

Alan

Exhib, 1

Benefits of Analog Electric Meters vs Radio Frequency and/or Smart Meters

According to some experts / reports by consumers:	Analog Meters	Smart Meters (Electronic)
RF Radiation Exposure	No	YES
Part of mesh network that blankets community with RF radiation	No	YES
Health complaints	No	YES
AAEM physicians' association warnings about health effects	No	YES
Santa Cruz Health Dept. warnings about RF radiation emissions	No	YES
Privacy Intrusion	No	YES
Hackable	No	YES
Utility collects personal energy use data	No	YES
Data on your personal energy use may be provided to 3rd parties	No	YES
Can cause "dirty electricity" emissions on wiring	No	YES
Can be used to power down or shut off your appliances	No	YES

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Can be used to remotely shutoff your utility service	No	YES
Can be used to charge for Time-of-Use rating	No	YES
Higher bills complaints	No	YES
Appliance Burnout Complaints	No	YES
Associated with numerous house fires	No	YES
Interference w/ wireless devices	No	YES
Safety complaints	No	YES
Can contribute to electrical grid failure	No	YES
Meter has short life	No – last 30-50 years	YES – last 12-15 years

Sourced from:

<http://www.electrosmogprevention.org/stop-ca-smart-meter-news/san-diego-county-smart-meter-news/benefits-of-analog-meters-vs-smart-meters-why-you-should-opt-out-today/>

RESTORE THE ANALOG METER AS A METER OF CHOICE

Digital and other Smart Meters have Billing Problems as well as contribute to health issues due to the mechanisms contained within them that impact the wiring and health of those in the home. Analogs don't have these problems and would be fair and equitable to consumers to have the analog meter restored as a meter choice--not just to residents who have already have them, but as a policy for all who should be informed regarding them and to be able to request them.

Some main points as quoted by Bill Bathgate's, expert testimony at the Michigan House Energy Committee Meeting from that website on the Billing Issue is at <https://smartmeterharm.org/2018/02/25/electrical-engineer-explains-to-michigan-legislature-why-smart-meters-are-causing-high-bills-video/>

- These Smart Meters and digital meters have a switched mode power supply inside that creates harmonics, also known as transients.
- The transients travel on the wiring throughout the home.
- Transients are seen by the current sensors and voltage sensors in the meter and are counted as consumed electricity.
- Other electric appliances have "EMC" filters in them to filter out transients. Smart Meter manufacturers did not put "EMC" filters in Smart Meters or digital meters.
- No agency mandated "EMC" filters in Smart Meters or digital meters.
- Transients on the wiring equate to higher bills. Bill Bathgate has seen 16-40 volts peak-to-peak of transients.
- ANSI, which creates standards and tests meters, is a private industry-funded organization. It is not a federal standards agency.
- ANSI allows meter manufacturers to remove the electronics from digital meters before they are tested for compliance, including testing their ability to handle surges.
- ANSI's definition of accuracy is very, very different, and ANSI does not address the precision of Smart Meters to consistently and repeatedly give the right reading.
- Analog meters are transparent; a customer can verify their bill by looking at the meter.
- Smart Meters and digital meters' calculations and algorithms are known only to the utility company and cannot be verified by the customer. Contrary to utility company and Smart Meter manufacturer claims, the customer is NOT in control of their bill. Example of one customer who complained, and his bill dropped for no reason.

Contrary to the statements on the City of Ashland Electric Dept. website that the analog is not available or purchasable, This is simply not true. I've enclosed evidence, and it is purchasable below the \$30 price paid for the other meters. From ElectraHealth.com with discounts.

Request you charge the Electric Dept with complying with the Resolution. Analog meters have been changed out without notification to customers. Please address this right away as there was a claim in the newspaper Feb 21 Ashland was rolling out smart meters.

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2. OTEK Corporation | Analog Meter Replacements | otekcorp.com

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4. Smart Meters & AMI Solutions | Microstar Electric Co. Ltd.

Adwww.microstarelectric.com/

DLMS Certified & MID approved Smart Energy **Meters**; Turnkey AMI/AMR Solutions.

Search Results

Buy Your Analog Meter Here | Stop Smart Meters!

<https://stopsmartmeters.org/2011/10/09/buy-your-analog-meter-here/>

Oct 9, 2011 - You can purchase verified electromechanical *analog electric meters* at Electrahealth. These are refurbished analog meters with a numerical readout (not digital). The photo here is not a direct representation of the meters they sell, but very similar to their model. Is having your own electric meter changed a ...

Analog versus Digital Smart Electric Meters - The Balance

<https://www.thebalance.com › Money Hacks › Frugal Living › Household Saving Tips>

Learn about *analog* versus smart *electric meters* and discover if the latter, which provides detailed *electricity* usage data, is always safe and accurate.

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Analog Watthour Electric Meter - Electricity Utility Meter - Stetzerizer

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analog dial watthour *electric* utility meter to measure *electricity* usage for home, apartment, RV, boat, rental property.

Electric Meters | Analog Devices

www.analog.com/en/applications/markets/energy/metering.../electric-meters.html

Electric Meters. Analog Devices is a pioneer in electronic energy metering through our early introduction of energy metrology components. Increasingly, the use of Automated Meter Reading (AMR) and Advanced Meter Infrastructure (AMI) systems has intensified the requirements for efficient meter communications systems, ...

Replacing your smart meter – EMF Safety Network

emfsafetynetwork.org/replacing-your-smart-meter/

Dec 4, 2011 - Jerry Day, a media expert and producer from Burbank California, whose video "Spy Meters" skyrocketed to 1.4 million views has just released a new video called, "Replacing A Smart Meter With A Safe Analog Meter". In this video Jerry details with clarity and humor how to take back your power, by replacing ...

Electricity meter - Wikipedia

https://en.wikipedia.org/wiki/Electricity_meter

An *electricity meter*, *electric meter*, *electrical meter*, or *energy meter* is a device that measures the amount of *electric* energy consumed by a residence, a business, or an electrically powered device. *Electric* utilities use *electric meters* installed at customers' premises for billing purposes. They are typically calibrated in billing ...

Images for analog electric meters

[More images for analog electric meters](#)[Report images](#)

analog vs digital electric meters | GoGreenSolar

blog.gogreensolar.com/2009/05/analog-vs-digital-electric-meters.html

May 17, 2009 - Most people typically don't pay attention to their *electric meters*, but if your considering to install a grid tie solar *electric* system, it's a good idea to determine what type of *electric meter* you have. *Analog meters* also known as electromechanical are the most common, the simple meter spins forward when your ...

Stealth Meters - The EI Wellspring

www.eiwellspring.org/smartmeter/stealthmeters.htm

The stealth meters: Analog meters with hidden transmitters. Analog meter with hidden wireless transmitter. The serial number is blanked out to protect privacy. *Analog electrical meters* sometimes transmit to the utility, just as a digital smart meter. Many people with these meters are unaware that they have a transmitter on ...

Reading an Analog Electric Meter & Calculate Usage and Cost ...

► 8:46

<https://www.youtube.com/watch?v=1bq3wBqYvSw>

Jan 1, 2016 - Uploaded by Doug Haskins

This video reviews reading an *analog electric meter* as well as using the electric usage and cost equations. The ...

People also ask

How do electric meters measure power?

How do you read an electric meter?

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What is a digital meter for electricity?

What is a smart meter?

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3. Quality Panel Meters

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Types: Transformer Advantage, Westinghouse Panel Meter, Bargraph Meter

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<http://www.smartmetereducationnetwork.com/dirty-electricity-and-smart-meters.php>

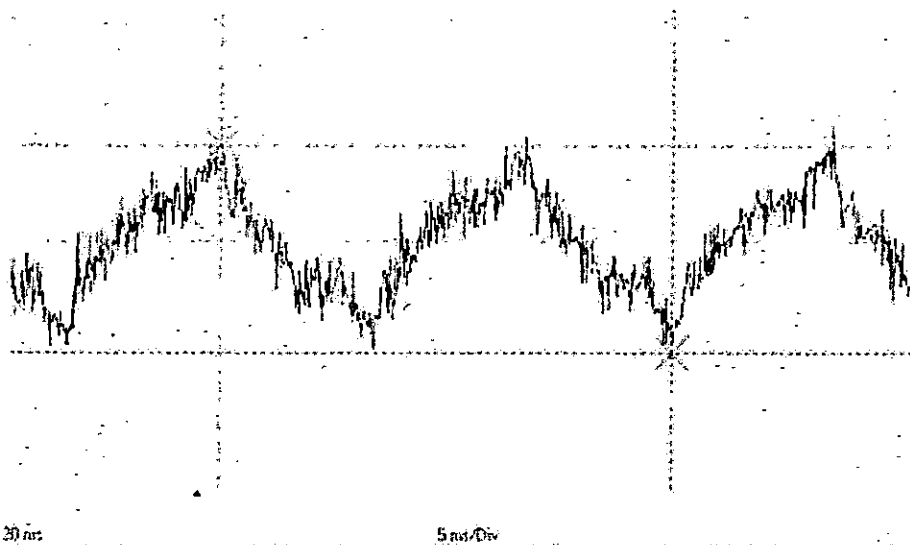
Dirty Electricity

It's Not Just Wireless That's Causing Health Problems

DTE's so-called opt-out meter is just a smart meter with the wireless turned off. It will hurt you nearly as much as the smart meter because of the "dirty electricity" generated by the meter. If you wish to avoid the health (and privacy) problems associated with smart meters, then you must keep your analog meter.

Turning off the radiofrequency will not solve the health (or the privacy) problems associated with DTE and Consumers Energy smart meters. Digital meters—whether or not "smart"—cause dirty electricity to flow through your home's wiring. The problem is what is called the "switched mode power supply." Switched mode power supplies are used to run the digital meter (whether a smart meter or DTE's radio-off opt-out meter). In order for a smart meter to be powered, the 240 volts coming off the power line to the meter must be stepped down to 4-10 volts. A switched mode power supply is the device used to step down the voltage from 240 volts to 4-10 volts. This generates an enormous amount of what is commonly known as "dirty electricity" and referred to by electricians and electrical engineers as "voltage transients," "voltage harmonics," "line noise," and "power quality issues."

→ Dirty electricity is a spiky, pulsed, highly variable electrical current that rides through all the circuitry of a building. It has devastating health effects. Many people are already experiencing those effects, which include high blood pressure, tinnitus, insomnia, and cognitive difficulties. The Nevada Consumer Protection Bureau reached an agreement with the Nevada Public Utilities Commission to allow individuals to keep their analog meters in part because of health problems associated with the switched mode power supplies. Prevention Magazine reports on the hazards of dirty electricity.



People who have had their smart meter's wireless turned off are experiencing the same health problems as people with smart meters, just to a slightly lesser degree ([click here to read their personal](#)

testimony and here for another story). Our cells cannot handle a highly variable current, and build up a sugar coating around themselves, which means it's harder for nutrients to get in and wastes to get out. In addition, these electromagnetic currents cause the bonds holding DNA together to break, increasing the risk of cancer. Think of a jackhammer going off and on every day, 24/7. That is what the cells in your body experience. Even though you can't feel it, it's still hurting you. Brain cancers take 10 years to develop, and few people feel the cancer. In addition to all that, the electromagnetic frequencies knock calcium ions off the cell membrane, causing a host of effects.

DTE's so-called opt-out meter is just a smart meter with the wireless turned off. It will hurt you nearly as much as the smart meter. Many older-style digital meter do not seem to create the dirty electricity problems that smart meters and so-called opt-out meters do. The reason is this: the older-style digital meters do not measure electricity in the fine-grained manner that the new meters do. These meters are constantly active, recording data and making computations at up to millisecond intervals. This means they are cycling—on-off, on-off—constantly. It is this on-off cycling that is part of what creates the spiky dirty electricity. These new meters have what's called a chopper circuit—the name is illustrative of what we've just been talking about—which rapidly switches the voltage on and off. In so doing, it creates ultra-high frequencies, and very sharp, fast transient voltage spikes, up to 70,000 volts/second. Part of the reason some people hear their smart meter making sounds is that the ultra-high frequencies they generate can be picked up by some human ears.

The magnetic field generated is a huge part of the problem. The current running through your house is an *electromagnetic* current. When the *electric* current runs through the wiring, it generates a *magnetic field* at right angles to the electric current. This means that you are surrounded in every dimension by an electromagnetic current—it's like being at the center of a hurricane, with the wiring on all the walls, the ceiling lights, and the wires running through the basement completely encapsulating you.

Broadband over powerline (BPL) and wind turbines cause the same dirty electricity problems.

See the following links for more information on switched mode power supplies:

- [Switched Mode Power Supplies and Smart Meters](#)
- [How Do Switched Mode Power Supplies Work—from "Things I Should Probably Know" blogspot](#)
- [How Do Switched Mode Power Supplies Work and Why Do They Bother People So Much?](#)
- [Dirty Electricity, Phillips](#). Transients are created when current is repeatedly interrupted. This manipulation of current creates a wildly fluctuating and potentially dangerous electromagnetic field that not only radiates into the immediate environment but also can back up along home or office wiring.
- [Magnetic Neighborhood](#). Blog of a careful Ann Arbor researcher trained in health studies. An excerpt: "*Once again, I've found my way to this same*

conclusion: the smart meter does not suppress line noise the way the analog meter did. Rather, it augments and even causes line noise."

- [Morgan, High-Frequency Transients on Electrical Wiring](#)
- [Stray Voltage, Stray Currents, Dirty Electricity](#)

See these links for pictures and more information on dirty electricity and/or switched mode power supplies.

- [Main sources of voltage transients.](#)
- [Compact fluorescent dirty electricity vs incandescent light bulbs.](#)
- [Windmills \(wind turbines\) and their dirty electricity signature.](#)

Your privacy is still invaded. The radio-off opt-out meter still collects the same fine-grained usage data as a smart meter. The only thing that has been turned off is the radio-transmitter. None of the data-collection software has been turned off.