# CLIMATE SMART COMMUNITIES

## Year 2 Report

Prepared for the

## New York State
## Energy Research & Development Authority

Prepared by

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## 1. Executive Summary

As we near the two-year anniversary of Superstorm Sandy, Long Island communities are still facing many challenges as they continue to recover and rebuild from the storm – ranging from damaged infrastructure to displaced residents and businesses. In addition, more recent severe weather events, such as the August 2014 rain event (13 inches of rain in less than 24 hours), further exposed the vulnerability of many Long Island communities. Despite the widespread destruction caused by these storms, one of the positive outcomes has been the recognition of and willingness to plan for climate change by Long Island leaders. The effects of sea level rise and more severe/extreme weather events are already quite visible on Long Island. Historic sea level rise data at New York Harbor's primary NOAA Station (Station 8531680 Sandy Hook, New Jersey) shows a mean sea level rise trend of 3.90 millimeters/year based on monthly mean sea level data from 1932 to 2006, which is equivalent to a change of 1.28 feet in 100 years.1 For a region with many communities constructed on filled wetlands and barrier islands, this is a significant change. The recently released 2014 Update to the 2011 ClimAID Report (Responding to Climate Change in New York State) projects a sharply accelerated trend of sea level rise for the region, with estimates ranging from 8-30 inches by the 2050s.2

In response to these storm events and climate predictions, many local municipalities have embraced the need to develop plans and projects focused on climate change adaptation. The development of CSC Climate Action Plans (CAPs), particularly at the county and town levels, has allowed municipalities to assess their vulnerabilities and their level of preparedness for climate change. The Climate Action Plans also allow municipalities to do their part in reducing greenhouse gases (GHG). Most of the measures that will reduce GHG will also save taxpayers money – a very convincing argument for their adoption and implementation. The CAPs allow the municipalities to highlight past actions, detail current plans/projects/policies, and set forth plans for future actions. This approach serves as a useful gauge, demonstrating where progress has been made and making it clear where future actions are needed. The CSC program along with recent events has made Long Island municipalities far more open to unique and innovative measures to reduce GHG emissions and prepare for sea-level rise, higher temperatures, and more frequent and intense storms.

[1] Mean Sea Level Trend, 8531680 Sandy Hook, New Jersey. NOAA. Updated: October 15, 2013 <http://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?stnid=8531680>

[2] Horton, R., D. Bader, C. Rosenzweig, A. DeGaetano, and W.Solecki. 2014. Climate Change in New York State: Updating the 2011 ClimAID Climate Risk Information. New York State Energy Research and Development Authority (NYSERDA), Albany, New York.

Year 2 of the CSC program brought new interest in the benefits of being a Climate Smart Community. Nassau County committed to moving forward with the CSC pledge. Discussions with key individuals made it possible to advance the process in year three through an influential legislator and key county committee. The City of Long Beach, a community that suffered dramatic losses from Sandy took the CSC pledge and identified the individuals that would be responsible for working with Long Island CSC Coordinators to prepare a CAP. In addition, there was renewed participation by many Climate Smart Communities on Long Island, including the Towns of East Hampton, Babylon, Brookhaven and North Hempstead, along with the Villages of Great Neck Plaza and Port Jefferson. Many Long Island municipalities completed the NY Rising Community Reconstruction program by the end of year 2 of CSC freeing staff to focus on their CSC Climate Action Plans in year three of the program. With the renewed participation of these communities, along with especially active Climate Smart Communities such as Suffolk County and the Town of Southampton, the CSC Long Island program has reached much of the region. In addition to Suffolk County and the Town of Southampton, the CSC Long Island Coordinators also initiated the climate action planning process with Nassau County, the Towns of East Hampton, Babylon, Brookhaven and North Hempstead, and the Villages of Great Neck Plaza and Port Jefferson – all communities eager to prepare plans for a changing climate. In addition, many of these communities have either developed or significantly advanced anchor projects. As an example, the Town of North Hempstead has spearheaded a proposal to create a Long Island-wide regional EV charging network, which would include four stations per town, creating a complete east/west network of charging stations. While this project is still waiting to receive grant funding, this type of regional approach to climate action is a very positive step that could foster further collaborations between municipalities.

During year 2 of the program, one of the CSC Coordinators visited the Netherlands through an American Planning Association tour. The program, entitled *Coastal Planning, Floods, and Hard and Soft Approaches to Hazard Mitigation* was a unique opportunity to meet with Dutch researchers, policy-makers, elected officials, and water management professionals in the public and private sectors to study their approach to climate change adaptation. The week included visits to innovative resilience projects with local experts in Amsterdam, Rotterdam and nearby regions. In the months following the trip, Mr. Berg presented at four conferences to discuss lessons to be learned from the Dutch.

## 2. Regional Climate Smart Communities Plan

At the start of the year, the Long Island Climate Smart Communities (LI CSC) Team developed a regional CSC plan outlining the team's work plan for the year (Appendix A). The regional plan focused on three main areas: engagement with communities, the development of climate action plans, and the advancement of anchor projects. This process would be aided by coordination with the Cleaner Greener Communities program, whose regional experience could help to inform the local climate action planning process.

## 3. Recruit Climate Smart Communities

### *3.1. Continued Outreach*

Early in the CSC process, all municipalities on Long Island (119 in total, including Nassau and Suffolk Counties) received a detailed questionnaire requesting information on facilities, operations, actions, and projects undertaken and planned by the municipality to reduce GHG and prepare for climate change (Appendix B). For Year 2, the CSC Long Island Team focused on securing the participation of the region's towns and counties. This approach was selected to generate a more regionally-based, comprehensive approach to climate action. It also provides an opportunity to coordinate across departments within the municipality, which is often missing in day-to-day municipal operations. The CSC LI Team found that the larger governments are more likely to have staff willing/able to participate in the CSC process, and that the actions taken by the larger municipalities are likely to have a greater effect on overall regional progress towards reducing GHG emissions and adapting to the effects of climate change than the villages. Outreach to villages was therefore selective, at least for this phase of the CSC program. Only the larger villages with significant facilities and operations were approached.

### *3.2. Participating and Candidate CSC*

As of September 2014, 15 communities on Long Island had adopted the Climate Smart Communities Pledge:

| | |
|---|---|
| Counties: | Suffolk County |
| Towns: | Babylon, Brookhaven, East Hampton, Huntington, Islip, North Hempstead, Smithtown, Southampton |
| Villages: | East Rockaway, Port Jefferson, Woodsburgh, Greenport, Great Neck Plaza |
| Cities: | Long Beach |

These CSCs have demonstrated a strong desire to adopt climate action plans and begin work on new projects. The City of Long Beach, hard hit by Superstorm Sandy, is interested in pursuing new projects and initiatives as part of a climate action plan. The City is engaged in several planning initiatives related to climate adaptation and future storm resilience that they would like to integrate with the CSC CAP. The CAP would then be incorporated into its new comprehensive plan.

In addition to these 15 registered CSCs, the Long Island Team has been working with several municipalities who are very interested in the program but have not yet adopted the formal pledge. These municipalities include the Towns of Hempstead, Oyster Bay and Riverhead, the City of Glen Cove, and the Village of Rockville Centre. The Town of Hempstead has a long history of leading-edge environmental initiatives, including the development of an energy park and zero-energy house located on the south shore of Long Island. The Town of Oyster Bay has been a local leader in energy-efficient fleet management, particularly in the area of natural gas. Oyster Bay has developed its own compressed natural gas (CNG) fueling station at its primary Department of Public Works facility, allowing the town to purchase and compress its own natural gas. The town's entire sanitation fleet, along with several passenger vehicles, now operates exclusively on CNG.

The LI CSC Team successfully engaged with Nassau County in year 2 of the program. Those efforts led to a commitment by key officials in the County to bring the CSC pledge to its legislature for a vote in year three. Participation by the County will help bring the remaining two Nassau County townships (Oyster Bay and Hempstead) into the program.

The work completed by the LI CSC Team in year 2 with the Suffolk County CSC Committee has been very helpful in year 3 of the program. The CSC Coordinators are using the detailed climate action plan developed by the County with their assistance to recruit new CSCs across Long Island.

While the Team focuses its efforts on the development of climate action plans and demonstration projects in participating CSC communities, all Long Island municipalities continue to receive CSC notifications about webinars, events, grant opportunities, and marketing materials that describe the program and its benefits. Moving forward, the LI CSC Team continues to meet regularly with all Climate Smart Communities and provide additional support to communities wishing to pursue the CSC Certification program. Lastly, the Team continues to present workshops and webinars, engage municipalities, policy experts, industry leaders, and local residents to highlight best practices for climate action.

# 4. Greenhouse Gas Emissions Inventory

## *4.1. Development of the Inventory*

In late 2011, the Rauch Foundation funded an effort by the New York Institute of Technology (NYIT) to draft a comprehensive regional greenhouse gas (GHG) emissions inventory for Long Island's (LI) Nassau and Suffolk counties. NYIT released the complete results of the inventory in the form of a report and interactive website in early 2013. The *Long Island Carbon Footprint Project* provides a complete inventory and analysis for 2010, as well as comparisons between 2005 and 2010 emissions. The website also hosts a tool that features an interactive map that provides emissions data by sector, source, region, and municipality. Once the Long Island Climate Smart Communities webpage is launched, there will be a direct link to the NYIT report and the tools and methodology utilized for the Long Island inventory.

The LI GHG inventory includes the following sources:

- Fuel use (oil and natural gas) and electricity
- Transportation
- Industrial processes
- Agriculture
- Waste (wastewater and solid waste)
- Land use, land-use change, and forestry

The inventory utilizes data from the following sectors:

- Residential - building energy consumption
- Commercial and Industrial - building energy consumption
- Municipal - building energy consumption (included in commercial sector)
- Land Transportation - vehicle and fuel types, vehicle miles traveled (VMT)
- Marine Transportation - recreational only
- Solid Waste - generation rates and disposal types
- Waste Hauling - types and destinations
- Wastewater Treatment – large and small wastewater treatment plants, and on-site wastewater systems
- Land Use - agriculture, forested areas, open space
- Streetlights - type

Most data collected in the inventory are parsed by taxing jurisdiction (town, county and city) and in some cases by zip code.

- LIPA electric data by municipality (including villages and some unincorporated areas)
- National Grid gas data by zip code – request made to sort by municipality

- Fuel Oil – from the Oil Institute of Long Island
- Transportation data – by community, but includes vehicles traveling through

Inventory methodology was based in large part on the protocols developed by the New York State (NYS) GHG Protocol Working Group managed by Climate Action Associates and administered by the New York State Energy Research and Development Authority (NYSERDA). Cameron Engineering provided additional data and GIS analysis to complete the inventory, including Transportation Analysis Zone (TAZ) trip data to complete the transportation section of the inventory, land use and forestry cover data, and available agriculture data (note that 2010 data were not available for Long Island).

### *4.2. Utilization of the Inventory*

The CSC Team utilized the Long Island GHG inventory as the 2010 emissions baseline for each of the participating municipalities. The inventory and 2005-2010 comparisons are and will be included in the relevant climate action plans, allowing municipalities to assess emissions trends.

The emissions inventory was provided to participating CSCs using the template developed by the NYS GHG Protocol Working Group (see Appendix C). In addition, the spreadsheets developed by NYIT for each sector were distributed to participating CSCs to allow for future emissions tracking. The NYIT spreadsheets contain all of the raw data, calculations, emissions factors, and methodology involved with the development of the Long Island GHG inventory. The Long Island CSC Team also shared the Cleaner Greener Communities (CGC) Long Island Regional Sustainability Plan with participating municipalities to better understand GHG emissions on a regional level. Within the CGC Plan, the Cleaner Greener Communities Team developed GHG emissions projections forward-casted to the year 2020. These projections may be useful for municipalities as they continue to develop climate action plans, providing a context for future climate actions and their potential consequences.

The NYIT project documented a significant reduction in greenhouse gas emissions on Long Island from 2005-2010. The Long Island CSC Coordinators utilized these data to encourage candidate municipalities to enter the program and contribute to what should be a long-term trend. The data was also used to encourage participating CSCs to develop or advance their climate action plans and establish their own GHG reduction goals. As a region, Long Island reduced its overall emissions output by 9.75% from 2005 to 2010. Quantitative metrics, like emissions reductions and cost savings, are often missing from community-level environmental initiatives. The provision of these metrics helps to justify both past and

future actions, as they help to highlight the benefits associated with environmental initiatives as opposed to the typical focus on initial costs. These metrics also allow municipalities to prioritize sectors for action, which is often a necessary step, given their limited resources and staff. The 2010 GHG inventory will also be used to measure the success of the climate action plans developed by the participating CSCs. Some municipalities have expressed reservations about adopting specific emissions reductions targets. Even without a specific emissions target, however, municipalities can still use the available data and standardized template to monitor emissions, costs and energy consumption or use the emissions data to promote particular areas of achievement.

## 5. Market CSC Program

To date, the Long Island CSC Team has given formal presentations and informal overviews on the CSC program to the following organizations (see Appendix E):

- Nassau County Village Officials Association
- Suffolk County Village Officials Association executive committee
- Long Island Green Homes Consortium
- Suffolk County Legislature Energy & Environment Committee
- Cleaner Greener Communities – Long Island working group
- Clean Energy Task Force
- Destination Long Island Infrastructure Committee

In addition, Cameron Engineering gave formal presentations and presented informal overviews of CSC and climate adaptation issues at the following year two events:

- Hofstra University Conference on Recovery and Rebuilding After Superstorm Sandy: Legal Perspectives
- Vision Long Island Smart Growth Summit (led panel discussion, manned booth and discussed CSC with municipal officials)
- Suffolk County Planning Federation Conference
- APA East End Planning Conference
- 3rd Annual Long Island Green Infrastructure Conference & Expo
- Local Solutions: Northeast Climate Change Preparedness Conference

Cameron Engineering drafted a website during year 2 to serve as a portal for CSC program information, including a collection of local resources and planning tools. The website will include all of the deliverables developed through the first two years of the program as well as new materials produced in year three. The website will incorporate links to relevant tools, such as the NYIT *Long Island Carbon Footprint* report and GHG tool, and links to other sources of

GHG reduction and climate adaptation information. All climate action plans will be made available at the website as well as demonstration project summaries.

Working with the Greater Long Island Clean Cities Coalition (GLICCC), Cameron Engineering developed an alternative fuels map and searchable database that includes all compressed natural gas (CNG), propane (LPG), ethanol (E85), and electric charging stations on Long Island (see Appendix D). This map will be available online once the CSC LI website goes live.

Cameron Engineering has also created informational handouts regarding energy-efficient fleets, infrastructure adaptation and mitigation, National Flood Insurance Program (NFIP) changes, the NFIP Community Rating System (CRS) and insurance discounts, FEMA rebuilding standards, green and cooperative purchasing, municipal energy use reductions, and local energy-efficient policies and model ordinances (see Appendix D).

## 6. Climate Action Planning

### *6.1. Support Local Climate Action*

The LI CSC Team performed extensive research and analysis to support climate action planning at the local level. The Team developed and maintains a database that includes a comprehensive list of projects, policies, and plans for each of the CSCs on Long Island (see Appendix D). The database plays an important role in the development of climate action plans, allowing municipalities to catalog past, present and future climate actions. The database was used during each of the Team's meetings with CSCs to assess their successes and failures and review the actions of other Long Island communities. In addition, it allowed municipalities to identify potential areas for regional collaboration, which is a vital component for securing outside grant funding for projects.

One of the Team's goals for Year 2 was to re-introduce and reactivate several Climate Smart Communities that had taken the pledge prior to the existence of the CSC Coordinators program, particularly at the town and county level. The Towns of Babylon, Brookhaven, Islip, and East Hampton had all adopted the CSC pledge in 2009/2010, but their programs were relatively dormant. The communities cited recent storm events, the transition of elected officials, and reductions in staff as the primary reasons behind their inactivity. Since reactivating these communities, they have been among the most eager to move forward and develop effective climate action plans.

For the towns, villages and cities on Long Island, the Team provided information on land use policies and codes that would result in reduced emissions and reduced vulnerability to climate change impacts. Several towns, including Southampton and Brookhaven, have adopted rather innovative local building codes – both for residential and commercial

properties. Both Towns' residential codes feature a tiered energy rating system that holds larger homes to stricter energy standards. For commercial properties, the Towns have developed an incentive-based system that uses LEED ratings as a benchmark. The Town of Southampton allows commercial properties to exceed height or gross-floor area restrictions if it is constructed to current LEED standards. The Town of Brookhaven offers property tax abatements for new or renovated commercial buildings that meet LEED (or equivalent) standards. The Team shared these innovative codes and their related performance analyses during meeting with participating CSCs. During Year 2, the LI CSC Team also promoted the then relatively new PACE (Property Assessed Clean Energy) loan program available to commercial property owners. Most municipalities, including Suffolk County, expressed an interest in pursuing the requirements to institute such a program.

Throughout the meetings with participating and candidate CSCs, it became apparent that municipal building audits and retrofits could play a key role in local emissions- and cost-reduction strategies. Communities often cited these audits and retrofits as "low-hanging fruit," as many retrofits and energy-efficient office practices could be easily implemented with immediate cost-savings. Typically, municipal audits are provided by local utilities or ESCOs on a contingency basis, requiring no capital investment. Audits are paid for through the calculated energy-savings of the retrofits. The Team encouraged municipalities to obtain such audits and offered the services of Cameron Engineering to review the recommended energy-efficient measures.

In addition, the Team has been promoting the energy assessments offered through NYSERDA, including both the Small Commercial Energy Assessment (free energy assessments for small business and not-for-profit customers that have 10 employees or less and an average annual electric demand of 100 kW or less) and the Home Energy Assessment (the assessment analyzes how all the elements of a home work together to affect the amount of electricity and fuel used. A final report details where energy is being wasted and makes recommendations for the most effective home energy improvements. Since the Long Island Green Homes program is no longer being administered on Long Island, the NYSERDA Home Energy Assessment is an important vehicle to promote climate action at the community-wide/residential level. The LI CSC Team also reached out to the New York Power Authority (NYPA) to discuss their role in providing energy audits for municipalities.

The Team has sent almost weekly notifications to Long Island municipalities providing information about grants available through NYSERDA, DEC, FEMA, EPA, LIPA/National Grid, and other organizations as well as information on webinars and other events.

### *6.2. Facilitate Local Climate Action Planning*

The LI CSC Team utilized the regional database of climate adaptation and energy-efficiency actions developed during years 1 and 2 of the program to assist municipalities draft climate action plans. The Team prepared a draft climate action plan (CAP) outline/template for each municipality that contained information on past and current actions from the Team's database, made available to the Team through staff, and gleaned from the municipality's website. In addition, the Team added potential future actions and initiatives that might be considered by the municipality. Those potential future actions were taken from work by other Long Island, regional, and national initiatives. The Team felt and still feels that completion of the CAPs is expedited if municipal staff is not burdened by having to start from scratch. It is also easier for municipalities to react to proposed initiatives and actions than to have to develop then entirely on their own. This approach worked well and sparked interest in new initiatives and even some healthy competition between municipalities. The inclusion of past actions and present initiatives allows municipalities to highlight past achievements that will contribute to GHG reductions and improved preparedness for climate change.

During year two, the LI CSC Team developed the format for what would become the typical Long Island climate action plan (CAP). Each CAP is generally divided into four main sections: 1) Introduction, 2) Municipal Facilities and Operations, 3) Community-wide Policies and Initiatives, and 4) Climate Change Adaptation. The Introduction summarizes relevant plans, studies, and reports, lists pledges and memberships, discusses the GHG inventory and sets a GHG emissions reduction target, and summarizes the CSC Certification program. The Municipal Facilities and Operations section details actions and initiatives related to buildings, renewable, exterior lighting, waste ((including solid waste, wastewater and organic waste), fleets, and operations. The Community-wide Policies and Initiatives section includes some similar subsections (buildings, exterior lighting, renewables), as well as transportation, land management and education. The climate adaptation section includes discussion of climate change projected for Long Island and its anticipated effects. Related programs are discussed including FEMA's Hazard Mitigation Grant program and the NY Rising Community Reconstruction program as many of the CSCs participated in these programs and took action or plan to take action through those initiatives. Self-assessment is reviewed and finally adaptation strategies and emergency preparedness in place or planned are discussed.

The Team worked extensively in year 2 with Suffolk County, the Towns of Brookhaven, Southampton, East Hampton, Huntington, North Hempstead, and the Villages of Great Neck Plaza and Port Jefferson to develop working draft climate action plans. Suffolk County and

the Town of Southampton, in particular, have devoted significant time to the development of effective and detailed climate action plans. During year two, there was a strong focus on producing and completing a final Suffolk County Climate Action Plan, as it is the second-largest county in the state in terms of land area and the fourth-largest county in terms of population (See Appendix A). Suffolk County has also been one of the most active and innovative municipalities in the region in terms of building energy reductions and utilization of renewable energy in its own facilities and on its own properties. Many meetings were held to finalize the plan, as it was felt that it could serve as a template for other Long Island municipal climate action plans and spur similar activity in Long Island's other county, Nassau. Suffolk County's plan not only highlights its many projects, plans and best practices, but also includes discussion of the process by which these changes were made and data that supports their successes.

## 7. Identify and Support Demonstration (Anchor) Projects

One of the more exciting aspects of the Climate Smart Communities program has been the opportunity to discuss innovative concepts for climate smart demonstration (formerly 'anchor') projects. At each meeting, municipalities were eager to share ideas for capital projects that would lower GHG emissions or prepare for climate change and have a lasting impact on the community. The NYS Consolidated Funding Application has included Cleaner, Greener Communities Phase II funding for innovative sustainability projects focused on energy-efficiency and climate adaptation. While a number of ideas were discussed during meetings, the LI CSC Team encouraged Climate Smart Communities to submit applications for demonstration projects that would likely qualify for implementation funding.

Many Long Island communities participated in the New York Rising Community Reconstruction Program (NYRCR), which is designed to make communities more resilient in the wake of Superstorm Sandy and prior storms and help them adapt to the effects of climate change. The NYRCR program focuses primarily on plans and projects at the community level, which complemented the work performed primarily at the regional (town/county level) through the CSC program. The development of local, community-based NYRCR Plans has helped to identify and refine potential demonstration projects for the CSC program. Municipalities that identify a project as a priority in both the CSC Climate Action Plan and the NYRCR Plan may be better positioned for funding available through the NYS Consolidated Funding Application and other state and federal programs.

During year 2, the Town of North Hempstead spearheaded an initiative to develop a Long Island-wide electric vehicle (EV) charging network. This initiative followed the CSC alternative fuels vehicle workshop held in the Town's platinum LEED community center. Each town on Long

Island would be home to approximately four EV charging stations, creating a complete east-west network across the entire region. The stations would be accessible to both public and municipal vehicles. By installing this type of charging infrastructure, Long Island, as a region, would eliminate one of the largest barriers to widespread use of electric vehicles. It would also allow the municipalities to put more electric vehicles into service for municipal uses such as code and parking enforcement.

The Town of North Hempstead also initiated work on the construction of alternative fueling (CNG and biodiesel) infrastructure throughout the town – some of which would be located adjacent to the aforementioned EV charging stations. The CSC Coordinators also discussed Town plans to construct a CNG fueling station at its Highway Department facility in New Hyde Park and plans to develop additional stations throughout the Town. Inter-municipal cooperation is the driving force behind the project. The alternative fueling stations would help to serve the Town's incorporated villages (31), school districts (13) and special districts (more than 50). The Long Island CSC program coordinators have encouraged this kind of inter-municipal cooperation to develop economies of scale in the expansion of alternative fuel vehicle use. It was made clear at the CSC alternative fuels workshop by the Town of Smithtown (a CSC) that fuel providers can offer better contract rates for cooperative ventures, as usage will be higher and more predictable. Perhaps most importantly, North Hempstead's project will provide significant public health benefits, as CNG buses and trucks emit far less particulate matter than their diesel equivalents, which is especially important to the school children who are exposed to diesel buses daily and are more susceptible to respiratory illnesses. During CSC meetings, other towns expressed an interest in pursuing similar alternative fuel ventures including the towns of East Hampton, Southampton, Huntington, and Brookhaven.

During year two, another potential demonstration project was advanced in discussions with the Village of Greenport, a CSC. The village wishes to develop a facility that would generate two to four megawatts of renewable energy. The Greenport '*Eco Energy Park*' would include wind and solar photovoltaic (PV) installations to provide renewable energy to supplement the five-megawatts of upstate hydroelectric power currently powering the village. Discussions with the Village revealed that during peak summer months, electrical demand in the village exceeds the five megawatts of hydroelectric power and the village must purchase power through NYPA on the open market (from fossil fuel sources) to maintain electrical service. On-site renewable power generation would eliminate the need to purchase this additional power, resulting in significant cost-savings and emissions reductions. The site would also be developed as a public parkand demonstration site for a range of sustainable and green infrastructure practices.

In western Long Island, the Village of Great Neck Plaza, a CSC, expressed an interest in what would effectively be a community solar photovoltaics project encompassing some portion of its

90 apartment buildings. The Village has the highest household densest in the state of New York. It is a highly walkable village, with easy access to transit and many restaurants and shops. During one of the CSC meetings,the Village identified one apartment owner with 30 buildings as well as one company that manages many of the apartment complexes. The CSC Coordinators suggested a number of options for solar PV including a community solar option, PV leasing, and roof rentals to supply a larger feed in tariff project. Discussions are on-going to further investigate these opportunities for large-scale renewable energy generation.

The CSC Coordinators are also providing the Village of Great Neck Plaza and several towns with model codes for solar PV installations including for large scale 'solar farms' that are being proposed for Long Island's east end townships.

## 8. Provide Education and Training

During year two, the CSC Long Island Team developed plans for several workshops to be held in year three. A half-day workshop will be presented on energy-efficient lighting in October 2014. Six presenters from the private sector and utility will discuss new indoor and outdoor lighting technologies, available lighting fixtures and lamps, lighting controls, outdoor lighting design, and available lighting rebates.

During the development of the Suffolk County climate action plan, it became clear that a workshop on building management systems (BMS) would be useful to Long Island counties, the cities, and the towns, all of which have tens to hundreds of buildings. The larger towns and the counties would also benefit from a web-based dashboard that would allow simultaneous and instantaneous energy data collection and control. These types of systems help facility managers make decisions on upgrades and operational changes. The BMS workshop was developed in the later part of year 2 of the CSC program and is scheduled for mid-December 2014.

In year two, the LI CSC Team began developing a workshop on the National Flood Insurance Program (NFIP) Community Rating System (CRS). This workshop will serve as a follow-up to the CSC LI webinar on the topic, which was broadcast on June 6, 2013. The CRS provides discounts to NFIP policyholders based on the flood mitigation actions undertaken by the municipality. The workshop, tentatively scheduled for January 2015, will bring together FEMA/NFIP representatives to go over the specific requirements of the CRS program and actually enroll municipalities of the CRS program. Given the effects of Superstorm Sandy on Long Island, as well as the planned increases in NFIP premiums, many communities are eager to enroll in the CRS program.

The website developed during year two and scheduled to launch in the fall of year three, will be an excellent platform for education. Materials developed during years one, two, and three of the CSC program will be posted on the site as well as links to information for each element of a

community's climate action plan. Climate action plans will be posted and downloads made available for past webinars and workshop presentations.

During year two of the program, one of the CSC Coordinators from Cameron Engineering (David Berg) participated in a unique educational opportunity, a study tour of the Netherlands. The week-long Netherlands study tour was organized by the American Planning Association (APA) for a small group of selected participants. The APA's program, entitled *Coastal Planning, Floods, and Hard and Soft Approaches to Hazard Mitigation* was a special opportunity to meet with Dutch researchers, policy-makers, elected officials, and water management professionals in the public and private sectors to study their approach to climate change adaptation. The trip included visits to innovative resilience projects with water management experts in Amsterdam, Rotterdam and nearby regions. In the months following the trip, Mr. Berg presented at four conferences to discuss lessons to be learned from the Dutch. That information was also delivered to existing and candidate Climate Smart Communities during the CSC meetings that followed the trip. The information concerned green infrastructure techniques to manage stormwater, coastal protection methodologies, stormwater storage systems, and a variety of other relevant technologies and management systems (see Appendix B).

## 9. Reporting

The Long Island Team provided regular progress reports to NYSERDA highlighting achievements and work completed during each month of the program. Moving forward, the Team intends to use the Long Island CSC website to promote the experiences and accomplishments of CSCs in the region.