SOLAR LANDSCAPE LEADING THE WAY
NEW JERSEY INDUSTRIAL SOLAR BOOMING
2020 will be the most challenging year ever for Solar Landscape, a leading provider of solar PV systems specializing in large industrial, commercial, and community solar projects. The Asbury Park, New Jersey based company was the big winner in the first round of their home state’s three-year community solar pilot program. The New Jersey Board of Public Utilities awarded the company more than 20 MW of solar project capacity to be built on 1.85 million square feet of commercial/industrial roof space. Solar Landscape’s community solar allocation represents more than 50% of the rooftop solar capacity awarded – and more than all other companies combined. "There was a lot of nuance with the community solar application..."
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Lucas Titolo, Director of Engineering

process, and we feel very fortunate”, said Shaun Keegan, CEO of Solar Landscape. “Now we get to do what we do best - design and construct large rooftop solar PV projects.”

With Community solar, the power generated on the rooftop is delivered to the community, not the building itself. No longer restricted by a building’s energy consumption (the power goes to the grid not to the building) engineers have carte blanche to use the entire rooftop to design systems for maximum production. “We no longer have to match the solar PV system size with a facility’s usage, like we do with behind the meter projects,” says Lucas Titolo, the company’s Director of Engineering. “Community solar allows us to incorporate large industrial – dry storage type warehouses and e-commerce sorting centers into the solar energy industry. It’s a game changer.”

The property owner receives a clean lease agreement for the solar rooftop equipment and obstructions. Today, a well-designed rooftop solar PV system can extend the lifetime of a commercial roof, by limiting sun damage. Solar panels may also lower a building’s energy costs by keeping it cooler. The solar panels absorb the harsh rays of the sun that would otherwise fall directly onto the roof.

Solar Landscape’s rooftop solar installations begin with a pre-inspection of the roofing system by both the manufacturer and the contractor that installs it. Solar Landscape works with roofing professionals to assess roof age, condition, drainage routes and existing rooftop equipment and obstructions. Any issues, concerns, or other problems are addressed prior to the start of a solar project. Titolo’s engineering teams design their PV systems to ensure drainage is not impacted, and access is provided to allow for proper system maintenance. Since all the PV systems the company has built have been integral to the building system, they design their systems to meet snow and/or wind loads and all other specifications of state and local building codes. Upon completion of the work, a post-solar installation inspection is scheduled to confirm that everything was completed as agreed upon, and the roof’s warranty remains unchanged.

In order to protect the rooftop during construction, Solar Landscape’s team will deploy temporary safeguards to avoid damaging the roof. Some of these protections are universal among roof types, while others are membrane specific. They include protecting areas that are frequently traveled with plywood and ensuring all pallet loads are placed on foam board sheets or other protective material. This helps “spread the load” without damaging the membrane or insulation below. Permanent protection may include walk pads and walkways, slip sheets, and separator sheets. These items stay on the roof for the life of the PV system. “An experienced solar construction team will have worked with all different types of rooftops; TPO, EPDM, PVC, metal and silicone, and know how to protect them during construction,” said Titolo. “Understanding different roofing systems and roof concerns is an integral part of being a quality commercial solar installer.”

Fortunately, most of Solar Landscape’s commercial/industrial solar PV installation are completed without roof penetrations. To protect the roof, Solar Landscape uses soft PV racking support pads compatible with the roof membrane which are laid on the rooftop. Metal ballast trays sit on the sacrificial slip sheets and are weighed down by block. The solar panels are attached to the frame of the ballast; not the roof itself.

Titolo believes that safety is where the most progress has been made with solar PV. “There has been so much improvement with the National Electrical Code, building code setbacks and parameters, OSHA requirements, and rapid shut down requirements that systems are much safer than ever before.” Solar Landscape designs their PV systems in accordance with recognized fire codes that identify best practices for rooftop PV systems. The company communicates with building departments and local fire departments to ensure they are aware of the PV systems designs and shutdowns.

Industrial property owners insist that the solar PV construction not interrupt the facility’s normal business operations. Titolo says that only happens through experience. “Communicating with the facility managers to ensure a seamless buildout and work around is where we shine”, said Titolo. “No construction team has been building commercial solar projects longer or more successfully in New Jersey than Solar Landscape.”

Solar Landscape will continue to pay lease payments to owners of large, flat commercial and industrial rooftops to host community solar projects. “There are millions of new square feet on industrial buildings going up every year in New Jersey. Using their rooftops for solar projects preserves local farmland and greenspace, while protecting ecosystems” said Keegan. “We know we are doing great things within these communities and that drives us every day”. 