



THE STANDARD IN PV MOUNTING STRUCTURES™

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UniRac Components Right for ACUA Facility

Custom UniRac structures are among the components of the hybrid solar-wind power plant dedicated in New Jersey by the Atlantic County Utility Authority (ACUA).

"We did a unique design for the large carport array," said Timothy Hool, UniRac's Technical Support Manager. He visited the site twice prior to the dedication and worked with Alternity Power, a division of the Conti Group, which engineered and constructed the solar components of the power plant.



© 2005 courtesy Alternity Power, a division of the Conti Group

Fifty-two rows of PV, each consisting of 18 modules, form a canopy over the carport at the ACUA wastewater treatment plant.

Solar canopy the size of a football field

The carport canopy and two large ground mounts form the solar component of the power plant and will provide 164 and 305 kilowatts, respectively. Their 2,700 PV modules displace the need for 375 barrels of oil annually.

On the canopy, SolarMount heavy-duty rails allowed long spans that minimized steel supports to reduce cost. The system's bottom-mounting module clips sped prepanelization of long rows of PV modules, which were then lifted into place by Alternity Power crews using a crane. "By the end of the project, they were doing up to five rows a day," said Hool.

Custom standoffs with tilted flanges and double wide L-feet were designed especially for the carport.

Coastal exposure

The plant's location on one of New Jersey's barrier islands required rigorous planning for exposure to heavy weather. The installation must be able to withstand 115 mph winds in the event of a hurricane or major storm.

The ground mounts utilize 3-inch steel pipe, SolarMount HD (heavy duty) rail, and 3-inch square tubing, components of UniRac's U-LA Large Array System.



A ground array at the ACUA wastewater treatment plant catches full sun on December 21, the day when the noontime sun is lowest in the sky. Note that the sub arrays are spaced just far enough to avoid shading.

© 2005 courtesy Alternity Power, a division of the Conti Group

First of its kind

The plant powers Atlantic County's wastewater treatment plant, the first in the United States to combine solar energy arrays with a wind farm. The energy produced will equal the requirement of about 3,800 homes.

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