Smart Meters and Radio Frequency

Myth vs. Fact about Smart Meters and Radio Frequency

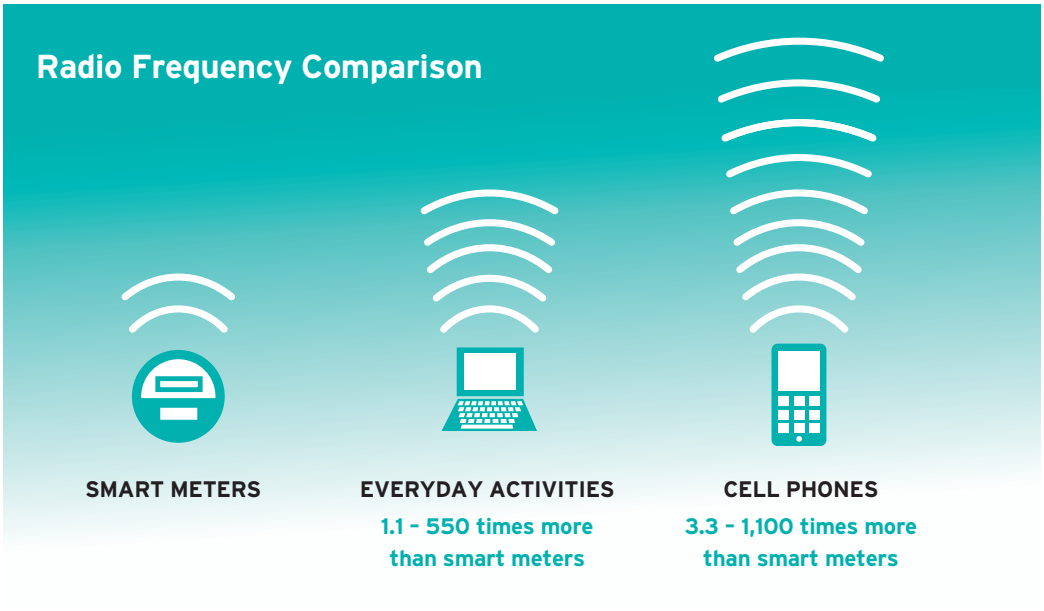
Myth: Like a cell phone, a smart meter is "on" all the time and emitting radio frequency as it searches for a signal.

Fact: In total, "the average" smart meter is "on" and transmitting data less than one minute per day. Each transmission is just milliseconds (thousandths of seconds) in duration. Three of these "millisecond" signals involve sending data, and the others involve communicating with nearby devices to be sure the meter is connected to the network and available to send and receive messages. When not transmitting, the smart meters are in "idle" mode.

The Itron OpenWay® technology and products chosen by SDG&E® fully comply with U.S. Federal Communications Commission (FCC) guidelines for human exposure to radio frequency energy. The FCC recently confirmed that current smart meter installations comply with FCC radio frequency exposure limits, whether for single meters, or for multiple meters at a site.

Our smart meters operate within the 900 megahertz and 2.4 gigahertz bands of the energy spectrum. These are FCC regulated frequencies that have been used for many years, and in devices such as baby monitors, cell phones, remote controlled toys, and medical monitors. Our smart meters have been tested in accordance with Title 47, Part 15 of the U.S. Code of Federal Regulations, and have been certified by the FCC.

- When the OpenWay device is transmitting, the exposure to radio frequency energy is much lower than the general population exposure limits set by the FCC. For example:
  - At 8 inches from the front of the meter, exposure is almost 10 times lower than the FCC limits.
  - Exposure toward the rear of the meter is 15 to 20 times lower than the FCC limits.
- Radio frequency generated by OpenWay smart meters are far below the levels emitted by common household appliances and electronics, including cell phones, baby monitors and microwave ovens.



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Radio Frequency Output Comparison Chart

Source	Radio Frequency Output Compared to Standing Two-Feet from a Smart Meter
Standing in front of an active microwave oven, two inches from door	550 times more
Holding a live walkie-talkie at your head	55 – 4,600 times more
Holding an active cell phone at your head	3.3 – 1,100 times more[1]
Using a laptop computer	1.1 – 2.2 times more
Sitting in a Wi-Fi cyber cafe	1.1 – 2.2 times more

Source: Richard Tell Associates

[1] Cell phones are designed to reduce RF output power to the minimum required for reliable communication, but may reach peak power output when signal strength is limited.

For example, a person speaking on a cell phone has 3.3 to 1,100 times more radio frequency exposure than a person standing 2 feet from an active smart meter. Similarly, a person using a laptop computer can experience up to 2.2 times more radio frequency exposure than a person standing 2 feet from a smart meter.

Scientific Research

We continually monitor regulatory and scientific developments related to human exposure to radio frequency energy. We rely upon the expert findings of science related to radio frequency exposures and potential health effects, most notably by the World Health Organization, the FCC, and the U.S Food and Drug Administration. According to the FCC, the Electric Power Research Institute and the World Health Organization, no adverse short- or long-term health effects have been shown to occur from the radio frequency signals produced by smart meters or other such wireless networks.

FCC Radio Frequency Exposure Guidelines

The FCC's guidelines for human exposure to radio frequency energy were adopted from limits recommended by the U.S. National Council on Radiation Protection and Measurements and the C95.1-1992 guidelines developed by the American National Standards Institute and Institute of Electrical and Electronics Engineers.

For More Information

To learn more about smart meters, visit *sdge.com/smartmeter.*