



GODDARD SCHOOL SOLAR PANELS AN EDUCATIONAL TOOL

By Jessica Masulli • June 7, 2011



(Photo by Sara Hudock-Cole/New Jersey Herald) Todd Oekson of East Coast Alternative Energy in Sparta stands on the roof of the Goddard School, where his company installed 195 solar collection panels last year.

SPARTA — When James Freda, owner and operator of Goddard School®, wanted to teach preschoolers about solar energy, he showed them the panels on their school's roof and allowed them to use magnifying glasses to understand the sun's power.

Greg Leo, owner of the Goddard School building, installed 195 solar panels on the roof of the childcare facility this past winter. Freda has been able to use the solar panels as an opportunity to teach the children about energy resources.

“We are trying to get the children to realize the necessity of solar power,” he said. “The panels are something we are using as an

education tool so the children will accept solar energy as an energy source.”

Freda hopes that the children at Goddard School will absorb this information and take it home to their parents so that in the future people will not be as dependent on oil for energy.

However, the panels also serve as a money saving option for Goddard School.

“In the summer, we have no electric bill, and in the winter, we get a quarter of the electricity for free,” Freda said. Freda used to pay \$2,000 a month for electricity in the summer.

Leo, who financed the panels on his building, is able to both reduce Freda's electricity bill, while still paying the 5-year loan for the solar panels and making extra money.

Each month, Leo can measure the solar energy production of the panels on a meter. He then receives Solar Renewable Energy Certificates (SRECs) for the production. For every 1,000 kilowatt hours of solar energy the school produces, one SREC credit is given.

These credits are sold to companies who must meet New Jersey state laws for using renewable sources, but cannot meet them on their own production. This is an incentive for people like Leo to invest in solar energy by receiving more income to pay for the panels.

Last month, Goddard School's panels produced about 4,000 kilowatt hours of solar power, which was translated into 4 electronic credits sold at \$653 a credit.

Leo said that this helps pay the five year loan for the panels. The panels initially cost \$225,000 and were installed by East Coast Alternative Energy in Sparta. Todd Okeson, owner of East Coast Alternative Energy in Sparta, said that Leo was also able to save on the initial cost through a \$50,000 in federal and state grants, as well as a 30 percent tax credit. "Initially, I thought, it takes so long for it to pay off, but with the credits and sales, it starts to make sense," Leo said.

Leo sees it now as a winning deal for both the tenants, who have lower electricity bills, and the owner who makes money through selling the credits. He now is investing in other similar projects, by putting solar panels on two apartment buildings across the street from Goddard School, a 27-unit apartment complex in Dover, and 180-unit apartment complex in Hackettstown.

The panels will have a pay back in only three years and can last 25 years with very little maintenance, especially since this area tends to have enough moisture in the air.

Okeson explained that solar energy requires a rooftop or land that is shade free for at least five hours a day. Even in winter when the roof is covered in snow, some sunlight is still able to reach the panels and generate power.

At Goddard School, some trees had to be removed to allow for that direct sunlight to the roof. On the playground, one child was concerned when he realized that the trees had been cut down.

"At 4-years-old, he realized we had to cut down the trees for the sun to reach the roof," Freda said. "But, we explained that we can regrow trees."

But, Leo said that the positive impact on the environment is far greater than trees being taken down.

Just the panels on Goddard School alone will reduce greenhouse gas emissions over 25 years by 854 tons of carbon dioxide. According to Leo, this is equivalent to planting 34,000 trees or eliminating 1.5 million miles driving in a car.