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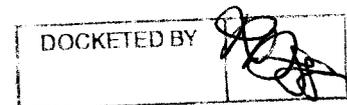
Arizona Corporation Commission  
DOCKETED

From: Monnie Ramsell  
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Date: 3/14/12

AZ CORP COMMISSION  
DOCKET CONTROL

MAR 15 2012

Re: DOCKET NO. E-00000C-11-0328 (Smart Meter)



Here are my comments regarding smart meters. Health issues are my number one concerns, followed by privacy and security. Others issues are safety and accuracy issues. It seems that the Arizona Commission is only addressing the issue of privacy alone and is ignoring all other important known issues.

Smart meters are classified as Class 2 B Carcinogen by WHO in May 2011. Since there is no mentioning of any discussion regarding the issue of health in the upcoming workshop, we request that future studies be conducted before any mass roll out of the smart meters and smart grid. Also there should not be any mandatory installation until the issue of health risk caused by both RF and dirty electricity is resolved. No fee opt-out should be the standard or we will hold each member of the commission personally responsible for any damages known or unknown now and in the future if you fail to address this health issue to our satisfaction. There is no lack of report of people suffering from high blood pressure, ringing in the ears, seizures, bleeding nose, insomnia, irregular heart rate, intense headaches, nausea, etc. from these meters. The health risks associated with long term exposure is still unknown. If short term exposures are already so crippling, long term exposure could be more lethal than tobacco. Young girls are born with their lifetime supply of eggs in their ovaries. Those eggs are especially susceptible to mutations and DNA damage from EMF radiation, and the birth defects those eggs are permanent and irreversible for all subsequent generations. Details are presented in videos of Barrie Trower, Physicist and microwave weapons expert: [http://www.youtube.com/watch?v=9Ao4Z5-RYTO&feature=player\\_embedded](http://www.youtube.com/watch?v=9Ao4Z5-RYTO&feature=player_embedded). The producers and installers of these meters are subjected to lawsuit and class action suits. See link for more details.  
<https://sites.google.com/site/nocelltowerinourneighborhood/home/wireless-smart-meter-concerns/smart-meter-consumers-anger-grows-over-higher-utility-bills> The fact that the Commission *may* instead of *will* develop an opt out proposal is simply not acceptable.

None of the smart meters are UL certified. There are known facts that they are unsafe. In Alabama in 2009, a Sensus engineering employee named Don Baker was fired for repeatedly alerting his management to the presence of a multitude of dangerous defects in the smart meter they were manufacturing (model iConA). He **reported serious flaws in design and functioning that could lead to electrical danger, overheating, and/or fire.** In fact, the failure rate of the meters was twenty times higher than it was supposed to be, and the engineer contends that at least two house fires were the result. In the complaint Baker relates in detail what makes the meters dangerous, and the allegations are damning—and alarming.

A few highlights:

***[Meters] may fail dangerously when subjected to a sudden surge of electricity .... Meters found to contain 'flux' or loose solder residue .... Calibration equipment not properly designed .... Electric resistor component defective .... Internal temperatures up***

***to 200° Fahrenheit .... Hot socket alarm .... Drastic overheating to the point of catastrophic failure, melting, and burning....***

**The sort of defects and failures enumerated in this suit might well have been caught with an independent safety-certification process such as Underwriters' Laboratories (UL).** But these Sensus iConA smart meters, and every other type of smart meter, have never been subjected to such testing.

More details about this can be found in this link

<http://stopsmartmeters.org/wp-content/uploads/2012/01/Alabama-Baker-Sensus-Complaint.pdf>

and there is a link to see the full complaint filed.

<http://stopsmartmeters.org/2012/01/20/meters-that-endanger-shocking-details-from-a-whistleblower/>

There are also issues like remote shut off. Even if the utility companies guarantee that there would be no chance of human error, there is still the possibility of hacker taking advantage of this feature. Just the idea that your power can be remotely shut off will pose a stress on people whose lives depend on life-saving devices like home dialysis machine and other medical devices. This feature needs to be disabled.

Please see my further comments on the issues raised by the draft proposed meter guidelines. Anything that is wireless can never be 100% secured. This is a well-known fact even stated clearly on the front page of Microsoft website. Norton's antivirus source code got hacked only recently. It Norton and our military system got hacked, just imagine how easy it is to hack the mesh grid and meters.

Smart meters are also harmful to the environment killing honey bees and vegetations. APS knew about it and they knew that the bees would disappear where smart meters were installed. If the commission is really serious about green technology, stay away from RF smart meters. Again, more studies are needed to ensure these meters are not harming our trees besides harming ourselves and other living creatures on the planet. We should be allowed to keep our analog meters until all these issues are adequately researched and studied. It would be much more expensive to fix the problems later when more data becomes available showing the lack of safety of these meters.

We have commented on this docket before numerous times, this is the first time we are required to send in 14 hard copies to Staff so that they will prepare a summary of comments for discussion at the Workshop. This is a total waste of paper and energy if 14 copies are printed out just to turn into a summary. Electronic copies are way more efficient for preparing a summary with copy and paste. It may be a slightly less unreasonable request if each commissioners and staff will have a copy of the comment instead of just the summary. For this reason, I will also send my comments electronically to make sure each commissioner has the opportunity to read my full comment.

I want you immediately to pass an ordinance prohibiting the installation of wireless Smart Meters by utility companies and their agents until such time as the people of this community are persuaded that Smart Meters are safe, do not represent a threat to our privacy, do not decrease our property values, will not result in the micro-management of how we live our lives, and will not result in higher energy costs during a period of economic danger and distress. I consider such an ordinance to be urgent civic business, and a matter of great public concern. Please understand that any failure to act swiftly to pass such an ordinance will produce a profound voter backlash.

## Comments on Draft Proposed Meter Guidelines

Following is a list of proposed guidelines for the use of all meters by electric utilities and for any data obtained from their use.

1. Measurement will not be specific to any particular appliance or electrical device, unless approved by the Commission for a specific tariff.

The way this reads is that the Commission will approve a specific tariff to measure specific usage of particular appliance or device. Any measurement CAPABLE of being specific to any particular appliance or electrical device is a breach of privacy regardless of whether such measurement is taken or not. This is especially problematic when the rate-payers do not consent to such invasion of privacy. Other examples of data collected that will infringe on our privacy are as follows even without specific measurement to particular devices.

<http://stopsmartmeters.org/wp-content/uploads/2012/02/Private-Memiors-of-Smart-Meter.pdf> Table 1. Private questions and answers that fine-grained power consumption data reveals.

Question	Pattern	Granularity
Were you home during your sick leave?	Yes: Power activities during the day No: Low power usage during the day	Hour/Minute
Did you get a good night's sleep?	Yes: No power events overnight for at least 6 hours No: Random power events overnight	Hour/Minute
Did you watch the game last night?	Yes: Appliance activity matching TV program No: No power event in accordance with game showtime	Minute/Second
Did you leave late for work?	Yes: Last power event time later than Google maps estimated travel time No: Last power event time leaves enough time for commute	Minute
Did you leave your child home alone?	Yes: Single person activity pattern No: Simultaneous power events in distinct areas of the house	Minute/Second
Do you eat hot or cold breakfast?	Hot: Burst of power events in the morning (microwave/coffee machine/toaster) Cold: No power event matching hot breakfast appliances	Second

Without having to measure specific appliance, a relative low power consumption and variation will signify no one in the house.

2. The utility will not share energy usage data except with its authorized agent. Individual or aggregate usage data will never be sold.

What kind of data will be shared? Name, address, bank account info, payment history, social security number or

Tax ID, account password, etc. Will those be shared because it didn't specified cannot be shared. If usage data never be sold, can it be shared instead of sold. Who can be authorized? Law enforcement agencies, IRS, investors, employees, outside agencies? Are these people equipped to handle data security?

3. All information transmitted between meters and the utility must be encrypted and password protected using US government approved and recommended standards.

What exactly is US government approved and recommended standards? Presently even our government can't even protect its own military server from being hacked. The so called government standard

**Federal Information Processing Standards Publications**

<http://www.itl.nist.gov/fipspubs/fip112.htm> was dated May 30, 1985. If we relied on something so ancient in this information age, that would be a farcical joke. Experts have warned that the security of the smart grid is easily hackable and even our government experts have suggested the present standard of protection is far from adequate. The other big problem is WIRELESS transmission. Presently, there is no 100% proof that wireless transmission is secured. The only fool proof transmission need to be wired. So having encrypted and password protection will not address the wireless vulnerability at all.

4. Data from each meter. must use specific unique identifiers associated with the customer's meter number and service address to ensure that each customer is billed only for his / her own usage.

Unless such data is stored and transmitted individually and separately by wired transmission, there is not assurance that such data is not corrupted or compromised if the data are stored and transmitted over the mesh network. Again no Wireless transmission is safe. Even Microsoft acknowledged it.

5. The utility will not control or shut off individual appliances without customer consent based on an approved ACC tariff.

The utility should NEVER control or shut off individual appliances, period. Any remote feature that will interfere with any individual appliances is not acceptable.

6. The utility may shut off electric service per ACC rules. The utility will abide by current regulations with respect to shut-off of service and curtailment in power emergencies.

All shut off should not be done remotely or without consent or advance notification to paying customers. Remote shut off can endanger life of customers with serious health situation on life-support medical devices including at home dialysis machine, oxygen support breathing assistance, etc.

7. The utility will limit the length of data transmission over a 24 hour period, (utility input will help define the appropriate length of time in seconds or minutes per time period).

The length of data transmission over a 24 hour period is not the only issue. It is also the frequency or transmission and as well as any transmission of pinging of meters within the mesh network. The more information transmitted, the higher the RF. With PG&E, these data are available to the California Public Utility Commission dated Nov. 1, 2011 [http://imgs.sfgate.com/g/acrobat/2011/11/03/RFDDataOpt-outalternatives\\_11-1-11%203pm.pdf](http://imgs.sfgate.com/g/acrobat/2011/11/03/RFDDataOpt-outalternatives_11-1-11%203pm.pdf) We need to ask for the same data for Arizona. Lists of question to ask are:

Question 1:

What is an average duration (in seconds) that a residential smart meter transmits in a 24 hour period?

Question 1.a.:

How is this average computed or measured?

Question 2:

How many times in total (average and maximum) is a smart meter scheduled to transmit during a 24-hour period?

Question 2.a.:

How many of those times (average and maximum) are to transmit electric usage information?

Question 2.b.:

How many of those times (average and maximum) are for other purposes? What are those other purposes? Please specify number of times (average and maximum) by type/category of transmission.

Question 3:

Under what scenarios does a meter transmit outside of the daily schedule, i.e., unscheduled transmission such as on-demand read, tamper/theft alert, last gasp, firmware upgrade etc.?

Question 4:

Typically, how much of the communication between the customer's meter and the utility is unscheduled vs. scheduled?

Question 5:

Are there any other factors that go into determining duration and/or frequency of meter transmissions (e.g., if a meter can't access the network when it's trying to send data, type of a meter etc.)? If yes, please identify these factors.

Question 6:

What is the amount of RF emission at the source when a meter is transmitting data (instantaneous maximum peak level, averaged over 30 minutes)?

Question 7:

Does the amount of RF emission vary depending on duration of transmission/volume of data being sent? For example, are RF emissions higher when there is a larger volume of data to be transmitted?

Question 8:

Are there any other factors that impact the amount of RF emissions? If so, please identify the factor(s) and its impact on RF emissions.

Question 9:

Is there RF emission when the meter is not transmitting? If yes, what is the amount of RF emission?

Question 10:

Is there a difference in the amount of RF emissions for a wireless smart meter with the radio off and a smart meter with the radio out? If yes, what is that difference and how is it calculated?

Question 11:

Is there a difference in the amount of RF emissions for a wireless smart meter with the radio off and an analog meter? If yes, what is that difference and how is it calculated?

There is a technical paper published by Peter H. Sierck in December 2011 to clarify RF radiation emissions and measurement methodologies on Smart meter. You can read it at this link.

[http://hbelc.org/pdf/Resources/SmartMeter\\_Sierck.pdf](http://hbelc.org/pdf/Resources/SmartMeter_Sierck.pdf)

8. Individual usage data gathered will be available only to the customer, the utility, and its duly authorized agent. Such data may be used only to help the customer make choices that will help keep electric bills to a minimum.

There are cheaper and more private alternatives for customer to obtain such data without a smart meter. Choices

only come with information. Unless the customer is educated of choices of alternative energy consumption or consumption pattern or methods of mitigation, shutting down air-conditioner or refrigerator on triple digit days is just not viable or is it humane. Painting the house and pavement a lighter shade will help reflect the heat and makes the house cooler. However there are currently city codes that won't allow any lighter color due to reflection. In fact, these codes encourage homeowners to paint their house a darker shade. Painting the house or pavement a light shade can cool it by 5 degree, more effective than turning down our A/C. According to the Phoenix Magazine, "*Dressing roofs and pavements in light colors might not titillate Phoenix's bolder gentry, but it can reduce surface temperatures up to 100 degrees and decrease a city's UHI by 5 degrees. That's according to the LBNL, which found that if Phoenix whitewashed its roofs alone, we could save a net \$37 million every year in cooling costs.*" "*Less energy also means fewer greenhouse gases. Two years ago, U.S. Energy Secretary Steven Chu, citing LBNL research, announced that if the world's 100 largest cities lightened all their roofs and pavements, it would offset 44 billion tons of carbon dioxide emissions. That's the equivalent of taking every car in the world off the road for 18 years, the LBNL's Art Rosenfeld later told the Wall Street Journal.*"  
<http://www.phoenixmag.com/lifestyle/valley-news/201105/phoenix-s-urban-heat-island/2/>.

The analog meter does not require electricity to run but the smart meter does. Collecting, tracking, analyzing, and safekeeping all the data from the smart meter further require more energy. There are already studies coming out showing that smart meter is not really saving any energy or money. "*Last year, consultancy firm the Brattle Group estimated that the European Union would spend 51 billion euros (\$65.65 billion) on smart meters by 2020 with savings of between 26 billion and 41 billion euros.*"  
<http://af.reuters.com/article/energyOilNews/idAFLDE6860P520100908?pageNumber=2&virtualBrandChannel=0>

APS's target is to install 1,100,000 smart meters and SRP's target is 980,000. The power output of 2.08 million meters each putting out 1/4 watt of RF would be 520,000 watts. A standard broadcast commercial radio station puts out 50,000 watts of power, and requires 75,000 watts of electrical power to achieve this. Using that formula, it would require 780,000 watts of electrical power to power the 2.08 million smart meters in APS and SRP territory alone, and all of that power is paid for by the customers who have the new meters in place. The new meters might be fairly accurate, but they do use energy and the customers have to pay for that energy. That is the reason for higher monthly bills. And that is just to power the meters which are part of a mesh network repeating the data through other meters until the transfer the data at a hub end repeater and transmit all that data on higher powered carriers to the central computers. All of that infrastructure has been paid by the ratepayers. The federal stimulus tax dollars, the corporation or their shareholders do not pay for any part of the new systems installed. A standard power plant puts out 1 million watts, so with the addition of 2.08 million new meters and related infrastructure, we will probably have to build another power plant just to power the meter project.

This is what Connecticut Attorney General had said "*The pilot results showed no beneficial impact on total energy usage,*" Jepsen said. "*And, the savings that were seen in the pilot were limited to certain types of customers and would be far outweighed by the cost of installing the new meter systems,*" he said. *Also, the existing meters, installed between 1994 and 2005, have a useful life of 20 years and replacing them early would incur additional costs for customers, Jepsen said.*

[http://www.ct.gov/ag/lib/ag/press\\_releases/2011/020811clpmeters.pdf](http://www.ct.gov/ag/lib/ag/press_releases/2011/020811clpmeters.pdf)

#### 9. The utility will use only aggregate, anonymous data for system planning purposes.

Data needs to be defined. We only agree that our monthly usage be collected and definitely not usage by hours or minutes. We also only agree that our usage be collected by the utility company and not any other parties. We don't have any contractual agreement with any third parties at this point. Just to be fair, we should also get a breakdown of exactly how much energy the smart meter and smart grid are using separately. If ratepayer is paying for it, ratepayer should have a right to know how much of their energy use is just to power the smart meter and smart grid and all its infrastructure.