



This is a report on the review of the California Council on Science and Technology document, “Health Impacts of Radiofrequency from Smart Meters”. I am a public health physician and former Dean of the School of Public Health at the University at Albany. I have been involved in review and analysis of studies on electromagnetic fields, including radiofrequency fields, for many years. I served as the Executive Secretary to the New York State Powerlines Project in the 1980s, and have published several reviews on the subject and have edited two books. In addition I was invited to present to the recent President’s Cancer Panel on the subject of powerline and radiofrequency fields and cancer.

This document is not an accurate description of the state of the science on the issue of radiofrequency fields, and is full of inaccuracies. My specific concerns are as follows:

1. The benefit of the smart meters is entirely to the utilities, and is economic in nature. If they install smart meters they can fire those individuals who at present are employed to go around reading meters. Thus this is a job-killing proposal, and will increase unemployment in a state that already has too much.
2. When a smart meter is installed residents have no choice in the matter nor ability to avoid exposure. But every individual has the option to use or not use other personal wireless devices, until more is known about health consequences of chronic RF exposure. There is a major difference between an exposure which an individual chooses to accept and one that is forced on individuals who can do nothing about it.
3. The statement “The potential for behavioral disruption from increase body tissue temperatures is the only biological health impact that has been consistently demonstrated and scientifically proven to result from absorbing RF within the band of the electromagnetic spectrum that smart meters use” is totally wrong. In the first place there are many adverse health effects other than “behavioral disruption” demonstrated as a result of tissue heating. The evidence for increased risk of brain tumors, acoustic neuromas and parotid gland tumors in individuals who have used a cell phone for 10 years or more is consistent, and the tumors occur predominantly on the side of the head where the phone is used. There is also strong and consistent evidence for increased risk of leukemia in individuals who live near to high power AM radio transmission towers, even though this report characterizes such exposures as being “quite low” and show in Figure 7 that they are lower than the RF fields from smart meters.
4. The statement “The scientific consensus is that body temperatures must increase at least 1°C to lead to potential biological impacts from the heat” is totally wrong, and makes it obvious that no persons with medical or biological expertise participated in this report. Every enzyme system in the body is exquisitely sensitive to temperature, and increases activity by even a fraction of a degree increase in temperature. In fact all RF generates heat, and what is defined as “non-thermal” is only a function of our ability to measure the temperature increase.
5. The statement “While concerns of brain cancer associated with mobile phone usage persist, there is currently no definitive evidence linking cell phone usage with increased incidence of cancer” is incorrect. The evidence is strong and consistent among studies looking at long-term and intensive use of cell phones. The AM radio studies mentioned above are also relevant, particularly because like smart phones radio transmission towers give whole body radiation, not just to the head.
6. The statement “There currently is no conclusive scientific evidence pointing to a non-thermal cause-and-effect between human exposure to RF emissions and negative health impacts is



inaccurate, and depends totally on what one defines as conclusive". In biology and medicine there is nothing that is 100% proven. We rely on statistical significance and weight of evidence when drawing conclusions about health effects. When one uses these definitions there is conclusive scientific evidence for adverse health effects in humans.

7. The evidence for adverse effects of radiofrequency radiation is currently strong and grows stronger with each new study. Wired meters with shielded cable do not increase exposure. The report clearly indicates that "smart meters could conceivably be adapted to non-wireless transmission of data. However, retrofitting millions of smart meters with hard-wired technology could be difficult and costly." Clearly the answer to this dilemma is not to install wireless smart meters to begin with.

Thank you for the opportunity to comment on this faulty report, and on the general issue of smart meters. Their use is unwise from both a public health point of view, which is where my expertise lies, but and also from a purely short and long-term economic point of view.

Yours sincerely,

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