

Remarks by CLEAR on the Filing of Puget Sound Energy Regarding Smart Meter Health and Testing for Docket U-180525

Health:

Studies used by PSE to support their position that there is no evidence of harm are a cherry picked, myopic selection of studies. The position relies heavily on a public inquiry in 2014 about the safety of wireless (Wi-Fi) in schools, which, according to the Washington State Department of Health, had very limited scope and was dated. The DOH: “Many schools are adopting Wi-Fi as an effective way to make the Internet available to more students. A Washington resident concerned about the safety of Wi-Fi in schools asked the Washington State Department of Health and the Office of the Superintendent of Public Instruction to review research about health effects from Wi-Fi devices.”

And,

“The two agencies reviewed all summary documents published in English by national or international health agencies since 2000. The reviewed documents included a thorough review of scientific literature on some aspect of human exposure to radiofrequency (RF) fields. Wi-Fi devices generate RF fields, as do cell phones, cell towers, radar, microwaves, and radio and TV broadcasts. None of the 16 documents reviewed found evidence that low levels of RF fields have any adverse health effects in humans. The Department of Health and the Office of the Superintendent of Public Instruction produced a draft report about Wi-Fi safety....”

Yes, the 16 studies looked at a sampling of research papers out of 1000’s. National Departments of Health in countries are known to try to avoid stepping on the toes of industry unless absolutely outrageous violations are occurring, so they doubtlessly downplayed findings that demand interpretation. They limited the search to English-only while the leaders in emf research are not in the US or England but countries like Sweden, Greece, Israel, Italy, and surprisingly strong: Iran and Turkey. An analysis that only included studies from the years 2000-2014, in English, is hardly a study of the majority of the data.

Left out of the surveys done by National departments of health in several countries in 2014 were thousands of peer reviewed studies. Also huge progress has been made in the last 5-10 years in closing in on causes, body mechanisms, controlling variables and these appear in peer-reviewed papers in a wide variety of sources. Prominently there is the National Toxicology Program’s multi-million several-year peer-review study, completed in 2018, of mice exposed to emf similar to a typical smart meter ‘s stream of emf radiation in frequency, duration, and intensity. It concluded that emf of cell phone type (therefore smart meter type) is a cause of cancer in hearts and brains of mice and, as mice are the gold standard for testing human reactions, a highly likely cause in humans. The American Cancer Society president saw this as a ‘game changer.” Details of the study: ntp.niehs.nih.gov. Also, the Ramazzini Institute study on mice (2018) backed up the findings of the NTP study, again omitted from the material the PSE and other power companies rely on. ([Link](#))

The WUTC needs to demand that companies update and extend their research to the vital and rich peer-reviewed results from many countries in many languages during the last 8 years and give detailed footnoted assurances of safety.

Meter Testing

PSE, as an example, being our power provider, provides a long list of meter testing protocols and standards that their Landis+Gyr meters have been subjected to and “passed.” But, as we are assured by

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power and electrical engineers, testing is done in the lab for certain narrow criteria, not in the real world a smart meter confronts: extreme temperatures, 24/7 humidity and rain moisture, without power surges, *with* constantly changing power draws of household appliances (instead of the steady draw of banks of 100-watt bulbs), and without faulty or near faulty bases that cause extremes of heat. No wonder the actual *observed* longevity in many programs over the years since 2011, for these outdoor mini-computers mounted on buildings, is only 5-7 years before breakdown, fires, or consistent errors. Also, we are informed that ANSI testing doesn't require a smart meter being actually pitted against a known standard measure of electricity, or an analog meter (the gold standard of electricity use measure), but rather, its algorithms and the like are tested for objective self-referenced validity.

In fact, the extensive objective testing at the University of Twente in the Netherlands revealed a wide range of erroneous measures: "Professor Frank Leferink of the UT estimates that potentially inaccurate meters have been installed in the meter cabinets of at least 750,000 Dutch households...rumours have been rife about electronic energy meters that give excessively high readings in practice...This prompted Prof. Leferink to investigate electronic meters, to see whether they can indeed give false readings. Together with co-workers Cees Keyer and Anton Melentjev from AUAS, he tested nine different electronic meters in this study. The meters in question were manufactured between 2004 and 2014. The meters were connected, via an electric switchboard, to a range of power-consuming appliances, such as energy saving light bulbs, heaters, LED bulbs and dimmers. The researchers then compared the actual consumption of the system with the electronic energy meter's readings. In the experiments (which were entirely reproducible), five of the nine meters gave readings that were much higher than the actual amount of power consumed. Indeed, in some setups, these were up to 582 percent higher. Conversely, two of the meters gave readings that were 30 percent lower than the actual amount of power consumed." Link here: [Click](#).

The WUTC needs to require "real world" testing of smart meters along with a company's litany of standard meter tests "passed."