

Climate Smart Communities Annual Report



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**Central New York Regional Planning
& Development Board**

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Climate Smart Communities Progress Report

Central New York Regional Planning & Development Board

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INTRODUCTION

The Central New York Regional Planning and Development Board (CNY RPDB) continues to assist municipalities with climate action plans and greenhouse gas emission inventory reports in cooperation with community leaders throughout Central New York. Our goal is to provide information on energy use and emissions for a baseline year and to supply guidance as local goals are developed. The following pages of this report provide summaries of the work accomplished by the CNY RPDB from June 2013 to December 2014 as part of the Climate Smart Communities (CSC) grant. These accomplishments extend beyond the minimum program requirements to include widespread coverage of education, data collection, and technical assistance objectives. During this period we worked with communities on greenhouse gas (GHG) inventories, climate action plans, and several demonstration projects. Approximately 60 families in ten CSCs participated in the Central New York Energy Challenge and two schools are involved in the Classroom Energy Challenge. Numerous workshops were held and educational brochures, fact sheets, and PowerPoint slide presentations were developed.

Municipal outreach and CSC recruitment has remained a priority for CNY RPDB. Outreach components have included correspondences to elected officials and key municipal stakeholders, educational workshops, and on-site meetings. CNY RPDB successfully recruited nine municipalities to sign the CSC pledge. Our CSC success has been further strengthened by regional partnerships with municipalities, agencies, non-profit organizations, colleges, and universities throughout Central New York. A summary and program abstracts are presented on the following pages, with computer links that provide additional information.

Climate Smart Communities Central NY Regional Pilot Program Progress: June 2013 – December 2014

| Climate Smart Community | New (since May 2013) | GHG Inventory Completed | Climate Action Plan | CSC Recruitment Presentation | CNY Energy Challenge |
|-------------------------|-------------------------|-------------------------|--------------------------------|------------------------------|----------------------|
| Auburn (C) | | Completed April 2013 | | | |
| Baldwinsville (V) | Yes | In progress | | | |
| Cazenovia (T) | | Completed April 2013 | In progress* | | Yes |
| Cazenovia (V) | Yes | Completed May 2014* | In progress | | Yes |
| Cortland (C) | | Completed February 2013 | Completed, adopted May 2014 | | Yes |
| Dewitt (T) | | Completed January 2012 | Completed, adopted August 2014 | | Yes |
| Eaton (T) | Yes | In progress | | | |

| | | | | | |
|-------------------------|-----|-------------------------|-----------------------------------|---------|-----|
| Fayetteville (V) | | Completed April 2013 | Completed*, adopted December 2014 | | Yes |
| Madison County | | Completed January 2013 | In progress | | |
| Minetto (T) | Yes | Completed November 2014 | | | |
| Minoa (V) | Yes | Completed July 2014 | In progress | | |
| Montezuma (T) | Yes | In progress | | | |
| Niles (T) | Yes | Completed October 2014 | | | |
| Oneida (C) | Yes | Completed July 2014* | Completed, adopted November 2014 | | |
| Onondaga County | | Completed+ | Completed+ | | |
| Oswego (C) | | Completed April 2013 | Completed, adopted November 2014 | | Yes |
| Oswego County | | Completed+ | Completed+ | | |
| Owasco (T) | Yes | In progress | | | |
| Pulaski (V) | | | | 12/4/14 | |
| Preble (T) | | Completed December 2012 | Completed, presented March 2014 | | Yes |
| Richland (T) | | | | 12/4/14 | |
| Skaneateles (T) | | Anticipated in '15 | Anticipated in 2015 | | Yes |
| Skaneateles (V) | | Completed December 2012 | Completed, adopted September 2014 | | Yes |
| Syracuse (C) | | Completed December 2011 | Completed September 2012 | | Yes |

* Partnership with SUNY College of Environmental Science and Forestry

+ Completed independent of Climate Smart Communities Program

GREENHOUSE GAS INVENTORIES AND CLIMATE ACTION PLANS

Greenhouse gas inventories and climate action plans remain a priority for CNY RPDB. Using tools and protocols provided by ICLEI-Local Governments for Sustainability, the CNY RPDB has developed a successful process to accurately and efficiently complete GHG inventory reports and Climate Action Plans (CAPs) for Climate Smart Communities in our region. Once a community has adopted the Climate Smart pledge, the CNY RPDB sends an e-mail congratulating and welcoming each community to the CSC program. This e-mail also explains the resources now available to them as a member of the CSC program and requests municipal energy use data to begin analysis for a GHG inventory ([information request list here](#)). The e-mail assists in building good relationships with community leaders, while also encouraging forward movement in the program.

Data is then collected for both municipal operations and the community-at-large following ICLEI's protocols. Energy use data is converted into emissions data using ICLEI's Clean Air and Climate Protection tool (prior to Q2 of 2014) or ClearPath (Q2 of 2014 and after). The information is then compiled in a report format, separating municipal and community emissions data. The process from data collection to completing the report generally takes about 3-5 months, depending on how responsive the municipal liaison is. The final report is presented to municipal officials at Town/Village Board or City Council meetings (see sample [PowerPoint](#) and [handout](#)). The CNY RPDB then makes any necessary updates to the GHG inventory and encourages each municipality to upload the finished report to their municipal website.

After the GHG inventory is finalized, the Mayor or Supervisor is encouraged to form a CAP Advisory Committee to oversee the climate action planning process. This committee is generally made up of 5-8 individuals, with some municipal staff members and some interested community members. The formation and guidance of the committee has increased the credibility of the finished documents and provided community-focused final CAPs. The committee meets monthly with CNY RPDB staff and is encouraged to continue to meet after adoption of the Plan to ensure project development and Plan implementation.

The advisory committee's first item of business is to set emissions reduction targets, including both a target year and target percent reduction from the GHG inventory baseline. The CNY RPDB then utilizes ICLEI's Climate and Air Pollution Planning Assistant (CAPPA) tool to analyze the potential impact of various emissions reduction strategies, as recommended by the committee that can be utilized to achieve reduction goals.

Once these strategies have been finalized, CNY RPDB prepares a draft CAP document for the committee's review. Since June of 2013, the CNY RPDB has created and reworked the CAP document format into an easily accessible document for all community members that includes: important background information on the community, local climate information, information about how the plan was formed, a summary of the GHG inventory report, and recommendations for climate mitigation and adaptation. CNY RPDB also prepares a technical appendix to the CAP document, called the Strategy Summary Document, that includes all figures, assumptions, calculations, and sourcing data used for final figures noted in the CAP ([sample here](#)). A separate Executive Summary document is also prepared for community members who are interested in learning about the plan but do not have time to read through the entire document ([sample here](#)).

It generally takes about 6 to 12 months to finalize these documents. The final CAP is forwarded to the Town/Village Board or City Council for review a few weeks before a formal presentation. In most cases, the formal presentation has included a public hearing as well. The Board/Council then votes, either later at that same meeting or at the following Board/Council meeting, on whether or not to formally adopt the Plan. If the Plan is adopted, the community is encouraged to upload the document and related materials on their municipal website. At this time, the CNY RPDB also offers to print and bind hard copies of the final plan for the community's records.

Creating a unified procedure for completing these actions has allowed for a more efficient climate action planning process. These steps also ensure local participation, accuracy, credibility and a community focus in climate action planning materials, while at the same time creating good working relationships between community members, the CNY RPDB, and local municipal leaders.

EDUCATION AND TRAINING

Educational opportunities in the form of workshops, conferences, and literature provided an excellent chance to reach out to municipalities currently involved in the CSC and others that the CNY RPDB had targeted for potential recruitment. In addition to municipal officials, our outreach efforts included school and college representatives, agencies, and non-profit organizations throughout Central New York. Educational programs were designed to highlight projects that advance energy efficiency and conservation objectives within a broader sustainability framework and provided opportunities for networking and sharing of successes and challenges. The events opened lines of communication, facilitated inter-municipal collaboration and provided opportunities for municipal officials to develop skills in setting and implementing climate action plans, and other climate goals and objectives. The workshops were publicized through on-line invitations and press releases. A participant questionnaire at the Solar Summit was also distributed.

PowerPoint Slide Shows

PowerPoint slide shows were developed with information on climate change, solar benefits and incentives, state and local initiatives to reduce carbon emissions, and the CSC program. The presentations were presented at municipal and community meetings.

- SUN Group, September 2014
- Collaborating with Universities to Produce Municipal Greenhouse Gas Inventories, September 2014

Educational Literature

CNY RPDB developed the following educational fact sheets and brochures:

- [Climate Task Force Brochure](#)
- [Climate Smart Community Brochure](#)
- [Climate Action Plan Summary Sheet](#)
- [CAP Summary Cazenovia](#)
- [Cleaner Greener Summary Sheet](#)
- [Green Tips for the Home and Office](#)
- [Eric Mower Employee Conservation](#)

Displays

A three-panel table-top display was used at several workshops and contains information on climate change in Central New York. The photograph shows the display at the Solar Summit in October 2014. CSC brochures and other handouts are distributed at events when the display is set up. Arrangements were also made to borrow a large, free-standing educational exhibit from the Paleontological Research Institute (PRI) at the Museum of the Earth in Ithaca, New York. The “Weird Weather” exhibit was on display in 2013 at the Dewitt Town Hall to provide information on local weather patterns and indications of climate change. Development of the exhibit was funded by a grant from the National Science Foundation provided to the PRI.



Tabletop display at the Solar Summit, 2014

Websites and Social Media

The CNY RPDB currently maintains two websites: the primary CNY RPDB website (www.CNYRPDB.org/) and the Central New York Energy Challenge website (www.cnyenergychallenge.org). The Energy Challenge website serves as a valuable tool for community outreach and education. It contains information about CSC activities, climate-related data, and information about local success stories. In addition, the site includes information on smart growth practices, sustainable development, stormwater management, tips on water conservation, recycling, transportation, calendar of event notices, and important municipal resources.

Average monthly totals from CNY Energy Challenge website:

Visits: 287.9
Unique visitors: 251.4
Pages per visit: 1.8
Visit duration: 1:56
NYS visits: 116.2
NYS pages per visit: 2.2
NYS visit duration: 2:35

Calendar events and energy/environmental articles and updates are distributed to media contacts throughout Central New York, including daily newspapers and radio broadcast stations. Information is also distributed on a routine basis to additional forms of social media such as Facebook and Twitter (daily updates), LinkedIn, Mail Chimp, and Gmail (monthly updates).

MEETINGS AND SPECIAL EVENTS

CNY RPDB staff sponsored and/or participated in numerous meetings and special events where the CSC program was promoted and educational literature distributed. Several of the major events are summarized below.

| Date | Meeting/Event | Target Audience | Approximate Attendance | CNY RPDB Outreach to CSC |
|-----------|--|--|------------------------|---|
| Nov 2014 | Sustainable Materials Management Workshop at Dewitt Town Hall with Neil Seldman from Institute for Local Self Reliance | Municipal reps, businesses, residents | 50 | CNY RPDB presentations and climate change table display with educational handouts |
| Oct 2014 | Solar Summit | Municipal reps, industry leaders, community stakeholders | 175 | CNY RPDB presentations and climate change table display with educational handouts |
| Oct 2014 | CNY RPDB Annual Meeting | Municipal reps | 100 | Climate change table display with educational handouts |
| Oct 2014 | SUNY-ESF Sustainable Use of Renewable Energy (SURE) conference | Educators, sustainability leaders and professionals | 80 | CNY RPDB presentation and climate change table display with educational handouts |
| Sept 2014 | Sustainable Upstate Network Annual Meeting | Municipal reps, businesses | 100 | CNY RPDB presentation and climate change table display with educational handouts |
| June 2014 | Skaneateles Green Fair | Residents, businesses | 50 | CNY RPDB presentation and climate change table display with educational handouts |
| June 2014 | USDA Funding Workshop | Municipal reps, businesses | 50 | CNY RPDB presentation and climate change table display with educational handouts |
| May 2014 | NY Conference of Mayors Annual Meeting | Municipal reps | 50 | CNY RPDB presentation and climate change table display with educational handouts |

| Date | Meeting/Event | Target Audience | Approximate Attendance | CNY RPDB Outreach to CSC |
|-------------|--|--|-------------------------------|--|
| May 2014 | Town of Dewitt Discovery Day | Residents, businesses | 50 | CNY RPDB presentation and climate change table display with educational handouts |
| April 2014 | United Nations World Urban Forum – Medellin, Colombia | International, national, municipal reps, academic and sustainability experts | 100 | CNY RPDB presentation and educational handouts |
| April 2014 | Chasing Ice documentary | Municipal reps, residents | 35 | CNY RPDB presentation and climate change table display |
| March 2014 | Onondaga County Planning Federation Symposium | Municipal reps, academic and sustainability experts | 100 | CNY RPDB presentation and climate change table display with educational handouts |
| March 2014 | SUNY-ESF Green Building Conference | Municipal reps, academic and sustainability experts | 150 | CNY RPDB climate change table display with educational handouts |
| Jan 2014 | Upstate Chapter of the US Green Building Council | Municipal reps, academic and sustainability experts | 30 | CNY RPDB presentation and climate change table display with educational handouts |
| Nov 2013 | NYS Unified Solar Permit workshop at SUNY-ESF | Municipal reps | 40 | CNY RPDB presentation and climate change table display with educational handouts |
| Nov 2013 | Upstate Chapter of the US Green Building Council – Green Materials and Services Expo at Destiny Mall | Residents | 100 | CNY RPDB climate change table display with educational handouts |
| Nov 2013 | American Natural Gas Association/NYS Business Council | Municipal reps, businesses | 40 | CNY RPDB presentation and climate change table display with educational handouts |

| Date | Meeting/Event | Target Audience | Approximate Attendance | CNY RPDB Outreach to CSC |
|-----------|---|--|------------------------|--|
| Oct 2013 | Cornell Climate Symposium | Municipal reps, academic experts, residents | 100 | CNY RPDB presentation and climate change table display with educational handouts |
| Oct 2013 | Skaneateles Alternative Energy Tour | Municipal reps, residents, businesses | 50 | CNY RPDB presentation and climate change table display with educational handouts |
| Oct 2013 | Skaneateles Net Zero Village Hall Ribbon Cutting Ceremony | State, municipal reps, residents | 35 | CNY RPDB presentation and climate change table display with educational handouts |
| Sept 2013 | Wind Energy on Farms | Municipal reps, residents, farmers | 30 | CNY RPDB presentation |
| May 2013 | U.S. EPA Climate Showcase Communities – national workshop | Federal, state and municipal reps, academic and sustainability experts | 100 | CNY RPDB presentation |
| May 2013 | NYSERDA Electric Vehicle Support Equipment – Municipal Workshop | Municipal reps | 35 | CNY RPDB presentation |

ACADEMIC COLLABORATIONS

The CNY RPDB provided internship opportunities for students at the SUNY College of Environmental Science and Forestry (SUNY-ESF). Internship tasks involved data collection and assessment of greenhouse gas inventories and assistance with municipal climate action plans. The CNY RPDB also partnered with the SUNY-ESF during the spring of 2014 and six students provided assistance with greenhouse gas (GHG) inventories for the City of Oneida and Village of Cazenovia and assistance with climate action plans for the Town of Cazenovia and the Village of Fayetteville.

The partnership between the CNY RPDB and SUNY-ESF began in 2011 when an Energy Audit course offered by Dr. Richard Smardon conducted an analysis of the City of Syracuse carbon footprint. Undergraduate and graduate class members formed teams to work with the municipalities to assess GHG emissions and analyze potential emission reduction strategies. The partnership utilized ICLEI Local Governments for Sustainability guidance and tools to conduct assessments of municipal energy use and associated GHG emissions for the GHG inventory projects. Additionally, the partnership evaluated the energy savings, return on investment, and GHG savings of various emission reduction strategies undertaken or proposed for municipalities developing climate action plans.

The student teams focused on initial inventory and analysis and provided their creative insights for potential projects and strategies. The students also participated in community meetings and assisted with outreach. The photo at right shows a student team presenting to the Cazenovia Village Board. This partnership enabled municipalities to expedite the completion of the initial assessment and planning requirements associated with climate action while also providing students with hands-on, practical skills in community sustainability planning. The CNY RPDB served as a liaison between the communities and students, and also provided oversight of final products and community engagement.



SUNY ESF students presenting to the Cazenovia Village Town Board, 2014

The CNY RPDB prepared municipal profiles for communities working on the GHG inventories and Climate Action Plans. The profiles were prepared for the benefit of the students in the SUNY-ESF class and contain information about sustainable projects, notable programs, and accomplishments. Municipal profiles were prepared for [Oneida \(C\)](#), [Cazenovia \(T and V\)](#), and [Fayetteville \(V\)](#).

Additional Academic Partnerships

The CNY RPDB also is collaborating with Cazenovia College professors and administrators on two projects: the Climate Action Plan for the Town and Village, and a potential bike-share program for students and faculty. CNY RPDB compiled information on successful bike-share programs that have been established in Central New York colleges such as Colgate University, Syracuse University, SUNY Environmental Science and Forestry, and SUNY Cortland.

SOLAR INITIATIVES

The CNY RPDB partnered with the U.S. Department of Energy Rooftop Solar Challenge (RSC) and the NYSERDA NY-Sun initiative to make it easier for Central New Yorkers to install solar by streamlining permit processes, updating planning and zoning codes, improving standards for connecting solar power to the electric grid, and increasing access to financing. The program is designed to make solar energy cost-competitive with other forms of energy by the end of the decade. CNY RPDB is assisting local governments, contractors, lenders and others stakeholders to make it easier, faster, and more affordable to go solar through the adoption of proven best management practices, training materials, and methods.

Solarize CNY

Solarize CNY was created as part of the Central New York Energy Challenge program with funding under NYSERDA PON 2672 and is supported by the national Solar Roadmap Initiative with funding from the US Department of Energy. Solarize CNY is a collaborative public-sector project, led by the CNYRPDB with technical assistance provided by Optony. Participating government agencies will work together within a common approach for deploying clean energy to drive new installed solar system capacity, increase local economic activity, and improve the regional environment. This initiative is based on a model that has been successfully deployed around the country. By aggregating regional efforts to identify and develop solar project sites, significant benefits are realized for participating agencies. Participation in this program can help municipalities reduce solar project costs, save in administrative and transaction costs, accelerate achievement of clean energy goals, and increase economic activity in the local clean energy

sector. There is no upfront cost to participate in this program. The CNY RPDB offers free technical assistance to help municipalities develop solar energy for their facilities, including feasibility studies and procurement documents.

Solarize Syracuse

The CNY RPDB worked with several local partners to organize the [Solarize Syracuse](#) campaign in 2014. Solarize Syracuse is a grassroots, community-based solar initiative for the City of Syracuse and the Towns of DeWitt, Manlius and Onondaga (and villages within). By providing educational programs and by combining the purchasing power of the community to save money and protect the environment, Solarize Syracuse successfully doubled the number of residential solar installations by adding 77 new projects and over 530 kW of new solar capacity.

Regional Solar Advisory Committee

The CNY RPDB established a Regional Solar Advisory Committee comprised of municipal officials, utilities, private industry, and other stakeholders and is facilitating discussions to gauge market barriers and to identify priorities and strategies that will reduce soft costs. Our goal is to expand market access for thousands of new solar customers across Central New York.

Solar Permits

The CNY RPDB has recruited 17 municipalities who agreed to adopt a standardized residential/small business solar permit that will remove barriers to local economic development in the growing solar industry. The New York State standardized permit will cut costs by creating a uniform permitting process in municipalities across the State. As municipalities adopt the permit, installers and municipalities alike will save time and resources permitting PV systems. The following communities in Central New York have adopted the streamlined solar permit: Village of Baldwinsville, Town of DeWitt, Village of Hamilton, Town of Lafayette, Town of Lebanon, Town of Lenox, Town of Lincoln, Village of Liverpool, Town of Marcellus, Town of Minetto, Town of Montezuma, Village of Morrisville, City of Oswego, Town of Parish, Village of Parish, Town of Skaneateles, and Village of Tully. This [link](#) provides additional information.

MUNICIPAL ASSISTANCE

The CNY RPDB provided assistance to Central New York municipalities with projects that demonstrate how climate action and energy sustainability can be used for economic development, community growth, and environmental stewardship. Examples of these anchor projects are provided below.

Syracuse Creekwalk

The Creekwalk is one of the local outdoor features that make Syracuse special and is the focus of a great deal of community pride. The 2.6 mile trail connects the museums, shops, and restaurants located in Armory Square to the apartments and businesses in Franklin Square. The trail continues onto the Inner Harbor (featuring community events and concerts) and ends at the shores of Onondaga Lake. Along the way, runners, hikers, and bicyclists can enjoy downtown landmarks such as the Syracuse University Warehouse, National Grid's art deco office, and the restored park and quaint streets in



Syracuse Creekwalk

Franklin Square. The Creekwalk features local water resources while providing special access to Onondaga Creek and Onondaga Lake. The trail, which was opened to the public in 2011, was constructed with porous pavement and rain gardens to reduce stormwater runoff. These green infrastructure components are expected to capture 254,000 gallons of rain water a year. Funding of \$30,000 was provided by the CNY RPDB's Climate Change Innovation Program as a sub-grant through the U.S. Environmental Protection Agency (EPA) to defray the cost of the installation of 38 new LED luminaires along the creek. The luminaires were installed by staff from the City's Department of Public Works. Total project cost was \$48,792 so the out-of-pocket cost to the City was \$18,792. Annual savings are projected to be \$2,993 so the simple project payback will be 6.28 years.

Village of Skaneateles

The CNY RPDB helped to make the Village of Skaneateles energy sustainable by providing technical assistance in its net-zero energy Village Hall project. Solar panels with a total capacity of 62-kilowatts were installed on the Village Hall roof and a flat screen monitor was placed in the lobby to display the amount of electricity that is being produced. Officials also installed car charging stations, permeable pavement and walkways to reduce stormwater runoff, LED lighting, day lighting, and insulation that exceeds code and minimizes heat loss. Consolidation of local government resources helped to boost efficiency and generate cost savings for tax payers. The Village further reduced their energy bills through the installation of a new geothermal heating and cooling system under the building's current public parking lot. The Village Hall is the first net-zero energy municipal building in NYS. In addition, new LED streetlights were installed and the Village is providing incentives and rebates to homeowners to implement energy efficient projects and equipment.

City of Cortland

The CNY RPDB assisted the City of Cortland Waste Water Treatment Facility to replace four (4) 150-HP centrifugal blowers used for secondary aeration to three (3) 100-HP turbo-blower units. Funding of \$30,000 was provided by the CNY RPDB's Climate Change Innovation Program, as a sub-grant from the U.S. EPA. NYSERDA provided support through the Industrial Process Efficiency program in the amount of approximately \$50,000, with the final incentive to be determined at completion and verification of savings, which are estimated to be approximately 464,945 kWh/year. Operational savings are estimated \$55,800. Using this estimated project cost, and an average utility rate, the blower upgrade has a simple payback of approximately 10 years. It is expected that actual savings may be substantially higher than initial estimates after system and performance verification, resulting in savings that may drive the simple payback down to approximately 6 years.

The CNY RPDB reviewed the City's proposal to secure funds in the 2014 round of Phase Two of the CGC program Cleaner, Greener Communities Program (Category 2) to support a city-wide Pedestrian and Bicycle Improvement Plan. The CNY RPDB provided input and suggestions to ensure conformity with the City's Climate Action Plan and the ***VisionCNY*** regional sustainability plan. Funds were awarded by NYSERDA in the amount of \$39,000. The plan will inventory current infrastructure and programs, identify opportunities, and recommend options for improving the pedestrian/bike system in terms of infrastructure, programming, and education. Ultimately, vehicle miles traveled will be reduced and alternative modes of transportation will be promoted.

Smart Neighborhood

The CNY RPDB has identified several communities that are promising candidates for a large-scale, multiple-sector intervention that would dramatically reduce GHG emissions and energy consumption. Dubbed the "Smart Town" or "Smart Neighborhood" the ideal candidates for this initiative are

communities (typically rural) that do not have natural gas service for many or most residential, commercial and industrial buildings. Critical interventions would include conversion of one or more key public facilities (i.e., town/village hall, public school, fire station, public library) from fossil fuels (typically fuel oil or propane) or electric resistance heating to an integrated solution using renewable thermal technologies (biomass, ground-source heat pumps, or solar thermal) or high-efficiency air-source heat pumps combined with deep energy retrofits (building envelope, windows, lighting) and solar PV. The CNY RPDB has assisted the Town of Preble (retrofit project) and the Village of Skaneateles (new construction project) to complete such retrofits, and these public demonstration projects have catalyzed investments by residents and businesses in their own properties. Additional funding (approximately \$50,000 per project) would be provided on a first-come, first-served basis (provided they meet specified project criteria such as SIR) to assist 10-20 homeowners and/or small businesses within close proximity to these public facilities to complete similar fuel-switching conversions. Finally, funding could be provided to convert municipal streetlights and/or traffic signals to LED (perhaps solar-powered) and to implement green infrastructure strategies (bioswales, tree pits, etc.) to improve climate adaptation and resilience and reduce energy consumption for water conveyance and pumping. The CNY RPDB estimates that between \$2-5 million in state funds would be required to implement this initiative per community. As stated above, the CNY RPDB has been identifying communities within its 5-county region that lack natural gas service and whose physical layout would facilitate such a community-wide intervention (buildings within close proximity, good solar orientation, flood-prone areas nearby). Possible communities include: Constantia (Oswego County), Cincinnatus (Cortland County), Aurora (Cayuga County), and Skaneateles or Fayetteville (Onondaga County). This strategy is consistent with NYSERDA's whole-building, fuel-neutral, customer-centric program models as proposed in its Clean Energy Fund proposal to the NYS Public Service Commission. NYSERDA could support this initiative by continuing to fund the Cleaner, Greener Communities Program and should also consider expanding its eligible biomass technologies to include wood chip boilers, gasification and CHP systems. The CNY RPDB recommends that NYSERDA allocate up to \$30 million per year of RGGI funds over the next five years to fund the CGC Program.

Micro-Grid Demonstration Projects

The CNY RPDB has identified several promising project opportunities and locations and engaged in preliminary discussion with possible project sponsors and partners for a proposal to the NY Prize competition, including: 1) the University Hill neighborhood within the City of Syracuse (University Hill Corporation, City of Syracuse); 2) the Hancock International Airport and Hancock Airpark (Centerstate CEO, Onondaga County, Town of Dewitt); and the Cayuga County IDA business park (City of Auburn, Cayuga County). These project opportunities could leverage proposed investments in clean energy generation (solar PV) and/or distributed generation (CHP). These micro-grid projects would support the CNY RPDB's work through its *Solarize CNY* initiative to deploy commercial and utility-scale solar projects on municipal facilities and property. The CNY RPDB has already engaged potential project sponsors including Cayuga County, the City of Syracuse and the Town of Dewitt as well as several micro-grid service providers. In addition, the CNY RPDB is assembling project and facility information for potential locations.

City of Oneida Rail Trail Program

The CNY RPDB assisted the City of Oneida with its application for funding made available to the State through the Federal Highway Administration (FHWA). The City of Oneida requested funds to support implementation of the Wampsville/Oneida Connector section of the Oneida Rail Trail. The CNY RPDB provided conceptual design illustrations and master plan map for the proposal, which was awarded

\$545,830 in January 2014. When complete, the project will reduce vehicle miles traveled and greenhouse gas emissions while improving resiliency and quality of life for the community.

Cazenovia Gothic Cottage Restoration

In early 2014 the Town of Cazenovia appointed a five member advisory group that represents many of the stake holders in the community as it relates to the future of their town hall. CNY RPDB was asked to participate because of our previous experience and expertise. Upgrades to the Gothic Cottage are needed in order to make it a more functional, efficient workplace for daily business and public meetings. Staff attended several early stage meetings to discuss potential improvements, energy efficient improvement opportunities, and access to potential assistance programs.

Onondaga County

The CNY RPDB assisted Onondaga County with its application for funding make available to the State through the Federal Highway Administration (FHWA). The County requested funds to support implementation of the Onondaga Lake Canalways Trail-State Fair Boulevard Extension of the Onondaga Loop-the-Lake Trail project. The CNY RPDB provided conceptual design illustrations and master plan map for the proposal, which was awarded \$1,530,000 in January 2014. When complete, the project will reduce vehicle miles traveled and greenhouse gas emissions while improving resiliency and quality of life for the community.

City of Oswego

The CNY RPDB provided \$30,000 as a sub-grant through the U.S. EPA to assist the City of Oswego with purchase of an ice cleaner at the Crisafulli facility, replacing a diesel powered ice cleaner with an all electric ice cleaner. This purchase provided an emission-free piece of equipment to clean the ice, and helped the City take full advantage of their solar PV installation utilizing energy produced on site to power the ice cleaner. Electric Ice Resurfacer's (ERV's) consume around 20,000 kilowatt hours per year with a demand of about 8 kilowatts and generate no emissions. The CNY RPDB provided \$30,000 toward the City's demonstration project. Utilization of electricity vs. diesel fuel results in emission reductions of 5,371 pounds of CO₂ annually. Additional savings are anticipated by reducing the need to provide air exchanges to keep emissions down. Incoming air greatly increases the heating and cooling loads of the building and the ice making equipment. A 10%- 15% reduction in heating and cooling loads has been realized in other replacement projects taking into account adjustments for the need for fresh air. Based on a previous engineer analysis of existing equipment, a 10% reduction in the Chiller load, and a 10% reduction in the boiler load would provide an annual savings of an estimated \$2,300.

The CNY RPDB reviewed the City's proposal to secure funds in the 2014 round of Phase Two of the CGC program Cleaner, Greener Communities Program (Category 2) to support a city-wide Pedestrian and Bicycle Improvement Plan. The CNY RPDB provided input and suggestions to ensure conformity with the City's Climate Action Plan and the ***VisionCNY*** regional sustainability plan. Funds were awarded by NYSERDA in the amount of \$225,000. The plan will incorporate Complete Streets initiatives for the Route 104 corridor within the City of Oswego to enhance community and regional access to the Oswego City center and encourage the use of alternate modes of transportation such as walking and biking. The Plan will determine the modifications needed to improve safety and offer more transportation choices while maintaining efficient, reliable passage through Oswego. Ultimately, vehicle miles traveled will be reduced and alternative modes of transportation will be promoted.

Electric Vehicle Supply Equipment (EVSE)

The CNY RPDB provides guidance to municipalities that are interested in establishing EVSE residential installation permitting and offers help with NYSERDA funding applications. Planning and zoning efforts are critical in order to prepare communities for long-term sustainability and to ensure permanent and continually decreasing greenhouse gas emissions. CNY RPDB provides information on NYSERDA incentives for municipalities that want to adopt permitting processes for Level 1 and/or Level 2 residential EVSE installations. Additional information about this opportunity is located [here](#).

The CNY RPDB is actively seeking partners, including Climate Smart Communities and private businesses, to install publicly-accessible EVSE. As more EVs become available throughout the region, it will become increasingly important to improve the availability of EVSE in order to reduce “range anxiety.”

CENTRAL NEW YORK ENERGY CHALLENGE

The Central New York Energy Challenge is a program that encourages area residents, businesses, municipalities, institutions, and industries to improve the energy efficiency of their properties and reduce their emissions. The Energy Challenge, developed as a partnership between the CNY RPDB and NYSERDA, provides participants with detailed information on conservation actions, energy efficiency improvements, renewable energy programs and incentives, and information about cost savings. Approximately 60 families have participated in this program through the formation of Energy Challenge teams. An interactive website was developed and maintained to provide information to the public about the Energy Challenge (<http://www.cnyenergychallenge.org/>).

CLASSROOM ENERGY CHALLENGE

In 2014, CNY RPDB and Energy Training Solutions developed and implemented a program called the Classroom Energy Challenge (CEC) at two pilot schools in the Syracuse School District. The CEC is designed to broaden the level of understanding of energy sustainability, provide value to diverse school audiences, and promote cost-effective strategies that reduce energy consumption in homes and schools. The program provides a comprehensive collection of instructional tools for teachers and students, including an energy curriculum, teacher guides, student workbooks, Power Point presentations, educational literature, equipment, and promotional material. The energy challenge curriculum is a concise six-week program for 5th and 6th grade enrichment classes and their families. It integrates science, math, and language arts instruction and provides learning experiences that correspond to state and national learning standards. KiloWatch involves middle school students, faculty and staff in an energy management approach specifically for school buildings. Students are trained to use specialized equipment to monitor energy use throughout their schools and they learn about technologies and practices that save energy by conducting experiments and energy audits.

CLIMATE SMART COMMUNITIES: CHALLENGES

CNY RPDB's primary challenge has been to maintain local enthusiasm for energy sustainability after the climate actions plans have been completed. Local participation is typically strong during the data collection and analysis stages and as the recommendations are developed. Maintenance of this level of enthusiasm, however, is difficult without the availability of financial incentives for implementation of the recommendations listed in the report.

CLIMATE SMART COMMUNITIES: RECOMMENDATIONS

Implementation funding

CNY RPDB continues to focus on CSC recruitment, greenhouse gas inventories, and the development of climate action plans. In order to maintain the program momentum and community support, funding is needed for implementation of the recommendations presented in these plans. Well-defined goals (as seen in the CSC certification program) and financial rewards for reaching certain levels of certification will promote municipal enthusiasm and local commitment.

Expand the Classroom Energy Challenge (CEC)

In September 2014, CNY RPDB submitted a proposal to NYSERDA (PON 2646) for the expansion of the CEC to ten schools throughout our five-county region. As part of the Central New York School Energy Challenge proposal, the CNY RPDB assembled a partnership comprised of Energy Training Solutions, Action Research Associates, National Grid (providing \$50,000 in matching funds), and school educators. Through the CEC, teachers, students and their families will learn about energy conservation issues and cost effective strategies to reduce energy consumption in homes and schools throughout the region. Approximately 2,000 are expected to benefit from this program.

Solarize CNY

The CNY RPDB proposes to seek funding through the Community Solar NY initiative for a regional, five-county “Solarize CNY” campaign. The CNY RPDB is offering to apply for this funding on behalf of – or in partnership with – local municipalities, school districts or community-based not-for-profit organizations. The intent is to pool several smaller grants and to use the funds to pay for ancillary costs such as staff, posters, lawn signs, flyers, and room rentals. This regional approach would reduce overlap and provide greater efficiency, while growing the solar market throughout Central New York.