

Slide 1

DPU Listening Session
MA DPU 20-69 November 20, 2020

Submission of
Patricia Burke

Thank you

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Independent Research

“ Smart meters have repeatedly been found to be the single most common trigger of new onset electrosensitivity (non ionizing radiation sensitivity), which can devastate the lives of those affected and has done so for many. “

- Dr. Beatrice Golomb, EHS researcher renowned for her work w/ Gulf War Syndrome

“ Smart meters have repeatedly been found **to be the single most common trigger of new onset electrosensitivity**

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Smart Meter Health Complaints

The diagram features a central illustration of a smart meter. Eight arrows radiate from the meter to different health complaints, each accompanied by a small cartoon character: Tinnitus (ears), Headaches (head), Fatigue (tired person), Eye Problems (eyes), Sleep Problems (person sleeping), Learning Problems (person at a desk), Heart Problems (heart), and Balance Problems (person falling). At the bottom, a cartoon character says, "No. Smart Meters = Friends and their side effects."

Courtesy EMF Safety Network. Many initial complaints came from Maine and California, 2 states where AMI meters were first deployed about 10 years ago

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Human Rights, Internationally

Other countries are already recognizing the need **to protect residents with EHS from exposures sourced from smart meters.**

And awareness of the RF/EMF issue is growing, around the world

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There have been decisions in smaller jurisdictions to honor requests for accommodation, without question, while other decision makers have been non-responsive. In MA, in one town the administrator allowed the customer to cut the wire to the transmitter, while in another town they cut off the water supply to the customer for not accepting a transmitting meter, even though she had recommendations from several physicians. Human rights protections are needed.

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Is AMI the Path Forward?

Some utilities are implying that smart meter installations are increasing, and that the industry is moving towards AMI.

Does it depend on who you ask?

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2015 - Indiana Rejected the Smart Meter Rate Case

FOX 59
State regulators reject Duke Energy's request for rate hike



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2018 New Mexico Rejected Smart Meters

SANTA FE NEW MEXICAN
Regulators reject PNM plan to install smart meters



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AMI growth tapering - HEALTH

AMI growth tapering?

A Congressional Research Service report in April described the introduction of AMI as "problematic."

"Smart meters have run into cost and performance issues and resistance to the technology (generally from concerns of some customers over potential health impacts of radio wave emissions)," the report said.

Figure 3. U.S. Smart Meter Installations Approach To Millions, Projected to Reach PE Billion by 2020

"Smart meters have run into cost and performance issues and resistance to the technology (generally from concerns of some customers over potential **health impacts** of radio wave emissions)," the report said.

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If Opt out, Analog vs. Radio Off?

"There are no analogs available"

"They don't make them anymore"

"The industry is moving towards AMI"

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NV Energy Offers New Analogue for Opt Out Meter; Analogues are Available

Smart Meter Opt-Out Information – August 10, 2020 Page 14 of 22

LITERATURE	CHIEF TAKEAWAYS	KEY POINTS	OPT-OUT OPTION	NOTES
Nevada PUC Order	On 8/10/2020, the PUC issued an order regarding smart meters.	On 8/10/2020, the PUC issued an order regarding smart meters.	Customers who do not wish to have smart meters installed on their premises may opt out of smart meter installation.	On 8/10/2020, Nevada Public Utilities Commission approved an order regarding smart meter opt-out. The order states that customers who do not wish to have smart meters installed on their premises may opt out of smart meter installation.
Nevada Consumer Rep.	On 8/10/2020, the PUC issued an order regarding smart meters.	On 8/10/2020, the PUC issued an order regarding smart meters.	Customers who do not wish to have smart meters installed on their premises may opt out of smart meter installation.	On 8/10/2020, Nevada Public Utilities Commission approved an order regarding smart meter opt-out. The order states that customers who do not wish to have smart meters installed on their premises may opt out of smart meter installation.
Nevada Department of Public Safety	On 8/10/2020, the PUC issued an order regarding smart meters.	On 8/10/2020, the PUC issued an order regarding smart meters.	Customers who do not wish to have smart meters installed on their premises may opt out of smart meter installation.	On 8/10/2020, Nevada Public Utilities Commission approved an order regarding smart meter opt-out. The order states that customers who do not wish to have smart meters installed on their premises may opt out of smart meter installation.

Are analogues available? It depends on who you ask. NV is providing **NEW** analogs as the opt out meter

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Opt Out Surcharges?

If Massachusetts chooses AMI as the path forward, despite on-going unaddressed concerns, would customers have the right *not* to have the AMI or RF-emitting meter installed?

Would they be surcharged to opt out? How much?

Should customers who require medical accommodation be surcharged?

What additional mitigation would be required to protect health-vulnerable residents and who would pay?

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Arizona Offers Analogs As Opt Out
(note in some cases analogues still in use, not AMR)

Smart Meter Opt-Out Information - August 18, 2023 Page 4 of 22

CITY/TOWN	ONE-TIME CHARGE	MONTHLY CHARGE	OPT-OUT OPTION	NOTES
Arizona - Tucson Water	\$0	\$0	Yes	...
Arizona - Phoenix	\$0	\$0	Yes	...

(Many other jurisdictions have true analogue meters still in service, unlike MA where AMR is widespread. Many ratepayers in MA have no idea what kind of meter they have or whether or not it transmits.

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Illinois, Indiana, Iowa Analog and Radio Off

CITY/TOWN	ONE-TIME CHARGE	MONTHLY CHARGE	OPT-OUT OPTION	NOTES
Illinois - Chicago	\$0	\$0	Yes	...
Indiana - Indianapolis	\$0	\$0	Yes	...
Iowa - Des Moines	\$0	\$0	Yes	...

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Nov. 13, 2020 PA Ruling:
No Meter Mandate (under appeal)

PECO: Billions of investment at risk with Pennsylvania court's rejection of smart meter mandate



Court decision just this month giving right to opt out
Billions of investment at risk





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Nov. 13, 2020 Pennsylvania Decision

Dive Brief:

- The Pennsylvania Public Utility Commission and Public Utility Consumers' Energy Choice Program asked the court to require PECO to comply with smart meter mandates for all electric customers to have a smart meter.
- In October, the Commonwealth Court of Pennsylvania ruled regarding whether the PECO smart meter mandate was a valid exercise of state power to force the utility to take the actions it had not wanted them. The court said the decision becomes relevant in connection with other utility and deployment.
- Many states offer customers the ability to opt out of smart meter deployment, but Pennsylvania utilities argue that the law does not provide that option. Some utilities have customer health check lines for smart meter deployment. But experts say it is typically a small number of customers who opt out.

MOST POPULAR

1.  Smart meter rollout plan is under review by regulators.
2.  Customers begin to opt out of smart meter deployment, raising concerns about the program's viability.
3.  Utility's smart meter rollout plan is under review by regulators.
4.  Smart meter rollout plan is under review by regulators.

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2019 Alliant - Iowa may not surcharge


Alliant loses bid to charge customers who reject smart meters

Business Wire | The Iowa Business Register | November 13, 2019 | 10:15 AM CST

Alliant Energy Inc. is expected to bid to charge more customers who decline to have smart meters used to track their electricity use.

The Iowa Utilities Board unanimously rejected Alliant's request to charge a \$10 monthly fee to customers who opted out of the utility's smart meters.

The board rejected Alliant's bid, a divided decision that allows a reduction in rate of all smart meters without charging more fees. Alliant already charges a surcharge for non-rolling meters in 40 percent cases, the board said.

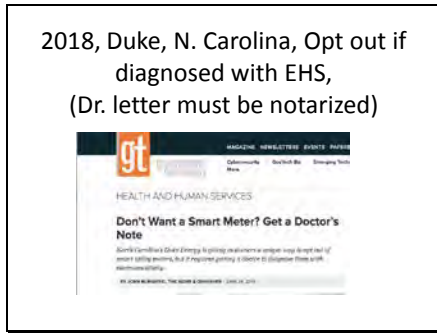


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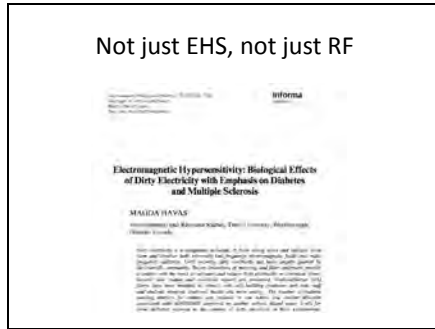
The requirement for a notarized Dr's note has proven extremely burdensome for consumers; Some early opt out fees were excessive and punitive, the trend is diminishing

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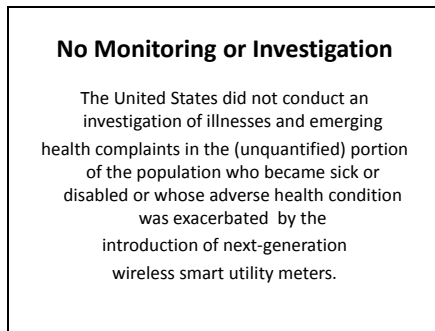
Utilities and utility regulators would be demonstrating tremendous foresight by becoming educated by non-industry and leading edge researchers who are actually working with patients

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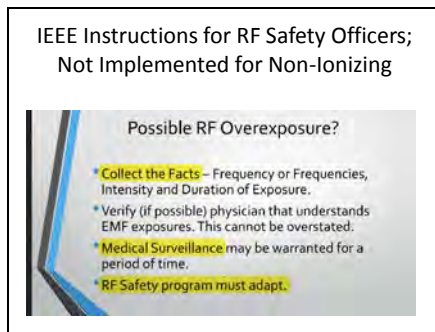
There are 2 issues; power quality and RF exposure. Many health conditions appear to be impacted. Responsible decision making would require determining what percentage of MA residents may need to be accommodated (Lyme, MS, cancer, fertility, neurodegenerative)

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Financial considerations are being prioritized over human health and environmental concerns.

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We used to assume that ionizing radiation was also harmless, until it wasn't

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If the DPU does not have investigative expertise or responsibility, who does?

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“We have very serious ethical questions we need to ask. Is my need to talk to anyone, anywhere, more important than a child’s need to talk at all in a lifetime?”
 - Dr. Teryl Jelter re: Autism and EMF

Is the utility company’s “need” to transmit to and from every connection to the grid 24/7/365 more important than resident’s sleep, heart rate, and brain function?

What agency in MA is responsible for receiving and investigating complaints, for example, puretone noise violations and microwave hearing that disturbs sleep, thereby impairing immunity?

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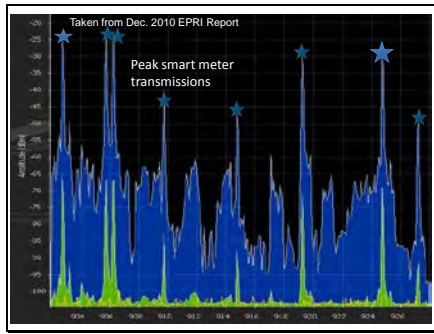
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People reporting injury; “field testing” by engineers reading measurements against theoretical standards, with a device that does not measure peaks



Testing from meters for RF signals.

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The intensity of the emissions is much stronger than what the utilities and the FCC admit. The actual peak (the stars) is 10,000 times the average measurement that the utility reports (the green spikes).

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“Mean Root Squared” Tobacco Science

- Is akin to comparing a sledgehammer and a hammer
- Is similar to saying that a strobe light shines less light, because it is going off and on (the meters only transmit 2% of the time)
- Is like saying that the average height of a tree in the forest is 1 ft. because you measure all the space as well as the trees and average the readings

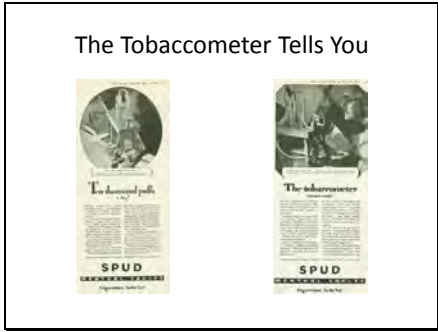
The cell walls and blood brain barrier don't take an average of the transmissions

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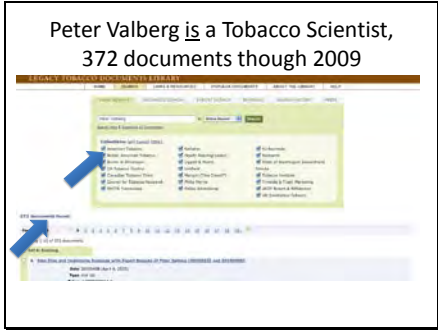
Field testing the meters

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This is similar to the equipment that is used to answer the question of whether smart meters are safe.

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And now there are even more submissions by Peter Valberg about tobacco, and how victims should not be compensated for injury, illness, and deaths. When second hand smoke was finally implicated by a Japanese researcher in cancer rates in widows of smokers, the tide turned. Second hand RF ????

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And there are more testimonials from Peter Valberg, also working for the wireless industry interests

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And there are more

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Once a document is introduced in one proceeding it makes its way to other proceedings. This has implications with MA DPU 12-76-B

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**Tobacco Scientist for Smart Meters:
Human body heat is “more energetic”
Maryland, Valberg**

Expert Testimony of Dr. Peter Valberg on Smart Meter Health Impacts

The radio waves from smart meters aren't dangerous to our health - our own bodies put out far more energy into the electromagnetic spectrum. Our bodies generate heat energy in the infrared spectrum, that can be seen by a "night vision" camera. These infrared waves are far more energetic than the radio waves used by smart meters, and the energy emitted continuously by our bodies (about 100 watts) is far greater than that emitted from the smart meter of one watt or less.

**The Electromagnetic Spectrum: Examples of How Wave Properties Change with Frequency:
Each column shows wavelength, frequency, and photon energy for each portion of the spectrum**

Radio	TV	Cellular	Wi-Fi	Bluetooth	Smart Meter	Visible Light	Ultraviolet	X-ray	Gamma
1000 m	100 m	100 m	100 m	100 m	100 m	100 m	100 m	100 m	100 m
300,000 Hz	300,000 Hz	300,000 Hz	300,000 Hz	300,000 Hz	300,000 Hz	300,000 Hz	300,000 Hz	300,000 Hz	300,000 Hz
300,000 J	300,000 J	300,000 J	300,000 J	300,000 J	300,000 J	300,000 J	300,000 J	300,000 J	300,000 J

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**Tobacco Scientists Testifying for
Industry to NCSL
(National Conf. of State Legislators)
“Dr. Valberg”**

Emerging Issues

Mike Olsak
VP Strategic Initiatives & General Counsel
Utilities Telecom Council

NCSL 2012 Energy Policy Summit
August 4, 2012

**Smart Meter Safety
Expert Testimony**

Dr. Valberg, testifying before the Maryland PSC stated:
“I’ve not and I’ve not any” adverse health consequences indicated from exposure to RF fields & levels below the international guidelines or records into included in the international guidelines on the existing scientific literature.”

Dr. Vance Blinnickler and Dr. William A. Bailey testifying before the Public Utility Commission of Nevada
“... the evidence is limited but appears to show that microwave fields do cause... The likelihood of potential risk factors.”

We have an entire industry built on the opinion of several mercenary scientists.

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Monitoring and Testing?

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Opt Outs?

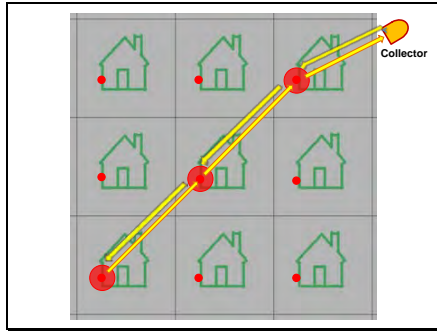
Opting out from a smart meter doesn't protect health-vulnerable residents in multi-family housing, or from neighboring meters, or in densely settled neighborhoods.

Additional shielding and mitigation is necessary.

Is an opt out the equivalent of low tar and nicotine cigarettes?

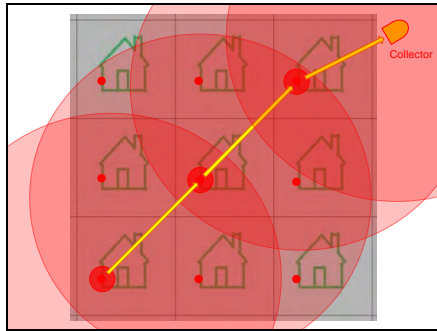
We shouldn't be surprised if this is the case, because the smart meter paradigm is based on the opinion of leading tobacco scientists.

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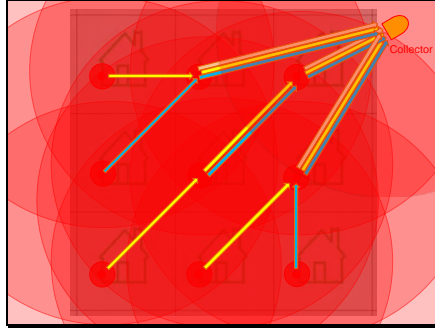
The meters pass data from one house to another, and can take many different paths.

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The globe of radiation emitted spreads in all directions. Where the globes overlap, there is a "hot spot" of higher-than-expected radiation.

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Simultaneous transmissions overlap, creating a cloud of radiation, sometimes called 'electrosmog'. The houses closest to the collector are relaying almost constantly, generating the most radiation.

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Are there health concerns with powerline communication? (is this Unifit?) [Smart Meter \[eiwellspring.org\]](http://SmartMeter[eiwellspring.org])
Who monitors?

Michael J. Kelly, M.D., M.P.H., Director, National Center for Environmental Health, U.S. Department of Health and Human Services
Michael J. Kelly, M.D., M.P.H., Director, National Center for Environmental Health, U.S. Department of Health and Human Services
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Michael J. Kelly, M.D., M.P.H., Director, National Center for Environmental Health, U.S. Department of Health and Human Services
Michael J. Kelly, M.D., M.P.H., Director, National Center for Environmental Health, U.S. Department of Health and Human Services

If consumers and their health care providers are not cognizant of changes in the delivery of their electricity, symptoms may be attributed to other causes. Many physicians are not yet trained to recognize EHS, and like the tobacco wars, when Drs recommended cigarettes to their patients for a sore throat, telehealth connectivity is being valued without questioning if the benefits can be achieved via hardwired connections, and not 5G and wireless.

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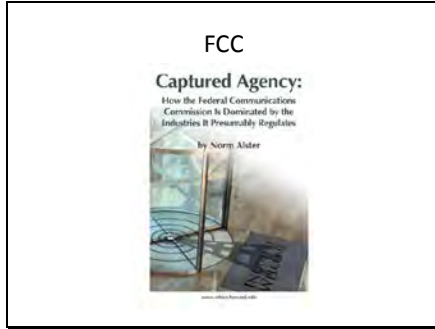
If We Don't Investigate, We Won't Know

Or, determine if the grid is acting as an unintentional antenna for frequencies from other sources such as weather and satellite communications, and call on the FCC to take action?

Or, is it the combination of frequencies from water meters, gas meters, electric meters, and connected devices in the home that has brought some to the breaking point?

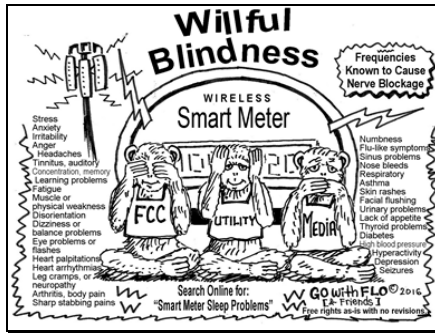
Again, Smart meters have repeatedly been found to be the single most common trigger of new onset electrosensitivity, by independent researchers who are not tobacco scientists.

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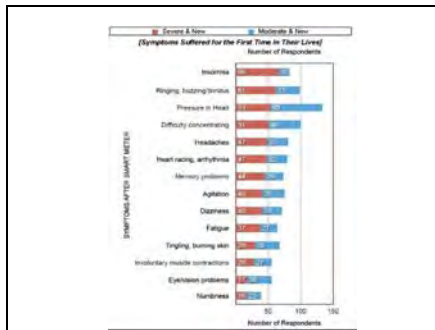
It appears that regulatory capture is operating at many levels. When it is in place at a federal level, it is up to other responsible decision makers the challenge corruption and suppression of legitimate science.

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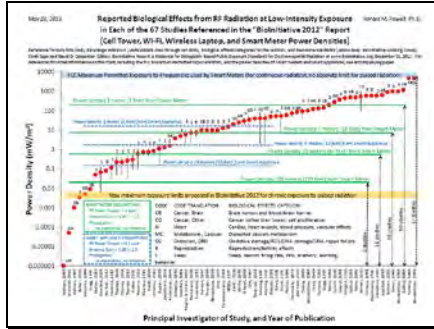
Courtesy Flo Freshman

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Symptoms Resulting from Exposure to Smart Meters | Smart Grid Awareness

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- WHAT UTILITIES USUALLY TELL THE PUBLIC**
1. Smart Meters are low power, therefore, not harmful
 2. Smart Meters emit less RF Radiation than cell phones
 3. Smart Meter emissions are a fraction of FCC Guidelines
 4. Smart Meters transmit 4-6 times a day for 45-78 seconds
 5. Smart Meters only record total usage like analog meters
 6. Smart Meters do not cause fires or "fry" electronics
 7. Smart Meter RF Radiation does not pose a health risk
 8. Smart Meter studies show no evidence of harm to health
 9. Smart Meters are safe to install on homes and schools: WHO 2B Carcinogenic label only applies to cell phones

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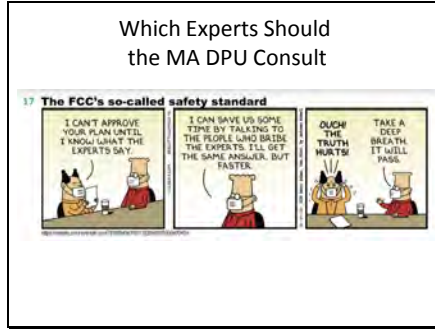
How many times a PG&E smart meter transmits in 24 hours – court order was required to obtain data

TABLE 2-1

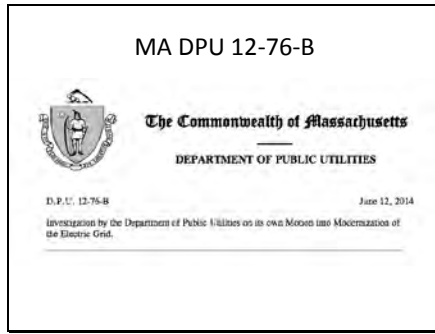
Electric System Message Type	Transmission Frequency Per 24-Hour Period:	Transmission Frequency Per 24-Hour Period:
	Average	Maximum (99.9 th Percentile)
[a]	[b]	[c]
Meter Read Data	6	6
Network Management	15	30
Time Synchron	350	260
Mesh Network Message Management	9,600	190,000
Weighted Average Duty Cycle	45.3 Seconds ^d	173.0 Seconds

Depending on where in the network a house is located (how close to a collector) will affect how often the meter transmits. Those closest in a large network will experience transmissions near the max; those further away will be more average. The point is, while a meter sends its OWN data six times per day, it is sending SOMETHING 10,000 times or more per day.

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Business as usual in MA, or not?

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**MA DPU 12-76-B; Inaccurate,
Fraudulent, or Negligent in Advancing
Corrupt Science**

MA DPU order 12-76-B contains the inaccurate, misleading not-science-based implication that FCC limits protect against both thermal and non-thermal impacts of radio frequency exposure, possibly introduced by tobacco scientist Peter Valberg of the product defense firm Gradient, working in concert with the DPU.

If a misunderstanding or misrepresentation or misinterpretation, the DPU can act, as the Lt Gov of Texas did when he learned about the corruption behind the Texas smart meter health report also referenced in MA. Or intentional by the industry and its partners?

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Here, "another commenter" Peter Valberg? misleads MA residents, because FCC limits do not recognize non-thermal impacts.

2. Adequacy of Existing Exposure Limits

These commenters assert that national and international exposure limits, including specifically the guidelines established by the Federal Communications Commission ("FCC"), are inadequate to protect the public from the effects of chronic, acute RF exposure, especially non-thermal effects. Another commenter disagrees and asserts that existing standards adequately protect public health, arguing that a number of national and international standards bodies agree on the adequacy of existing RF exposure limits, and that a number of these bodies have recently reviewed their limits. Evidence from peer-reviewed studies, communications by standards bodies, and conclusions from other jurisdictions do not support a finding that the FCC guidelines are inadequate to protect against either thermal or non-thermal effects of RF exposure.¹⁰

¹⁰ The FCC regulates communications by radio, television, wire, satellite, and cable without regard to form and its transmission. 47 C.F.R. §§ 1.1, 1.101. Under the Federal Policy Act of 1996, the FCC has responsibility for the development and enforcement of the national maximum RF exposure limits. 47 U.S.C. § 1502(a).

¹¹ See, e.g., Tr. A, at 963, 977-978, 1012 (citing exposure limits adequately protect public health, national and international standards bodies agree on the adequacy of

When researchers obtained evidence of who knew what when regarding wrongdoing by Monsanto, it was important to uncover the paper trail to assign liability. DPU 12-76B represents a significant step in the campaign to corrupt the science. Citizens have been left to create a paper trail. The DPU can take action on a federal level to correct this.

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FCC limits are thermal only

- 2002 EPA to Jane Newton of EMR POLICY INSTITUTE
- "The FCC's current exposure guidelines, as well as those of the Institute of Electrical and Electronics Engineers (IEEE) and the International Commission on Non-Ionizing Radiation protection, are thermally based, and do not apply to chronic, non thermal exposure situations".

If the entire DPU is not cognizant of the distinction between thermal and non-thermal impacts of RF exposure, ratepayers are not served or protected by competent regulators. The DPU should seek clarification about the origin and legitimacy of this issue.

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FCC does not protect against non-thermal impacts of RF

that results from an increase in body temperature. The FCC's exposure guideline is considered protective of effects arising from thermal mechanisms but not those of possible non-thermal mechanisms. Therefore, the guideline may mean that the guidelines protect human health from harm by use of all mechanisms to not protect.

These guidelines are based on findings of an adverse effect level of 4 watts per kilogram (W/kg) body weight. This SAR was obtained in laboratory research involving acute exposures that reported the body temperature of animals, including endocrine systems. The exposure guidelines did not consider information from additional sustained, prolonged exposures, i.e., from research showing effects with induction of the possible adverse effects in situations involving chronic/long-term (non-thermal) exposure. Relatively few chronic, low-level exposure studies of laboratory animals and epidemiological studies of human populations have been reported and the majority of these studies do not show obvious adverse health effects. However, there are reports that suggest that potentially adverse health effects, such as cancer, may occur. Since EPA's comments were submitted to the FCC in 1991, the number of studies reporting adverse effects associated with both acute and chronic low-level exposure to RF radiation has increased.

While there is general, although not consistent, agreement that the database on low-level, long-term exposures is not sufficient to provide a basis for adequately determining acute, emergency guidelines also suggests that their adverse effect level is based on an increase in body temperature and do not claim that the exposure limits protect against both thermal and non-thermal effects. The FCC does not claim that their exposure guidelines provide protection for exposure to which the R.F. SAR limit does not apply, i.e., exposures below the 4 W/kg threshold level that are chronic/long-term and sustained. However, exposure that complies with the FCC's guidelines generally has been represented as "safe" by many of the RF industry operators and service providers who have sought such limits, even though there is uncertainty about possible risk from non-thermal, sustained exposures that may continue for years.

When an error of this magnitude is created, is it an error, incompetence or corruption? How it is addressed once identified provides clarity.

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Where did inaccurate MA DPU claim about the FCC guidelines come from?

The claim that “another commenter” implied that the FCC exposure limits encompass protection against non-thermal impacts is not confirmed by the transcript of the testimony by Peter Valberg, nor did he provide references that appear in DPU 12-76-B. If Valberg did not participate behind the scenes in adding inaccuracies to 12-76-B, it came from the MA DPU.

Why did the DPU identify other testifiers (MACI, etc) but revert to the term “another commenter” and not clearly identify Peter Valberg of Gradient as the only testifier on the health panel seated to dismiss citizen and expert testimony in docket 12-76=B? Because apparently they thought they could?

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Peter Valberg at MA DPU, Feb. 2014, Fact Sheet #193



Who paid Dr Valberg and how much was he paid. How much money have MA ratepayers paid to Valberg and Gradient over the years to “sign off” against citizen health and environmental issues?

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Peter Valberg’s WHO Fact Sheet #193

“Summary Conclusions” Image from Video Clip

The WHO “Fact Sheet” # 193 is misleading to the public in that it fails to acknowledge:

- (1) the limited evidence that clearly exists for adverse health effects being associated with RF exposure that warrants a precautionary approach; and
- (2) the IARC 2B classification applies to RF emissions from all types of devices, not just “mobile phones.”

For an in-depth presentation of other serious RF exposure issues, watch the complete documentary film.

During the hearing, Peter Valberg claimed that research demonstrating harm due to RF exposure could not be reproduced.

Janet Newton of the EMR Policy Institute explained to the DPU how the confounding research was manipulated.

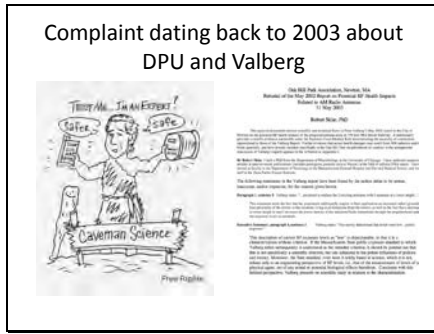
Peter Valberg attempted to sway the DPU that the 2B classification was only for cellphones. Again, is the DPU expert enough to know the science, or not? If not, how can that be corrected?

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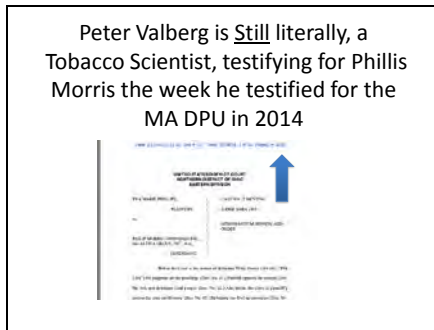
Peter Valberg and Gradient, based in Cambridge, sign off on health concerns for many utility concerns, and have been doing it for years in MA, not just for smart meters.

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From Oak Hill Park in Newton, 2003

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Peter Valberg is still a tobacco scientist, and was an expert witness in this case in 2014 concerning light cigarettes, the same week he was seated in Boston to discount testimony from Jean Lemieux of MA Asso. for Chemically Injured, Dr. Lisa Nagy, Nutritionist Thea Fournier, and others.

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Peter Valberg, Product Defense for the Industry and the MA DPU?

"They profit by helping corporations minimize public health and environmental protection and fight claims of injury and illness. In field after field, year after year, this same handful of individuals and companies comes up again and again... They have on their payrolls (or can bring in on a moment's notice) toxicologists, epidemiologists, biostatisticians, risk assessors, and any other professionally trained, media-savvy experts deemed necessary. They and the larger, wealthier industries for which they work go through the motions we expect of the scientific enterprise, salting the literature with their questionable reports and studies. Nevertheless, it is all a charade. The work has one overriding motivation: advocacy for the sponsor's position in civil court, the court of public opinion, and the regulatory arena [where these studies benefit their sponsors] not because they are good work that the regulatory agencies have to take seriously but because they clog the machinery and slow down the process. Public health interests are beside the point. Follow the science wherever it leads? Not quite. This is science for hire, period, and it is extremely lucrative."

Are consumers wasting their time testifying before public utility commissions who have agreed to accept compromised testimony as truth?

Slide 68

Not as "Safe" as Claimed

	Half Truth	Whole Truth
FCC RFR limit	Far below limit of 600uW/cm2	Bioeffects at 0.002 -10uW/cm2
Tiny bit" of RFR	Ave of 9uW/cm2 over 30 mins.	Peak is 100,000 to 1 mil X's backgrnd
Emits <cell phone (CCST vs Hirsch)	Using faulty numbers & approach	sm mtr 100 X's cell phone
Very low duty cycle	Only "on" a few mins/day in total	Transmits every 1/2 to every 9 secs.

Instead of continuing to test the devices against theoretical engineering measurements, we need to pay heed to what is happening to customers when exposed to the technology. Who is going to have enough integrity to do this?

Slide 69

Don't Ask Don't Tell?

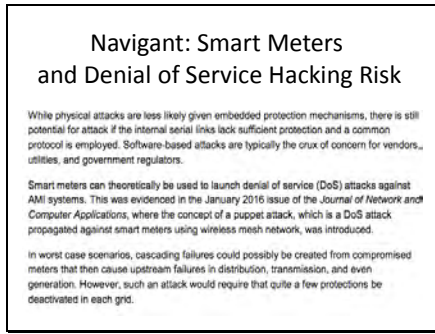
Symptoms of wireless toxicity

Slide 70

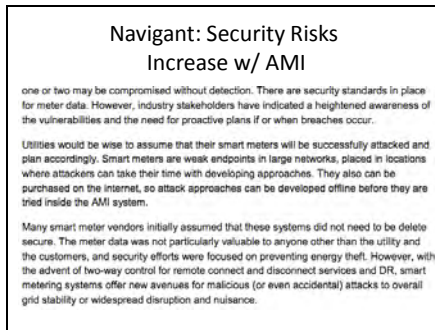


Consulting Firm late 2019 Report

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Slide 72



Slide 73

AMI vs. AMR Safety and Security

As the meters become MORE intelligent, including the option for the remote on/off function, and/or any communication with devices in the home or on the premises, they become MORE, and not less, subject to hacking and other security concerns, as well as privacy.

For the industry, a blank check for security?

Slide 74

AMI Meter Lifespan vs. Planned Obsolescence

- In Canada, the Ontario Auditor General's report from 2014 stated: "The estimated useful life for a typical smart meter is 15 years, compared to 40 years for an analog meter. **The dis-tribution companies we consulted said the 15-year estimate is overly optimistic** because smart meters ... will likely be **obsolete** by the time they are re-verified as required by the federal agency Measurement Canada **every six to 10 years.**"
- Ontario Auditor General 2014 Report on the Smart Metering Initiative, available for review at <https://skyvisionsolutions.files.wordpress.com/2015/09/ontario-ministry-of-energy-smart-meter-initiative-audit-report.pdf>

What the manufacturers say vs. what really happens – what can MA build into its authorization to protect against obsolescence, including the possibility that the meters will be found to be harmful to health?

Slide 75

Look Beyond Manufacturer Claims re: Lifespan of Devices



The screenshot shows a webpage with a header 'Smart Grid Awareness' and a main title 'Security Risks and Technology Challenges Reduce Smart Meter Expected Lifetimes'. It features several images, including a smart meter, a warning sign, and a person working on a meter. The text on the page discusses the challenges of smart meter lifespans and the need for better security and technology.

Security Risks and Technology Obsolescence Reduce Smart Meter Expected Lifetimes | Smart Grid Awareness

Slide 76

Also, Carbon Footprint, E-Waste

- **Smart tech's carbon footprint** April 30th, 2020 | Matthew Barton | The Ecologist
- "Smart technology has been promoted as 'green' because it can help monitor and reduce carbon emissions and achieve energy efficiencies. But is this the full picture?"
- The embedded energy costs of communications technologies and voracious digital consumption are actually exacerbating global heating rather than helping prevent it, the recent Shift Project report, Lean ICT, Toward Digital Sobriety, suggests.
- The report recommends a shift from "intemperance to sobriety in our relationship with digital technologies" - basically the idea that individuals and companies could self-limit their purchase and usage of equipment. But this clearly runs counter to the financial imperatives of the big tech companies and their marketing strategies."
- <https://theecologist.org/2020/apr/30/smart-techs-carbon-footprint>
- **E-waste has reached massive proportions worldwide** July 6th, 2020 | James T Cross | Sustainability Times
- "One of the lessons the current coronavirus pandemic has taught us is that we depend on electronic devices more than ever, not least during prolonged periods of self-isolation. Smartphones, laptops, television sets, e-readers, refrigerators, air conditioners — they've all been supremely useful.
- The trouble is what happens to them once they are replaced by newer models. The answer: millions of electronic devices end up in the trash heap each year, adding to the already acute problem of electronic waste. Last year alone a staggering 53.6 million metric tons of e-waste was generated globally, which was 21% more than just five years ago, according to a report by the United Nations."
- <https://www.sustainabilitytimes.com/environmental-protection/e-waste-has-reached-massive-proportions-worldwide/>

And conflict mineral mining. Clean energy is ignoring economic justice/environmental justice issues by outsourcing harm to impoverished nations.

Slide 77

**MA DPU 11-129,
Worc Smart Meter Pilot**

Unresolved issues regarding the pilot remain a massive environmental justice issue in Worcester, especially in the Tory Fort neighborhood.

Slide 78

Data Driven Decision Making vs. Decision-Based Evidence Making

Did the Worcester National Grid smart meter pilot program demonstrate clearly to the public the danger of utilities and decision makers with access to the data from smart meters using it fraudulently to support a pre-determined outcome? Yes.

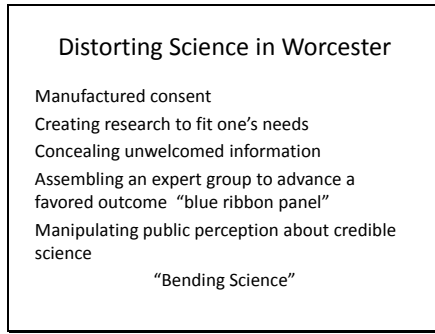
Shouldn't the DPU complete all of the unresolved dockets regarding the Worc. Pilot before considering more customer facing grid modernization plans? Including an audit and correction of the results reporting?

Slide 79

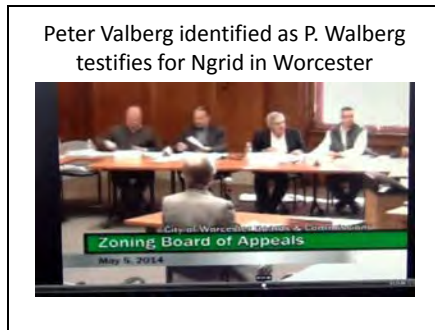


There is a smart meter behind the rose bush. The water tower above the neighborhood is laden with antennas. Which direction is the two way communication between the meter and the collector traveling? The plants are telling us.

Slide 80

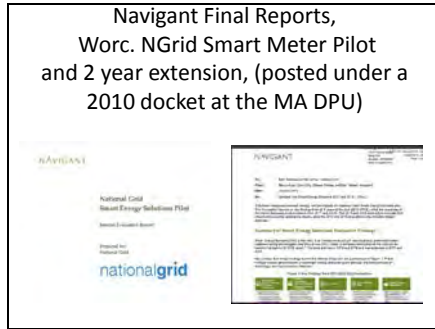


Slide 81



The Worc Board and Health, Assessor, and many elected officials bought into the pilot long before the residents even knew about it. There was NO advocacy for citizen or community rights.

Slide 82



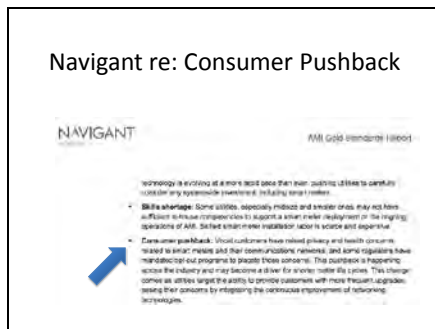
Do the reports constitute accounting fraud?

Slide 83



Navigant and Structure were "putting out fires" for the smart meter agenda from the start, and let's not even talk about the fires here. But see testimony from Nina Beety submitted for this docket 20-69

Slide 84



In 2005, Navigant was accused of overcharging Los Angeles County in a contract to work at Martin Luther King Jr.-Harbor Hospital in Willowbrook, CA. County auditors rejected over \$206,000 in expenses, including unauthorized first-class airfares to and from Los Angeles, and determined that Navigant had deleted from their to-do list a number of tasks and goals that they had failed to accomplish.^[4] Despite Navigant's work, King-Harbor failed to meet federal standards for Medicare funding in 2006,^[5] - wikipedia

Slide 85

AMI planned obsolescence-
blaming educated consumers,
(a utility's worst customer)

- Navigant claims that customer pushback is driving shorter smart meter life cycles, and that the industry is responding with more frequent upgrades to ease customer concerns.
- AMI planned obsolescence has *not* addressed *any* concerns about security, safety, cost, health, environment, privacy, human rights, community rights, or green-washing concerns. The newer meters are worse in every regard, with planned obsolescence and increased surveillance capability.

Navigant is also creating analysis for other grid modernization projects for the MA DPU

Slide 86

Smoking Gun - Data is Gold

Miles Keogh, director of grants and research at the National Association of Regulatory Utility Commissioners (2015):

"I think the data is going to be worth a lot more than the commodity that's being consumed to generate the data."

(Politico, *Smart grid powers up privacy worries*,
<http://www.politico.com/story/2015/01/energy-electricity-data-use-113901.html#ixzz3Na2wSGU>)

Wireless technology to enable data monetization and surveillance should be separated from access to essential services

Slide 87

Smoking Gun - 1976

"If the more advanced nations of the West are strict in the enforcement of stringent exposure standards, there could be unfavorable effects on industrial output and military functions."

REPORT: DIA – Biological Effects of Electromagnetic Radiation (1976) |

Slide 88

**Human Rights,
Non-consenting, Non-Benefitting
Populations**

- Dr. Mallery-Blythe notes, “While reducing exposure [to RF-EMR] is a nice idea, to be honest, when it comes to children, it’s a bit like giving them a low-tar cigarette. I don’t think it’s legally defensible in terms of proper protection for a group who is often times non-consenting and not benefitting. ...For that group, we should be looking at complete withdrawal from radiofrequency emissions and minimizing ELF emissions in the places they habituate – in schools and public places and empowering parents to do this at home.” ...including wireless utility meters

Many consumer groups may not benefit from time of use billing, but will be subjected to RF.

“Radiation without representation is tyranny.” – Pam Steinberg, health-vulnerable Worc. resident

Slide 89

**National Academies of Science
Inadequacies of RF Research**




The report is titled "Identification of Research Needs Regarding the Potential Biological or Adverse Health Effects of Electromagnetic Fields (EMF) or Frequency Fields (FF) or a Combination of Both" and was published by the National Academies of Sciences, Engineering, and Medicine in 2012. The report is 100 pages long and is available for free download from the National Academies Press website.

- Characterization of exposure to power lines, cellular, personal wireless, and other non-pointed wireless devices and RF fields from both indoor and outdoor sources
- Characterization of individual susceptibility factors and individual differences that cause variation and responses in different individuals
- Evaluation of the quantity of existing peer-reviewed literature to call papers and not missing items
- Prospective epidemiologic cohort studies of children and pregnant women
- Epidemiologic case-control studies and clinical studies, including high-dose work
- Prospective epidemiologic cohort studies of adults in a general population but incorporating subjects with features of high occupational exposure
- Human laboratory studies that focus on possible adverse effects on neurophysiology/behavior and that include a sufficient number of participants of the effect of RF electromagnetic fields on neural activity
- Evaluation of dose metrics on the molecular level
- Additional experimental research focused on the identification of potential biological and biochemical mechanisms of RF action

Many subgroups are not protected by inadequate RF exposure “theories”

Slide 90

**American Academy of Environmental
Medicine Calls for Immediate Caution**



The report is titled "Identification of Research Needs Regarding the Potential Biological or Adverse Health Effects of Electromagnetic Fields (EMF) or Frequency Fields (FF) or a Combination of Both" and was published by the American Academy of Environmental Medicine in 2012. The report is 100 pages long and is available for free download from the American Academy of Environmental Medicine website.

Physicians monitoring and treating patients over time observed the impact of wireless smart meter exposures.

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Asking individuals to charge their cars at off peak hours is not the same thing as time of use billing



The public has not been informed about the MA DPU's intentions about time of use billing, and the MA DPU has not considered the alternatives. Getting Smarter About the Smart Grid

Slide 92

Recommendation 1

Historically, in order to address the damage caused by smoking, and to protect the public, the World Health Organization had to clear its ranks of infiltration by the tobacco industry.

Should the MA DPU, the MA Clean Energy Community, and the Legislature clear their ranks of corruption, and incorporate emerging, independent, non-industry science in policy decision-making, subject to public review, transparency, and accountability?

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This Month, November 12, 2020 Mayflower Wind EMF Expert: "Dr. Peter Valberg"



How far is the DPU willing to go in continuing to authorize investments by referring to a tobacco scientist to sign off on all health and environmental concerns? What would the implication be of actually vetting projects honestly and responsibly for potential health and environmental impacts, and heeding complaints of harm in cooperation with the public?

Slide 94

Recommendation 2

- The MA clean energy community should not hang its hat on the outcome of the appeal of the Pennsylvania smart meter court case, *where customers have been given the right not to accept an AMI meter*.
- Like previous RF lawsuits, claims were preempted because conflict with the FCC's regulatory authority, and/or for economic reasons. This has nothing to do with whether the devices should carry consumer information about health risks, or whether they are safe.
- In addition, the surveillance capabilities of the meters and promise of monetization of data is influencing regulatory and legal decision-making.

Was MA DPU 12-76-B referenced in the PA case, or any other case? (The court did not feel that the complainants proved that they have been injured by the meters. This worked for tobacco for while too.)

Slide 95

Recommendation 3

Recheck the research. Who decides whether the MA DPU could or should issue a retraction regarding both the scope of the FCC limits, and the results report for the Worcester National Grid smart meter pilot program. Who decides if the DPU should be subject to independent audit and investigation? The DPU? Is docket 12-76-B being used in other proceedings?

Does MA need to create another agency to represent residents, that is not beholden to the industry?

Slide 96

Who Stops Fraud? Everyone

Given the domination by the industry and industry insiders analyzing the supposed benefits of smart meters and time-of-use-billing, the fraudulent data from Worcester ("98% retention rate") indicates to ratepayers that mistrust of industry assumptions and claims is warranted. There are many steps the DPU and MA utilities could take to restore public trust, including pausing the drive to AMI and clarifying the integrity of its assumptions and the data informing its choices. Massachusetts could build an reputation for integrity in energy policy.

Slide 97

Recommendation 4

The DPU and MA Utilities could join Boston in challenging the FCC for failure to protect the public, the environment, investment, government, and commerce, especially in light of further easing of safety standards to accommodate 5G and the immediate threat of proximal wireless infrastructure, prior to any addition authorization for wireless investment

- Section 704 of the Telecom Act of 1996 especially needs to be addressed. ⁴

4. No State or local government or governmental authority may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions in the event that such facilities comply with the Commission's regulations concerning such emissions. Section 704 of the Telecommunications Act of 1996.

The oral arguments for lawsuits pending against the FCC are scheduled for January 2021.

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RF and EMF exposure is a much larger issue than smart meter and household wiring emissions.

- City of Boston, Massachusetts testimony to FCC on inadequacy of (theoretical) RF limits, which have NEVER been tested.
- **"Boston believes that the concerns of the public are real and that the Commission has done a disservice to itself, local government, consumers, and even the wireless industry in failing to understand and respond to the broadly shared mistrust of the safety of RF emissions."**
- [Submissions to FCC on Human Exposure to 5G Higher Frequencies Docket 19-226- Environmental Health Trust \(ehtrust.org\)](#)

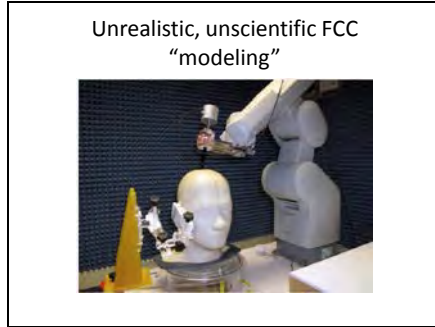
The utilities and DPU should ask whether the FCC has endangered the industry.

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Boston to FCC

- "The City, and many of its constituents, do not believe the cursory way in which the Commission simply reaffirmed its decades old standards in 2019 was based on a robust review of the record and an updating of the science. And until the Commission appreciates the educational component of its role as the nation's RF monitor, local governments, like Boston, will continue to be stuck in the middle as residents oppose wireless deployments for fear of the emissions, while the FCC and Congress have preempted local government review of RF standards."
- City of Boston, Massachusetts Submission to FCC,
- [Submissions to FCC on Human Exposure to 5G Higher Frequencies Docket 19-226- Environmental Health Trust \(ehtrust.org\)](#)

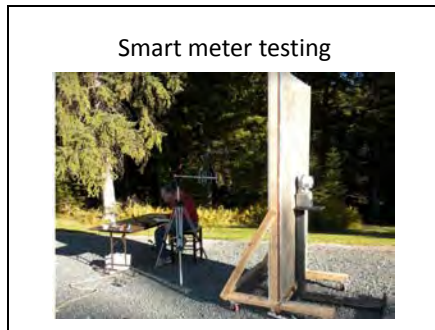
Slide 100



Slide 101



Slide 102



This is a model used for testing the impact of a stucco house on smart meter transmissions.

Slide 103

Recommendation 5

Should the DPU go back to the drawing board to look at grid modernization without time-of-use billing and wireless transmissions as the cornerstone, and focus instead on other alternatives including education and outreach regarding “shaving the peak,” with investment decoupled from utility desire to monetize data and widespread citizen surveillance? Is time of use already an outdated approach due to many concerns, including security, privacy, surveillance, cost, green-washing, environment, and health?

Slide 104

**Conclusion: Late Lessons
from Early Warnings**

“Clean energy policy” deserves and requires a sea change in Massachusetts and beyond. That means doing the difficult deep work to assess human health and environmental impacts, whether from close proximity to wind turbines or solar farms or telecommunications infrastructure, and clearing the regulatory agencies and political process of undue corporate infiltration and mercenary corruption of the science. Someone has to take the high road.

Slide 105

**Citizen Science and Independent
Science Is Far Ahead of Federal
Regulation, and Can Assist**

The screenshot shows a webpage with a header 'Building Smart Cities' and a sub-header 'The Opportunity for Smart Cities in Boston - An Update to Many'. Below this, there are two columns of links to various reports and articles. The left column includes links to 'Health Effects of Wind Turbine Noise', 'Public Health and Environmental Impacts of Wind Turbines', 'Citizen Science and Independent Science Is Far Ahead of Federal Regulation, and Can Assist', 'Health Effects of Wind Turbine Noise', 'Public Health and Environmental Impacts of Wind Turbines', 'Citizen Science and Independent Science Is Far Ahead of Federal Regulation, and Can Assist', 'Health Effects of Wind Turbine Noise', 'Public Health and Environmental Impacts of Wind Turbines', 'Citizen Science and Independent Science Is Far Ahead of Federal Regulation, and Can Assist', 'Health Effects of Wind Turbine Noise', 'Public Health and Environmental Impacts of Wind Turbines', 'Citizen Science and Independent Science Is Far Ahead of Federal Regulation, and Can Assist'. The right column includes links to 'Health Effects of Wind Turbine Noise', 'Public Health and Environmental Impacts of Wind Turbines', 'Citizen Science and Independent Science Is Far Ahead of Federal Regulation, and Can Assist', 'Health Effects of Wind Turbine Noise', 'Public Health and Environmental Impacts of Wind Turbines', 'Citizen Science and Independent Science Is Far Ahead of Federal Regulation, and Can Assist', 'Health Effects of Wind Turbine Noise', 'Public Health and Environmental Impacts of Wind Turbines', 'Citizen Science and Independent Science Is Far Ahead of Federal Regulation, and Can Assist', 'Health Effects of Wind Turbine Noise', 'Public Health and Environmental Impacts of Wind Turbines', 'Citizen Science and Independent Science Is Far Ahead of Federal Regulation, and Can Assist'.

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Before the DPU pursues two-way communication between utilities and consumer devices, MA energy policy needs two-way communication with all consumers, including the health-vulnerable and those already harmed.



Slide 107

Citizen Science and Independent Science Can Help

But every decision maker, and clean energy, conservation, and industry group must hold themselves accountable to seeking and speaking the truth, especially regarding human health and environment impacts, to avoid more late lessons from early warnings. Clean green energy is off the rails.

Thank you

Politicians also. If we are living through the equivalent of the tobacco wars, its time to choose sides.

Slide 108

Even though microwave radiation is invisible...

