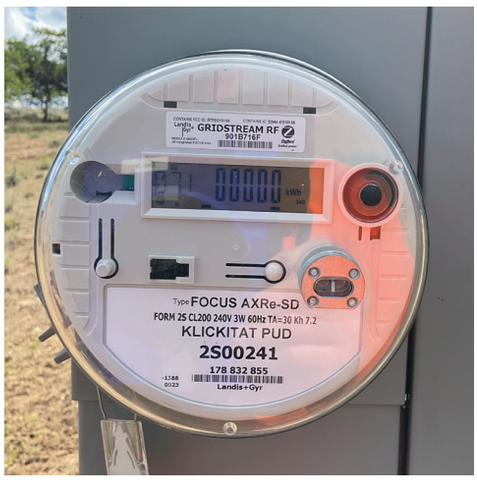
Radio Frequency and Advanced Meter Infrastructure

Last month in this magazine, we detailed our approach to dealing with changes in wholesale electric power markets. Part of these efforts include Klickitat PUD integrating advanced metering infrastructure throughout Klickitat County during the next nine months or so.

Part of AMI is advanced meters. They meter more usage data that older electronic and mechanical meters, which makes it possible for utilities and our customers to obtain accurate, real-time readings of electricity use.

With advanced meter data, we can monitor and manage power distribution more efficiently to ensure we upgrade our distribution systems to meet growing electricity needs efficiently. In addition, we can then supply this data to you to make informed, possibly money-saving decisions about how and when you use electricity in your home and business. This, in turn, can reduce the cost of power we have to buy. Any savings will be passed along to our customers.



For details on the full scope of why advanced metering infrastructure is important to you and your PUD, visit the Klickitat PUD website at www.klickitatpud.com.

In order to provide this information, advanced meters operate by transmitting and receiving information wirelessly. This allows us to access meters real-time and provide this information to you as well. As a result of this wireless technology, some people have expressed concerns about the possibility of negative health effects from the radio frequency waves that advanced meters use to communicate.

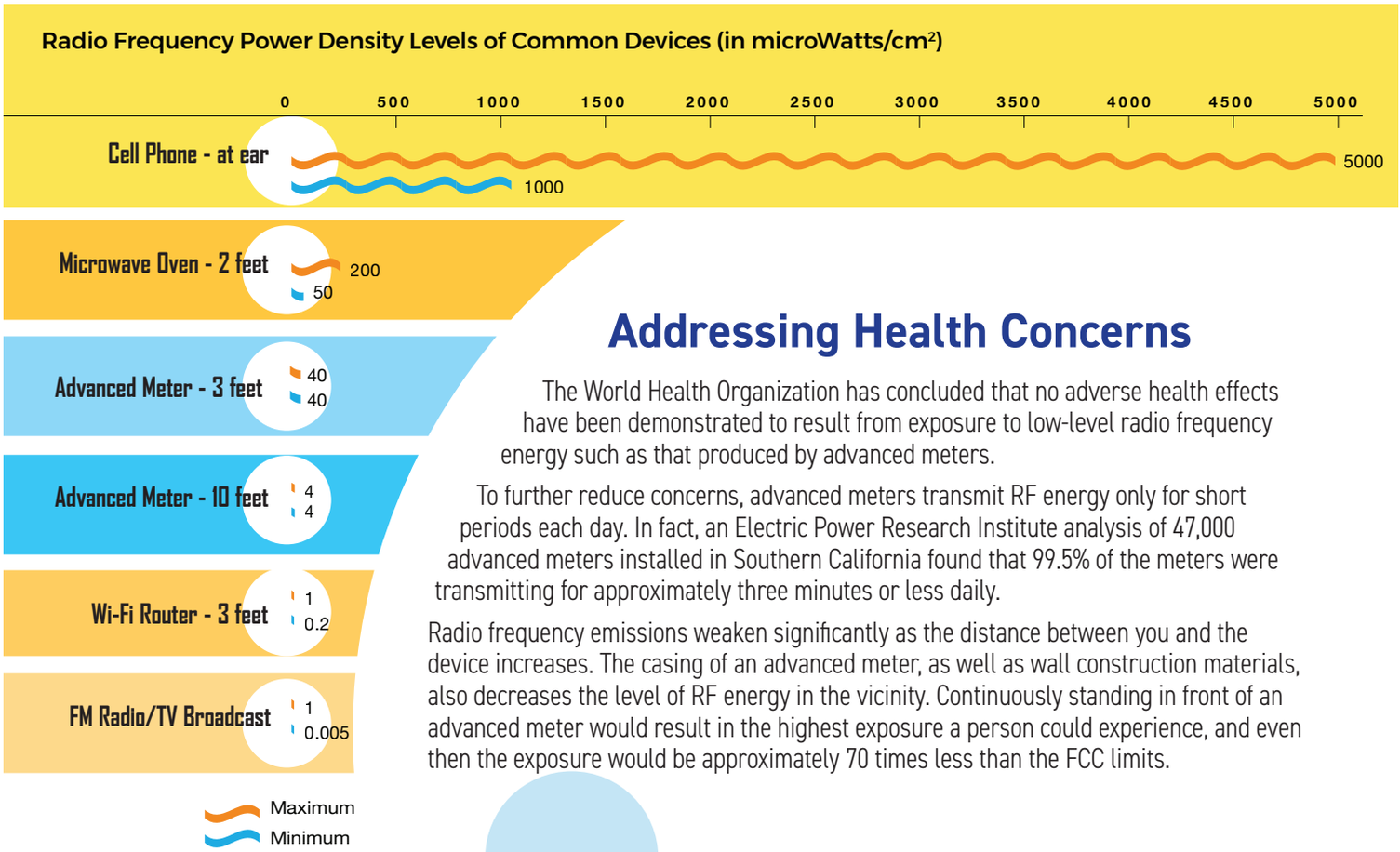
What Are Radio Frequency Waves?

Radio frequency waves are a form of electromagnetic energy. They move through space at the speed of light and can be human-made or occur naturally.

RF waves are used for a variety of purposes, but most importantly, they are employed in telecommunications. Advanced meters use low-energy radio frequency waves to transmit information across distances.

Every day, people use and keep near them many devices that use radio frequency waves, including microwave ovens and cellphones.

The Federal Communications Commission sets RF limits and requires that all radio communicating devices be tested to ensure they meet federal standards before they are allowed to transmit within the radio spectrum. Advanced meters emit less radio frequency energy than many other commonly used wireless devices which, like advanced meters, are safe and FCC-approved.



About this figure: This figure depicts the radio frequency waves emitted by various common wireless devices. Source for starting measurements: Electric Power Research Institute (EPRI), Radio-Frequency Exposure Levels from Smart Meters: A Case Study of One Model (February 2011). The RF exposure for cellular phones shown in this graph is for comparison purposes only Cellular phones are evaluated for compliance with FCC exposure standards on the basis of specific absorption rate (SAR) and not power density.

Addressing Health Concerns

The World Health Organization has concluded that no adverse health effects have been demonstrated to result from exposure to low-level radio frequency energy such as that produced by advanced meters.

To further reduce concerns, advanced meters transmit RF energy only for short periods each day. In fact, an Electric Power Research Institute analysis of 47,000 advanced meters installed in Southern California found that 99.5% of the meters were transmitting for approximately three minutes or less daily.

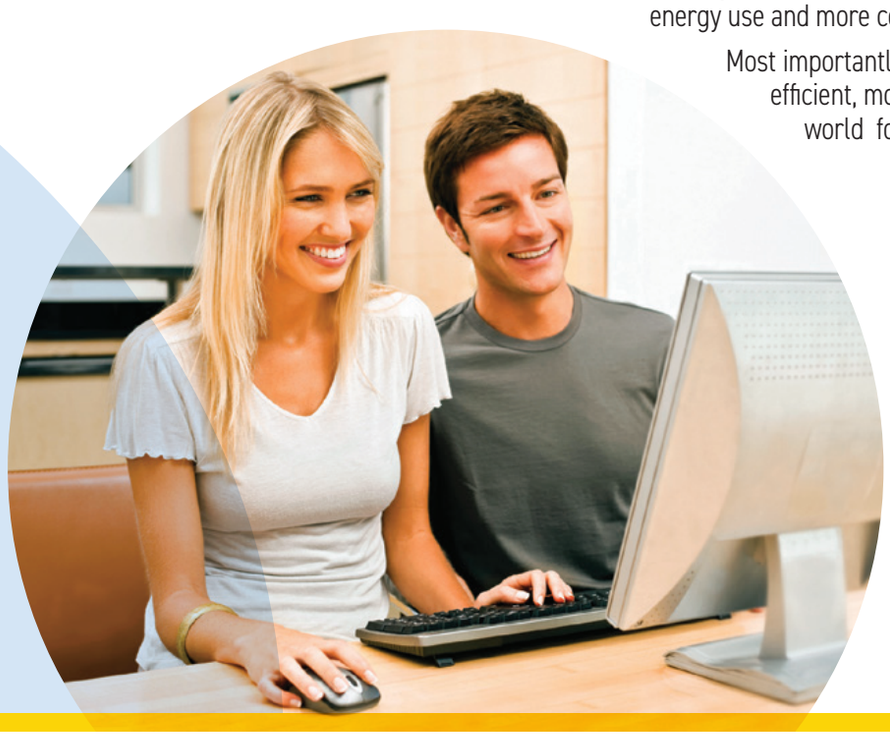
Radio frequency emissions weaken significantly as the distance between you and the device increases. The casing of an advanced meter, as well as wall construction materials, also decreases the level of RF energy in the vicinity. Continuously standing in front of an advanced meter would result in the highest exposure a person could experience, and even then the exposure would be approximately 70 times less than the FCC limits.

In Conclusion

Advanced meters do not produce negative health impacts. They emit a low level of radio frequency energy that is both FCC-approved and lower than the level of RF energy emitted by many other devices that are used daily by millions of people. At most, advanced meters transmit radio frequency energy for only a few minutes each day, and that energy is reduced further by surrounding materials.

Advanced meters are a very important step to improving the delivery of electricity for consumers. They will give you more insight into your energy use and more control over your energy expenditures.

Most importantly, advanced meters will help create a more efficient, more reliable and more sustainable electricity world for generations to come.



For more information, scan this QR code to read more on the KPUD website.

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