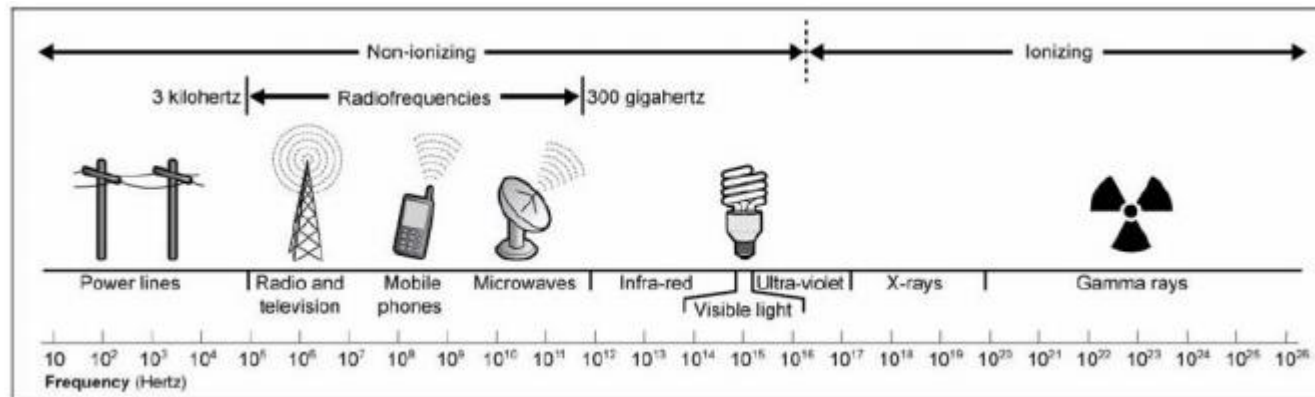


Radio Frequency Waves and EMF Radiation

- Radio frequency waves are a **form of electromagnetic energy**. They move through space at the speed of light and can be man-made or occur naturally.
- The methods of data transmitted by **advanced meters** and other forms of telecommunications (television, radio, cell phones, satellite) **utilize nonionizing EMF radiation** in the RF band, commonly known as **RF EMF**.
- Radiation comes in two forms: **ionizing and non-ionizing**.





Ionizing Radiation

- High-energy radiation capable of producing ionization in substances through which it passes. It includes non-particulate radiation, such as x-rays, and radiation produced by energetic charged particles, such as alpha and beta rays, and by neutrons, as from a nuclear reaction.
- This means there is **enough energy to remove an electron from (ionize) an atom or molecule**. This can damage the DNA inside of cells, which **can result in cancer**.





Non-Ionizing Radiation

- Non-ionizing radiation has **enough energy to move atoms in a molecule around or cause them to vibrate**, but not enough to ionize (remove charged particles such as electrons).
- Many studies have examined the potential health effects of non-ionizing radiation from radar, microwave ovens, cell phones and advanced meters and other sources, there is currently **no consistent evidence that non-ionizing radiation increases cancer risk**.

FCC Regulated Advanced Meters & Infrastructure

- At 20 inches in front of a meter, the average exposure to radio frequency signals is less than one-seventhousandth of the safe exposure standard set by the FCC.
- You would have to stand directly in front of 7000 RF meters giving off RF emissions at the same time.
- Gridstream meters (based on their configuration) are “on” for approximately 83-118 seconds/day.
- Gridstream Routers are “on” for approximately 119 seconds/day.
- RF Gap Collectors will communicate for just more than 177 seconds across the entire day.
- RF Collectors will communicate for just more than 177 seconds across the entire day (4 Radios X 177 = 709 seconds)

Because, the amount of RF radiation you could be exposed to from a smart meter is much less than what you could be exposed to from a cell phone, it is very unlikely that living in a house with a smart meter increases risk of cancer.



...By Comparison

Typical Values*

Smart Meter
900 MHz radio



Baby Monitor
7 x greater



Wii Remote Controller
30 x greater



Nintendo DS with WiFi
180 x greater



WiFi Access Point
400 x greater



Cordless Phone
1,000 x greater



Cell Phone
1,000 - 10,000 x greater



* Based on FCC 47CFR1.1310, which averages exposure over 30 minutes of usage. Comparative data provided by Elster.

"In the case of Smart Meters, the FCC has no data or reports to suggest that exposure is occurring at levels of RF energy that exceed our RF exposure guidelines."

- Lynn Woolsey, FCC Chief of Engineering and Technology

In Addition...

The World Health Organization (WHO) 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. Radio frequency emissions weaken significantly as the distance between you and the device increases. Continuously standing in front of a 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 and lower than the level of RF energy emitted by many other devices that are used daily by millions of people. (See example in the chart on the front page.) At most, advanced meters transmit radio frequency energy for less than a minute each day, and that energy is reduced further by the casing of an advanced meter, as well as wall construction in home and building materials separating persons from the RF energy.

