The City of Schenectady, the county seat in Schenectady County, has a history of technological innovation. Located on the south side of the Mohawk River near its confluence with the Hudson, about 15 miles northwest of Albany, it developed rapidly in the 19th century from a farming community to a trade, manufacturing and transportation corridor. Industries included a cotton mill and the American Locomotive Company. Thomas Edison moved his Edison Machine Works there, which eventually became General Electric.

PROGRAM
The Bevis Hill solar array has a 711 kW capacity from 3,029 panels. It has already reduced the city’s energy costs by about $80,000 over the last two years and is projected to save about $840,000 over the lifetime of the array. The electricity is obtained through a power purchase agreement, meaning the city didn’t have to pay for the construction of the array. Since the solar site is isolated and not very visible, there was little opposition. SolarCity was the installer, and the project took over a year from start to finish, the long timeline mostly due to interconnection arrangements made with the local utility. In addition to the Bevis Hill solar array, the city also saved over $30,000 per month on the city’s energy consumption by upgrading its waste water filtration system. Schenectady has also received approval from the New York State Department of Public Service to partner with National Grid to install advanced streetlight technology. As part of this “smart city” demonstration project under NYS’s Reforming the Energy Vision program, National Grid will replace approximately 4,220 streetlights with energy-efficient LEDs and smart controls that will allow remote operation to maximize lighting effectiveness under different conditions to reduce lighting costs. Mayor Gary McCarthy appointed a Smart City Commission in 2016 to research the project, which took a year. The lights, controls and associated equipment will be installed over three years in total. Overall, the LED lighting will save two million kW hours of electricity, annually.

9 http://www.cityofschenectady.com/DocumentCenter/View/2145/Schenectady-Smart-City-Announcement?bidId
Schenectady’s fleet currently has eight plug-in hybrid electric vehicles, funded in part by NYS grants. Charging stations are now available at City Hall, two municipal parking lots, Central Park and the library. New vehicles are being phased in as fleet vehicles need replacing. The city had to make some legal modifications to allow businesses to get Property Assessed Clean Energy (PACE) financing for charging stations, which then made them eligible for more grant money.

**PROCESS**

Many of these initiatives were accomplished through the help of staff and the support of the City Council. Neighborhood meetings and community partners were keys to the success of these projects.

The team collaborated with various entities, including the University of Albany and Clarkson University’s graduate school, Smart Cities partnerships, and a broad coalition of AT&T, General Electric, Intel, Simcon, Itron and National Grid. The NYS Department of Transportation and several boards at the Capital District Transportation Committee worked together to keep communication clear and open. The team contacted local Assembly members and NYS Senators to support their efforts. Though not required, they kept the school board in the loop, which helped with community agreement.

**TAKEAWAYS**

Mayor McCarthy’s suggestions for other communities interested in undertaking similar projects are to be creative, persevere through the paperwork for grants, and tailor all these plans to determine how they fit best for your community.

When awarding the 2018 Mayors’ Climate Protection Award to Mayor McCarthy, Stephen K. Benjamin, Mayor of Columbia, South Carolina and President of The U.S. Conference of Mayors, said, “As the nation struggles to find a common vision to the growing challenges of a changing climate, Mayor... McCarthy show[s] how local leadership and action offer a pathway to a broader national consensus and response to our climate challenges.”

“Schenectady has a proud history of innovation and it is more important than ever that we upgrade our technology and infrastructure to tackle climate challenges while improving the efficiency of services and increasing the quality of life for residents,” said Mayor McCarthy when accepting the award. “Emerging technologies have incredible potential to create real value while also making our communities more sustainable.”

**FOR MORE INFORMATION**

Contact Director of Operations Alex Sutherland at asutherland@schenectadyny.gov or 518-382-5000.
STATE PROGRAMS

CLEAN ENERGY COMMUNITIES
Amherst, East Hampton, Red Hook  Under NYSERDA’s Clean Energy Communities program, communities that complete four out of the 10 High Impact Actions and meet all other eligibility requirements are designated by New York State as a Clean Energy Community and are eligible to apply for grants to fund additional clean energy projects. Those ten actions are:

- **Benchmarking** - Adopt a policy to report the energy use of buildings
- **Clean Energy Upgrades** - Achieve 10% reduction in greenhouse gas emissions from buildings
- **LED Street Lights** - Convert street lights to energy efficient LED technology
- **Clean Fleets** - Install electric vehicle charging stations or deploy alternative fuel vehicles
- **Solarize** - Undertake a local solarize campaign to increase the number of solar rooftops
- **Unified Solar Permit** - Streamline the approvals process for solar
- **Energy Code Enforcement Training** - Train compliance officers in energy code best practices
- **Climate Smart Communities Certification** - Get certified by the NYS Department of Environmental Conservation
- **Community Choice Aggregation** - Put energy supply choices in your community’s hands
- **Energize New York Finance** - Offer energy upgrade financing to businesses and non-profits

CLEAN ENERGY STANDARD/RPS
Eagle, East Hampton  The Clean Energy Standard requires that 50% of New York’s electricity come from renewable energy sources such as solar and wind by 2030. New renewable projects provide enormous benefits to local communities, including reduced emissions of greenhouse gases and other pollutants, economic investment and PILOT payments, and new, high quality jobs in the clean energy sector.

COMMUNITY CHOICE AGGREGATION
Ossining  Community Choice Aggregation allows local governments to work together through a shared purchasing model to procure energy supply service and distributed energy resources for eligible customers within the jurisdictional boundaries of participating municipalities. Eligible customers will have the opportunity to have more control to lower their overall energy costs, to spur clean energy innovation and investment, to improve customer choice and value, and to protect the environment, thereby fulfilling an important public purpose.

GROUND SOURCE HEAT PUMP REBATE
Lockport  NYSERDA’s [Ground Source Heat Pump Rebate](#) provides funding for the installation of ground source heat pump systems for residences, businesses and institutions. Benefits include lower and less volatile energy bills, greater resiliency and reliability, and health benefits from this emissions-free technology.

MUNICIPAL ZERO EMISSION VEHICLE INFRASTRUCTURE REBATE PROGRAM
Amherst, DeWitt, Red Hook, Schenectady  The [Municipal ZEV Infrastructure Rebate Program](#) provides rebates to cities, towns, villages, and counties (including New York City boroughs) to install publicly available charging stations. Installation of these charging stations will help electrify New York’s transportation sector and meet its climate goals, putting local communities on the road to energy independence while helping to reduce emissions harmful to the environment.

NY-SUN
Avon, Clarkstown, Delaware, DeWitt, Grand Island, Red Hook, Schenectady  [NY-Sun](#) provides multiple resources for local governments to install solar energy, including financing, incentives, and training/education to identify opportunities and mitigate barriers, providing the tools necessary to build clean, affordable solar programs to power their communities.

REFORMING THE ENERGY VISION DEMONSTRATION PROJECTS
Schenectady  New York State is seeking demonstration projects to show how new products and services can capture latent value on the grid, and how new business models can monetize and distribute that value across third parties, utilities and customers. While New York’s investor-owned utilities have been directed to partner with third parties to develop a first round of REV demonstration projects, the utilities will continue to undertake demonstration projects until these kinds of products and services are fully integrated into core system operations.