The Challenges in Getting Solar Started in Your Community

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The changing public perceptions of solar

Most public option polls have found that Americans strongly support solar energy (Roper 1979 & 1989). In the latest poll conducted by the Gallup Organization (2001) found that 91% of survey respondents indicated that they looked favorably on energy from the sun.

However, when it comes to actually making an investment in their own system, Americans are not yet buying in numbers.

The question we must ask is why?
The changing public perceptions of solar

Detailed surveys have identified specific reasons for consumers' hesitance to invest in solar energy.

Sozer, H; Elnimeiri, M. (2003) and Faiers, A; Neame, C. (2005) found that cost, system reliability, appearance (aesthetics) and constructability to be the major concerns voiced by consumers for not choosing solar for their homes.

We now need to ask are these concerns justifiable?
Were these concerns justifiable?

These concerns were justified and has caused significant marketing problems for solar energy, primarily because early adopters are not driven by the same motives as the general public.

Characteristics of early adopters:
• More years of education
• Have a greater interest in technology
• Cost is not important, what matters is what it is worth to them as individuals
• Will put up with inconvenience or reliability problems because they are focused on the long-term benefits
• Not concerned with appearance

However, this phase is a necessary prerequisite for successful technology diffusion.
The changing public perceptions of solar

Fast forward 20 years: Two recent studies of solar homes
Rave reviews from solar homeowners

Top motivations for buying a solar home

- Saving money: 53%
- Environment: 15%
- New Technologies: 11%
- None/Didn't matter: 16%
- Other: 5%

Do the panels affect your home’s appearance?

- No: 82%
- Positive: 8%
- Negative: 6%
- No Answer: 4%
Rave reviews from solar homeowners

Difference between electric bills in solar home vs. previous non-solar home

- Don't know: 17%
- No difference: 6%
- Significantly more: 3%
- Significantly less: 70%
- No Answer: 4%

Have you had any problems with your solar power system?

- Yes: 8%
- Not Sure: 6%
- No: 86%
Rave reviews from solar homeowners

What is your overall impression of solar power?
- Positive: 96%
- No Opinion: 3%
- Negative: 1%

Would you recommend a solar home to a friend?
- Yes: 92%
- Not Sure: 7%
- No: 1%
Premier Gardens, Rancho Cordova, CA.
Premier Garden’s included a highly integrated 2kW PV system on each house
Premier vs. Cresleigh electric bills for July 2006

Premier bill is 46% lower than the typical SMUD bill and 50% lower than the Neighboring homes right across the street.

Cresleigh Avg July Bill $133.62

SMUD Avg Res. Bill $123.67

Solar Avg July Bill $67.05
Occupied home evaluation report

- Premier homes had a 44% in annual energy savings over Cresleigh homes
- Premier subdivision sold faster than the Cresleigh subdivision
- Premier buyers were younger than Cresleigh buyers
- Premier buyers were more environmental conscious than Cresleigh buyers
- Premier buyers had a lower household income than Cresleigh buyers
- Premier buyers had a higher education than Cresleigh buyers (2:1 diploma:degrees)
- Premier buyers visited twice as many homes as Cresleigh buyers
- Premier buyers did more research than did Cresleigh buyers

Premier Homes have found:
- The key to selling a solar home is educating the buyer
- The buyer must understand how a solar home works and the benefits it offers
- A two-pronged approach is most effective (good for the environment + energy efficient, which saves money)
Need to undertake a solar homes survey for Arizona

Number of residential PV in Arizona by year (581 to May 2008)

Source: R.W. Beck
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Now when you buy at Trilogy we'll top off your Shea Green Certified™ home with an attractive, leading-edge BP® Solar roof tile system as a standard feature that is absolutely free!* Only Trilogy can bring you this close to energy independence—you'll save up to 60% on electric bills and reduce your home's carbon footprint by 48%.

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Read the press release.
Green and growing greener. Wood certified from sustainable forests, energy Star appliances included in every home and airtight construction are just the beginning of the Shea Green Certified effort.

We’re singularly focused on superior living. In the short run, that translates to a lower energy bill each month. In the long run, it means a home that costs less to own. And for the foreseeable future, it means a healthier planet as well as a healthier you.

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- Superior Energy Efficiency
- Eco-Friendly Ventilation
- Green Construction

Each new Shea Green Certified™ home at Trilogy includes a 3kW BP Solar Home Solutions® solar electric system. Engineered for lasting quality and an aesthetically pleasing, sleek design by the world’s leading solar manufacturer since 1972, each solar system comes with a 25 year warranty and is installed by a BP Solar trained and approved expert roofing contractor.

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- Produce your own clean, renewable energy.
Solar Power System Installation

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Characteristics of this most recent phase

- Provide a balance between concerns and the ability to execute multiple concerns simultaneously, such as cost, system reliability, appearance (aesthetics), constructability, etc.
- Provide a seamless and one stop delivery process
- Educate the buyer as to how a solar home works and to the benefits it offers
- Provide continuous consumer feedback to the process
- Provide a high level of consumer comfort – make it like buying a refrigerator
However, there are still some problems

HOA’s are reluctant to accept solar (even given AZ law).

Building inspectors don’t understand solar well and often give incorrect interpretations on the code.

Utilities need to standardize their interconnection rules and their field inspection processes.

Lack of trained solar installers is becoming critical in some areas.
Conclusion

The solar industry has come along way in 25+ years.

Educating the consumer is key to the success of solar.

Educating building professionals to solar.

The architectural challenges, especially the aesthetics for residential systems are being aggressively addressed by the solar industry.

To maintain the high level of public support it has historically received the solar industry must be continuously diligent concerning the products and services it provides.
Thank You

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