Top 10 Home Energy Trends in 2011

Across the United States, Energy Management continues to be an evolving landscape, especially in the residential space. New products and solutions for consumers, home builders and contractors are announced virtually every day. With so much noise it’s especially hard for consumers to decipher what the major innovative breakthroughs in home energy management will be in 2011 and beyond. One thing is for sure, the residential market will continue to raise awareness of consumer energy consumption and how consumers can improve their overall energy efficiency. For some, drivers for increasing energy efficiency are motivated by cost, and for others it’s reducing an individual’s carbon footprint for a healthier, greener planet. Whatever the reason, consumers are starting to keep a closer watch on their energy consumption starting in their home, where they feel most empowered to make a significant impact.

Millions of homeowners look to Schneider Electric for the latest innovations in the residential market for lighting and lighting control, structured wiring systems, solar power, and surge protection provided by the Square D by Schneider Electric, Juno Lighting Group by Schneider Electric and APC by Schneider Electric brands. The following pages list a few of the pervasive trends that Schneider Electric experts see evolving in the coming year.

Make the most of your energy®
Rising Energy Costs

Despite the recession, the retail price of electricity has been on the rise an average of three percent over the past three years. Forecasts from the Department of Energy call for similar increases in the price of electricity, something which customers are likely to be conscious of. Because of this, homeowners will look for any way to cut costs and manage their consumption more efficiently. Source: U.S. Department of Energy.

Demand Management Solutions

Look for even more solutions with time-of-use or critical peak pricing. Demand management implies a flexible, integrated and optimized end-user environment and management system that can turn down power to minimize grid demand during peak hours. As utilities across the country install Advanced Metering Infrastructure (AMI) and other smart grid technologies, many are implementing dynamic pricing to help consumers be conscious of cost and adjust energy use accordingly. Programs are currently being tested in communities all over the country and each day we move closer to a tangible smart grid. Source: DC Dynamic Pricing Program.

Smaller Homes

Within the last few years people purchasing homes have been mostly first-time buyers, causing the size of new homes built to shrink considerably since the real estate peak in 2006. In 2009 the average single family home was 2480 square feet, down from 2520 square feet in 2008. First-time buyers, plus strict requirements from banks for loans, and the rising interest in energy efficiency means the trend of smaller accommodations is likely to continue, even if the economy does significantly recover in the next year. Source: Builder Online.

Phantom Load Awareness

As technology has become more accessible, homeowners have increased the energy used in their homes to power electronics, many of which carry phantom loads when in stand-by mode. The Department of Energy’s Lawrence Berkeley National Lab estimates that 5–10 percent of the energy consumed in homes across the United States is used for electronics in stand-by mode. In the coming year, consumers will continue to look for technologies that cut phantom loads where possible. Source: U.S. Department of Energy.

Government Funds for Smart Grid Projects

Since 2009, the Federal government has awarded $4.5 billion in stimulus funds to spur smart grid investment and innovation. With this injection of funds and the near-term potential of a scaling smart grid, state legislators, regulators, utilities and grid operators are surveying the stakes of commercial integration and laying boundaries for the sector via policy and pilot initiatives. These developments in turn will translate to products and solutions in the residential market. Source: GreenTech Media Research.

Solar Panel Accessibility

Over the past couple of years solar panels have become more accessible and affordable to homeowners. The Solar Energy Industry Association estimates that installed costs dropped 10 percent in 2009 and today solar energy systems are in higher demand thanks to tax subsidies and utility buy-back programs. As more homeowners get involved, some builders are even offering equipment leasing programs. These initiatives offer homeowners a way to get solar energy systems installed on their roofs with little or no down payment while contributing to significant reductions in their monthly electricity bills. Source: Solar Accessibility.

Energy Efficient Appliance Purchases

Another important factor in shopping for energy efficiency is consumer appliances. A 2009 Whirlpool Corporation study confirms that most consumer respondents, 84 percent, consider energy efficiency to be the most important factor in their appliance purchases, beating out water and time savings. Source: WhirlPool Study.
8 **Shopping for Energy Efficiency**

According to a 2009 study conducted by American Lives, consumers say they are willing to spend more for energy upgrades to their home, ranging from $1,000–$10,000. This includes upgrades such as more efficient windows, high-performance HVAC systems and extra insulation. This is significant as the same group of consumers said they would rather spend their money on energy efficient solutions than other “green upgrades” such as recycled content or sustainably produced materials. Source: Consumer Study.

9 **Electric Vehicle (EV) Products and Solutions**

The automotive industry has seen a flurry of announcements this year ranging from actual EVs to their charging solutions. The Department of Energy has given loans to several car manufacturers to build these vehicles and create new American jobs. Through the Recovery Act, the Vehicle Technologies Program funded $2.4 billion in transportation electrification and battery development projects across the country. These projects included creating Nissan Leaf electric vehicle, developing plug-in hybrid electric vehicle (PHEV) minivans with Chrysler and Ford, as well as training automotive technicians. Momentum will continue as cars begin to hit the streets and get plugged-in. A coordinated rollout of new infrastructure for charging access at home, at work and around town will be needed. It is expected that by 2015, access to vehicle charging will be available at nearly one million charge points in the United States. Source: AutoBlogGreen.

10 **Consumer Education**

Although more information about energy efficient products and solutions is available everyday, it’s often tech-savvy individuals and early adopters who are most educated and seek information. In order to educate the masses on the benefits and importance of energy efficiency, the messages need to be communicated in terms that people know and understand. Lawrence Berkeley National Laboratory found that comfort, health benefits, appealing to social norms, or even becoming a self-reliant American were all preferable to just talking about energy savings, or even bill savings. The public needs hard examples in order to listen. Instead of telling people their house is leaking energy, they need to hear that their hard-earned money is being wasted. Once the average consumer truly understands the benefits of energy efficiency in their own home, adoption will be one step closer.

**Energy Efficiency Outlook**

Innovations in the residential energy efficiency market will continue to thrive as consumers seek ways to cut back on energy consumption and get smarter with their energy use. The most successful technologies will be those that help the consumers distinguish ways to monitor and reduce energy consumption with the least impact on their day-to-day lives. It will be interesting to see in the coming year the evolution of current technologies in the market, the new ideas that will appear in 2011, and how both will impact consumers.

To learn how Schneider Electric works with builders, contractors and homeowners to save energy, click here.