Solar Subcommittee Report

The committee met on Friday, August 8th, to discuss the feasibility of acquiring solar panels for the production of hot water for all three of our condo buildings. Three representatives of solar companies were present, and were able to answer questions from the committee members.

They presented three alternatives for a solar system in our complex:

1. **Purchased, occupies roof of one building**, supplies all electricity for our needs, and no extra.
2. **Purchased, occupies roofs of all three buildings**, supplies our electrical needs and supplies extra that we can sell back to the power company.
3. **Leased**, occupies one roof, and supplies our needs, with none going back to the power company.

Discussion

Members asked questions about:

- **Roof:** The effect of solar panels on the roof. Would our roof warranty be valid?
- **Insurance:** Who would cover liability for installers?
- **Financing:** At what rate could such a system be financed? Over what period of time?

The company representatives will each supply us with a detailed proposal, after meeting with the building manager to take measurements and evaluate the installation.

The committee would also like to report on some general facts about solar hot water that we learned during the fact-finding stage of our research, for the benefit of new owners who were not present in the early part of the project.

What are the advantages of a solar hot water system?

There are several advantages of solar hot water heating that apply to our condo situation:

1. **Simplicity**: A solar hot water heater is simple and has no moving parts. It requires no electricity for operation, so we would have hot water even during a power failure.
2. **Freeze protection**: Can be used with antifreeze to protect against water freezing in the few occasions when the temperature drops below freezing.
3. **Cost**: Once the system is paid off, the solar hot water system would save us over $1,000 per month in electric costs.
4. **Flexibility**: Once the panels are in place, electricity will be produced that can be used for other purposes, depending on the number of panels.

5. **Sell-back**: The association makes money if it creates excess electricity that it can sell back into the electrical grid.

What are the disadvantages of a solar hot water system?

As with any large system, there are some risks:

1. **Extreme freeze**: If the temperature should drop below 20 degrees Fahrenheit, maintenance would be required to make sure the water continues to move through the system. Insulation layers would have to be checked.
2. **Installation**: Having the correct installation is critical. If the slope of the pipes is incorrect, this could compromise the efficiency of the system. If the roof mounts are not properly installed, this could lead to voiding of our roof warranty.
3. **Hard water**: In hard water areas, minerals can affect system efficiency.

There are several types of solar hot water systems, including:

- Direct Pump
- Draindown
- Closed Loop

Once we decide to move to the next phase, the potential suppliers will submit a proposal, outlining which type of system would be most appropriate for our association.

Owner Interest

We undertook this project after inquiries from condo owners. Many are interested in reducing the monthly maintenance fee that all owners are charged, and felt that a solar system would be one way of accomplishing this by reducing our monthly expenses.

The committee feels that this would be a viable method for reducing our expenses. However, owners need to understand that the payback period for a loan on such a system could be 10 to 15 years. The useful life of a solar system would be 25 years, given proper maintenance, so the committee feels it would be worth the expenditure.

Other owners expressed interest in this and other "green" initiatives that would make our association a leader in this arena. Many want to be responsible custodians of the environment, and feel that a solar hot water system would be an excellent start in accomplishing this.

A few owners have purchase electric cars, and would like to see our car charging stations powered by solar energy. The solar company representatives said that this could be accomplished, assuming we select a system with sufficient capacity.

The next committee meeting will be held on September 26th, at the Pender House, at 8:00 pm. All owners are encouraged to attend.