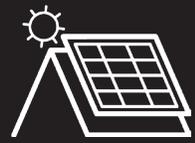




Case Study — White Rose Foods Carteret, New Jersey Facet™ Mount



At-A-Glance

Project Name:

White Rose Foods

Location:

Carteret, NJ

Industry:

Commercial

EPC:

Solar Power Inc.

Module Manufacturer:

LDK Solar

Roof Profile:

TPO

Project Size:

4.88 MW (~ 22,000 panels)

Project Partners:

- KDC Solar
- Borough of Carteret
- Firestone TPO Roofing
- White Rose Foods
- NuGen Capital Management



The Project

White Rose Foods launched what was promoted as the largest system on the East Coast: a 4.88 MW rooftop solar array installed on its grocery distribution warehouse in Carteret, New Jersey.

The behind-the-meter system was designed to supply a significant portion – potentially all – of the site’s electricity needs while lowering long-term energy costs and reducing the facility’s carbon footprint.

The project reached commercial operation in January 2012 and was the largest roof-mounted photovoltaic (PV) systems in New Jersey at the time. More than 22,000 panels were installed to generate roughly 6.2 million kWh annually, replacing about 6 million kWh of grid power each year with clean renewable energy and delivering significant carbon reductions.

Developed as part of KDC Solar’s broader initiative to scale behind-the-meter commercial PV across New Jersey, the project was executed through a joint venture between KDC Solar and NuGen Capital Management. Solar Power Inc., served as EPC and service technician.

The Challenge

A rooftop array of this scale introduced engineering hurdles well beyond typical commercial installs. At nearly 5 MW, the system eclipsed the previous largest local rooftop project by about 25%, intensifying concerns around structural loading, wind uplift and roof durability.

The warehouse roof was a non-ballasted, fully adhered TPO system with an 8-inch clearance requirement – eliminating ballast as an option and sharply limiting attachment choices – yet still needed to support a system large enough to offset more than 60% of building demand.

The design also had to handle Northeast extremes: freeze/thaw cycling, hurricane-level winds and heavy snow loads, all while keeping point loads as low as possible to protect the roof and maintain watertight integrity.

With numerous stakeholders – city officials, investors, the landlord, labor unions and White Rose operations – every technical decision also had to prove lasting reliability and serve as a repeatable model for future behind-the-meter projects statewide.

The Solution

Facet™ Mount made a non-ballasted 5 MW rooftop system feasible under these constraints. Crafted from high-pressure cast aluminum, Facet Mount delivers market-leading strength – shear values above 6,750 lbs. and uplift resistance above 12,750 lbs. – while maintaining low point loads critical for fully adhered TPO roofs. This combination let engineers secure a utility-scale array without compromising roof stability or clearance limits.

Its raised crown and diagonal mounting screws delivered robust holding power, while a waterproof washer and flashing cover – tested to rigorous industry standards for water infiltration, adhesion and wind resistance – ensured reliable watertight performance on a roof where membrane integrity was non-negotiable. The heat-welded flashing was fabricated from the same exact membrane material as the roofing itself, ensuring full material compatibility and a seamless weld at every penetration.

Installation speed further supported the project's scale: each mount could be installed in under six minutes, including membrane heat-welding or fluid-applied flashing. With compatibility across virtually all roof materials and racking systems, plus 16 attachment points – 12 vertical and four slanted – and a versatile mounting interface, Facet Mount allowed the racking layout to be completed before final roof attachment, simplifying engineering approval and field execution.

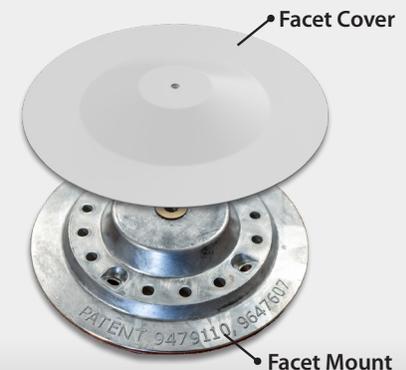
The result was a landmark East Coast installation that met structural and weather demands without ballast, displaced an estimated 4,716 metric tons of CO₂ annually, validated Facet Mount's durability and established a replicable behind-the-meter model for utility-scale solar on complex commercial rooftops.

How Did Facet Mount Help?

- **Simple, quick installation:** Installs in under six minutes per mount, including membrane heat-welding or fluid-applied flashing.
- **Flexible layout:** Lets crews complete racking layout before final roof attachment, speeding alignment and reducing rework.
- **Multiple connection options:** 16 mounting point options – 12 vertical and four slanted – to meet engineering specifications and complex layouts.
- **Guaranteed durability:** Tested and approved by the Los Angeles Department of Building and Safety with a 25-year warranty.
- **Verified watertightness:** Tested to ASTM E2140, the most demanding water penetration test in the industry.

Long-term Outlook

Long term, the White Rose Foods installation has proven to be a durable, low-risk model for utility-scale rooftop solar. Facet Mount's high-strength, low point-load design protects the fully adhered TPO roof while standing up to freeze/thaw cycles, hurricane winds and heavy snow without compromising watertightness. Now looking back after 15 years, there has not been one service-related issue or repair—clear evidence of enduring reliability.



“When it comes to solar energy systems, especially solar photovoltaic systems, bigger is better, and the biggest one to date is the 5-megawatt rooftop system proposed for the White Rose Building in Carteret, New Jersey. The building is both the corporate headquarters and a food distribution hub for White Rose Foods, the largest independent wholesale food distributor in the New York City metropolitan area.”

—PV Magazine



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