

BEFORE THE ARIZONA CORPORATION COMMISSION

Smart Meter Hearing
Docket #: E-00000C-11-0328

September 16, 2011

Smart Meter Medical Opt-Out Proposal

Pursuant to Commissioner Newman's request for technical solutions, made during the hearing on September 8, 2011, we hereby submit a detailed proposal.

I. Introduction

The installation of communicating AMR/AMI "Smart" electrical meters poses a direct threat to the health and well-being of a small subset of the population referred to as electrically hypersensitive (EHS).

People who are electrically hypersensitive are affected by electrical and magnetic radiation at levels far below what the general population would notice and which are well within federal radiation guidelines.

The sensitivity level varies with the person. People with moderate sensitivities may experience neurological effects such as sleep problems, restlessness and headaches. More severe patients can become disabled by the condition, where exposure to electromagnetic radiation may produce burning pains, heart palpitations, seizures and other neurological symptoms.

Many of the most severely affected patients have relocated to rural areas to avoid the electropollution of the cities. The Southwest is a popular refuge.

The EHS condition is presently the subject of debate, which is customary for an emerging illness. In recent times, people with asthma, allergies, fibromyalgia, asbestos lungs and other ailments similarly had to not only suffer a debilitating illness, but also be treated with suspicion until medical research could provide proof, which usually takes decades. Where there are monetary interests behind the controversy, such as for EHS, asbestos lungs, and tobacco-related illnesses, acceptance takes longer.

The Council of Europe is an advisory body under the European Parliament. In its

resolution 1815 of May 27, 2011, it specifically acknowledges the existence of “electrosensitive” people and advises the European nations to “introduce special measures to protect them.”

Several medical conferences have issued resolutions in support of people with EHS, such as the 2008 Venice Resolution, which states: “We recognize the growing public health problem known as electrohypersensitivity.”

II. Problems with the new meters

The specific EHS medical issues with the AMR and AMI/Smart Meters are:

- Radio frequency radiation
- Radiation from wire-borne transients
 - Power line communication (PLC)
 - Switch-mode power supplies
- Remote programming without notification

The radio frequency radiation from Smart Meters, as well as cell phones, can affect people with EHS, even at some distance.

Some meters transmit almost continuously or can be programmed to do so. This is the case with both some AMI and AMR type meters.

Some meters communicate by overlaying signals on the existing power lines. This is referred to as PLC (Power Line Communication or Power Line Carrier). These are also problematic, even though they are not wireless. The signals travel on all wires throughout each home and along the street power line, turning them into a very large antenna. PLC systems are actually worse for EHS patients than wireless systems due to the above phenomena.

All solid state meters include a switch-mode power supply. Depending on the design, these can also put significant amounts of electrical signals (transients) on the household wiring, a problem that does not exist with electromechanical meters.

When the utility can reprogram the meter without notifying the rate payer, they may later set the meter to transmit much more frequently, either intentionally or by error. A person who previously tolerated the meter may then get symptoms and not know the source of them and thus be unable to complain or take corrective action.

III. Proposed medical opt-out program

a. Technology

The medical opt-out program will include the option of an electromechanical meter which does not communicate. If other technologies are tried, the affected person retains the right to later use the electromechanical meter, which will be installed promptly if requested.

b. Eligibility of residential customers

Any full or part-time residential customer is eligible when providing a letter from a physician documenting the need for a medical opt-out.

c. Eligibility of business customers

A small business is eligible for the medical opt-out if it provides housing for a person with a need for the medical opt-out, such as a small nursing home.

A small business is also eligible if the medical opt-out is a part of a workplace accommodation under the Americans with Disabilities Act (ADA). A business requesting a medical opt-out must provide a letter from a physician documenting the need. If a wireless meter is used and the affected person can be placed at least 100 ft. away from that meter, then the business is not eligible for the opt-out.

d. Portability

The opt-out follows the person when moving to a new residence. The utility may ask for a new letter from a physician after five years, but only when moving residence.

e. Surcharge

A token monthly fee may be levied, plus a reasonable fee when and if a meter has to be physically changed. People of low income should not be charged.

f. Notification

Customers must be notified at least 30 days before a meter is installed. They must be notified by special mailing or a door hanger as well as local newspaper ads. The notification must clearly state the eligibility criteria and enrollment process.

g. Meter reading

The utility decides how to read the meters. This can be done by several

methods:

- Utility personnel
- Pre-printed postcards
- Automated telephone menu
- Web site

Reporting the reading by computer (web site) cannot be the only method available.

h. Disallowed technology

PLC technologies are disallowed where the power line signals will enter the household wiring of houses that are included in the medical opt-out program.

i. Close-by neighbors

Where the neighbors' meters are located in close proximity (within 100 ft.) to the dwelling of a medical opt-out participant, those meters are also eligible for the program. It is the responsibility of the opt-out participant, not the utility, to negotiate with eligible neighbors.

j. Retention of analog meters

The utility should warehouse the analog meters they remove from residences. They can then supply the medical opt-out program for the foreseeable future.

IV. Discussion

The utilities are introducing a new technology which was not there before. The customers are presently not allowed a choice. As electricity, gas and water are essential for daily life, and difficult, expensive or impossible to obtain otherwise, it is fair and just to allow people medically affected to receive these vital services in a manner that does not impact their health.

There is no imperative to have a 100% penetration rate of this new technology. The goals of reduced peak load and reduced overall consumption will not be compromised by a medical opt-out.

In Sweden, a country of 8 million people, about 800 households had to keep the analog meter on medical grounds. An additional undisclosed number did have other accommodations while using the new AMI/AMR technology. It is expected that very few businesses will use the medical opt-out since few are able to make reasonable accommodations that are otherwise needed. Businesses are usually in buildings large enough that a wireless meter is not a problem.

The human cost of not accommodating people with a medical need is very significant. In some cases, people have had to vacate their homes or sleep in RVs, outbuildings, etc. This is unjust.

The cost to the utility can be modest. They can stockpile the analog meters they presently remove and therefore no new equipment needs to be purchased.

The utility does not have to send a meter reader once a month. Some utilities only read their meters once a year and simply bill the customer an average rate per month.

Self-reporting by customers has been used by many utilities worldwide for decades and can be used in this program as well.

Banks routinely allow customers access via telephone or web sites, there is no reason a utility cannot also.

Requiring disabled people to bear the full cost of avoiding new technology that is dangerous to them is discriminatory. People in wheelchairs are not billed for using wheelchair ramps; therefore, people with other disabilities should not be required to pay for their accommodations.

In some cases, such as apartments, nursing homes, and close city dwellings, the meters serving the neighbors can be a medical problem. There must be reasonable procedures in place to resolve these issues, with the understanding that any negotiations with neighbors or landlords is the sole responsibility of the person with EHS and not the utility.

It has been suggested by some utilities that their opt-out program is to simply turn off the transmitter in the meter. This may be acceptable for a general opt-out but not for a medical opt-out. There are too many problems with verification, undisclosed/ unintended reprogramming and with the solid-state technologies themselves.

Some electromechanical meters can be upgraded to communicate with the utility in various ways. These meters are as problematic as any solid-state meter.

Sincerely,

Safer Utilities Network
PO Box 1523
Snowflake, AZ 85937