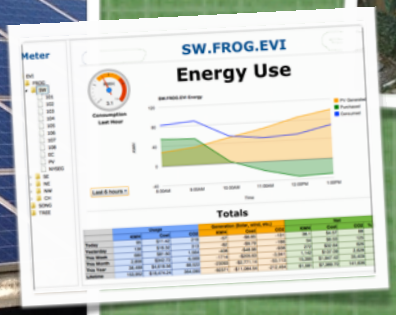
Community Solar Electric System

A PROJECT OF THE FROG NEIGHBORHOOD AT ECOVILLAGE AT ITHACA



50KW of clean solar power offsets about 60% of home usage and avoids over 250 tons of CO2 per year

A Model for Coops & Condos

Community scale solar electric with self-financing can be an option for thousands of co-op & condo associations around the country

The FROG (First Residents Group) neighborhood at Ecovillage at Ithaca has taken a big step toward lowering its ecological footprint and improving its economic independence.

Taking Control

Rather than letting rising prices and dirty energy markets dictate how resident energy dollars will be spent, the community decided instead to self-finance a new energy system. The co-op itself has become the power provider to the residents, selling local solar power and purchased utility power from clean suppliers. The PV installation and smart metering system was financed by interest-bearing loans from a subset of residents, which are paid off over time through the regular monthly charges for electricity. Residents pay the same or less than they would have paid the utility directly, but much of that money now stays within the community and pays off the system, with a full loan payoff estimated between 11 and 15 years, and economic break even almost immediately. Solar also helps insulate residents from the impacts of rising energy costs, since the price (free) never goes up!

Smart Metering

In addition to the clean PV power, the neighborhood upgraded its metering system. Previously, each house had a private account with the utility and a typical "dumb" meter, so residents had no way to monitor their daily energy use, nor was community-level info available. The new system will provide easy web based tools to monitor both short and long term patterns, allowing for better everyday decisions about usage.

> The system provides clean, local power to 30 homes, with no upfront costs, and saves real money over time.

Building Community Projects like this can help communities bind together. Working with neighbors on planning and operating these kinds of shared systems can bring real satisfaction and mutual benefits.

ECOVILLAGE at Ithaca

EcoVillage at Ithaca
located in the beautiful Finger Lakes region of upstate New York, is part of a growing global movement for a saner, more sustainable human culture. Visit http://ecovillageithaca.org.

System Information

- **50 KILOWATTS OF SOLAR GENERATION CAPABILITY**
- **224 TRINA SOLAR PANELS @ 230 WATTS EACH**
- **CONNECTED TO THE GRID AT 4 LOCATIONS WITHIN THE NEIGHBORHOOD WITH 8 SUNNY BOY 6000U INVERTERS**
- **INCLUDES FULL WEB-BASED MONITORING OF INVERTERS, AND TRACKS SUNLIGHT (INSOLATION) AND TEMPERATURE AT THE ARRAY SITE**
- **ANNUAL PRODUCTION ESTIMATE - 60,000 KILOWATT HOURS**
- **AT CURRENT RETAIL PRICES, POWER IS WORTH AROUND $7000**
- **ANNUAL REDUCTION OF CARBON DIOXIDE - 250 TONS**
- **OFFSETS 50%-60% OF RESIDENT USAGE**
- **SMART METERING SYSTEM INCLUDED, USING HARDWARE FROM EKM METERING WITH WEB BASED DISPLAY SOFTWARE CUSTOM DEVELOPED AT ECOVILLAGE**

Ecovillage at Ithaca Mission Statement

To promote experiential learning about ways of meeting human needs for shelter, food, energy, livelihood and social connectedness that are aligned with the long term health and viability of Earth and all its inhabitants.

Setting an example is not the main means of influencing others; it is the only means.

Albert Einstein

Resources

If you have more questions about the project, particularly if you are interested in doing a similar project yourself, feel free to contact us.

Contact Jeff Gilmore (jeff@thegilmores.net) for information about general project organization, metering or financing.

Contact Tony Henderson (tony@ecovillage.ithaca.ny.us) of Hayes Electric for PV system design, implementation, or pricing information.

Go to http://goo.gl/t7O8r for more project info.