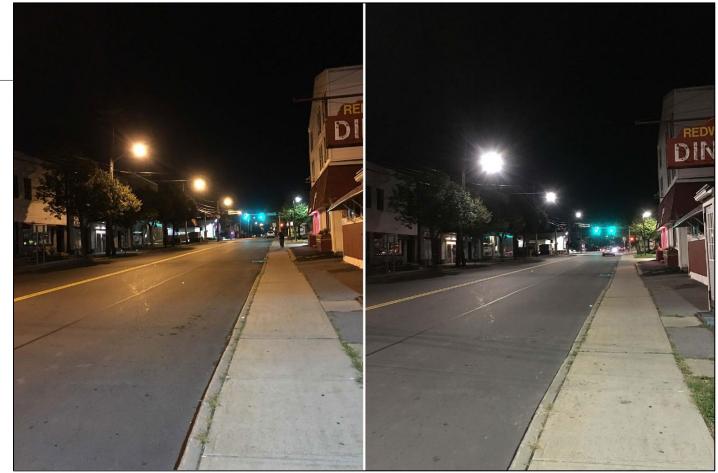
NYSERDA Clean Energy Communities

- Regional Coordinator for CNY since 2016
- Provide technical assistance to complete clean energy actions
 - LED streetlights
 - Municipal solar portfolio
- Earn grants for new clean energy projects



LED Streetlights

- Cost benefit analyses for 81 communities
- 78 completed projects, a few in process
 - ~24,000 streetlights
- Annual cost savings: \$1.645 million



Streetlights before and after LED conversion, East Syracuse

LED Streetlights in CNY Communities

- City of Auburn (completed independently)
- City of Cortland
- City of Fulton
- City of Oneida (completed independently)
- City of Syracuse (completed independently)
- Town of Albion
- Town of Aurelius (completed independently)
- Town of Brookfield (completed independently)
- Town of Brutus
- Town of Camillus
- Town of Cazenovia
- Town of Cicero
- Town of Clay
- Town of Cuyler (in process)
- Town of Constantia
- Town of DeWitt
- Town of Eaton
- Town of Elbridge (completed independently)
- Town of Fleming
- Town of Fabius
- Town of Geddes
- Town of Georgetown
- Town of Genoa
- Town of Granby
- Town of Hamilton
- Town of Hastings
- Town of Homer
- Town of LaFayette
- Town of Lebanon (completed independently)
- Town of Lincoln
- Town of Locke
- Town of Manlius (completed independently)

- Town of Marcellus
- Town of Mexico
- Town of Minetto
- Town of Montezuma
- Town of Moravia (completed independently)
- Town of Nelson
- Town of New Haven
- Town of Onondaga
- Town of Orwell
- Town of Oswego
- Town of Owasco
- Town of Pompey
- Town of Preble
- Town of Salina
- Town of Scipio
- Town of Sennett
- Town of Skaneateles
- Town of Throop (completed independently)
- Town of Truxton
- Town of Tully (completed independently)
- Town of Redfield
- Town of Richland
- Town of Van Buren
- Town of Venice
- Town of Victory
- Town of Volney
- Town of West Monroe
- Town of Williamstown
- Village of Aurora
- Village of Baldwinsville
- Village of Camillus
- Village of Canastota

- Village of Cayuga
- Village of Central Square (in process)
- Village of Cleveland
- Village of DeRuyter (completed independently)
- Village of Earlville (completed independently)
- Village of East Syracuse
- Village of Elbridge (completed independently)
- Village of Fabius (completed independently)
- Village of Fair Haven
- Village of Fayetteville
- Village of Jordan
- Village of Lacona
- Village of Liverpool
- Village of Hannibal
- Village of Homer
- Village of Manlius
- Village of Marcellus
- Village of McGraw (completed independently)
- Village of Mexico
- Village of Minoa
- Village of Moravia (completed independently)
- Village of Morrisville
- Village of North Syracuse
- Village of Parish
- Village of Phoenix
- Village of Port Byron
- Village of Pulaski
- Village of Sandy Creek
- Village of Tully
- Village of Union Springs
- Village of Wampsville
- Village of Weedsport

CEC Grant Projects

- \$3.615 million earned for CNY communities
- Grant projects funded
 - LED streetlight conversions
 - Municipal building energy efficiency
 - Heat pumps in municipal buildings
 - Electric vehicles for municipal fleets
 - EV charging stations
 - Electric landscaping equipment
 - Solar installations



Top: EV Trucks purchased by Village of Pulaski through CEC grant;

Bottom: geothermal installed at Hamilton Town Highway Garage through CEC grant



Community Solar

- AKA Community Distributed Generation (CDG)
- Solar energy produced at larger site on behalf of multiple subscribers
- Subscribing is free and offers credits on electric bills
- Capital investment and construction jobs
- Tax/PILOT revenue
- Residential and small business energy cost savings



5.7 MW Community solar array on Town of Manlius landfill

Community Solar in CNY

- 77 projects in CNY totaling 413.4 MW
- 540,000 MWh generated each year
- Electric bills reduced by ~\$8 million per year through subscriptions
- \$535 million investment in CNY
- Roughly \$1.5 million generated through PILOTs
- Roughly 400 acres per county in the region
- New source of revenue for farmers and landowners with marginal/underutilized land



3.98 MW Community solar array at Cayuga County Jail Complex

Municipal Solar Portfolio

- 13 Projects with 46 MW completed
 - Most community solar projects
- 3 Projects with 15 MW in active development
- 2 major projects with 50 MW in predevelopment stage
- \$175 million investment



2.7 MW Community solar array on Town of Elbridge landfill

Utility Scale Solar and Wind in CNY

- 9 projects (18 MW+) in CNY in the queue totaling 677 MW
 Homer Solar Energy Center 90 MW Towns of Homer, Cortlandville, and Solon
 Sky High Solar 20 MW Town of Tully
 Dog Corners Solar 20 MW Town of Ledyard
 Scipio Solar 18 MW Town of Scipio
 Oxbow Hill Solar 140 MW Town of Fenner

 - Garnet Energy Center 200 MW Town of Conquest
 ELP Granby Solar II 20 MW Town of Granby (Battery Energy Storage and Solar)
 - Hoffman Falls Wind 72 MW Town of Fennér
 - Agricola Wind 97 MW -
- 3 projects completed in CNY totaling 84.5 MW
 - Janis Solar 20 MW Town of Willet
 - Fenner Wind Energy Facility 30 MW Town of Fenner
 Munnsville Phase 1 Wind 34.5 MW Town of Madison
- Office of Renewable Energy Siting (ORES) now permits projects 25 MW and larger
 ORES is required to consider any applicable local law when making a determination

 - Permits will include a provision requiring host community benefits such as a discount or credit on utility bills
- NYSERDA Large Scale Renewables
 - Annual procurements for large scale renewable energy

NYSERDA Build Ready

 Nominate sites for renewable energy development: underused land, including brownfields, landfills, existing or former commercial and industrial sites, and dormant electric generating sites

Clean Energy Advisor: Mike Dunn

- Technical assistance to municipalities across Central NY, Finger Lakes, Western NY, and Southern Tier
- Connect communities to information and resources
- Help identify areas where projects are most likely
- Assist in creating or updating renewable energy zoning codes
- Contact: mike@nywoodlands.com or 716-397-5791

Current Renewable Energy Landscape

Battery Energy Storage Systems:

an integral component in Grid management

- Community Solar w/BESS (Hybrid)
- ORES projects including BESS
 - Sometimes to be built out later
- Utility Scale Storage 20MW 200MW+
 - Support Grid reliability while and minimizing line upgrades
 - Support Large Demand users (Micron)

BESS and Safety

• Fire Safety Working Group (FSWG) recommendations

webinar May 7th

- Critical fire safety considerations for BESS
- Best practices for permitting and oversight
- Require industry-funded independent peer review of all projects
- Expect Changes to the NYS Fire Code
- Expect new guidance material from NYSERDA

How Communities can Capitalize on the Renewable Energy Industry

Understanding Renewable Energy Developers

- Projects Close to Substations
- Upgraded Substations
- High Capacity 3 Phase Lines
- Open Land (if possible)
- Favorable Solar/BESS Code

Prepare Don't React

- Research and understand where
 Renewable Energy Development is likely
- Consider what is important to your community in a Renewable Energy Project
 - Setbacks, Buffering, Fencing
 - Protection of soils, timber, viewsheds
 - PILOT, Host Community Agreement
 - Green Energy, Protecting the Environment

Questions?