

AN OVERVIEW OF ELECTRONIC UTILITY METER HAZARDS

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

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Introduction

New York State has embarked on an ambitious initiative to examine and reform its energy vision. For this to be successful, New York must first enact utility consumer protection that includes an analog utility meter choice and the end to the forced installation of digital electronic utility meters, also known as one-way (AMR, ERT) or two-way (AMI, Smart) 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 or considering utility consumer privacy rights. 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-2000s, utilities began removing safe functioning electro-mechanical analog meters and replacing them with electronic meters. By 2010, where electronic meters were installed, health complaints were reported to utilities, elected officials and government agencies. Utility companies are ignoring the reported problems. 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 – Contrary to false statements by utility companies, electronic meters are energy intensive devices that transmit and conduct dangerous levels of non-stop radiofrequency/microwave (RF/MW) and/or electrical radiation. RF/MW radiation is a Class 2B carcinogen and is known to cause harm to biological life. 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, eye problems, strokes, cancer and more. Analog utility meters do not transmit RF/MW radiation.

Most utility companies in New York State refuse to accommodate customer requests for safe analog meters. For this reason, 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 despite 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 complicated transmitting electronic meters into electrical systems that are designed to work with non-electronic mechanical analog meters. Electronic meters are not compatible with existing consumer electrical systems and lack circuit breaker protection. Furthermore, electronic meters lack surge arrestors, whereas analog meters are built with substantial surge arrestors. Power surges can and have caused fires, explosions and equipment failures. 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 UL approved electronic devices. 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 others that give rise to 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 private consumer 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 pose 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 meter networks to terrorist attacks that could shut down essential parts of local and national utility operations. (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 learn the facts and expose the truth. Utility providers in New York State have made the following false claims about electronic 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, some companies intentionally deceive the public by insisting that their electronic meters are not “smart” meters. This is a name game. “Smart” is the word the industry chose to sell digital electronic meters. Because so many problems were associated with 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” for a period of time and replaced it with “AMR”, “ERT” and “non-transmitting” opt-out. Now, some utilities in New York are installing two-way smart meters. Regardless of labels, these meters pose unreasonable risks to utility customers.

(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 was conducted only after the meter was altered to fit a test modality that was not designed for testing utility meters. This test also failed to include consumer and utility electrical wiring and the unpredictable variables found within actual 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 effects after electronic meters are installed. In any case, the FCC 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 RF/MW engineering firm, to investigate the RF/MW radiation emissions caused by these meters. Starting with basic RF/MW detecting equipment, Isotrope confirmed that transmitting electronic meters emit non-stop pulsed RF/MW radiation.

Using more sophisticated RF/MW detecting equipment, Isotrope also determined that electronic meters cause conducted pulsed RF/MW radiation to travel into and contaminate home electrical wiring systems. An electronic meter unleashes this radiation through the electric circuit breaker panel, which then transforms an entire electrical wiring system into a massive pulsed RF/MW antenna. Once the conducted pulsed RF/MW radiation corrupts the electrical system, it radiates at unpredictable levels and locations within a building. This antenna effect results in unprecedented and constant whole-body RF/MW radiation exposures. RF/MW radiation is designated by the World Health Organization (WHO) as a Class 2B carcinogen, perhaps soon to be changed to Class 1. (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. In actual use, however, 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 meters were designed to protect consumer electrical wiring from surges on the grid. Analog meters do not contain electronic components and therefore cause no dirty electricity.

Unleashing electronic utility meters on an unknowing public, before the meters were 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 are allowing the utility industry to force hazardous electronic meters on New York State residents.

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

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 readily available. Many utility companies across the United States provide analog meters for their customers. Supply meets demand. There is a demand for analog meters, and a supply to meet it.

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.

Some utility companies are already discarding the first round of expensive and hazardous one-way electronic meters and replacing them with untested two-way RF/MW transmitting meters. In addition, two-way meters require extensive and untested wireless infrastructure to be installed throughout our neighborhoods. We are paying dearly for this. The NYSPSC continues to approve rate hikes for electronic meters while covering up the problems.

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 connect the utility grid to consumer wiring and are connected to all electrical wiring throughout private property. This is unprecedented. There are no other forced devices that contaminate electrical wiring on private property with transmitted and conducted non-stop, pulsing RF/MW and electrical radiation. Electronic meters have a dangerous and unique design. No other wireless or electronic device can be compared to it and they can not be turned off by the consumer.

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 dollars from these funds, our tax dollars, for electronic meters. They made unsubstantiated claims that this was "green" technology. Yet, in the last ten years, New Yorkers have seen no proof of any environmental benefits from

electronic meters installed in this state. In truth, 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 RF/MW 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. Further, 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" 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 ever 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 which analog meters have been used, there have been no such complaints. All electronic meters, whether transmitting or not, violate 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.

Any opt-out 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 others around them have 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 RF/MW 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 conducted pulsed RF/MW radiation 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

Electronic meters have no proven consumer benefits. 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 consumer's 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 consumers' 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 consumer benefits.

The NYSPSC and utility companies are willfully ignoring many 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 to fulfill its mandate to protect the public. It is now up to the public and elected officials to take immediate action to ban electronic utility meters in New York State.

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