

# RF exposure from electric meters much lower than other sources\*

Are the radio frequencies emitted by CCEC's AMI meters safe?

Yes. People are continuously exposed to very low levels of natural and manmade radio frequency fields, or RF. Even the earth's surface and the human body are constant sources of RF fields.

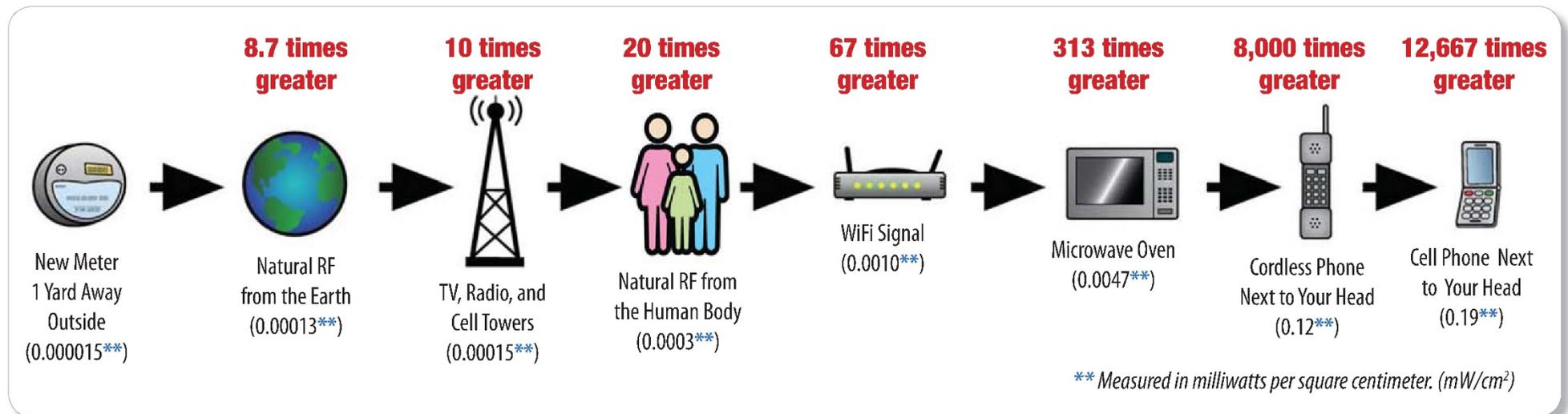
AMI meters send information about home electricity use to the cooperative by FCC licensed RF channels. The exposure from these meters is of much lower power than other common sources for two reasons: 1) infrequent signal transmission, and 2) distance. CCEC's meters emit power from a low intensity 1-watt radio for on average a tenth of a second for six times a day.

Further, meters are typically placed outdoors, with a wall separating the meter from the living space. This combination of placement and infrequent operation means that you would need to be within a foot of 7,000 meters all communicating at the same time to reach the FCC exposure limit.

## Quick Facts

1. The FCC limit for RF exposure is 1 milliwatt per square centimeter (mW/cm<sup>2</sup>)
2. At 20 inches in front of a meter, the average exposure to radio frequency signals is less than the background radio frequency signals naturally generated by the earth, and less than 1/7,000<sup>th</sup> of the safe exposure standard set by the Federal Communications Commission.
3. Exposure to RF is significantly reduced by buildings. At one yard in front of the meter on a typical day, inside your home, your exposure is miniscule — more than 1.3 million times below the FCC standard.

\*Based on the FCC average exposure standard, which averages RF exposure over 30 minutes of usage (47CFR1.1310 averaging)



Information provided by Yakov P. Shkolnikov, Ph.D. Dr. Shkolnikov has published more than 25 peer-reviewed papers on electrical engineering topics, such as semiconductor physics and electrical-safety and has participated in numerous technical conferences on medical device analysis and semiconductors. He has a patent pending on security of Radio Frequency Identification (RFID) cards, and has filed several provisional patents filings on cell phone power management, RFID technology, and mechanical strain sensing. He holds a Ph.D., Electrical Engineering, Princeton University, 2005; M.A., Electrical Engineering, Princeton University, 2004; B.S., Engineering Physics, Cornell University (summa cum laude), 1999.