

Dirty Electricity With Regards To Utility Metering Devices

What Is Dirty Electricity ?

The term, Dirty Electricity refers-to voltages and currents that are present on the utility power wiring that are **other than**, the intended utility power.

In the U.S. the utility power is at a frequency of 60 Hz (Hertz, i.e. cycles per second). In Europe the utility power is at a frequency of 50 Hz.

Dirty Electricity voltages and currents are typically frequencies that are **higher than** the power line frequencies.

While there is no official definition of Dirty Electricity, an analysis of the Dirty Electricity energy that is present on various power circuits (residential, commercial and industrial) will usually show that most of this Dirty Electricity energy is in the frequency range of:

5KHz (5,000 Hz) to 1 MHz (1,000,000 Hz).

It should be noted though, that Dirty Electricity can be any frequency, so 500 Hz, 2 KHz or other such very low frequencies that are **other than** the basic power line frequency (50 Hz or 60 Hz) would be called Dirty Electricity.

1.3 Sources Of Dirty Electricity

Dirty Electricity from switch mode power supplies that power various electronics that are connected to the A.C. line, including digital utility monitoring meters, often called "Digital Meters", digital utility monitoring meters that transmit their metering information wirelessly to central collection points, often called "Smart Meters", etc.

NOTE; Utility Meters

In the area of new utility metering deployments (electrical power, gas, water) there are various names and terms used to refer-to these technologies.

Digital Meters

"Digital Meter" often refers-to a utility measuring meter (such as electrical power meter) that has a digital display on the front of it. This digital display is in contrast to the old style "analog meters" that have a series of dials that indicate the energy used.

Since the Digital Meter has electronics within it, it must have a power supply within it as well. Those power supplies are apparently of the "switching" variety. This is evidenced by tests of the power lines that are connected to these meters, where considerable Dirty

Electricity has been found. Specifically, Dirty Electricity from the switching power supply.

Smart Meters

"Smart Meters" can be thought of as Digital Meters with a two-way data radio included. So Smart Meters will place Dirty Electricity on the power lines as well as radiate EMF from the data radio.

Understand The Impact of Dirty Electricity In This Setting

The Dirty Electricity is voltages and currents at high switching frequencies (example 20 kHz) that are riding on the wiring, throughout the facility. These voltages and currents radiate Electric fields and Magnetic fields into the living space and those fields induce voltages and currents into the human body.

You can consult with a Bau Biologist to understand the many physiology effects that are reported for individuals who are in an environment where there is appreciable Dirty Electricity.