



## Getting Smart About the Smart Grid: A Primer

In a recent post, we discussed our latest round of funding, which will fuel development of our energy management solutions and Advanced Metering Infrastructure (AMI) product initiatives. That got us to thinking: With the increasing media coverage out there about AMI, energy management, utilities and smart grids, are consumers feeling confused or overwhelmed? What exactly is the smart grid, and what does energy management mean for consumers and their bottom-line budgets? Read on as we discuss all-things-energy to establish a clearer understanding.

We begin with a few definitions. A smart grid delivers electricity from suppliers to consumers via digital technology. Think of it as the application of computer intelligence, networking and two-way communication abilities to an electricity distribution system. Advanced Metering Infrastructure (AMI) is the architecture for automated communication between a smart utility meter and a utility company. An AMI provides utilities with real-time information about power consumption. Also, with AMI technology, customers can evaluate their energy usage based on the price at time-of-use. AMI is an integral part of any smart grid initiative.

Much has been written about Google's PowerMeter, which reads household energy usage information from smart meters at homes and presents data in Web format, and Microsoft's Home Energy Site. Clearly, giving homeowners a view of their energy is a good thing. But, it raises several questions. Will in-home energy management systems be deployed in conjunction with utilities rolling out smart meters to customers? Are customers willing to pay to view and control their energy use? While customers' willingness to pay for this technology may depend on price, it's certain that if utilities monitor consumer energy use, it will create a new method of pricing that rewards lower energy consumption. This is achieved by each individual first taking control of their energy usage.

The ultimate goal is for utilities and consumers to work together to reduce energy consumption. Imagine smart meters 'talking' wirelessly with a smart thermostat, and appliances, showing customers their real-time energy use patterns. Control4 is looking at possible partnerships with utilities, as well as selling directly to consumers, new energy management solutions that will provide real-time data on energy consumption. Both utilities and regulators want to dial down energy use during their peak usage times, typically the morning hours and the late afternoon to early evening.

Control4's Energy Controller, a wirelessly controllable thermostat able to communicate with smart meters, will hit the market early next year. We mention this not to toot our own horn, but to underscore the fact that Control4 can actually control home energy use (thermostat and lighting). Homeowners will be able to do more than simply watch how much power they are consuming. In other words, we're doing our part to take energy efficiency and management one step further by not only tracking energy use, but controlling it – all without making consumers significantly change their lifestyles.

If home energy management systems can be linked with utilities that want to curb power use during peak demand times, think of the implications not just for consumers' bills, but for US energy usage, increasing overall efficiency and reducing the risk of blackouts. This sure is an exciting time for energy management and home control.

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