

Solar PV Case Study

Mannington Mills, Inc. 602.7 kW



LOCATION:	Salem, NJ
COMPLETED:	December 2008
NUMBER OF PANELS:	2,870
PANEL TYPE:	REC Solar SCM 210
OUTPUT:	700 MWh per year
INVERTER:	Satcon PowerGate 500 kW

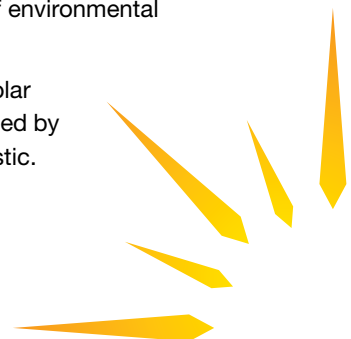
Project Overview

Mannington is an industry-leading manufacturer of hard and soft surface flooring products for commercial and residential markets. The company is family-owned and has been in business since 1915, spanning four generations.

Mannington's environmental position is clear and straightforward: actions speak. The company has chosen to focus on increasing the efficiency of its operations and the performance of its products while decreasing the company's impact on its surroundings and its use of resources.

The Mannington headquarters and manufacturing facility in Salem, NJ, is located in the middle of one of the region's most significant tidal wetlands. This location has prompted the company to undertake a number of environmental initiatives related to migrating birds and the planting of native shrubs and trees.

The Salem facility is also an excellent location for the installation of a solar photovoltaic system. Solar power is a natural fit with Mannington's environmental position, so when the company was approached by CarbonFree Technology about the possibility of installing a PV system, the response was enthusiastic.





Solution

Rather than funding the significant capital outlay required for the system, Mannington opted to enter into a 20-year power purchase agreement, or PPA, through which it does not pay any money upfront but commits to buy the electric output of the system at predetermined prices for 20 years. The company benefits from the use of a solar power system without any of the hassle or risks of direct ownership, or even any requirement to maintain the system. For this portion of Mannington's electricity needs, the company benefits from having locked-in, long-term electricity rates with no risk of unexpected increases.

CarbonFree made the PPA contract possible by arranging the financing, installation and maintenance of the system.

Environmental Benefits

The environmental attributes from the system are used to help New Jersey meet its ambitious Renewable Portfolio Standard, which includes a target for solar generation.

The 602.7 kW solar array will generate approximately 700 megawatt hours of clean electricity in its first year of operation, declining by approximately half a percent over each successive year. Compared to grid electricity, the effect of using this solar system is equal to eliminating more than 551 metric tons of carbon emissions per year, based on the average mix of fuels used to make electricity in New Jersey.

THE CARBON SAVINGS ARE EQUAL TO:

- » Powering 77 average NJ homes
- » Taking 101 cars off the road
- » 125 acres of mature pine/fir trees

Project Notes

Utilizing experienced New Jersey solar installers and reliable, quality equipment and materials, CarbonFree Technology delivered the project on time and with no disruption to Mannington Mills' operations.

In the first stage of the project, CarbonFree worked closely with Mannington to analyze the potential of several different rooftops, focusing eventually on a group of buildings used for distribution.

Although there was plenty of vacant space, the specified roofs had been constructed in stages since 1915, with a number of additions at different roof elevations. Determining which roofs were of suitable condition and structural capacity to support the photovoltaic system was a challenge that had to be overcome with detailed physical inspection and engineering analysis.

During the installation phase, the project proceeded smoothly. Despite the fact that it took 72 days to receive a permit from the state's Department of Consumer Affairs, the system was placed in service within the specified time frame. An observation platform was subsequently erected, and the system is now a standard feature on Mannington's company tours for suppliers and customers.

“CarbonFree Technology was an ideal partner for us. They were able to coordinate with multiple parties and put all the pieces together to make the project happen, so we could stay focused on what we do – making beautiful flooring.”

DAVE KITTS
VICE PRESIDENT - ENVIRONMENT
MANNINGTON MILLS, INC.

About Us

CarbonFree Technology is a leading North American solar project developer. We provide turnkey solutions to help clients benefit from solar energy without bearing the significant capital expense of purchasing systems. We offer the most up-to-date, reliable solar technologies available and make it easy for organizations to choose the systems best suited to their needs.

For more information, please contact us.

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