

UNDERSTANDING RADIO FREQUENCY

What is Radio Frequency?

Radio frequency (RF) is electromagnetic energy that includes frequencies used for everyday communication such as radio/television broadcasting and cell-phone transmissions, and common household appliances such as microwave ovens and baby monitors.

The Federal Communications Commission (FCC) has regulatory authority over and licenses most RF telecommunications services, facilities and devices. The FCC has adopted Maximum Permissible Exposure criteria for RF transmitters of all types, including advanced meters designed to provide reasonable protection in a residential installation. All advanced meter radio devices must be tested and certified to the FCC's rules.

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 RF signals produced by advanced meters or other such wireless networks.¹

The California Council on Science and Technology has also released a study on radio frequency exposure from advanced meters that notes²:

- Wireless advanced meters, when installed and properly maintained, result in much lower levels of RF exposure than many existing common household electronic devices, particularly cell phones and microwave ovens.
- The current FCC standard provides an adequate factor of safety against known thermally induced health impacts of existing common household electronic devices and advanced meters.
- To date, scientific studies have not identified or confirmed negative health effects from potential non-thermal impacts.

A PERSON'S EXPOSURE TO RF SIGNALS DEPENDS UPON THREE FACTORS:

1. How far the person is from the device: an advanced meter's signal strength diminishes significantly with distance from the meter
2. How often and how long the RF signals are transmitted: advanced meters transmit data several times a day for a few seconds at a time, totaling no more than a few minutes a day
3. The power level of the device: typical advanced meters operate at power levels similar to or lower than most common household devices, such as cordless phones, baby monitors or Wi-Fi routers

1. Silver Spring Networks. Radio Frequency Emissions: Analysis of Radio Frequency Exposure Associated with Silver Spring Networks' Advanced Metering Devices. 2011 – White paper.

2. California Council on Science Technology. Health Impacts of Radio Frequency Exposure from Smart Meters. April 2011 – Final Report.