

INTRODUCTION TO SOLAR POWER AND SOLAR APPLIANCES

Back-up Power

Is back-up power actually needed?

Home back-up power is now becoming a necessity in many homes due to heavy reliance on electricity for everyday life necessities and the proliferation of home offices. During an emergency, a home with out power is no longer a comforting shelter from the storm and an office is out of business.

An article on MSNBC's web site, (<http://www.msnbc.msn.com/id/15292581/from/ET/>) discusses a report by the North American Electric Reliability Council, which oversees North America's power grid, that says the nation faces more frequent power outages as power demand outstrips new generating capacity. And locally, Dominion Electric wants to build a 40-mile transmission line with 15 story high towers through Northern Virginia countryside. Dominion claims that without the transmission line to serve growing demand, Northern Virginia will see rolling blackouts by 2011. Read the report and watch it played out in our back yard.

TYPES OF BACK-UP SYSTEMS

1. **Portable** automatic home back-up systems with solar, similar to using a conventional portable generator but without the noise or fumes, works well as an uninterruptible power supply for a home office.
2. **Permanently installed** automatic back-up systems with solar are capable of running the electric meter backwards, \$21,000 and up.

A Solar Powered Back-Up System goes a long way toward addressing growing electricity demand and dealing with power reliability and it qualifies for a 30% federal tax credit.

Battery based back-up power is maintenance-free and offers automatic and silent operation 24/7 while delivering the steady power demanded by modern home electronics and entertainment systems. The solar component of the system provides the battery charging needed for prolonged power outages. When utility power returns, the solar generated electricity is fed into the home, helping to reduce utility bills; (the home owner can see the electric meter run backwards) this back-up system pays for itself, unlike conventional back-up generators. Think of this as an appliance that is designed reduce the electric bill and keep the lights on, much like a heating system is designed to keep the cold out.

Conventional generators cannot offer that level of performance.

On the bright side...

According to a Roper Public Affairs survey that was conducted in May 2006, **8 out of 10 Americans believe that homebuilders should offer solar power as an option for all new home construction.** The survey also showed that two-thirds of Americans are **willing to pay a premium** for homes that have solar systems installed, when told that solar homes have a proven higher resale value. Solar has been popular for a long time in areas like California, Florida and Arizona. This survey shows that the rest of the country is ready for the solar revolution. **Consumers want the option** of having their new homes powered by solar energy.

Solar Powered Refrigerator

A Solar Powered Refrigerator (intended as a second refrigerator or freezer) embodies Green technology (solar), energy savings as well as security in the form of uninterrupted power to the refrigerator, all at an affordable price. As an added bonus, an available option provides 120 volt AC power for lights and entertainment (radio, TV, internet, cordless phone) for the latest news during a utility power outage.

And then there is the "cool" factor, on a hot summer afternoon; family, friends and guests are served **solar chilled** drinks.

A Solar powered refrigerator with a 2' x 4' solar panel is an excellent low cost and environmentally friendly incentive to new home buyers, it saves \$ on electric bills and is the "coolest" technology around, while providing real benefits to the home buyer for many years to come.

Solar Lighting

Solar Electrics designs each Outdoor Solar Lighting System to meet each project's specific requirements for the number of lights, their intensity and architectural considerations. Since each project is unique, the design will vary accordingly. Solar lighting offers builders, developers, home owner associations and home owners the convenience and competitive pricing of a one-stop shop. Communities gain freedom from utility bills, reduced air pollution and the security of uninterrupted operation during a power outage while keeping the bean counters happy.

Solar Heating

In addition to solar electric systems and appliances we offer low cost (about \$1-2 per SqFt of heated floor space) solar heating systems that can reduce heating bills 20%+.

Solar water heating systems are the most cost effective way to heat water and can **pay for themselves in one day.**

On average, 20-30% of household energy consumption is for hot water, (showers, washing dishes, washing clothes etc.) which is the second largest single residential energy user after heating and air conditioning.

Solar Air Conditioning

Solar powered AC is available as a whole house system or as a split system with individual cooling for each 500SqFt zone, no ductwork needed to distribute the conditioned air.

Hybrid Solar Generator

The Hybrid Solar Generator is designed to power Sales/construction trailers at a fraction of the cost of traditional diesel generators. Other applications include:

- *Construction site power, these systems recoup their cost in one year*
- *Power for mobile office space (sales and construction trailers)*
- *Disaster relief*
- *Remote resorts, homes and farms*
- *Temporary power for fairs and special promotional events*
- *Remote research stations*
- *Uninterruptible Power Systems*

Pricing

With home prices in some areas starting at \$500K and up, solar heating systems are about ½%-3% of the home's price and solar electric systems are in the 3%-10% range, energy efficiency packages are in the ¼%-3% range. The above price ranges reflect the many available choices and options.

Let Solar Electrics guide you toward the best value for you and your customers.

Marketing

As public concern about energy, the environment and global warming grows, there is an opportunity to tap into this sentiment. As mentioned earlier, **80%** of survey respondents believe that **homebuilders should offer** solar power as an option for all new home construction and one half of those surveyed would spend up to 10% more for a solar-equipped house, indicating that the cost of a solar system is not a major concern.

Green is in, and builders who offer Green to their customers will see more green where it counts: THE BOTTOM LINE

Need help going Green?

Solar Electrics will help you transition into building or remodeling Green, from material selection to site power (to construct the homes) to appliances, lighting and HVAC systems.

GET STARTED TODAY, CALL JODY SOLELL OR CARMELA KNEPLER

Office: 703-425-9712

E-Mail: SolarElectrics@msn.com

Web: www.SolarElectricsVA.com