

## How the SmartMeter™ system works and what it can do for you

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### **What is the SmartMeter™ System?**

The SmartMeter™ system collects electric and natural gas usage data from your home or business. SmartMeter™ electric meters record residential electric usage hourly and commercial electric usage in 15 minute increments. SmartMeter™ natural gas modules attached to gas meters record gas usage daily. This data is periodically transmitted to us via a secure wireless communication network.

### **How is Privacy and my SmartMeter™ Data managed?**

Protecting our customers' information is a top priority. PG&E applies the same privacy protection standards to all data collected by the company from customers including the usage data collected by the SmartMeter™ system. We treat each customer's personal information and data as confidential, consistent with all regulatory requirements, including those established by the California Public Utility Commission (CPUC). See PG&E's [Customer Information Privacy Policy](#).

### **How do Radio Frequency (RF) concerns relate to SmartMeter™ Devices?**

PG&E uses wireless radios attached to an electric meter to send customer usage information securely and wirelessly with its SmartMeter™ devices to PG&E for data collection. This technology allows our customers to better manage their energy consumption. For more information, see the [Understanding Radio Frequency page](#).

### **Can the SmartMeter™ system help control my costs?**

The SmartMeter™ system lets you track your energy use anytime throughout the month, so you can make smart decisions and control your energy costs.

### **Is the SmartMeter™ system available to all PG&E customers?**

The SmartMeter™ system will be rolled out to all PG&E customers by mid-2012.

### **Will it make meter reading more convenient?**

The SmartMeter™ system will allow PG&E to read your meter without setting foot on your property and without interrupting your schedule.

### **Will it help pinpoint power outages?**

In the future, the SmartMeter™ program will help us improve your service by giving us the ability to pinpoint power outages and restore your power faster.

### **Will installation disrupt my schedule?**

You do not need to be present for the upgrade, but we will need unobstructed access to the meter(s). And going forward, we'll collect your meter readings without setting foot on your property.

### **How long does it take to install the SmartMeter™ device?**

It takes less than 15 minutes to install the SmartMeter™ device. The upgrade will take place during regular business hours and in most cases will take about five minutes.

### **Understanding Radio Frequency (RF)**

**As PG&E deploys SmartMeter™ gas and electric meters across Northern and Central California, some customers and communities are asking about the possible health effects of radio frequency emissions from the meters. We hope this information will help answer those questions.**

We understand that our customers want to be well informed about new technologies. SmartMeter™ devices are digital meters that have been widely used since the 1980s. The new development is a small 1-watt radio that allows two-way communication between the customer and PG&E, which enables the customer to review their daily energy use.

A SmartMeter™ device transmits relatively weak radio signals, resembling those of many other devices we use every day, like cell phones and baby monitors. A major radio station, by contrast, usually transmits with 50,000 times as much power.

Based on years of studying whether radio waves cause health effects, the Federal Communications Commission has adopted Maximum Permissible Exposure limits for radio transmitters of all types, including smart meters. It includes a prudent margin of safety just in case some health effects are too subtle to have been detected. Even so, SmartMeter™ devices operate far below the limit—typically only about one-seventieth as much.

Exposure is based on the transmitter's power and your distance from the source. In general, doubling your distance cuts the so-called "power density" by a factor of four. That's a major reason why radio waves from a smart meter, at a distance of 10 feet, are only about one one-thousandth as much as a typical cell phone. That's also why powerful but distant radio and TV transmitters are not seen as posing any danger.

Some people wonder if the long-term use of devices like cell phones might have unexpected health effects even if daily exposure is low. The World Health Organization advises: "A large number of studies have been performed over the last two decades to assess whether mobile phones pose a potential health risk. To date, no adverse health effects have been established for mobile phone use." And cell phones are typically held against your head when in use, while smart meters are outside your house, on the other side of the wall.

Should you be concerned about long-term exposure to smart meters, even if scientists can't find any trace of health problems from cell phones? Common sense suggests not. Consider that SmartMeter™ devices transmit only about 45 seconds a day. You'd have to live with one of our meters for more than 1,000 years to get as much exposure to radio waves as a typical cell phone user gets in just one month.

## Comparison of RF Power Density in the Everyday Environment

**Device Relative Power Density in microwatts per square centimeter (µW/cm<sup>2</sup>)**

FM radio or TV broadcast station signal	0.005
<b>SmartMeter™ device at 10 feet</b>	<b>0.1</b>
Cyber cafe (Wi-Fi)	10-20
Laptop computer	10-20
Cell phone held up to head	30-10,000
Walkie-Talkie at head	500-42,000
Microwave oven, two inches from door	5,000

Source: Richard Tell Associates, Inc.

### PG&E Whitepapers

- [RF Summary Discussion](#) (PDF, 64 KB)
- [2005 PG&E Study from Richard Tell Associates](#) (PDF, 494 KB)
- [2008 Supplemental Report from Richard Tell Associates](#) (PDF, 175 KB)

### Additional Resources

- [Federal Communications Commission Radio Frequency Safety Web Page](#)
- [Food and Drug Administration Radiation Emitting Products Web Page](#)
- [Environmental Protection Agency Radiation Protection Ionizing and Non-Ionizing Radiation Web Page](#)
- [World Health Organization Web Page on Electromagnetic Fields](#)
- [University of Ottawa web page on Wireless Communications and Health](#)

### Customer Information Privacy Policy

Protecting customer information is a top priority for PG&E. We treat personal information and data about our customers as confidential, consistent with all legal and regulatory requirements, including those established by the California Public

Utilities Commission (CPUC). This privacy policy identifies and describes how PG&E uses and protects the information we collect about our customers.

### What Information Do We Collect?

We collect customer information based on our business relationship with you and your use of our utility services and other products we provide. Some examples include:

- Contact information that allows us to communicate with you, including your name, address, telephone number and email address;
- Billing information related to your financial relationship with us, including your payment data, credit history, and Social Security Number;
- Electric and gas usage data gathered by our metering systems; and
- Information gathered when you participate in utility programs such as those related to energy efficiency.

### How Is The Information Collected?

We collect customer information in a variety of ways including:

- When you set up your account and interact with us regarding your account, your utility service, and your participation in utility programs;
- When you use electricity and natural gas service, usage data is collected via our metering systems (including the SmartMeter™ system);
- When you choose to engage with us through our website [pge.com](#) (view our [Website Privacy Policy and Terms of Use](#)); and
- When we interact with third parties such as credit agencies.

### How Is The Information Used?

This privacy policy is aimed at protecting personal information, i.e., information about you and your energy usage that includes personally identifiable information about your account, such as the name on the customer account, addresses and telephone numbers associated with the account, and the account number.

We use personal information to administer your account, inform you about your energy usage, as well as to manage, provide, and improve our services and business operations. Some examples include:

- To generate your customer billing statement and otherwise in connection with billing and payment on your customer account;
- To enable you to see your energy usage data on a next day basis via secure access on the internet (available to residential customers on the SmartMeter™ system or commercial customers);
- To communicate with you about your energy usage to help you select the best rate plan, or help you, if you choose, to take better advantage of certain pricing programs offered by PG&E, such as our SmartRate™ program;
- To communicate with you about specific programs or opportunities offered by PG&E that may help you to lower your energy usage or realize other benefits; and
- To communicate with you about energy saving tips and energy management tips tailored to your geographic area, climate, and daily energy usage.

We may also aggregate data about your electric and gas usage in various formats such that the data becomes anonymous and cannot be identified personally with you. For instance, aggregated data could be a summary of total energy usage for all homes and businesses in a certain geographic area or climate. Aggregated data is not subject to privacy restrictions and is used by us to manage, provide, and improve our services and business operations. Some examples include:

- To analyze rates and rate structures;
- To project usage demand patterns and plot growth in different geographic or other areas; and
- To improve our energy supply planning and to better design and engineer our energy distribution systems.

### Is Customer Information Disclosed To Others?

PG&E does not release personal customer information to any other person or business entity without your prior written consent.

There are, however, certain exceptions that have been authorized by the CPUC or the California Legislature. PG&E may release personal information without your prior written consent as follows:

- To law enforcement officers, pursuant to legal process (such as a warrant or subpoena approved by a judge);
- To contractors providing utility-related services on behalf of PG&E—but only to the extent necessary to render the service and subject to confidentiality and security obligations;

- To the CPUC (or other governmental agencies with jurisdiction over PG&E), when they require such information;
- To others as required by court order or by applicable laws, rules, or regulations governing PG&E; and
- To credit reporting agencies, and to collection agencies (if your account is assigned for collection).

We do not sell or provide personal customer information to third parties for their commercial benefit.

### How Do We Protect Customer Information From Unauthorized Access?

We understand that system and data security is a top priority for our customers. PG&E takes extensive measures to ensure the integrity of our systems and to secure and protect customers and customer data. We safeguard customer information on secure systems with restricted access, and have implemented appropriate security controls to protect the information when it is stored or transmitted by us. Our contractors acting on our behalf are required to comply with our privacy policy.