



Edison's Smarter Meter



The California Public Utilities Commission in 2004 directed the state's regulated utilities to explore the feasibility of upgrading their home and small business electric meters to the type used to measure

energy usage by larger business customers. Currently, home meters record only the total electricity used during a billing period. The next generation of meters will record not only how much power is used, but when, making possible a wide range of new energy saving service options.

After analyzed numerous approaches based on off-the-shelf metering technology, Southern California Edison (SCE) concluded they would not be cost-effective for the utility's customers because of the limited functions and customer benefits. Instead, Edison began working with meter manufacturers to develop an enhanced, solid-state electric meter promising a lower overall cost, greater customer benefits and improved grid operations. The outcome is the industry's leading advanced metering system currently in field testing by SCE.

Why Smart Metering?

Californians lead the nation in energy efficiency. Nevertheless, the state's population and per-person energy use continue to grow. As a result, state officials and utilities are exploring ways to provide customers with incentives to conserve and shift usage away from periods of peak demand. The advanced metering initiative is one of the keys to this effort.

Utilities pay much more for the power their customers need during a weekday afternoon than in the middle of the night. But residential and small business rates do not reflect this fact. These customers have little incentive to use electricity in ways that reduce utility and customer costs and slow the need for new power plants and transmission lines. If electric rates were higher during peak periods and lower during off-peak times, customers likely would find ways to save by moving discretionary consumption to off-peak periods.



Potential Savings & Benefits

Advanced metering will be costly. SCE has asked regulators for authorization to spend \$1.3 billion to install 5 million of the new devices between 2009 and 2012. As a result, SCE has worked hard to develop a program that ensures customer financial benefits will match or exceed customer costs.

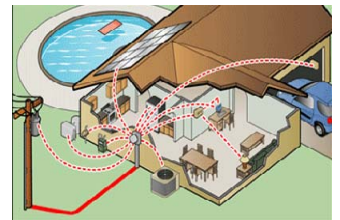
SCE believes its advanced metering program could reduce peak power consumption by as much as 1,000 megawatts – saving the entire output of a major power plant. And advanced meters will provide customers with new information and control over their energy use, putting additional downward pressure on costs.

Other potential savings include reduced labor costs due to remote meter reads, turn-ons, reduced infrastructure replacement costs as some peak usage is shifted to off-peak periods reducing stress on the power delivery system, and reduced need to purchase expensive wholesale power to address rapidly rising peak demand.

A key feature of the advanced metering technology developed under SCE's leadership is the use of open architecture, meaning the underlying design will be compatible with future features beneficial to customers and SCE. This approach has obvious advantages given the rapid changes and innovations occurring in the field of communications technology.

The meters developed for SCE's customers offer a number of benefits not previously available:

- Approximately 1 million Edison customers relocate each year. The new technology will make remote service activations possible, enabling these customers to request that their new service be activated when they want it, rather than when utility personnel are available.
- The new SCE meter will be capable of communicating with the coming smart thermostats and appliances, giving customers new options for managing costs.
- SCE's new meters will be able to "talk" to home area networks, providing customers with real-time energy use and cost information.



Edison SmartConnect is just one aspect of SCE's national leadership smart grid technology bringing customers more reliable, cost-effective, environmentally responsible power delivery systems.