Will Smart Meters Result In Rising Utilities Bills?

Recently, Smart Meters (SMs) were installed at our condominiums, and the utilities company claimed customers will have “the ability to see your detailed usage data daily, making it easier to use energy more efficiently and lower your bill.” Although that can happen, it’s not always the case.

Prof. David Carpenter of the Albany (NY) School of Public Health revealed that in California, “under court order, Pacific Gas & Electric (PG&E) admitted that their Smart Meters generate 14,000 spikes of communication per day.” Starting in Bakersfield in 2007, some PG&E customers’ bills increased as much as 2 and 4 times their bill for the same months of the previous year, resulting in class action lawsuits.

In an article in the SPRINGFIELD VERMONT NEWS on how SMs hike electric bills, one finds that “bad calibration, electric arcing and malfunction can raise your bill….Smart Meters consume power, analog meters do not.” Oklahoma TV station KOCO (Channel 5) aired a report (which can be seen online) titled “Smart Meter Customers Report Higher Bills.” And in a July 19, 2011 article, “Why Smart Meters Produce Higher Bills” by Ted Twietmeyer, this senior laboratory engineer at the University of Rochester states that KOCO’s “almost gets it right.”

Regarding the older electric meters, Twietmeyer then remarks that “both older electric meters and newer smart meters use basic magnetic principles. However, which of the two principles they utilize to sense the magnetic fields created while you consume power is what actually determines the size of your bill….Older electric meters work on the eddy current electrical principle. The silver disk you see protruding through the slot with black bars is actually made of aluminum. This disk is the visible part of an electric motor inside the

meter known as the rptor. In electrical motors the rotor is made of a magnetic steel allow which required for the motor to rotate. Yet in older electric meters the rotor is not magnetic….Aluminum cannot be magnetized, but it is affected by any changing magnetic field passing through it.

This characteristic is known as paramagnetism….With older electric meters, all power in your home passes through coils inside the meter. These coils create a magnetic field which penetrates the aluminum disk, creating eddy currents. These eddy currents form tiny temporary magnets in the aluminum disk….Temporary magnets in the aluminum disk formed by eddy currents have enough force to make the disk to rotate. When the disk rotates it turns a series of gears behind the meter's faceplate. These move the hands which show power consumption in kilowatt hours. A 1000 watt load running for an hour = 1 kilowatt hour.

On the other hand, "in smart meters there are no moving parts and no aluminum disk to rotate. A simple solid-state sensor works on a principle known as the hall effect. The stronger the AC created by the total power of all loads in the home, the stronger the AC field the sensor detects. This analog signal is digitized by a convertor and stored in protected memory, is calibrated in kilowatt hours and appears on the meter's display. There is a temperature sensor in smart meters to keep the meters calibrated with temperature changes.

"In older electric meters, the power line's 60 cycles/second are averaged together to rotate the disk. The aluminum disk is incapable of detecting each cycle in the 60 cycles/second. In smart electric meters, EACH cycle in the 60 cycles/second power consumed is measured. Nothing is missed.

"So why do smart meters produce higher readings?…In fact it's related to what appliances you have in your home. Mainly, this has to do with electric motors. With furnace fans and compressors used in refrigeration, there is a very high

starting current. With a small window or table top electric fan, starting current is relatively insignificant. For refrigeration appliances, window air conditioners, furnace blowers or central air conditioning, starting current is quite high, often several times higher than the running current listed on the nameplate or label."

Perhaps all of this is why according to a survey by Toronto Hydro, "80% of homeowners with Smart Meters reported price increases on their bills, which is the exact opposite of what the Smart Grid promised to deliver." (For health problem associate with SMs, look at my recent article in the Durham HERALD-SUN or Raleigh NEWS & OBSERVER.)

(Note: NWV readers, please don't forget that the hospital here gave my mother the wrong medicine, causing her to be unable to walk the last 4 years thus far. Besides doctors' bills, etc., this has cost me $31,000 per year, which has drained my life savings about 90%. Please help us if you can, and may God bless you richly.)

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