



AMERICA'S FIRST STATEWIDE SOLAR MAP AND PORTAL LAUNCHED AT NY SOLAR SUMMIT

CUNY Built Map Puts Solar Tools in Hands of All New Yorkers

NEW YORK, NY - The NY Solar Map and Portal was launched today at the 10th Annual NY Solar Summit. Sustainable CUNY of the City University of New York (CUNY) worked with a team of researchers, IT and GIS experts at the country's largest urban public university, as well as with solar leaders across the state, to design and build the comprehensive interactive website with support from the NY Sun Initiative and the U.S. Department of Energy (DOE) SunShot Initiative.

nysolarmap.com

The NY Solar Map and Portal allows New Yorkers across the state to realize their solar potential with detailed technical and economic calculations and the ability to connect with accredited solar installers. Distinguished from other solar maps, the NY Solar Map and Portal provides consumers with localized information, market statistics and flexible analytics. Consumers, installers and municipal leaders can also access information on resources and programs available in their local community through the 'In Your Area' feature. This tool connects consumers to local 'solarize' group purchasing campaigns and community shared solar opportunities, which are open to renters, investors and those with non-viable roofs.

The NY Solar Map also features a 'draw solar' tool that can be utilized anywhere in the state: a rooftop in Albany, a parking lot on Long Island or a brownfield in western New York. NYC and the Westchester County additionally have LiDAR: surveying technology that uses light and radar to measure a geographic space. This allows the Map to account for shading from trees and other obstructions to direct sunlight. Additional communities that capture Lidar data will be added to the map when available. The NY Solar Map and Portal is an expansion of the NYC Solar Map (also by Sustainable CUNY), one of the first solar maps in the country, built in 2010 utilizing 5 billion points of LiDAR data with support from the DOE, NYS, the City of New York and Con Edison.

"In NYC, we've more than tripled solar since 2014 -- focusing on cutting red tape and making lower-cost solar accessible to as many New Yorkers as possible, as we work toward our OneNYC goal of an 80 percent reduction in emissions by 2050," said **NYC Mayor Bill de Blasio**. "The NY Solar Map will help ensure New Yorkers have the information they need to make the switch to clean energy, and we're proud to support this valuable new tool."

"As Thomas Jefferson said, 'Information is the currency of democracy' and the NY Solar Map is an important tool to provide all New Yorkers--from customers to installers to policymakers--the information they need to choose affordable solar power," said **Richard Kauffman, Chairman of**

Energy and Finance for New York. "Resources like this new map will help democratize the production of energy, ensure greater access to clean energy for households and communities across the state, and contribute toward achieving Governor Cuomo's goal of 50 percent renewables by 2030."

"In Reforming the Energy Vision -- Gov. Cuomo's strategy to fight climate change and grow New York's green economy -- a key goal is to expand solar and other renewable power and the NY Solar Map and Portal will greatly assist in that effort," said Audrey Zibelman, Chair of the New York State Public Service Commission. "Like REV, this new map and interactive portal will give energy consumers the information and the tools they need to lower their energy bills."

"Through Governor Cuomo's NY-Sun initiative, solar in NYS is setting records in installation and job growth in New York State," said **John B. Rhodes, President and CEO, NYSERDA**. "The NY Solar Map and Portal gives communities, businesses, hospitals, colleges and others the tools to help them choose to install solar, which adds good jobs to the State's clean energy economy and renewables to the State's energy mix."

"The easier we can make it for consumers and businesses to determine whether solar is the right option for them, the faster solar will become an essential components of the State's energy mix," said Gil C. Quiniones, NYPA president and CEO. "We're proud to support the Solar Map, as the more consumers know about solar, the more they're bound to embrace it for their energy needs."

"The City University of New York is proud to have worked for over a decade with municipalities across New York as well as utility, State and Federal leaders to play a significant role in reducing the costs of conversion to solar energy," said CUNY Chancellor James B. Milliken. "The NY Solar Map and Portal, developed by Sustainable CUNY and built in collaboration with CUNY faculty and students across many campuses, is a robust interactive tool that puts data and information at the fingertips of all New Yorkers, ultimately boosting economic development and helping New York gain recognition nationally as a model for the future of renewable energy."

"The NY Solar Map is another tool that will help support the growth of clean, renewable solar energy in our state," said **Craig Ivey, president of Con Edison**. "That is also the goal of our Solar Progress Partnership, which brings together utilities and solar companies to encourage solar development while helping to maintain a reliable, resilient grid."

Sixteen municipalities around the state representing over half the population have partnered with Sustainable CUNY, lending localized expertise in a collaborative effort to encourage streamlined permitting, develop a Model Solar Zoning Law and Toolkit, create group purchasing campaigns and host workshops for municipal leaders and installers. These collective efforts helped inform the development of the Portal for the NY Solar Map, offering a one-stop shop for consumers, installers, city planners and utilities. Committed jurisdictions that spent over three years working with CUNY now each have their own solar map address, such as nysolarmap.com/albany. The City of Yonkers, the Town

of Red Hook, the Village of Warwick, the Town of Warwick, the Town of Huntington and New York City additionally collaborated with CUNY's IT team to create <u>interactive permitting guides</u> for the portal.

"Sustainable CUNY has developed a practical online technology that empowers individuals to find out if solar energy is a viable option on their property," said **Albany Mayor Kathy M. Sheehan**. "This map and portal provide an important tool for property owners who want to determine whether they can save money and reduce their carbon footprint by making the switch to solar. It is also an important contribution to Governor Cuomo's bold initiative to aggressively promote alternative energies."

"The Town of Huntington partnered with Sustainable CUNY on solar energy initiatives because the Town is committed to making it easier for local residents and business to explore whether solar works for them and to streamlining the conversion process," said **Huntington Supervisor Frank P. Petron.**"The NY Solar Map and Portal is the next logical step in this effort, providing the information on-line and in an interactive fashion. I congratulate Sustainable CUNY for producing this first-in-the-nation portal."

"The NY Solar map and portal will be a great asset for our community to monitor progress towards increasing our use of renewable solar energy," said **Town of Warwick Supervisor Michael Sweeton**. "The Town of Warwick is proud to have worked on the Interactive Permitting Guide and to have adopted the unified permit."

"The Village of Warwick was pleased to participate in the development of a Statewide Solar Permit," said **Mayor Michael Newhard**. "Working with CUNY and colleagues throughout New York State was a valuable lesson in cooperation and vision. The permit and Statewide Solar Map are important steps for the future of a sustainable New York."

"Southampton Town is a strong advocate for renewable solar energy installation," said **Town of Southampton Supervisor Jay Schneiderman.** "We, as a Town, are now entering our second round of a
Solarize Southampton campaign, partly funded by a NYSERDA grant, to promote solar installations
throughout the Town. This tool will be an invaluable asset to that local effort as I am sure it will be in
other parts of the State."

"Clifton Park was eager to lend expertise, as a member of a select working group, to the goal of comprising a unified code for all municipalities in New York State pertaining to solar installations," said Clifton Park Town Supervisor Phil Barrett. "The code will provide a uniform standard for all municipalities, which will streamline the solar installation process for homeowners, businesses and the solar industry. We value our partnership with CUNY in this endeavor and look forward to future collaborative efforts."

"Red Hook is privileged to be working with Sustainable CUNY to help New Yorkers with home grown solar," said **Red Hook Town Supervisor Robert McKeon.** "This will complement our Solarize Northern Dutchess campaign which has hundreds of interested families.

"The City of Schenectady is proud to have partnered with Sustainable CUNY and the 15 other New York jurisdictions through the U.S. Department of Energy SunShot Initiative Rooftop Solar Challenge II," said **Schenectady Mayor Gary McCarthy.** "This initiative will not only help to break through some of the economic and permitting barriers to installing rooftop solar energy systems, but the NY Solar Map and Portal will allow Schenectady residents to estimate the solar potential of their home, get step-by-step guidance and information, and connect with local qualified installers."

The Age of Solar

Sustainable CUNY's 10th annual NY Solar Summit featured onstage conversations with U.S.

Department of Energy SunShot Initiative Director Dr. Lidija Sekaric and the Public Service
Commission along with National Grid President Kenneth Daly, and Con Edison Vice President
Stuart Nachmias on present and future solar policy. Utility leaders highlighted current demonstration
projects triggered by New York's 'Reforming the Energy Vision' while the NYC Solar Partnership
outlined Solarize NYC- a comprehensive program of solarize and shared solar campaigns in America's
largest City. NYSERDA President John Rhodes gave the afternoon keynote outlining the tremendous
progress of the NY-Sun Initiative and a panel on solar+storage featured the efforts of CUNY's Smart
DG Hub-Resilient Solar Project to create a pathway to the marketplace for batteries. 'Building New
York's Solar Empire' featured the many programs available in New York and numerous case studies
showed the way for shared solar and solar+storage projects. Prime sponsors of the 10th annual NY
Solar Summit include NYSERDA, Con Edison and the U.S. Department of Energy SunShot
Initiative. Full Sponsor List

The Making of the Map

The NY Solar Map and Portal is the country's first comprehensive statewide solar map complete with a robust informational portal. Sustainable CUNY led development of the project and maintains the content, while CUNY's Center for Advanced Research of Spatial Information (CARSI) at Hunter College was responsible for software design, development and implementation.

The NY Solar Map adds LiDAR data covering Westchester County to the existing model of New York City, while the Map provides solar estimations for the rest of the state using satellite imagery and historical weather data. For NYC and Westchester, the NY Solar Map estimates rooftop solar potential using a computer model that calculates the incoming direct and diffuse solar radiation for every square meter. The model is based on the position of the sun; multiple historical weather datasets, which were calibrated using the performance of deployed solar systems; latitude; and, most importantly, shading. Shading information is generated from a 3D model derived from the LIDAR data. Integration with local land-use data allows users to easily click on a building or search for an address and find its solar potential. For areas without LIDAR data, users are prompted to draw a box on their southernmost-facing

roof. The NY Solar Map uses historical weather and solar radiation data from the National Renewable Energy Lab (NREL) to estimate the solar production of the roof. In both cases, the Solar Calculator provides detailed information about the solar investment, including estimated incentives, savings, and payback.

What separates the NY Solar Map and Portal from other solar mapping tools is the integration of local program information and educational resources. In addition to the In Your Area tool, the Solar Connect feature allows users to receive quotes from NYSERDA-qualified solar installers, and sort contractors based on their offerings and the number of projects they have completed within a local jurisdiction. The Solar Statistics and Solar Layers features allow users to visualize how New York's solar market is growing as a whole and within each municipality. Charts display how prices are falling, and users can view installed systems across the state. Installers can view maps of which municipalities have adopted the NYS Unified Solar Permit and other beneficial information. All of these resources are wrapped into a customizable Portal containing educational resources created by Sustainable CUNY and its partners. The Map also integrates Advanced Tools for contractors, such as the forthcoming Grid Ready tool that will allow pre-screening of large properties in NYC for necessary grid upgrades to interconnect with Con Edison.

The Map and Portal are funded by the U.S. Department of Energy SunShot Initiative and the NY-Sun initiative and are part of NYSolar Smart, a strategic effort led by Sustainable CUNY that supports Federal, State and NYC efforts to reduce the soft costs of installing solar in New York. CUNY works in partnership with NYPA, NYSERDA and more than 70 organizations including utility companies, installers, government agencies and industry leaders.