



NORTHERN Currents

THE LEADER'S COMMUNITY NEWS

Sun day all week at Café Wren

by David Wisted

LUCK - After improving their café's energy efficiency by upgrading appliances and switching to more efficient compact fluorescent lighting, Café Wren owners Stephanie Lundeen and Brook Waalen recently took the next step toward making their business environmentally friendly by installing solar panels.

The café's solar water heating system was installed by Legacy Solar of Frederic and started producing hot water this winter.

The solar panels on the south side of Café Wren, which are visible from Hwy. 35, will provide at least 65 percent of the café's hot water needs. According to Lundeen, "A restaurant goes through a lot of hot water and getting our cold well water up to temp. is expensive. Now the sun does most of it for us."

System costs

The total installed cost of the Café Wren system was \$6,645. After taking advantage of the state Cash Back Reward program from Focus on Energy, a 30-percent federal tax credit, and an advertising barter with Legacy Solar, the final out-of-pocket cost to the owners was \$2,485.

To keep costs down, Lundeen and Waalen purchased used solar panels since the panels are quite long-lived. Before being installed at the café, the panels were in operation at another location since the early 1970s and they have plenty of life left.

Big savings

A conservative analysis indicated that the financial payback time of the solar energy system is four years, which means after four years the system will have paid for itself in energy savings and after that time it will produce hot water basically for free. The typical financial payback time for a solar domestic water heating system with all new components is eight to 12 years.

According to Kris Schmid, owner of Legacy Solar, "Solar water heating systems are often the first choice of people interested in solar energy due to lower up-front costs and a relatively short financial payback time." Schmid also



Brook Waalen, Stephanie Lundeen and Kris Schmid in front of the solar panels at Café Wren at Luck. - Photo submitted

noted that interest in solar energy has increased recently due to the 30-percent federal tax credit now available to people who install solar systems by Dec. 31, 2008.

Environmental considerations

For Lundeen and Waalen, the environmental payback was just as important as the financial payback. "No one knows what tomorrow will bring, but future generations won't want to inherit any more environmental disasters than they have to. We all need to consider the impact our lifestyles are having on people as well as the planet as a whole."

Each year the relatively small Café Wren solar energy system will produce 24 million BTUs (British thermal units) of energy. This energy will save 7,000

kwh (kilowatts) of electricity that would normally have been used by their electric water heater thereby preventing over 12,000 pounds of pollutants from entering the atmosphere every year.

How it works

The heat absorbed by the panels is transferred to the potable (drinkable) water in a storage tank by way of a heat exchanger. The solar-heated water in the storage tank is then fed directly to the conventional water heater where additional heat is added if needed on cloudy days or at night.

Since the solar storage tank can easily reach temperatures above the desired hot water tap temperature of 120 degrees, a temperature safety (mixing) valve was installed at the output of the

backup water heater to control the maximum water temperature that is provided to the taps.

Think globally, act locally

"Environmental issues and economic issues are one in the same," according to Waalen, "Saving energy means saving money, which is just one component of a successful business strategy."

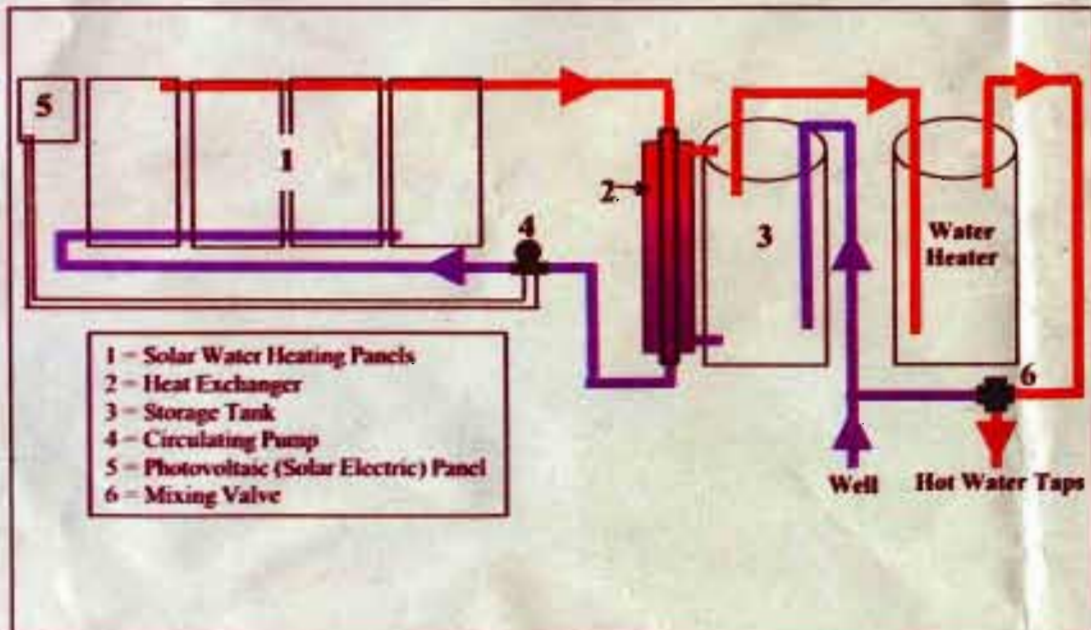
Lundeen added, "Another one of our business strategies is to support other local businesses. This strengthens the local economy while limiting the amount of fossil fuels burned to bring goods here from the other side of the country. At Café Wren we use food from local farmers, sell gifts from local artists, and we serve Fair Trade organic coffee. This summer we will begin composting our kitchen scraps which will keep them out of the landfill. Every little thing matters."

Solar energy system tours

Schmid will give periodic tours of Café Wren's solar energy system in honor of Earth Day on Saturday, April 21 between 1 and 4 p.m. For solar design and installation inquiries, contact Schmid at 715-653-4295 or at solman@legacysolar.com. Solar information is also available at www.cafewren.com in addition to the Café's menu and event information. Café Wren is located one-half mile north of Luck on Hwy. 35.



A gauge showing the water pressure and water temperature.



A diagram showing the solar water heating system. At right, Kris Schmid installs the system at Café Wren.

