

Atria Is First Island Restaurant to Go Solar

4/4/06 By JULIA RAPPAPORT

Saturday evening marked another first for the Vineyard. At 6 p.m., about 25 people gathered outside Atria restaurant in Edgartown to watch a ribbon-cutting ceremony. When the deed was done, the crowd raised champagne glasses to the first Island restaurant — and first commercial building — that will rely on solar panels to generate hot water, all 700 gallons used there each day.

Atria's system was installed by Nelson Mechanical Design Inc, a mechanical contracting company on the Island that bills itself as a green company. The system features six four by ten-inch solar collectors, two drainback reservoir tanks, 400 gallons of hot water storage and a digital control system. The storage tanks receive and store water heated from the sun. As the water cools, it turns on pumps, which send the water between the collectors on the roof, a drainback reservoir tank and the storage tank. This hot water will be used in Atria's kitchen and bathrooms.

Brian Nelson, co-owner of Nelson Mechanical Design Inc. only recently became interested in installing solar systems. Last winter, he was working on a project at the Oak Bluffs School that would have redesigned the school's heating and control systems in a more ecologically friendly way. Kate Warner, director of the Vineyard Energy Project, heard about the project and invited Mr. Nelson and his partner, Dave Sprague to a solar hot water training held by her organization.

Currently, less than one-tenth of one per cent of the Vineyard's energy is produced on the Island. The rest arrives either by boat or by underwater cable from the mainland. Four years ago, Ms. Warner decided to try and change that. She received a grant from the Million Solar Roofs Program, a U.S. Department of Energy program that has since been eliminated. Thus began the Vineyard Energy Project, Ms. Warner's organization which promotes efforts to make the Island more energy independent. Since its founding, the project has received almost \$200,000 in funding for educational and planning efforts. The project won the U.S. Department of Energy's Million Solar Roofs Initiative National Best Progress award last year.

Since taking the workshop, Nelson Mechanical Design has participated in Ms. Warner's Island initiative. The company has installed solar hot water systems in four homes on the Vineyard, including Mr. Nelson's. Ms. Warner explains that solar energy systems are expensive — installation ranges from \$10,000 to \$30,000 — but that a hot water system can pay for itself in five to ten years. Mr. Nelson says that the Atria project cost about \$21,000 but that, at today's prices, Christian Thornton, Atria's owner and executive chef, will see a payback in seven years. In addition, the state will issue him a 30 per cent tax credit. On top of that, the

solar system is designed to last 30 years, as opposed to the fuel oil system's ten. "As fuel prices rise," Mr. Nelson says, "these choices will become obvious."

Mr. Nelson's company had been doing work at Atria for years before their interest in solar began. The company and Mr. Thornton began talking about the option of going solar last spring, a few months after Ms. Warner's workshop. "We knew how to do it, but Christian was the guy who put his money where his mouth is," Mr. Nelson says. "He had to take the first step."

"I've always been interested in solar," Mr. Thornton says, explaining that he has a mentality that one must tread lightly on the earth. "I'm making a conscious effort not to consume, consume, consume." As a part of his effort, Mr. Thornton makes sure to look closely at his raw materials, the produce and fish that he buys for Atria. His menu features Island-grown organic greens. He knows his fishermen and the producer of his olive oil personally. "We design our menu around what the farmers and fishermen can do," he says. "I like to promote sustainable agriculture and solar energy is a natural next step."

In the workshop, Mr. Nelson and Mr. Sprague had learned that restaurants are one type of location that can greatly benefit from solar hot water systems. "Solar hot water is important because it decreases your fuel bill," Ms. Warner says. In addition to restaurants, she recommends that the systems be installed in camps, hotels and laundromats — all places that use a lot of hot water.

Mr. Thornton confirmed that restaurants use a tremendous amount of energy and hot water in particular. "At a restaurant, people expect a comfortable environment and fine dining," he says. That means air conditioning. It means a 12-range burner top stove that burns propane for 16 hours a day. And it means a dishwasher that runs continually from 3 to 8 p.m. even though the restaurant is only open for dinner.

Mr. Sprague explains that the company based its solar system plans on the dishwasher. The team calculated that it would have to meet Atria's daily load of 700 gallons of water. They wanted to design the system that would keep the restaurant's fuel oil tank, which they kept as a backup because a restaurant cannot operate without hot water due to sanitation laws, from ever having to fire. Because Atria is not open in the winter, when a system runs the risk of freezing because of the Vineyard's severe climate, and because the system can still work on cloudy days, the pair expects this will be possible.

After making the decision to go solar, the company put Atria's details and structure into Retscreen, a renewable energy technology software developed by NASA and the Canadian Office of Energy. The program, which they use on every solar project, then recommends the number of panels, storage



SOLAR PANELS WILL PROVIDE HOT WATER FOR RESTAURANT.

and other details.

They started the installation on July 21 and finished a week later. "We wanted to do the project fast," Mr. Sprague says. "We wanted to make it work so we could see it in August — peak season." So on Saturday, they, along with homeowners, architects and potential clients, cut the ribbon to celebrate.

"We want everyone to witness the new mark that's been set by Christian as a restaurant owner," Mr. Sprague says. "We hope this sets a bar. That it shows people that restaurants aren't going to stop being restaurants, we're not gonna stop being mechanics, but there's a way to work together and compromise." People will be able to see the results of the company's hard work. Soon, a web-based digital control on their Web site will allow viewers to see the actual amount that Atria is saving with the solar system.

The Atria project marks the Island's 155th solar roof, most of which were installed under Ms. Warner's leadership. Ms. Warner has a goal of reaching 500 solar roofs by 2010 and is not deterred by the elimination of some of her fund-

ing. The funding that was eliminated went towards education and outreach so that workshops like the one attended by Mr. Nelson and Mr. Sprague could be held. Ms. Warner says the subsidy money that goes towards putting in systems is not going anywhere. She still plans to hold workshops, with one coming up for plumbers in September, but will not be operating on a full year's funding this year.

Although the funding may not be there, all involved are excited about the Atria project and the direction that it signals for the Island. "It will prevent four tons of carbon dioxide from going into the atmosphere," Mr. Nelson says. "Imagine if every restaurant did this. What's exciting is that it is doable. It's not rocket science, it's not even cutting edge," he says.

For more information, visit the Web sites: atriamv.com, nmdinc.com, and vineyardenergyproject.org. Tax-deductible donations for the Vineyard Energy Project can be made either on their Web site listed above or checks can be mailed directly to the Vineyard Energy Project, PO Box 172, West Tisbury, MA, 02575.