



SMART METERS

VIRGINIANS FOR SAFE TECHNOLOGY, LLC

March 31, 2023

FAIR USE ACT DISCLAIMER

Disclaimer: The material contained in this presentation is for educational purposes only and any copyrighted material that may be used herein is distributed in accordance with the fair use act.

Copyright Disclaimer under section 107 of the Copyright Act 1976, allowance is made for “fair use” for purposes such as criticism, comment, news reporting, teaching, scholarship, education and research.

VA4ST'S MISSION

Email: virginiansforsafetech@protonmail.com

43 Town & Country Drive, Suite 119#125

Fredericksburg, VA 22405



AGENDA

- **WHAT IS A SMART METER?**
- **ITRON I-210+C AMI SMART METERS FOR VA 2022**
- **WHAT'S DIFFERENT ABOUT NEW AMI ELECTRIC UTILITY METERS?**
- **DEV'S SMART METER HAZARDOUS INSTALL PROCEDURES**
- **AMI DISTRIBUTION DIAGRAM**
- **MESH NETWORK**
- **TOP 3 EMF EXPOSURES THAT ARE DESTRUCTIVE TO HEALTH**
- **ARE AMI SMART METERS SAFE?**
- **COMMON SMART METER BIOEFFECTS**
- **STREETLIGHT AND IoT NETWORK CANOPY**
- **SMART METER RESOURCES ABOUT SMART METER SAFETY**
- **SMART METER TECH PROBLEMS**

WHAT IS AN AMI SMART METER?

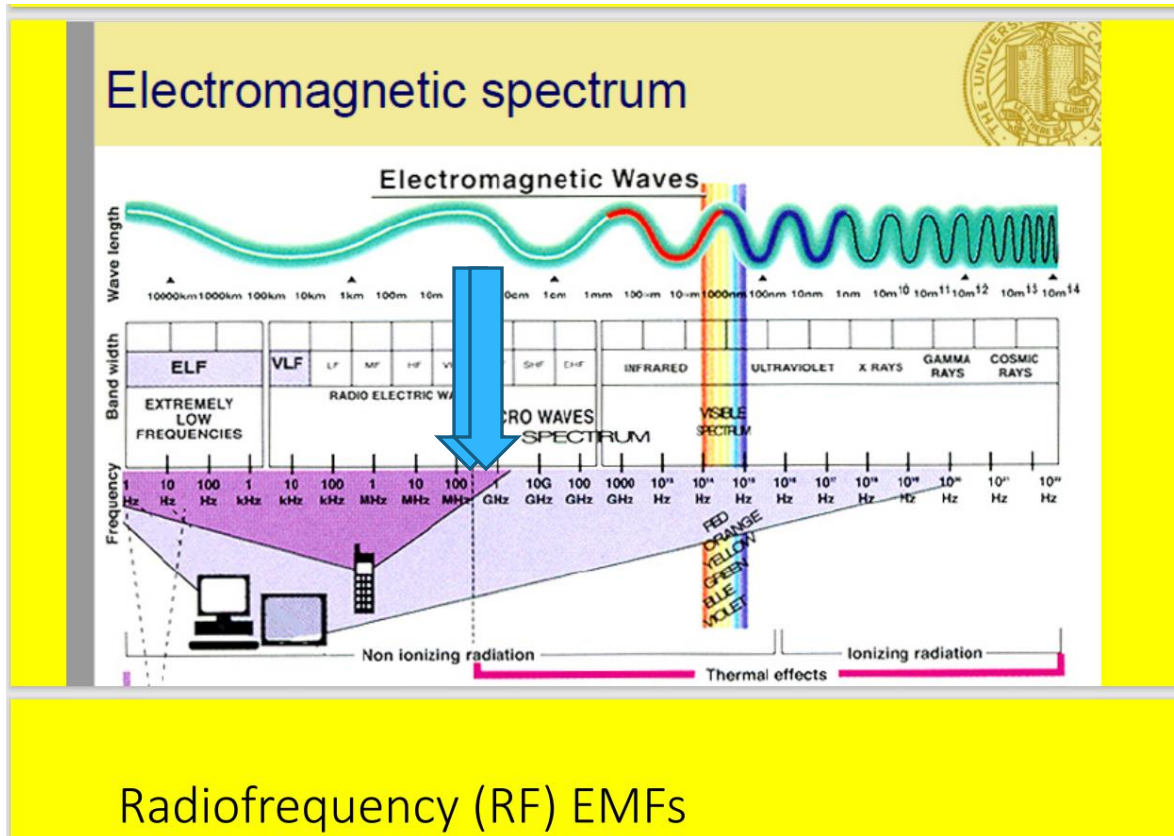
(Advanced Metering Infrastructure)

- An electric utility meter that measures electricity usage in intervals or at least every 30 minutes up to 190,000/day
- A 2-way radio device using 2 frequencies
- A data recorder and reporter of your private data
 - Electrical signatures reveal what you are doing hour by hour – data is mined by 3rd parties for sending you ads
 - Easily hackable, not cybersecure, burdens power grid
- IoT 5G microcell interfaces with 5G macrotowers
- **A safety and fire hazard without any building inspector or building code enforcement oversight**

WHAT IS AN AMI SMART METER?

A 2-way radio using 2 different frequencies in the electromagnetic spectrum

<https://ehtrust.org/wp-content/uploads/Dr.-Carpenter-AMI-Meter.pdf>



**Wi-Fi @
910 Mhz
2.4 Ghz**

WHAT IS AN AMI SMART METER?

- Examples of the information captured by smart meters include:
 - Energy usage, demand
 - Voltage, meter temperature
 - Real-time information regarding the operational status
 - Self-diagnostics
 - Power quality.....Dirty Electricity???
 - Condition of the electric grid at the customer premises
- Smart meters are equipped with a network interface card and communicate with each other, creating what is referred to as a mesh network. The higher the density of smart meters, the stronger the mesh network.

WHAT IS AN AMI SMART METER?

A smart meter is.....

*“unwanted by consumers, devoid of credibility
and mind-blowingly expensive”¹*

and

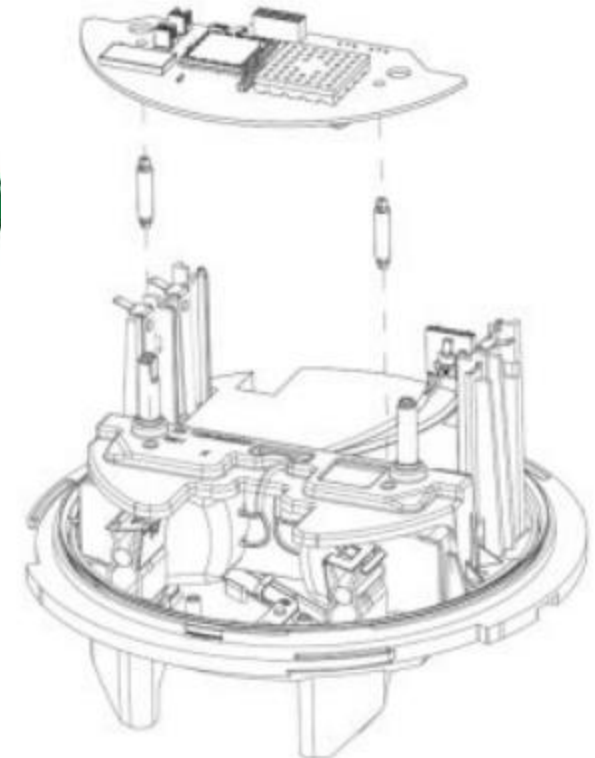
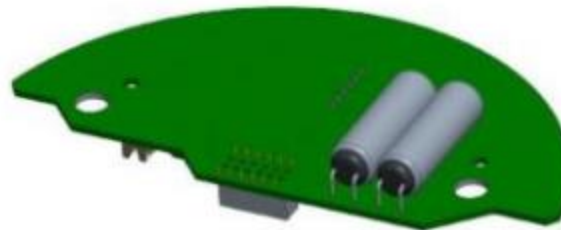
*“An Unjustified, Over-Engineered, & Expensive
Mistake”²*

^{1,2}<https://stopsmartmeters.org/2015/04/06/uk-business-institute-smart-meters-are-an-unjustified-over-engineered-expensive-mistake/>

ACLARA SMART METERS

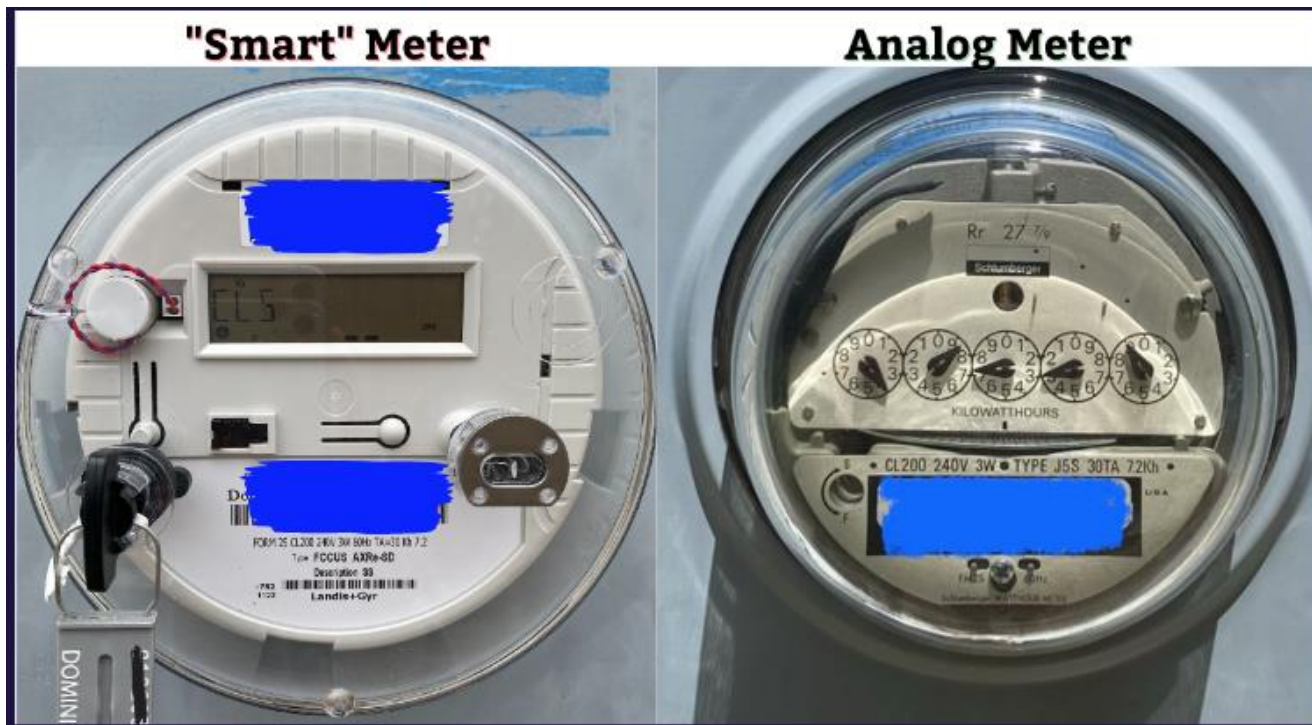
<https://manuals.plus/aclara/i-210c-smart-electricity-meter-manual.pdf>

➤ Aclara ITRON I-210+C AMI SMART METERS



WHAT'S DIFFERENT ABOUT NEW AMI ELECTRIC UTILITY METERS?

<https://virginiansforsafetech.org/say-no/>



DEV INTALLS METERS HOT!

- **“The meter upgrade will require only a momentary power interruption; no need for you to make an appointment or be present during the exchange” (Stated on Dominion’s Install Notice)**
 - Installing meters with the electricity on or “hot” creates multiple electrical hazards and unsafe conditions which can subrogate liability claims for personal injury to the property owner
 - DEV claims they are exempt from the National Electric Code in its entirety, including safety protocols
- Approved mainly due to time of use pricing structures
 - **Smart meters will never save customers money or energy!**
 - See <https://stopsmartmeters.org/?s=pricing> and <https://scc.virginia.gov/docketsearch/DOCS/6byy01!.PDF> (1/7/22)

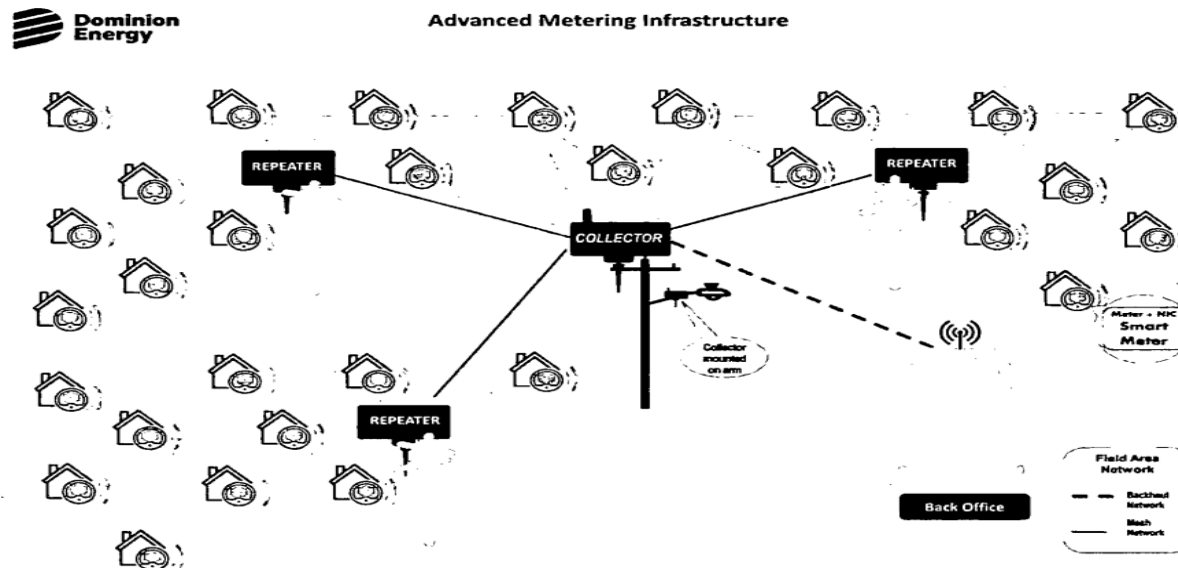
AMI DISTRIBUTION DIAGRAM

Source :

<https://scc.virginia.gov/docketsearch/DOCS/53vb01!.PDF>

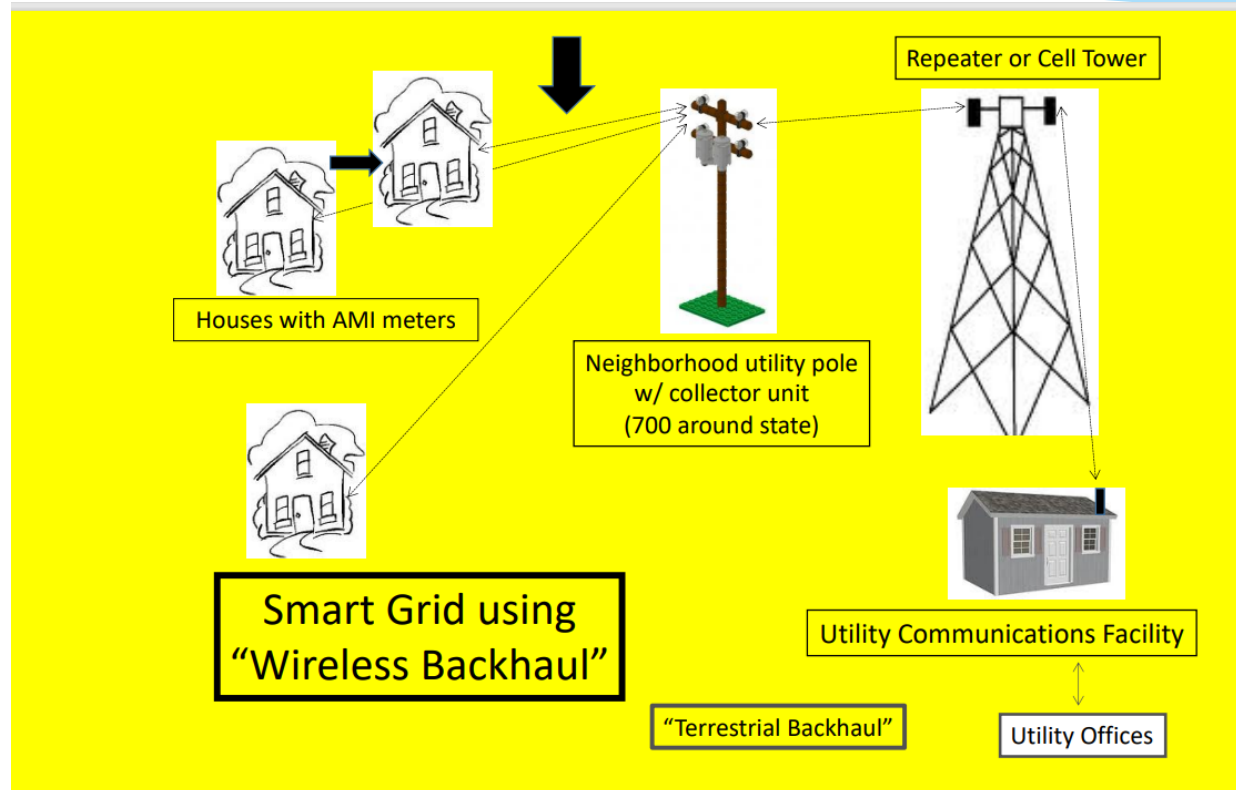
Company Exhibit No. ___
Witness: AJ
Schedule 1
Page 2 of 2

Figure 1: Advanced Metering Infrastructure



AMI DISTRIBUTION DIAGRAM

<https://ehtrust.org/wp-content/uploads/Dr.-Carpenter-AMI-Meter.pdf>



MESH NETWORK

<https://www.powermag.com/new-ge-digital-tool-part-of-grid-management-advancements>



MESH NETWORK

RF Mesh Diagram -2nd hand microwave radiation

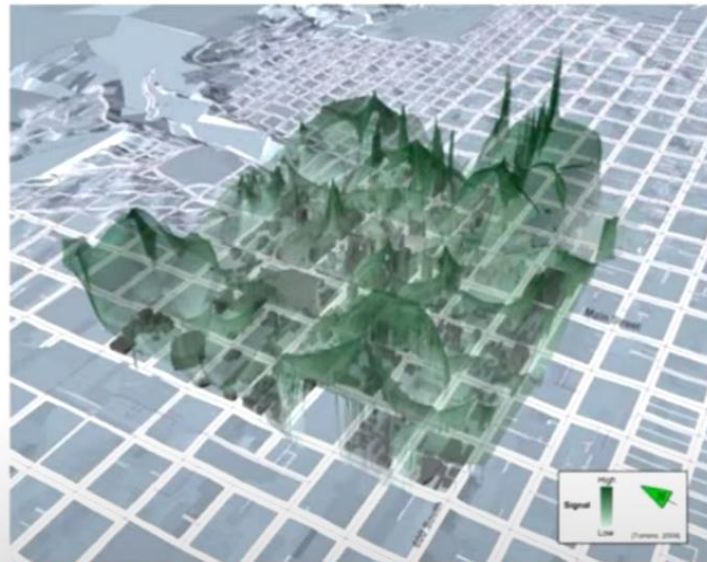
<https://eu.landisgyr.com/blog/5-considerations-for-advanced-metering-infrastructure?hsLang=en-gb>



MESH NETWORK SIMULATION

Electrosmog Smart Meter RF Mesh CAD Model
Air pollutant and Group 2B Possible Carcinogen
<https://www.youtube.com/watch?v=c-F3nf47kAs>

“SECOND-HAND” RADIATION MAP IN SALT LAKE CITY, UTAH



Smart Meter Deployments are Significantly Increasing Electrosmog

SOURCE: “Second-hand” microwave geography in Salt Lake City, Utah, Paul M. Torrens, Geography, Arizona State University

MESH NETWORK

<https://eu.landisgyr.com/blog/5-considerations-for-advanced-metering-infrastructure?hsLang=en-gb>



TOP 3 EMF EXPOSURES

➤ The top 3 EMF exposures that contribute to destructive health according to Dr. Klinghardt

Youtube video titled, “Dr. Dietrich Klinghardt - Smart Meters & EMR - The Health Crisis Of Our Time”

<https://www.youtube.com/watch?v=PktaaxPl7RI>

- Smart meters
- Mobile or DECT cordless phones
- Energy Efficient light bulbs that have a mercury vapor filling (CFL)

<https://pubmed.ncbi.nlm.nih.gov/22263702/>

University of Athens Study showed that 143 brain proteins are altered by the use of DECT cordless phones over an 8 month study

➤ Itron smart meter communication with LED street light canopies on sidewalks, every light is a transmitter

- LED Street Lights? What kind of RF exposures exist?
- <https://www.itron.com/na/solutions/who-we-serve/smart-cities>

TOP 3 EMF EXPOSURES

<https://pubmed.ncbi.nlm.nih.gov/22263702/>

University of Athens Study showed that 143 brain proteins are altered by the use of DECT cordless phones over an 8 month study

- *This type of exposure completely changed the DNA*
- *ALZ, glioblastoma, stress and brain metabolism problems can result*
- *“learning, memory and other functions of the mammalian brain were impacted by the microwave radiation, including the hippocampus, cerebellum and frontal lobe, at exposures below the ICNIRP (International Commission on Non-Ionizing Radiation Protection) safety guidelines”*
- *Recovery is only possible from avoidance of EMF's, especially during sleeptime*

Greek Researchers Show Crucial Regions of the Brain Related to Learning, Memory, Alzheimer's Impacted by Whole Body EMF Exposure in Animals
25.01.2012 by emily Category Electromagnetic Health Blog

A Greek scientific study led by Adamantia Fragopoulou and Lukas Margaritis has demonstrated important protein changes in the brain of animals following whole body exposure to RF electromagnetic fields, similar to the kind of microwave radiation emitted from cell phones, portable phones, WiFi and wireless computer equipment. The study, “Brain proteome response following whole body exposure of mice to mobile phone or wireless DECT base radiation”, was published in *Electromagnetic Biology and Medicine*, Early Online: 1-25, 2012 (See Abstract, below).

Important regions of the brain necessary for learning, memory and other functions of the mammalian brain were impacted by the microwave radiation, including the hippocampus, cerebellum and frontal lobe, at exposures below the ICNIRP (International Commission on Non-Ionizing Radiation Protection) safety guidelines. A total of 143 proteins in the brain were impacted by the RF radiation over a period of 8 months, providing new evidence for a potential relationship between everyday cell phone use, wireless transmitters and wireless computer equipment and electrosensitivity symptoms, such as headaches, dizziness and sleep disorders, as well as with tumors, Alzheimer's and even metabolic effects.

The study simulated 3 hours of cell phone exposure over eight months, 8 hours of DECT portable phone exposure over eight months, and included a sham exposure control group. The results showed both down regulation and up regulation of the proteins.

TABLE 1 Number of differentially expressed proteins across three major brain regions, following long-term electromagnetic radiation exposure to conventional mobile phone (M) and DECT wireless base (B).

Proteins	Hippocampus		Frontal lobe		Cerebellum	
	B	M	B	M	B	M
Upregulated	11	37	12	19	8	36
Downregulated	11	33	11	18	10	18
Total number of proteins changed	22	70	23	37	18	54

Several neural function related proteins (i.e. Glial Fibrillary Acidic Protein (GFAP), Alpha-synuclein, Glia Maturation Factor beta (GMF), and apolipoprotein E (apoE)), heat shock proteins, and cytoskeletal proteins (i.e. neurofilaments and tropomodulin), were shown to be impacted by the radiation, as well as proteins of the brain metabolism (i.e. Aspartate aminotransferase, Glutamate dehydrogenase), in nearly all of the brain regions studied.

<https://www.radiationresearch.org/news/greek-study-shows-regions-of-the-brain-related-to-learning-memory-alzheimers-impacted-by-emf/>

ARE SMART METERS SAFE?

<https://www.youtube.com/watch?v=PktaaxPl7RI>

Dr. Klinghardt @ 30:50 minute mark

- Electrosensitive and electroallergy are two different things, everyone is equally electrosensitive.
- Measurable parameter changes:
 - **TGF Beta 1 increases, inflammatory marker**
 - **MMP-9 increases, inflammatory marker**
 - **Copper level in the serum increases indicating chronic inflammation that is suddenly there**
 - **Hormone and the neurotransmitter abnormalization**
- “Smart meters do this. These changes are even with these people who don’t feel it, but some people have awareness” and others don’t, but the labs will look just as bad for both people living together.
- Children and unborn children are most impacted (RFR is concentrated on the inside of the womb)
- **Safe sleeping environment is 5 microwatts/meter squared**

ARE SMART METERS SAFE?

<https://healthybuildingscience.com/2013/02/18/emf-and-emr-conversion-formulas/>

RF Radiation - Regulations

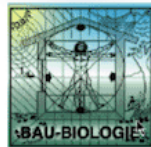


USA - FCC Guidelines
10,000,000 uWatts/m²
-Short Term 30 min, based on heat



BioInitiative Report
Precautionary ≤ 1000 uWatts/m²
10,000 x less than FCC

5 microwatts/meter squared



Building Biology SBM 2008
Austrian Medical Association
Magnetic Field ≤ 0.1 uWatts/m²
100,000,000 x less than FCC

RF Allowable Levels

ARE SMART METERS SAFE?

<https://jcsud.com/DocumentCenter/View/154/Smartmeter-2011-FCC-Safety-PDF?bidId=> , pg. 20

This bar chart is commonly used by power industries to prove smart meters are safer than cell phones, with no whole body exposure standardization considered

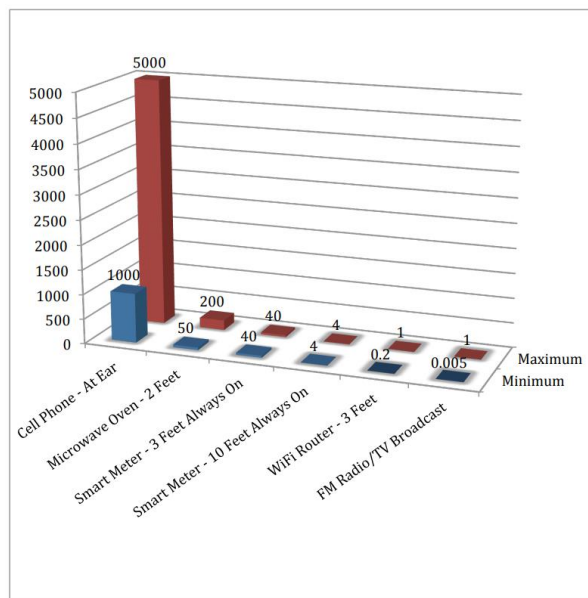


Figure 7. Comparison of Radio-Frequency Levels from Various Sources in $\mu\text{W}/\text{cm}^2$

Note: Exposure levels in $\mu\text{W}/\text{cm}^2$ obtained from Table 2 and converted from mW/cm^2 . Smart meter figures represent 100% duty cycle (i.e., always on) as hypothetical maximum use case.

ARE SMART METERS SAFE?

www.marylandsmartmeterawareness.org/wp-content/uploads/2012/06/DanielHirschReport.pdf

Daniel Hirsch Draft Comments on The Health Impact of RF from Smart Meters. Jam 2011, pg. 10

Bar chart revised to show cell phones are less harmful than smart meters using whole body exposure standardization

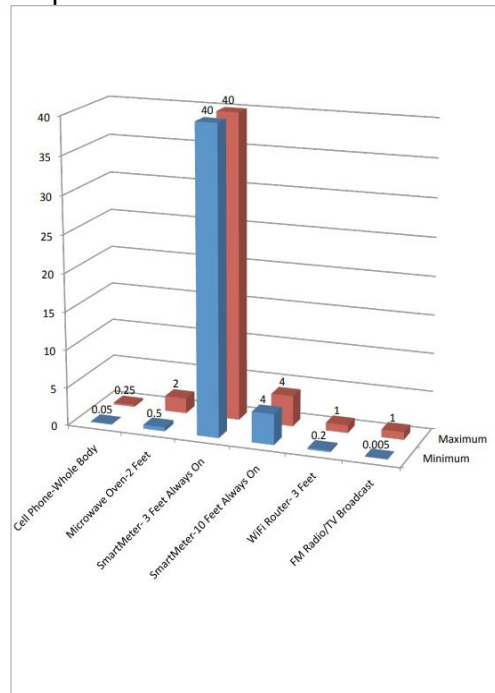
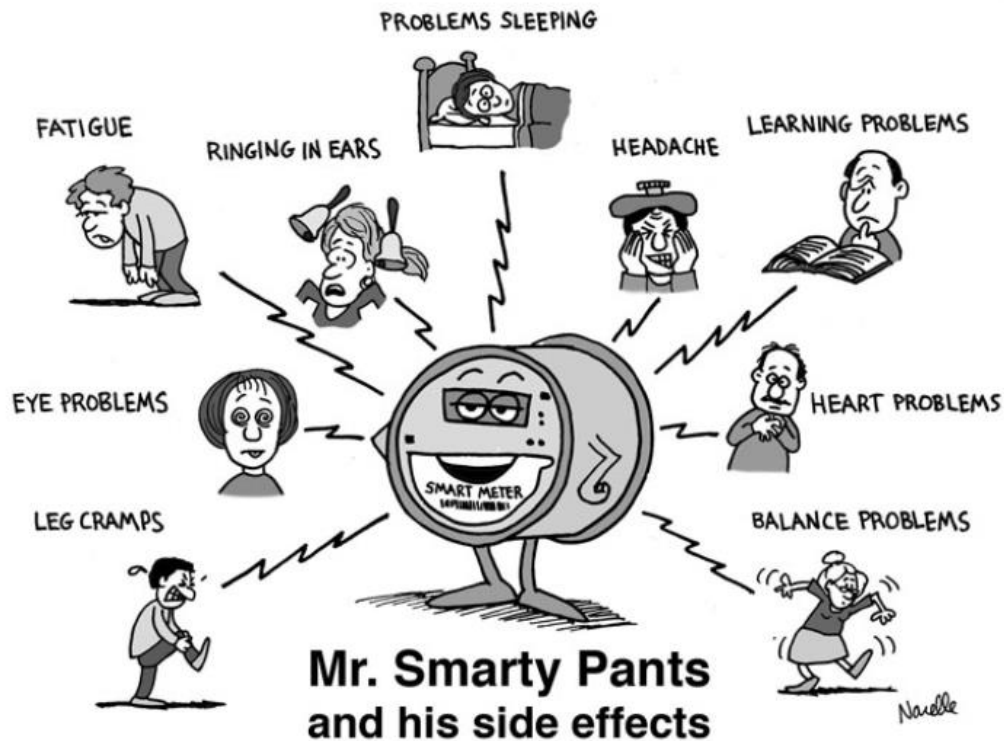


Figure 3. Comparison of Radio-Frequency Levels to the Whole Body from Various Sources in $\mu\text{W}/\text{cm}^2$ over time [corrected for assumed duty cycle and whole body exposure extrapolated from assumed cell phone dose at ear].

COMMON RF/WIFI BIOEFFECTS



<http://emfsafetynetwork.org/wp-content/uploads/2015/04/Overview-of-PGECPUCE-mails-on-smart-meters.pdf>

ARE SMART METERS SAFE?

<https://www.youtube.com/watch?v=PktaaxPI7RI>

Klinghardt nighttime protocol for EMF injury recovery

- *Turn off fuses*
- *No wireless in the house: no cordless phones or wireless internet in the house*
- *Incandescent lightbulbs in the house instead of CFL energy saving lightbulbs*
- *RF radiation levels in any bedroom should be 5 microwatts/m² or below achieved with Y shield paint and silver backed curtains*

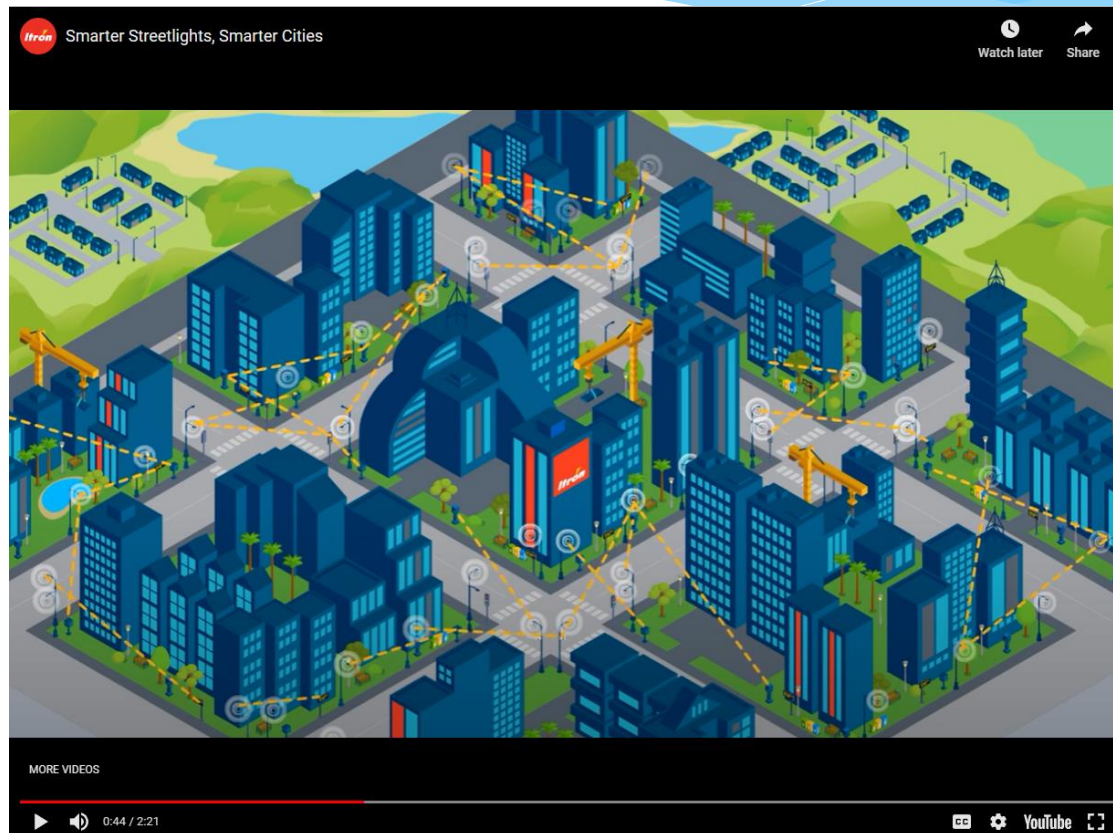
ARE SMART METERS SAFE?

- Unique UK solution found here @ 3:17 minute mark
<https://www.youtube.com/watch?v=R2gRFeYwM1Y>
Get Rid of Your Smart Meter In Days
- Hardie Backer Cement board and 2 layers of regular screen screening that is stapled to the wall on the inside of the house (available at Lowe's), offered by Bill Bathgate, PE www.defiltersllc.com

STREET LIGHT CANOPY

<https://www.itron.com/na/solutions/who-we-serve/smart-cities>

Note: Play at 30 second marker for one minute



IoT NETWORK CANOPY

<https://www.itron.com/na/solutions/who-we-serve/smart-cities>

- Plug and play ecosystem of solutions for a diverse set of use



IoT NETWORK CANOPY

- **LED STREET LIGHT IoT CANOPY PLUS**
- **COMMUNITY SMART SENSORS PLUS**
- **HOUSEHOLD SMART METERS EQUALS**
- **SMART CITY, SMART COMMUNITY/AREA**
- **EQUALS DIGITAL TRANSFORMATION**

SMART METER PROBLEMS

<https://smartmeterharm.files.wordpress.com/2019/07/fire-and-electrical-hazards-report.pdf>
(*Fire and Electrical Hazards from 'Smart', Wireless, PLC, and Digital Utility Meters*)

- **Lack of surge protection**
- No direct path to ground
- National Electrical Code 240 violation
- No Protective Device Coordination Study
- “Catastrophic failure” – a new meter failure mode
- **Overheating • Inferior materials (resin insulator on switch contact melts!)**
- Burned meter-to-meter-box contacts
- **Faulty remote disconnect switch**
- **Arcing**
- Circuit boards in electric meters
- Melting solder can create new circuit board pathways
- Meters don't fit sockets • Thinner blades • Pitting
- Malfunctioning temperature alarms and sensors
- Switching mode power supply (SMPS) surges and appliance damage
- RF signal and SMPS transients routed onto building wiring
- **Interference with AFCIs/GFCIs (disables them with a 'false trip event')**
- **Moisture, heat, and flammable Lithium batteries (can leak too)**

SMART METER PROBLEMS

- Risks from AMI/AMR water meters
- **UL certification of meter models that cause fires**
- Flawed FCC requirements and testing
- Inadequate worker qualifications and training, poor installation quality
- **Vulnerability to hacking**
- Danger due to meter location • Vibration and heat in building materials from RF emissions
- Accelerated corrosion
- Violation of FCC Grants of Equipment Authorization

SMART METER RESOURCES

- http://sagereports.com/smart-meter-rf/?page_id=429
 - * Smart meters can exceed the Maximum Permissible Exposure Limits
- www.emfsafetynetwork.org
 - Sebastopol's local ordinance 1057 banned smart meters since 2013 and recently got overturned in December 2021 due to **"climate washing" and is a marketing spin to claim that energy is being saved and reducing green house gases, a green initiative**
 - Smart meter fires and explosions are common. See <http://emfsafetynetwork.org/smart-meters/smart-meter-fires-and-explosions>
 - Nina Beety's Smart Meter Overview white paper (July, 2019) <https://smartmeterharm.files.wordpress.com/2019/07/fire-and-electrical-hazards-report.pdf> (*Fire and Electrical Hazards from 'Smart', Wireless, PLC, and Digital Utility Meters*)
 - EMFsafetynetwork is filing a lawsuit and is hiring Ariel Strauss to represent them
- <https://gettingsmarteraboutthesmartgrid.org>
 - Tim Schoechle's paper "Getting Smarter about the Smart Grid" contains 9 key points that are problems with current electricity approach. Download here: <https://gettingsmarteraboutthesmartgrid.org/pdf/Smart%20Grid%20Report%203-15-13.pdf>
- <https://stopsmartmeters.org>
- Environmental Health Trust: <https://ehtrust.org/smartmeters-health-and-safety-faqs/>
- <https://ehtrust.org/wp-content/uploads/Carpenter-Letter.pdf> Dr. Carpenter Letter, bioeffects similar to cell phones
- Children's Health Defense: <https://childrenshealthdefense.org/defender/chd-amicus-brief-supreme-court-pennsylvania-reject-smart-meters-mandate/>

OPT OUT FORMS

Dominion Energy Virginia is committed to providing safe and reliable energy to our customers by investing in our infrastructure. As part of this commitment, we are currently upgrading to smart meters in your area.

This letter is in response to your inquiry for more information about the **Interim Non-Communicating Meter Option (Residential "Opt-Out")**. If you decide to opt-out, the meter at your location will be replaced with non-communicating equipment. The non-communicating meter does not have any data storage features or two way communication functions enabled. As a result, it will be necessary for a meter reader to obtain a visual meter reading monthly.

Smart meters allow innovative features to:

- give you more control over how you use energy by providing you with information about energy usage;
- notify Dominion Energy Virginia when your power is out and back on for efficient restoration; and
- offer flexible, alternative pricing structures based on usage data.

Please find a summary comparing smart meters (communicating) to the opt-out program meters (non-communicating).

	<u>Comparison of Meter Features</u>	
	Standard Smart Meter (Communicating)	Opt-Out Program Meters Non-Communicating Meter
Remote Outage Detection	Yes	No
Remote Service Connection	Yes	No
Customer Pricing Plan Options	Yes	No

Currently, Dominion Energy does not charge any special installation or usage fees to customers who choose the Interim Non-Communicating Meter Option; however, since manual monthly meter readings are required for these non-communicating meters, Dominion Energy Virginia may propose recovering expenses in the future. Such fees are subject to approval by the State Corporation Commission of Virginia (SCC) and, if approved, Dominion Energy Virginia will inform all participants of the Interim Non-Communicating Meter Option.