

**RE: Commentary on Panel Hearings for DPU Docket 12-76**

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**I. Introduction**

Radiofrequency-emitting smart meters and the wireless smart grid constitute an over-engineered, wrong, and destructive technology. Wireless smart meters expose the public to unprecedented risks, in violation of local democracy. It is irrefutable that radiation from cellphones, cell towers, smart meters, "Wi-Fi" and other devices and infrastructure can cause damage to both humans and the nature environment, regardless of industry protectionists like MA DPU testifier Dr. Peter Valberg's attempt to deny evidence of adverse impacts.

The DPU would be negligent in its responsibility to insure safe and reliable delivery of electricity if it were to continue to discount, ignore, and not investigate the suffering and harm already being reported by Massachusetts ratepayers, in part due to increasing, involuntary exposure to utility-generated wireless radiofrequencies.

Because many residents are literally in the dark about the ways in which microwave radiofrequencies have been introduced into the environment, the true cost in adverse health and environmental impacts remains obscured.

The juxtapositions of frequencies employed have not been proven safe, despite industry claims to the contrary.

In addition, the DPU, utilities, and legislators are violating the trust of residents by both endorsing and conducting human experimentation without knowledge or consent.

## **II. Testimony by Dr. Peter Valberg of Gradient concerning the safety of non-ionizing radiation should be discounted in its entirety.**

A. The DPU did not protect the safety and health of the state's utility customers by enlisting the expertise of Dr. Peter Valberg. Dr. Valberg has made a career misrepresenting safety science on behalf of the cigarette, asbestos, and hexa-chrome industries, and should be rejected as an expert witness on ethical grounds. In his book, *Doubt is Their Product: How Industry's Assault on Science Threatens Your Health*, author David Michaels exposes outfits like Dr. Valberg's company, Gradient. "They combine science with public relations to help clients avoid regulation and litigation.... The intent is to cast doubt on real science. The industry has deep roots in the fight over tobacco." In fact, Dr. Valberg is literally a tobacco scientist, having misrepresenting health and safety science on behalf of the cigarette, asbestos, and hexa-chrome industries.

The link "<http://microwavenews.com/docs/mwn.11-06.CT.pdf>" exemplifies Dr. Valberg's work, which was rejected by the Connecticut Department of Health. Dr. Valberg is also featured in the soon-to-be-released French documentary film *Microwaves, Science and Lies*, which exposes how he influenced the World Health Organization's cancer research on behalf of the telecommunications industry.

B. Dr. Valberg did not disclose a financial conflict of interest. He previously testified for National Grid regarding the construction of a 115 Kv transmission line from Millbury to Tower 510.

<http://www.env.state.ma.us/dpu/docs/siting/09-136/12409nepptp6.pdf> The DPU did not question whether Dr. Valberg had financial ties to the industry. He is not an independent expert witness. If Massachusetts ratepayers had a say, it is likely that many would have objected to his participation in the panel.

C. The most egregious lie Dr. Valberg told under oath during the hearing concerns the World Health Organization's fact sheet 193. Dr. Valberg stated, *"Prior to coming to this meeting, I did look at the websites of many of these leading organizations, and I went just a day or so ago to the World Health Organization site. They have a publication called Fact Sheet 193, which is information on cell phones. And cell phones, we're talking about them here today because they have radiofrequency emissions as well. And all of these organizations, if you go to their websites, at the very bottom they'll say, more research is needed. I mean, that's almost like a mantra for any public health organization. More research is always encouraged, and I certainly would endorse that. But their conclusion, and this was a very recent Web page, but at the bottom it said the Web page had been last updated as of June 2011; and the bottom-line sentence was, "A large number of (PAGE 1062) studies have been performed over the last two decades to assess whether mobile phones pose a potential health risk. To date, no adverse health effects have been established as being caused by mobile phone use."*

What Dr. Valberg did not disclose is that with Michael Repacholi, he helped to craft misleading documents for the World Health Organization on behalf of the telecommunications industry, as shown in the photo here from the upcoming documentary film produced in France:

<http://smartgridawareness.org/2013/11/12/french-documentary-on-manufactured-doubt/>.

These misleading "fact sheets" could later be used by scientists-for-hire in testimony around the country, such as the MA DPU hearings.

Given that cellular phones are a recent phenomenon, studies from 2011 may already be out of date. The attempt by Dr. Valberg to undermine the

classification of RF as a possible human carcinogen in May of 2011, which included the radiofrequencies emitted by smart meters, should be disregarded by the DPU.

D. Dr. Valberg of Gradient testified *"and there's been a great deal of work done on cell phone antennas, and do they cause diseases, do they not cause diseases? And the epidemiology on the whole has been quite reassuring that the majority of the studies show that there is no effect."*

The US has not funded any antenna studies, but the evidence from other countries is not reassuring, including the Italian ruling against the Vatican. Italy's smart meters are hard-wired as a result.

E. Dr. Valberg testified, *"And if you look at the broad spectrum of both national and international public health agencies, they will say that they believe that the standards that we have today are in fact protective of health."*

Many international bodies recognize strong science to support stricter RF/EMF limits. The DPU was made aware of the Bio-Initiative Study, the Seletun Scientific Statement, and many other resources in statements previously submitted in opposition to DPU docket 12-76.

E. In regard to RF exposure limits, Dr. Valberg stated, *"I don't think we need to beat up on the FCC; there's the International Commission on Non-Ionizing Radiation Protection, there's the World Health Organization, there's the Swedish radiation protection authority, which is, I think, on the forefront of being fairly conservative. There's Health Canada, which has radiofrequency standards as well...."*

Radiofrequency limits in the Western Alliance nations (UK, US, Canada, NZ, Australia) cater to the military-industrial complex. Dr. Valberg refers to the science from the Western Alliance nations and industry front groups from several other countries that continue to cater to the industry and suppress evidence of harm.

F. Dr. Valberg misled the DPU in stating, *"And I would say that they are all in pretty much good agreement with each other, so it's not like the FCC is an*

*outlier somewhere. These scientific groups are composed of people who understand the science from all sorts of points of view, and they have arrived at quite similar radiofrequency protection standards.”*

Dr. Valberg did not disclose that he was only referring to the science in nations that do not recognize the non-thermal impacts of non-ionizing radiation. The radiofrequency exposure limits in some countries and hundreds of times lower than those in the United States.

G. Dr. Valberg stated, *“no plausible mechanism has come to the fore to show how this small amount of added energy can cause the biological processes to be disrupted”*

In his testimony before the DPU, without clarifying that harm has already been reported in a portion of the population, Dr. Valberg denied that several mechanisms of harm have been postulated, including calcium voltage gates. Dr. Valberg has not kept up with current research that contradicts the industry’s interests. In science, sometimes even if a specific mechanism is not understood, it does not negate consensus that a mechanism exists.

H. Dr. Valberg stated in his testimony to the DPU *“I think that in terms of individuals who have a feeling that they’re electrosensitive and so on — I mean, I’m not a medical doctor and so I’m not going to comment on anybody’s individual case,”*

His testimony has extended beyond his level of training and expertise and he is relying on industry published data to support his inaccurate claims. He is not a medical doctor and has never conducted research, diagnosed, or treated a patient suffering adverse impacts due to exposures to pulsed radiofrequencies.

In 2002, the US Architectural and Transportation Barriers Compliance Board (ATBCB) stated "The Board recognizes...electromagnetic sensitivities may be considered disabilities under the ADA if they so severely impair the neurological, respiratory and other functions of an individual that it substantially limits one or more of the individual's major life activities.

In 2005, the US National Institute of Building Sciences (NIBS) issued an Indoor Environmental Quality Report which concluded: "For people who are electromagnetically sensitive, the presence of cell phones and towers, portable telephones, computers, wireless devices, security and scanning

equipment, microwave ovens, electric ranges and numerous other electrical appliances can make a building inaccessible."

In 2013, the letter to the FCC from the American Academy of Environmental Medicine stated: "It became clear to AAEM physicians that by the mid 1990's patients were experiencing adverse health reactions and disease as a result of exposure to electromagnetic fields. In the last five years (2008-2013), with the advent of wireless devices, there has been an exponential increase in the number of patients with radiofrequency induced disease and hypersensitivity.....By recognizing electromagnetic sensitivity (statements of ATBCB and NIBS herein), the federal government and affiliated organizations are clearly acknowledging the existence of non-thermal effects."

**III. The DPU has not adequately involved of Massachusetts residents in its study of smart meters and smart grid devices and has not adequately addressed factors that would possibly be the most important to ratepayers, including cost, privacy, safety, health, and green-washing.**

Only a very small proportion of Massachusetts residents are questioning how it was that one of the same scientists who manufactured doubt over the link between cigarette smoking and lung cancer for decades testified concerning the health impacts of microwave radiation exposures from smart meters and other wireless utility infrastructure on February 27<sup>th</sup>, 2014.

MA residents were not given the opportunity to rebut his submissions because as of Friday March 21, the deadline for comments, his submissions were not posted on the DPU website, if he in fact submitted the documents including fact sheet 193 that he referred to in his testimony.

The over-riding reason why so few citizens have not raised questions and have not submitted commentary is not that this issue is a low priority in the lives of residents, or that they have abdicated trust and responsibility and authority to the DPU.

The issue is that ratepayers are unaware of what is unfolding, because little effort has been made to include them in the decisions that are being made concerning aggressive economic growth decisions flying under the radar as "environmental initiatives."

Many individuals, when informed about smart meters beyond industry spin,

are opposed to meter deployment due to privacy, invasion, hacking, and health risks.

Specifically concerning the DPU panel discussions, many consumers work all week and can't get to DPU to read the transcripts, which were not posted on the website. Due to lack of access of information about the proceedings, residents have not basis to provide commentary. While industry reps and DPU employees are paid for their participation, citizen testifiers have to take time off from work in order to participate in the hearings.

Furthermore, some individuals were intimidated by the initial document indicating that panel discussions would take place over a full week, believing that they would have to take a week's time off from other commitments.

No attempt was made to accommodate remote expert witness participation. As a green initiative, the working group could be expected by Massachusetts taxpayers to reduce the consumption of fossil fuels necessitated by long-distance travel and make some accommodation for remote participation.

For these proceedings in particular, the input of the marginalized group of electromagnetically hypersensitive individuals is essential. Many, in an attempt to preserve their lives, avoid the use of phones, computers, etc., and extra efforts must be extended in order to include them. The burden of this responsibility has fallen on citizen volunteer activists groups with limited resources.

Regarding the blocking of citizen participation, National Grid has attempted to invoke Section 704 of the Telecommunications Act of 1996 in the siting of microwave towers in residential neighborhoods in Worcester. Section 704 prevents the community from voicing environmental or health concerns, for an initiative that has been justified to address the health and environmental impacts of the fossil fuel model. This is both absurd and unethical.

#### **IV. Opt out provisions do not protect vulnerable residents, and are medically unethical.**

Across the country, debates concerning opt out provisions are reflecting the same circular, unreasonable, and unrealistic assumptions in a bullying paradigm that is not only unfair, but is threatening the survival of a growing portion of the population of the United States.

Massachusetts residents are already reporting harm, and in need of immediate relief.

Some residents have become drastically ill immediately when the meters are installed either in the neighborhood or on the residence, or when nearby infrastructure is installed.

Because no research has been conducted to determine why some residents appear to be more vulnerable to the radiofrequencies, or what variables in the home might be contributing factors, there is no data, but a portion of Americans are becoming sick and disabled due to the installation of this untested and unsafe infrastructure.

However, the residents are not reacting to the presence of the meters, they are reacting to the radiofrequency exposures. They not only need an opt out, they need to have their homes professionally shielded, and need compensation for loss of habitat, including access to jobs, health care, etc. in deployed communities.

In California and elsewhere, the utilities have claimed that the “opt outs” interfere with the integrity of the mesh network. Therefore, some sort of repeater has to be placed on a pole near the residence. The ratepayer is charged for the “opt out” but not protected from the radiofrequencies powering the network.

The installation of wireless meters and infrastructure is creating a refugee problem in the US, and is a human rights violation that is already unfolding in the Commonwealth of Massachusetts.

Rather than responding to insure the safety of these residents in regard to the safe delivery of electricity, the DPU appears to be moving ahead with the smart meter initiative, abdicating its responsibility to protect citizens from harm.

If the true cost of human suffering, health losses, and loss of habitat were factored in, the smart meters and smart grid would already have been recognized to be as unreasonable as the ideal of Star Wars weaponry during the Reagan administration in the late 1970's.

The question is not whether suffering due to the unwise adoption of wireless technologies at unsafe levels already exists.

The question is how much longer the health care costs, social costs, and misery of actual torture, enabled by ineffective and inadequate regulation, will be ignored.

There is no ethical basis for which the Commonwealth could consider surcharging individuals who require an “opt out”. Barring regulatory capture, the DPU should instead be advocating for protections and compensation for individuals who have been adversely impacted by utility expansion.

**V. Massachusetts ratepayers have already been misled concerning their increasing exposures to pulsed microwave radiofrequencies by utilities, and are still in the dark**

Within the breed of dogs, herders possess an enhanced capability to perceive an approaching electrical storm. Humans also vary in their abilities to perceive EMF.

As an individual with the capability to both hear and physically sense frequencies being turned off and on in many electric service areas across the Commonwealth, I am aware that technology experiments are already taking place, which have not been divulged to residents of the Commonwealth.

Professional grade RF detection meters have verified the presence of pulsed radiofrequencies in some areas, and in others, the frequencies are outside the range of the meter, but I am certain that if the appropriate spectrum could be quantified, professional grade equipment will verify my perceptions.

Residents were not informed when the AMR meters were upgraded to transmit continually over the last decade. Neither they nor their health care providers were informed that the home or work environment was being subjected to increased exposure to radiofrequencies.

If customers are given the opportunity to review their health records against accurate data from utility companies, it is probable that a pattern will emerge linking many chronic conditions to increased radiofrequency exposure.

I am currently living in NStar service territory, and multiple frequencies envelop our home off and on throughout the day and night. The frequency

disrupts the sleep of all three residents of the home, and is adversely impacting the health of several neighbors, each unique to the individual's constitution, weaknesses, and previous injuries.

The DPU, as a regulatory body,

- should be investigating the health and safety complaints of residents
- should possess equipment including a spectrum analyzer available to measure the frequencies being utilized
- should be monitoring the safety standards to ensure that they are appropriate and effective for the protection of residents (which they are not)
- should ensure that residents receive full disclosure concerning their exposures to RF-emitting utility infrastructure.

I believe that the pilot programs are misleading Massachusetts communities into perceiving that they are not yet receiving wireless smart meters and smart infrastructure, and that wide-scale installation is already taking place without the knowledge or consent of communities. This was also the case when I lived in Northern CA in 2009.

Furthermore, I believe that new technologies are being tested that do not require new smart meters, because existing meters have been upgraded in functionality, or, that WiMax technologies that piggy back on Wifi systems are being tested.

Utilities and their regulators have insidiously entered into an unprecedented realm of human experimentation without informed consent. No health studies have been conducted to indicate that wireless smart meters and smart grid technologies are safe.

Representatives from National Grid have indicated to Worcester residents in a radio interview with Jordan Levy of WTAG that the Public Utility Commissions in Texas and California conducted health studies.

As exemplified in the MA DPU listing the infamous Texas report in footnote 39 on page 31 of Docket 12-76-A, the DPU itself is misleading ratepayers and utilities in its statement: "A number of published reports on potential health effects of AMI suggest that RF from this technology is unlikely to harm health."

National Grid and NStar have also indicated to ratepayers that the new smart meters are using technology that has already been around for decades, misleading ratepayers to assume that smart meter exposure levels are comparable to AMR meters.

Finally, as municipalities begin forcing ratepayers to accept new wireless meters, false or outdated information is being distributed to residents.

For example, in regard to its water meters, the City of Lawrence states, “Many studies have been conducted on the potential for detrimental health effects due to this low level exposure and all authorities agree that there is no health risk associated with RF exposure from MTUs. While the FCC has imposed limitations to the amount of RF emissions from electronic devices including MTUs, they’ve found that RF exposure from these devices is “thousands of times below safety limits”. The California Council on Science and Technology, the World Health Organization, the Environmental Defense Fund, and the American Cancer Society all agree with the findings.”

These statements are untrue. There are no studies, the safety limits in the US are inadequate and placing human health and the environment in great danger, and the juxtaposition of frequencies has never been evaluated.

Faulty industry-generated comparisons between devices in common use, such as microwaves, cellphones, and baby monitors also must be carefully scrutinized.

## **Conclusion**

No longer is the smart meter debacle a question of just a handful of scientists successfully manipulating public opinion. In the countries that have allowed the military-industrial complex to set microwave radiofrequency exposure limits, wide-scale and pervasive flat earth science is being employed regarding non-ionizing radiofrequencies powering “smart meters” and the “smart” grid by industry, public utility commissions, and legislators, at the expense of human health and the environment.

The Massachusetts DPU and the larger body of policy and decision makers face an extraordinarily simple choice concerning DPU docket 12-76 and smart metering initiatives around the state.

The choice is to continue to mislead and manipulate the public, or to tell the truth, take responsibility and make amends for the damage that has already unfolded, and begin to forge a necessary course correction regarding the commoditization of the electromagnetic spectrum.

This challenge has been created by the Western Alliance countries in a relatively short period of time, but is reaching a point of critical mass with ubiquitous wide-scale installation and activation of wireless microwave devices in the utility industry.

In contrast to the US, India has lowered its RF limits after reviewing the scientific data. France is forging a course correction. “The French National Assembly has adopted a bill to limit exposure to electromagnetic fields (EMFs) generated by wireless technologies – cell phones, tablets, Wi-Fi etc. This bill will mean the following:

- A ban on Wi-Fi in all childcare facilities for children under the age of 3.
- Cell phone manufacturers will have to recommend the use of hand-free kits.
- A ban on all advertising targeting children under 14.

Children's EMF exposures are a particular cause for concern. Studies show that children's brains can absorb up to three times as much radiation compared to adults. A recent *International Agency for Research on Cancer* (IARC) report suggested that EMF exposures can be more devastating in children because their:

- Brain tissue is more conductive.
- Skull is thinner.
- Smaller brains and softer brain tissue allows radiation to penetrate more effectively.
- Potentially longer period of exposure due to use beginning at an earlier age.

This new French bill seems to have taken these concerns into account. ANSES already rang the alarm bell in October 2013, (as have American pediatricians). After evaluating more than 300 international studies, ANSES published a report highlighting the biological effects of EMFs on humans and animals concerning sleep, male fertility and cognitive performance. A spokesperson for ANSES stated that “the massive development of technologies relying on radiofrequencies, leading to intensive exposure of the

population, specifically more sensitive persons, which cannot be avoided”. They went on to say that the deployment of 4G “will be accompanied by increased exposure of the public”.

Switzerland and Liechtenstein and eight Member States of the European Union (Belgium, Bulgaria, Greece, Italy, Lithuania, Luxembourg, Poland, Slovenia) have adopted more restrictive limits than those of France and the US.

In Europe there is a growing recognition of the plight of persons suffering ill health from exposure to electromagnetic fields, a condition known as electrical hypersensitivity or electrical sensitivity. This new bill requires that the French government provide Parliament with a report detailing “the opportunity to create areas of limited electromagnetic radiation, notably in the urban environment”. It also requires that the conditions of electrosensitives be taken into account in the workplace.

Though this bill has to be adopted by the French Senate for it to be made into law, clearly this bill reflects the buildup of public opinion in France and other European countries that EMF exposures are dangerous and the public needs protecting.

How long before US public opinion is successful in introducing similar protective legislation?

The book *“Merchants of Doubt”* by Naomi Oreskes and Erik M. Conway describes “how a handful of scientists obscured the truth on issues from tobacco science to global warming.” The authors review the history of tobacco industry protectionists, who framed the health debate as scientifically ‘unproven.’ They gained decades of market share for the merchants of death—who knew all along the risks of their products.

Rather than recognizing that the radiofrequency limits in place are outdated and inadequate and devoting resources to the development of safe, reliable, cost effective, and ecologically balanced approaches to the distribution of water, gas and electricity as an essential service, resources are being squandered promoting unsafe and unsound technology.

The book *Merchants of Doubt* chronicles how science and ethics were derailed regarding acid rain, the argument over the ozone hole, the fight over second-hand smoke, revisionist attacks on Rachel Carson and DDT, the

global warming debate, and faulty justification for the Star Wars Strategic Defense Initiative.

In the case of the justification for Ronald Reagan's Strategic Defense Initiative, "strident anti-communists planted claims in the minds of Americans by using large scale publicity campaigns in the mass media." Little evidence was cited for unfounded claims of military superiority by the Soviets, "and when the available evidence did not support their claims, they found a way to force it."

In mandating smart meters as the cornerstone to grid modernization, the Massachusetts DPU, rather than insuring the safe and reliable delivery of electricity for all ratepayers, is as culpable as those who unrealistically attempted to justify the development and deployment of exorbitantly expensive and ineffective Star Wars anti-ballistic defense systems.

Health experts who participated in the WHO proceedings in 2011, including Dr. Anthony Miller, have stated that if the classification of radiofrequency were to be re-examined today, it would be 2A (probable carcinogen). Link to 4 minute testimony: <https://www.youtube.com/watch?v=wARxnaxrRKK>

Studies of ants and fruit flies in 2013 demonstrated significant biological impacts of radiofrequencies. Marie-Claire Cammaerts and Olle Johansson have recently published a paper looking at the movement of ants exposed to radiation from a DECT cordless phone, a GSM mobile phone, a smart-phone, WiFi and a wired computer (with and without WiFi active).  
<http://www.powerwatch.org.uk/news/20131021-ants-and-drosophila.asp>

*They write: "One very elegant feature of using ants as experimental animals is - as for other animal species, plants and bacteria - that they do not lend themselves to psychological models, such as mass media driven psychoses (Witthoft and Rubin, 2013). If they react to artificial electromagnetic fields, it is not because they have listened to radio broadcasts, watched the TV news or read columns in tabloids. No, then they do react to the actual adverse environmental exposure".*

It is time for the human experimentation without knowledge of consent to end.