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NEWS

How Smart Meters work
Learn how the wireless meter-reading devices work

By **Kelly Dunleavy** July 29, 2010

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The PG&E Smart Meters employ a combination of cellular mesh networks and radio frequencies to replace the traditional gas and electric meters. Meter readers will no longer have to come to people's homes.

The wireless Smart Meters record residents' electricity usage data every hour. Every four hours, that data is then sent to a transponder device on a nearby telephone pole using a radio frequency. (Gas meters will transmit the data to the transponder every six hours.) The transponder sends the data back to PG&E using a secure cellular network. For commercial customers, the meters record the data every 15 minutes instead of hourly.

Instead of one data point of usage per month, there will now be 720 data points per month for residential customers.

An additional radio in the meter sends the data back into the house. This means that if customers choose to buy additional devices currently being developed by companies like Cisco, then those devices will read the data and can tell the customer exactly what appliances are using how much energy. If customers don't wish to buy the additional device, they can still log into pge.com and track their usage data hourly with the Smart Meter program.

PG&E argues that the meters are part of creating a smart grid that will allow customers to better understand their energy use and will ultimately lead to greater energy savings.

Implementation of the meters began in Marin in July and will continue through 2011. PG&E intends to spend $2.2 billion to implement 10 million meters in the state.

Do you think Smart Meters will help you become more energy efficient? Tell us in the comments.
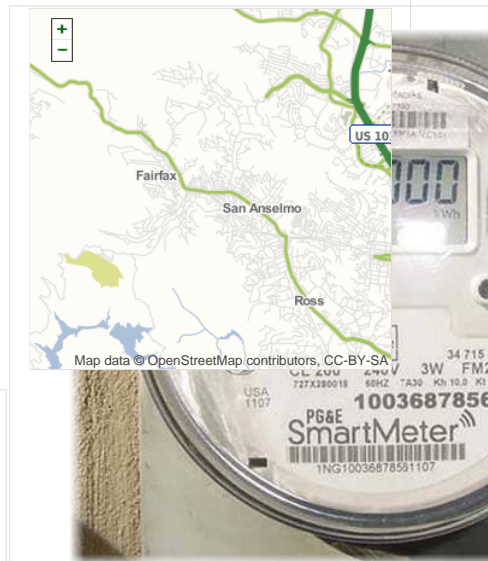
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