OpenWay Radio Frequency FAQ

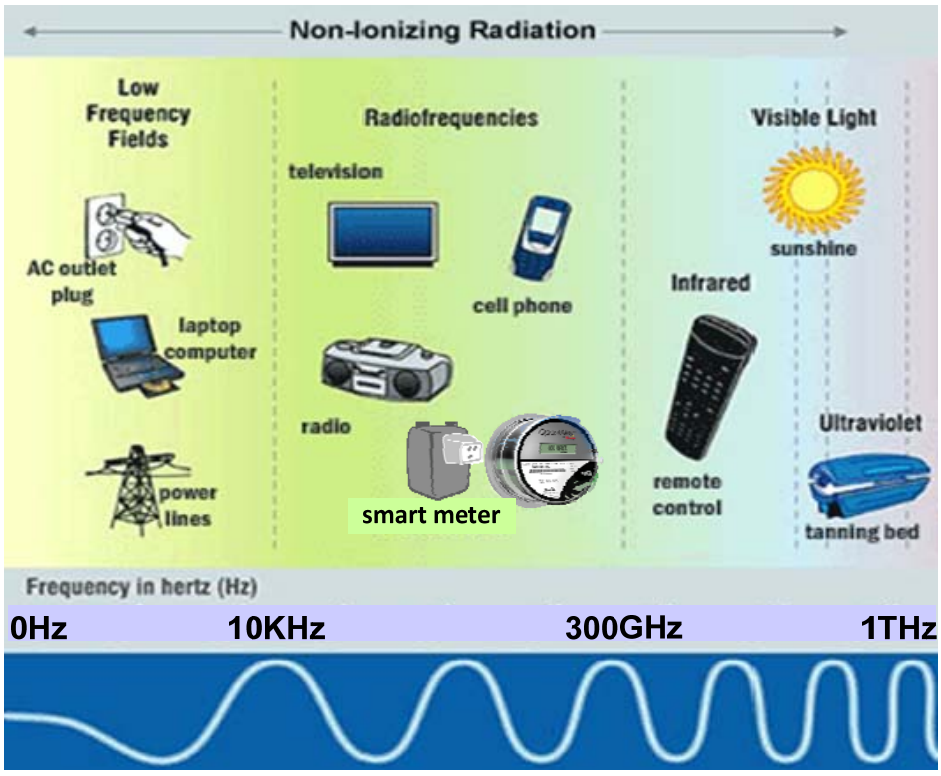
March 10, 2010

Overview

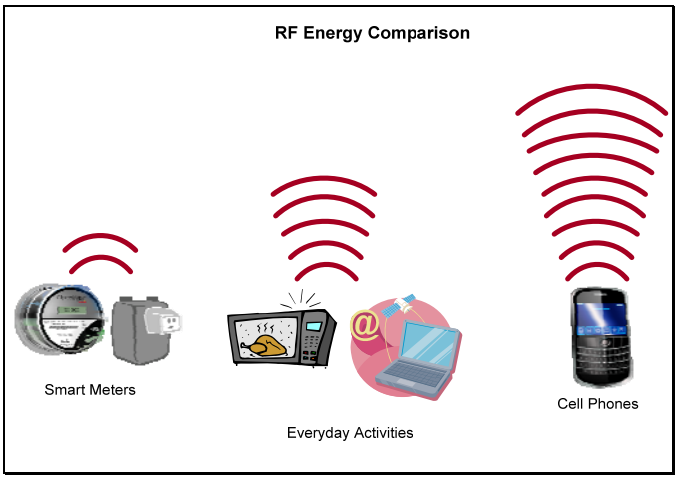
This document provides general information about radiofrequency (RF) electromagnetic fields from OpenWay® wireless communication equipment. This information has been provided by Itron which has evaluated the OpenWay® equipment for RF emissions. The OpenWay® equipment has been certified by the Federal Communications Commission (FCC).

Frequently Asked Questions

	Question	Answer
1	**What frequencies are used by the meters being installed?**	OpenWay® wireless communication equipment operates in the Industrial, Scientific and Medical (ISM) bands at frequencies from 902 megahertz (MHz) to 928 MHz and from 2,405 MHz (2.4 gigahertz or GHz) to 2,483 MHz. The Food and Drug Administration (FDA) and the FDA's Center for Devices and Radiological Health (CDRH) have classified radiation emitted by devices operating at these RF frequencies as non-ionizing. Other types of non-ionizing radiation include visible and infrared light.
2	**Have the smart meters been certified by the FCC?**	Yes, meters being installed have been tested in accordance with Title 47, Part 15 of the Code of Federal Regulations (CFR), and have been certified by the FCC. (ID #s: SK9AMI-3, SK9AMI-4, SK9CRUG1).



3	**Where can I go to learn more about Regulatory Compliance?**	The FCC's document *OET Bulletin 65 Edition 97-01, Evaluating Compliance with FCC guidelines for Human Exposure to Radiofrequency Electromagnetic Fields* details how to measure or calculate levels of RF radiation and to determine compliance of RF facilities with exposure limits. Additionally, FCC OET Bulletin 65 *Supplement C Edition 01-01* (known as *OET-65C*), provides further guidance on determining compliance for portable and mobile devices. These documents may be found at www.fcc.gov/oet/rfsafety.
4	**What is the power output from the OpenWay® devices when they are transmitting data?**	The power output for the OpenWay® devices is less than one watt. In comparison, portable transmitters used by consumers typically operate over an output power range of less than 100 milliwatts (mW) to several watts.
5	**Are there any health hazards associated with the new technology?**	The World Health Organization (WHO) notes in its Fact Sheet 304: "[T]o date, the only health effect from RF fields identified in scientific reviews has been related to an increase in body temperature (> 1 °C) from exposure at very high field intensity found only in certain industrial facilities, such as RF heaters. The levels of RF exposure from base stations and wireless networks are so low that the temperature increases are insignificant and do not affect human health." See WHO Fact Sheet 304 for more information about RF fields at http://www.who.int/mediacentre/factsheets/fs304/en/index.html.
6	**Are there RF exposure standards for the OpenWay® devices?**	The FCC has established rules requiring transmitting facilities to comply with RF exposure guidelines. The limits established in the guidelines are designed to protect the public health with a very large margin of safety. We are informed that these limits have been endorsed by federal health and safety agencies such as the Environmental Protection Agency (EPA) and the FDA. The FCC has established exposure guidelines for RF devices operating in the 300 kilohertz (kHz) – 100 GHz range. These safety guidelines are outlined in the publication, *OET Bulletin 65 Edition 97-01, Evaluating Compliance with FCC guidelines for Human Exposure to Radiofrequency Electromagnetic Field* and can be found at www.fcc.gov/oet/rfsafety. The general population exposure limits set by the FCC for the frequency range utilized by the smart meters and other devices like cordless phones and baby monitors is 0.6 milliwatts per centimeter squared (mW/cm^2) at 902 MHz and 1.0 mW/cm^2 at 2.4GHz. When the smart meter is transmitting, the exposure to radio frequency energy at a distance of 20 centimeters (8 inches) from the meter is 0.06 mW/cm^2 at 902 MHz, or almost 10 times lower than the exposure limit set by the FCC, and 0.062 mW/cm^2 at 2.4 GHz, or more than 16 times lower than the exposure limit set by the FCC. This calculation is for radio frequency energy radiated outward from the front of the meter. The power transmitted toward the rear of the meter is typically an additional five to ten times lower. For more information on the effects of RF energy exposure, please visit the

		following sites: **FCC**: Questions regarding potential RF hazards from FCC-regulated transmitters can be directed to the Federal Communications Commission, Consumer & Governmental Affairs Bureau, 445 12th Street, S.W., Washington, D.C. 20554; Phone: 1-888-225-5322; E-mail: rfsafety@fcc.gov; or go to: www.fcc.gov/oet/rfsafety. **FDA**: For information about radiation from microwave ovens and other consumer and industrial products contact: Center for Devices and Radiological Health (CDRH), Food and Drug Administration. http://www.fda.gov/cdrh/radhealth/ **OSHA**: The Occupational Safety and Health Administration's (OSHA) Health Response Team has been involved in studies related to occupational exposure to RF radiation. http://www.osha.gov/SLTC/radiation_nonionizing/index.html **WHO**: The WHO's Electromagnetic Fields information page is located at: http://www.who.int/peh-emf/en/. 
7	**Will installation of the new meter interfere with my security systems, pacemaker, cell phones or other RF electronics?**	The transmitting devices operate in compliance with 47 CFR Part 15 regulations, which require coexistence with other Part 15 certified devices. Within the 902-928 MHz frequency band, operation is limited to frequency hopping, direct sequence spread spectrum and digital modulation intentional radiators. This rule facilitates multiple devices operating in the same location. This includes devices such as security systems, cordless phones and pacemakers. The meter's transmit signal is of very short duration, which further decreases the potential to interfere with other devices.

8	**Why does my meter look different than my neighbor's?**	SDG&E will be deploying several types of meters during the transition to the new technology. These meter types include residential, commercial, industrial, and Cell Relays. As a part of the deployment, approximately 1 in every 750 units installed will be Cell Relays. In addition to supporting all of the normal metering functions, a Cell Relay is also responsible for communicating information back to the utility. With this additional functionality, the meter size is slightly increased. Cell Relays, like all other meters, have been tested to ensure proper metering functionality and accuracy and compliance with applicable guidelines.