ONTHEGRID

PROJECT: **OPERATIONS WERE RECENTLY STARTED ON THE FIRST MAJOR SOLAR PV GROUND-MOUNT ARRAY IN ALBANY COUNTY, NEW YORK, THE HOME OF THE CITY OF ALBANY, THE CAPITAL OF THE STATE, IN EAST CENTRAL NEW YORK.**
SIZE: The 2.1-megawatt solar farm on five acres will generate 2,823,000 kWh per year, equivalent to the amount needed to power 270 homes.
BACKGROUND: Calibrant Energy partnered with Albany County to provide a renewable energy solution that is said to support both local and state sustainability objectives. The project is owned and operated by Calibrant Energy, a joint venture between Siemens and the financial services company Macquarie Group. The county will purchase the over 2.8 million kilowatt hours of renewable electricity generated by the farm each year, and be reimbursed for the power generated on county property. The credits received will be applied to eight county facilities. The project was developed in collaboration with the New York Power Authority (NYPA), which assisted with site analysis, managed the competitive bidding process, and provided ongoing support during contract execution and project installation through its Distributed Energy Resources team. NYPA also provided a $350,000 grant to assist with construction.
BENEFITS: One of the benefits of the location of the solar array in Albany County is the development of an educational program for students at the neighboring Capital Region Board of Cooperative Educational Services (BOCES) and local schools. Through this partnership, students were able to participate in project construction, and going forward, they will be able to assist with maintenance of the solar array and monitor the site in real time.

PROJECT: **BROAD STREET REALTY RECENTLY COMPLETED A SOLAR PROJECT AT ITS CROMWELL SHOPPING CENTER IN GLEN BURNIE, MARYLAND.**
SIZE: 2.4 MW rooftop solar project.
BACKGROUND: The 233,000 square foot Cromwell Shopping Center, anchored by an AutoZone mega hub and a Roses store, hosts the solar project, which produces enough electricity to power over 1,000 homes in Baltimore Gas & Electric (BG&E) service territory in Maryland. The ballasted racking system is covered by 4,380 solar panels. Centennial Generating Company developed the project, which was built by Halo, a solar engineering contractor, and AccelDev provided development capital financing. The project will be owned and operated by Madison Energy Infrastructure, which has a portfolio made up of over half-a-gigawatt of clean energy infrastructure assets across more than 25 states.
BENEFITS: The solar project at Cromwell Shopping Center demonstrates how commercial real estate owners can implement solar projects with a clear and measurable benefit to their bottom line while achieving sustainability targets, says Centennial Generating. State incentive programs, when utilized by landlords like Broad Street and executed by developers like Centennial, can accelerate both community benefits and the national clean energy transition, say the companies. The solar project at the Cromwell Shopping Center is an example of Broad Street's commitment to decarbonize the company's footprint in line with the most advanced technologies.

PROJECT: **GERMAN COMPANY GICON IS BUILDING THE WORLD'S TALLEST WIND TURBINE WHICH AT 1,197 FEET WILL APPROACH THE HEIGHT OF NEW YORK'S EMPIRE STATE BUILDING (1,250 FEET) AND BE HIGHER THAN THE EIFFEL TOWER (1,020 FEET).**
SIZE: The $30 million high-altitude wind turbine will be the second highest structure in Germany after the Berlin TV tower. The patented technology combined with optimal wind conditions at a height of almost 1,200 feet will enable significantly higher energy generation. The high-altitude wind turbine will have increased output of up to 220 percent of conventional wind turbines.
BACKGROUND: In order to install a turbine at this height, GICON developed a telescopic device that allows the turbine to be installed at a height of 150 meters and then lifted to its final position, which is said to be a world first. The new monolith will be the same altitude as the final approach height for commercial aircraft coming in to land on a runway.
BENEFITS: At this higher altitude, the wind not only has higher average speed, but also a wider distribution, which leads to significantly more full-load hours for wind turbines, says GICON. Conditions are said to be comparable to offshore wind turbines, but with onshore operating conditions. This means that the costs for construction and maintenance are significantly lower, which has a positive effect on profitability, says the company. In the future, GICON's technology will enable triple use of space: two levels of wind turbines combined with solar parks on the same site.