

AN OVERVIEW OF ELECTRONIC UTILITY METER HAZARDS

Why We Must Take Immediate Action to Protect The Health, Safety and Privacy of Utility Consumers

Introduction

New York State has embarked on an ambitious initiative to examine and reform its energy vision. For this to be successful, New York State must first enact utility consumer protection that includes an end to the forced installation of electronic utility meters, also known as AMR, ERT, AMI, "Smart," Power Line Carrier (PLC), electronic "non-transmitting opt-out" and more.

The New York State Public Service Commission (NYSPSC) approved electronic utility meters for use in the early 2000s before testing the meters for health and electrical fire safety. The approval was based on ignorance and misleading information from the utility industry and the Federal Communications Commission (FCC). This decision is now adversely affecting millions of people.

By the mid 2000's, utilities began removing safe functioning electro-mechanical analog utility meters and replacing them with electronic meters. By 2010, where electronic meters were installed, health complaints were being reported to utilities, elected officials and government agencies. Today, utilities in New York State continue to ignore consumer's complaints and force unsafe, privacy invading and expensive electronic meters on residents. The NYSPSC is complicit in this misconduct.

Utility corporations wield excessive influence over the NYSPSC and the public. This influence restricts our energy choices and must be reined in before New York State can be truly dedicated to fostering an independent, sustainable and safe energy future.

What is Wrong With Electronic Meters?

HEALTH –Electronic utility meters are energy-intensive devices that transmit and conduct dangerous non-stop microwave and/or electrical frequencies. This exposure is making some people very ill. Illnesses reported include insomnia, heart palpitations, heart ailments, tinnitus, dizziness, inflammation, intestinal ailments, headaches, skin rashes, high blood pressure, strokes, cancer and more.

Because utility companies in New York State refuse to accommodate customer requests for safe analog meters, there are residents who have chosen to live without electricity rather than continue to be sickened by electronic meter radiation. Some New Yorkers have taken it upon themselves to remove electronic meters and replace them with analog meters. They are doing this in spite of utility company threats to cut services. In one case, Fortis/Central Hudson cut service to a home where the residents, for health reasons, removed an electronic meter and replaced it with a safe analog meter. (Source A. See links on page 10 for information about electronic meter health risks.)

SAFETY - In addition to health risks, electronic meters are causing fires, explosions and equipment failures across the United States and around the world.

Utilities and government agencies overlooked evaluating the dangers of retrofitting a complicated electronic microwave utility meter into an electrical system that was designed to work with a mechanical analog meter. Electronic meters are not compatible with existing consumer electrical systems, including consumer circuit breakers. Furthermore, electronic meters lack surge protection, whereas analog meters are built with substantial surge protection. Power surges can cause fires, explosions and equipment failures. It is a fact that people have died in fires caused by electronic meters.

Electronic meters are not Underwriters Laboratory (UL) safety approved. Perhaps the utility industry knew about the many electrical problems associated with these meters and, as a result, never obtained UL approval for them. It is generally accepted that all electronic devices should be UL approved. In fact, utility companies' own "safety" pamphlets strongly recommend using only electronic devices that are UL approved. Why has the NYSPSC allowed utilities to install electronic meters that are not UL approved?

Thousands of electronic meters have been recalled for various failures, at consumer expense, through tax dollars and raised utility rates. These failures include over-billing, faulty operation, unreliable signals, overheating, melting

circuit boards, fires, explosions and other safety concerns. (Source B. See links on page 11 for information about UL safety recommendations, fires, explosions and “smart” meter recalls.)

PRIVACY - Along with posing health, safety and fire risks, electronic meters invade utility consumers' privacy. Electronic meters allow utility companies to extract utility consumer private utility usage data without permission. We pay utilities to deliver electricity, water and gas. We have not given them the right to invade our privacy and sell our information to third parties.

Security experts warn that electronic meters are a major cyber-security threat because they can be electronically hacked. In its rush to profit, the utility industry failed to calculate the vulnerability of wireless utility meter networks to terrorist attacks that could shut down essential parts of local and national utility operations.

Likewise, the transmission of private utility usage data is vulnerable to hackers who have the ability to determine when residents are not home. This makes individuals susceptible to crime through utility meter wireless networks. (Source C. See links on page 11 for information about “smart” meter privacy breaches and cyber-security risks.)

Utilities Spread Misinformation About Smart Meters

When corporations spread misinformation about their products, it is important to take notice and learn the facts. Utility providers in New York State have made the following false claims about electronic utility meters:

1. Since 2010, utility companies in New York State have claimed their meters are not “smart” meters.

FACT: Today, when customers contact utility providers about meter concerns, the companies instruct their employees to deceive the public by insisting that their electronic meters are not “smart” meters. This name game must stop. “Smart” is the word the industry chose to sell digital electronic meters. Because so many problems were reported after the installation of “smart” meters, the word “smart” became synonymous with the dangers of this technology. Instead of changing their ill-conceived electronic meters, utilities simply stopped using the word “smart.” Instead they named the meters “AMR,” “ERT,” “non-transmitting” digital “opt-out,” etc. These are all electronic meters, regardless of the labels with which the utilities attempt to mask them. (Source D. See links on page 12 for

proof about utility industry meter name games.)

2. The utility industry claims electronic meters are safe and have been tested for health and safety.

FACT: The industry bases its electronic meter health and safety claims on flawed FCC testing that altered the meter to fit a test modality that was not designed to test utility meters. This test failed to include consumer and utility electrical wiring and the unpredictable variables found within those electrical systems. In the only test that the FCC conducted, the electronic meter was not connected to, nor did it interact with, realistic conditions found within electrical systems, electronic and wireless equipment, building materials and biological systems. These are the circumstances that determine if there will be electrical problems, electronic equipment failures, fires and/or adverse health affects after electronic meters are installed. In any case, the FCC would did not test these meters for health and safety because the FCC is not a health or safety agency.

In 2010, New York State residents reported illnesses after utility companies installed electronic meters. In response, Stop Smart Meters NY hired Isotrope, an expert engineering firm, to investigate the microwave radiation emissions caused by these meters. Starting with basic microwave detecting equipment, Isotrope confirmed that transmitting electronic meters emit non-stop pulsed microwave frequencies.

Using more sophisticated microwave detecting equipment, Isotrope also determined that electronic meters cause conducted pulsed microwave frequencies (CPMF) to travel into and contaminate home electrical wiring systems. An electronic meter unleashes CPMF through the electric circuit breaker panel, which then transforms an entire electrical wiring system into a massive pulsed microwave antenna. Once CPMF corrupts the electrical system, it radiates at unpredictable levels and locations within a building. This “antenna effect” results in an unprecedented and constant whole body microwave radiation exposure. Microwave radiation is designated by the World Health Organization (WHO) as a Class 2B carcinogen, perhaps soon to be changed to Class 2A. (Source E. See link on page 12 for facts about WHO 2B carcinogen classification.)

On page 16 of the Isotrope report, a photograph depicts the “FCC Part 15.247” testing of an electronic meter. The photograph shows that the FCC laboratory attached a power cord to the bottom of the meter. A utility meter does not employ a power cord. The Isotrope report states: “Using a power cord instead of setting up the power wiring the way the device is actually used may not reveal how the house circuit wiring through the meter may act. The actual *in-situ* wiring may be more like an antenna that may pick up unwanted RF energy and noise within the

meter and conduct it into the residence.” The Isotrope report further explains that, in a proper test, the electronic meter would have failed. ([Source F](#). See link on page 12 to the Isotrope report.)

In its testing procedure, the FCC also failed to detect unacceptable and harmful levels of conducted high frequency voltage transients, known as “dirty electricity.” “Dirty electricity” is triggered by electronic components inside electronic meters, including the switch mode power supply and is also generated from the grid. Analog utility meters were designed to protect consumer electrical wiring. They contain no electronic components and therefore cause no “dirty electricity” or CPMF.

Unleashing electronic utility metering technology on an unknowing public before it was tested correctly has resulted in thousands of reported health injuries, fires, explosions and electronic equipment failures. Based on fatally flawed testing that was never intended to assess health and safety, elected officials and government agencies have allowed the utility industry to force hazardous electronic devices on New York State residents.

In addition, utility workers who drive through neighborhoods collecting microwave radiation frequencies from thousands of transmitting electronic meters are at risk from radiation exposure. These risks are intensified by the electronic and microwave meter equipment enclosed inside the utility vehicle. This exposure was never tested for health and safety either.

3. Utilities in New York State claim mechanical analog meters are no longer available.

FACT: Utilities across New York State are deliberately propagating the myth that analog meters are no longer available as an excuse to maximize profits from the rollout of electronic meters. These companies are systematically removing and destroying working analog meters. However, analog meters are still readily available. Supply meets demand. If there is a demand for analog meters, there will be a supply. Utility companies and consumers across the United States can easily obtain analog meters.

4. Utilities in New York State claim analog meters do not work with solar power arrays.

FACT: In New York State, there are functioning analog meters that simply spin backwards when connected to grid-tied solar systems. Some New Yorkers are afraid to install grid-tied solar because their utilities have told them—falsely—that they will need to have an electronic meter. This deception is impeding progress toward increased use of renewable energy sources.

5. Utilities in New York State claim electronic meters lower energy costs.

FACT: Since 2007, when electronic meters became widely distributed throughout New York State, utility rates have skyrocketed. There is no evidence that these meters are cost effective. Replacing and destroying reliable analog meters with electronic meters yields a cost, not a savings. If the utility industry has its way, all of the dangerous electronic meters presently installed in New York State will be replaced with even more expensive, harmful and untested meters in addition to the wireless infrastructure needed for those meters. Already the NYSPSC has approved a Con Edison rate hike for another electronic meter rollout. The NYSPSC should not have approved electronic meters before evaluating and testing the meters for public health, safety, privacy and consumer costs.

6. Utilities in New York State claim electronic meters are similar to and as “safe” as other electronic appliances and devices in homes.

FACT: With NYSPSC approval, electric, water and gas companies in New York State force electronic meters on consumers. There are no other electronic appliances or devices that are forced on consumers for any reason. With all electronic equipment, we have a choice.

Electronic meters for electrical usage cannot be compared to other devices because these meters are connected to utility and consumer wiring before the circuit breaker panel. Thus, they are connected to all electrical wiring throughout private property. Before electronic utility meters, there has never been an electronic device connected to a consumers entire electrical system. There is no other forced device that contaminates electrical wiring on private property with transmitted and conducted non-stop, pulsing electrical and microwave frequencies that cannot be turned off. Electronic meters have a dangerous and unique design. No other wireless or electronic device can be compared to it.

7. Utilities in New York State claim and have convinced the public, lawmakers and environmentalists, that electronic meters offer benefits for both consumers and the environment. They say that these meters are necessary to manage energy consumption and integrate renewable energy resources into the power grid, therefore addressing the climate crisis.

FACT: In 2009, \$11 billion in Federal stimulus funds were allocated for “green” technology. Utility companies in New York State grabbed hundreds of millions of these funds, our tax dollars, for electronic meters and made unsubstantiated claims that this was “green” technology. This money grab continues today. Yet, in the last eight years, New Yorkers have seen no proof of any environmental benefits from the electronic meters installed in this state.

The utility industry was not considering the environment when it began installing electronic meters, but instead intended to increase its profits by eliminating jobs for meter readers, raising rates and collecting data to sell to third parties.

Replacing analog meters with electronic meters does not save energy. Are millions of energy-intensive pulsing microwave meters, installed on every house and building in New York State, going to save energy? Is it sustainable to set up an energy-intensive electronic meter infrastructure? Will it help climate change to build giant temperature controlled buildings to house massive utility data collection centers? Is it benefiting the environment to use excessive amounts of energy to steal and sell our private utility usage data? No, all of these undertakings have proven to be a failure. The push by the utility industry to green-wash utility meters is motivated by profit alone.

8. Utilities in New York State claim that a time-of-use rate system facilitated by electronic meters is essential for energy savings.

FACT: Time-of-use rates are another excuse for the utility industry to install electronic meters. Time-of-use charges are unjust. For example, it is unfair to impose higher rates for daytime usage when an individual works at night and is only home during the day. Electronic meters and time-of-use rates are not needed in order to level peak demand when there are proven educational and non-invasive conservation methods that are successful.

9. Utilities in New York State claim electronic meters do not collect personal utility usage data.

FACT: Electronic meters are designed to collect granular personal utility usage data. Although the NYSPSC has received thousands of electronic meter complaints, it recently approved more intensive two-way electronic meters plus the needed infrastructure, allowing for a further reach into our personal lives by the utility industry. Without our consent the NYSPSC has approved the extraction of our personal data, by utility companies, to sell to third parties. Utilities have no right to obtain or sell customers' personal utility information and the NYSPSC has no right to approve this action. This is electronic trespassing.

10. Some utilities in New York State are charging fees for an electronic "non-transmitting digital opt-out meter," which is leading customers to believe that these "opt-out" meters are safe.

FACT: No electronic utility meters, including the so-called "opt-out" meters have never been tested for health and safety. Both transmitting and non-transmitting electronic meters invade privacy, cause "dirty electricity" to conduct into buildings on electrical wiring and are an electrical hazard. Many health complaints have

been reported after the installation of both transmitting and non-transmitting electronic meters. In the decades that analog meters have been used, there have been no such complaints. All electronic meters, whether transmitting or not, are a violation of consumer rights.

Utility companies are charging a fee for some consumers to "opt-out." It is nonsensical for utilities to make New York State residents pay costly fees to "opt-out" of an electronic meter, only to have another electronic meter imposed on them, especially when safer analog meters are already approved by the NYSPSC. This deceitful utility "opt-out" offer is designed to confuse the public about utility meters.

An analog meter is the only acceptable and safe "opt-out" at this time but it is not a long-term solution. Those who do not have electronic meters will still be exposed to dangerous radiation from surrounding transmitting meters and looming infrastructure. How do people who live in apartments "opt-out" when everyone else around them has electronic meters? How do families who live above hundreds of electric, water and gas meters "opt-out" if they want to protect themselves? How do individuals who live on the other side of a bank of electronic meters "opt-out" from transmitted microwave radiation coming through their walls? How do parents who know nothing about meters protect a baby who is sleeping on the other side of a bank of electronic meters? How do building superintendents living in basement apartments next to rooms full of electronic meters protect themselves? No one can "opt-out" of CPMF or "dirty electricity."

The justification for the utility industry's removal of analog meters for the rollout of electronic meters is based on erroneous claims.

Electronic Meters Should Never Have Been Approved in New York

It was a terrible and costly mistake for the NYSPSC to approve the deployment of electronic meters. There have never been any plausible justifications for using them. Analog meters should have been left in place for the following reasons:

- Analog meters have been used safely for decades with no health, fire, electrical or privacy complaints. Electronic meters have been used for less than a decade with many thousands of reported complaints.
- Analog meters are durable, accurate, cost-effective and have a life span of 20 to 40 years or longer. Electronic meters are flawed, ill-conceived

plastic devices that need to be replaced often.

- Analog meters have surge protection. Electronic meters do not have surge protection.
- Analog meters protect the privacy of utility consumers. Electronic meters harvest private utility usage data.
- Analog meters do not cause fires, are not flammable and are not a safety threat. Electronic meters are flammable, cause fires, explosions and equipment failures and are a cyber-security threat.
- Analog meters are well-designed mechanical devices that contain no electronic components or antennas, waste no electricity and do not need batteries. Electronic meters contain poorly designed electronic components and microwave antennas that waste electricity.
- Analog meters protect a consumers electrical system from electrical irregularities from the grid. They do not cause “dirty electricity” or microwave radiation to conduct onto electrical wiring. Electronic meters are open portals, into consumer's electrical systems, from the energy grid. Electronic meters cause unprecedented “dirty electricity” and microwave frequencies to conduct onto electrical wiring, thus contaminating entire electrical systems.

Local Municipalities Address the Dangers of Smart Meters

To date, the Ulster and Dutchess County Legislatures, the Towns of Woodstock, Olive and Gardiner and the City of Kingston have passed resolutions asking the New York State Legislature to examine the problems with electronic meters. They have done this in response to escalating complaints from residents about electronic meters. Each of these communities has affirmed the immediate right of utility customers to retain or recover analog meters.

Conclusion - Safe and Sustainable Energy Goals With Analog Meters

New Yorkers have made it clear that they want to conserve energy and address the climate crisis, as evidenced by many comments submitted to NYSPSC proceedings. Those who have taken the time to research and educate themselves about utility meters have made it clear that we cannot ignore scientific facts or waste money on dangerous meter technology that has no environmental benefits.

The NYSPSC and utility companies have continued to willfully ignore thousands of public requests for analog meters while experts are warning that electronic meters expose us all to intolerable risks.

An investigation will show that the NYSPSC has failed its mandate to protect the public. It is now up to the public and elected officials to take immediate action on this issue and end the use of electronic utility meters in New York State.

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SOURCES:

A. HEALTH RISKS

Dr. Ronald Powell: Symptoms After Exposure To Smart Meter Radiation

http://stopsmartmetersny.org/images/Symptoms_after_Exposure_to_Smart_Meter_Radiation.pdf

American Academy of Environmental Medicine Opposes the Installation of “Smart” Meters

<http://stopsmartmetersny.org/images/AAEMSMCS.pdf>

Study Uncovers How Electromagnetic Fields Amplify Pain in Amputees

http://www.utdallas.edu/news/2016/2/3-31891_Study-Uncovers-How-Electromagnetic-Fields-Amplify-story-wide.html?WT.mc_id=NewsHomePage

Video: Dr. Dietrich Klinghardt: “Smart” Meters & EMR: The Crisis of Our Time

https://www.youtube.com/watch?v=b_wxM6IAF1I

Video: 200 International scientists sign an appeal to the United Nations to protect human health and wildlife from electromagnetic fields and wireless technology

<https://vimeo.com/129194410>

Video: MSMA: Woman Suffers Acute Radiation Exposure from “Smart” Meters
<https://www.youtube.com/watch?v=F9QZuWPw6Y0>

B. SAFETY RISKS

More Tips from Con Edison for UL Approved Electronics
<http://www.coned.com/customercentral/electricsafety.asp>

“Smart” meter fires and explosions:

EMF Safety Network: Smart Meter Fires and Explosions
<http://emfsafetynetwork.org/smart-meters/smart-meter-fires-and-explosions/>

Stop Smart Meters: “Smart” Meter Fire News Round Up
<http://stopsmartmeters.org/2012/09/08/news-round-up-smart-meter-fires-open-up-a-difficult-smart-grid-story-ieee-puts-industry-on-notice/>

Smart Grid Awareness: Domino Effect "Smart" Meter Fires
<http://smartgridawareness.org/2014/08/27/domino-effect-of-more-smart-meters-being-replaced-due-to-fires/>

“Smart” meter recalls:

Article: 2016-Hydro One pulls plug on wonky smart meters in rural areas
<http://ottawacitizen.com/opinion/columnists/egan-hydro-one-pulls-plug-on-rural-smart-meter-signals>

Article: More Smart Meters Removed Due to Fire Hazard
<http://incompliancemag.com/thousands-more-smart-meters-removed-due-to-fire-hazard/>

C. PRIVACY RISKS

"Smart" meter privacy breaches:

Smart Meter Awareness: “Smart” Meters Generate a “Gold Mine of Data” for Utilities
<http://smartgridawareness.org/2015/12/31/smart-meters-generate-gold-mine-of-data/#more-13704>

Cyber-security risks:

Smart Grid Awareness: Puppet Attack: Newly Discovered Cyber Threat for Smart Meters
<http://smartgridawareness.org/2016/01/13/puppet-attack-new-cyber-threat-for-smart-meters/#more-13816>

Video: CIA Director Calls Smart Grid Really Stupid - Security - Smart Meters
<https://www.youtube.com/watch?v=rIFD1sUTGX8&list=PLD83D71F37917E809&index=4>

D. INDUSTRY METER NAME GAMES

SEEI-AEIC-UTC: Smart Meters and Smart Meter Systems . . . 2011

http://stopsmartmetersny.org/images/unnamed_document.pdf

GE Digital Meters (“Smart” Meter - NY State - Fortis Central Hudson)

http://stopsmartmetersny.org/images/GE_Digital_Energy_-_Smart_Metering_-_ANSI_Meters_-_kV2c_Meter.pdf.pdf

Smart Infrastructure Fortis Central Hudson

<http://www.aclara.com/smart-meters/>

E. WHO CLASSIFICATION 2B CARCINOGEN

NACST: 10 Myths - We Need the Facts

<http://www.nacst.org/10-myths.html>

F. ISOTROPE REPORT

Isotrope: Report on Examination of Selected Sources of Electromagnetic Fields at Selected Residences in Hastings on Hudson

http://stopsmartmetersny.org/images/Report_on_Examination_of_Selected_Sources_of_Electromagnetic_Fields_at_Selected_Residences_20140301.pdf