

OP-ED

## A Consumer Smart Grid Begins With Information

By Adrian Tuck

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Consumers are hearing a lot about the “Smart Grid” these days. As intriguing as it sounds, relatively few can envision how it might affect their daily lives. This understanding gap is breeding skepticism that risks limiting the Smart Grid’s success - and resulting national energy savings - before it even gets started.

At least two barriers must be addressed if we are to bridge this gap. First, we need to more effectively communicate the benefits of Smart Grid technology. Second, consumers need the ability to view, understand, and adjust their energy usage.

Consumer engagement is critical, but it will only occur when they grasp the economic value and convenience of energy management and when they have access to their own energy usage information. If we clear these key hurdles, we will unleash a wave of innovation and entrepreneurship that will accelerate America’s global leadership in Smart Grid technology and seize the economic development and energy saving benefits.

To address the first barrier, we can draw a simple yet powerful parallel. A staggering 72.5 million U.S. households use online banking. In other words, 76% of all U.S. households that use the Internet have gravitated toward the ease, efficiency, and security of online financial transactions, according to e-commerce information service Fiserv.

Imagine if those same 72.5 million households used the same web-enabled tools to securely understand and manage their energy use. From a computer or their smartphone, they could quickly adjust thermostats, lights or appliances as easily and securely as they send an electronic bill payment. Automated systems could manage daily household energy use just as easily as they help people pay their bills on time. This comprehensive vision is the “Consumer Smart Grid.”

To put this in context, if the average U.S. household uses 11,040 kilowatt hours of energy per year, according to the Energy Information Agency, then a modest 10% improvement in Energy Efficiency in those same 72.5 million homes would save over 80 billion kilowatt hours. The Federal Energy Regulatory Commission has concluded that if these technologies were implemented system-wide, we could avoid building another coal-fired power plant for at least 15 years.

To address the second barrier, consumers must be guaranteed access to their own energy usage information. Without a clear understanding of their energy usage patterns, it is impossible to know which habits are costly or how to adjust energy use in real-time to save energy.

Currently, in several cases where new advanced meters have been installed, energy providers have experienced the majority of the benefits while energy consumers have been left confused and frustrated. Utility regulators are mindful of this disparity and are becoming increasingly insistent that consumers and the utilities realize the benefits of the new technology at the same time.

As of today, public utility commissions of several states – notably, California, Texas, New York and Pennsylvania – have specifically granted consumers the right to access their energy usage information

directly. And perhaps equally as important, they have established the consumer's right to share that data with partners that can securely turn the raw digits into meaningful, accessible, and actionable information.

To extend this concept nationally, Rep. Edward Markey of Massachusetts and Sen. Mark Udall of Colorado have introduced the "Electronic Consumer Right to Know Act", also known as the "e-Know Act". The legislation gives consumers the right to access their own energy usage information and the rates associated with that usage. It also allows consumers to share their information with trusted partners of their choosing. Forward-thinking legislation of this sort is a critical step toward creating greater consumer engagement and fostering Smart Grid innovations.

America's global competitors are pouring resources into clean energy technologies – including Smart Grid development – in hopes of capturing economic growth, jobs and energy savings. Right now, the most promising Smart Grid technologies are coming from American companies.

We are in a strong position to lead this emerging market and have the benefit of prior experience. Much like the commerce and the productivity boom that the Internet enabled, energy management is rooted in making data organized, accessible and interactive. By turning raw data into useful, actionable information we play directly to America's global competitive advantages: our technological leadership and our entrepreneurship.

By engaging and better communicating with consumers and securing their access to energy usage information, we will enable an innovation economy and unleash a wave of entrepreneurship in the energy industry every bit as powerful and transformative as the information and communication economy over the past 20 years. Ultimately, it will speed our national realization of the clean energy economy trifecta: economic growth and job creation, major reductions in national energy use, and a critical competitive edge in the global clean technology race.

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