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MEMORANDUM

December 17, 2014

TO: File – Case 2012-00428

FROM: Andrew Melnykovich, PSC Staff

RE: Public comment meetings

Public comment meetings in Case 2012-00428 were conducted at 6 pm on December 16, 2014, and 10 am on December 17, 2014, at the offices of the Kentucky Public Service Commission, 211 Sower Boulevard, Frankfort.

Sign-in sheets are attached.

Both meetings began with a presentation by Andrew Melnykovich, providing an overview of the case. There was an opportunity to ask questions following the presentation.

Public comments were received from one person at each of the meetings. Each of the speakers provided a written copy of their comments. These are attached.

The meetings were recorded. The recordings are available on the PSC website, psc.ky.gov.

The December 16 meeting was adjourned at about 6:50 pm. The December 17 meeting was adjourned at 10:45 am.

Attachments: Sign-in sheets
Written comments of Melissa Kirtley
Written comments of Charles A. Bowsher

PUBLIC MEETING - SIGN-IN SHEET

Case No. 2012-00428 – Smart Grid administrative proceeding
Frankfort, December 16, 2014

PLEASE PRINT LEGIBLY

Name	Address	DO YOU WISH TO SPEAK?
1 <u>Duncan Crosby</u>	<u>2000 PNC Plaza 500 W. Jefferson St., Louisville, KY 40202</u>	YES <input checked="" type="radio"/> NO
2 <u>L A & E BOLDMAN</u>	<u>114 WOODFORD DR. LEXINGTON KY 40504</u>	YES <input checked="" type="radio"/> NO
3 <u>David Huff</u>	<u>220 W. Main, Louisville KY 40202</u>	YES <input checked="" type="radio"/> NO
4 <u>GREG COOKER / DELTA Natural Gas</u>	<u>225 Capital Ave - Frankfort + 14</u>	YES <input checked="" type="radio"/> NO
5 <u>Patrick Woods, ETPC</u>	<u>4775 Lexington Rd, Winchester, KY 40391</u>	YES <input checked="" type="radio"/> NO
6 <u>Rance Wohlschlag</u>	<u>KPC</u>	YES <input checked="" type="radio"/> NO
7 <u>Larry Cook</u>	<u>OAG</u>	YES <input checked="" type="radio"/> NO
8 <u>Melissa Kirtley</u>	<u>1961 Blairmore Rd, Lex KY 40502</u>	<input checked="" type="radio"/> YES <input checked="" type="radio"/> NO
9 <u>VAN NEEDHAM</u>	<u>DUKE ENERGY KY</u>	YES <input checked="" type="radio"/> NO
10 _____		YES <input type="radio"/> NO

PUBLIC MEETING - SIGN-IN SHEET

Case No. 2012-00428 – Smart Grid administrative proceeding
Frankfort, December 17, 2014

PLEASE PRINT LEGIBLY

Name	Address	DO YOU WISH TO SPEAK?
1 <u>ROCK LOVEKAMP</u>	<u>11106 Shady Hollow Dr. Louisville, Ky 40241</u>	YES <u>NO</u>
2 <u>David Huff</u>	<u>220 W. Main St, Louisville, KY 40202</u>	YES <u>NO</u>
3 <u>Eddie Brewer</u>	<u>1015 Palmetto Dr. Richmond KY 40475</u>	YES <u>NO</u>
4 <u>Beth Oltz</u>	<u>101 Bullitt Lane Louisville, Ky 40222</u>	YES <u>NO</u>
5 <u>Ben Loetz</u>	<u>101 Bullitt Ln Lou, Ky 40222</u>	YES <u>NO</u>
6 <u>M. Evan Buckley</u>	<u>2365 Harrodsburg Rd Ste B-325 Lex, KY 40503</u>	YES <u>NO</u>
7 <u>Duncan Crosby</u>	<u>2000 PNC Plaza. 570 West Jefferson St, Louisville, KY 40202</u>	YES <u>NO</u>
8 <u>Robert Chatham</u>	<u>PO Box 5487, Louisville, KY 40255</u>	YES <u>NO</u>
9 <u>Greg Paulsen</u>	<u>101A Enterprise Drive Frankfort KY</u>	YES <u>NO</u>
10 <u>Gregory D. Hoen</u>	<u>OAG</u>	YES <u>NO</u>

PUBLIC MEETING - SIGN-IN SHEET

Case No. 2012-00428 – Smart Grid administrative proceeding
Frankfort, December 17, 2014

PLEASE PRINT LEGIBLY

Name	Address	DO YOU WISH TO SPEAK?	
1 Talina Mathews	500 N. 10th St 6 th Fl DEPI	YES	<input checked="" type="radio"/> NO
2 Nancy Watkin	Warwick Ln.	YES	<input checked="" type="radio"/> NO
3 Geoff Pinkerton	284 Capitol Annex Frankfort	YES	<input checked="" type="radio"/> NO
4 Charles A. Bowsher	508 SOUTH BEND OK LEX 40503	<input checked="" type="radio"/> YES	NO
5		YES	NO
6		YES	NO
7		YES	NO
8		YES	NO
9		YES	NO
10		YES	NO

Good evening. My name is Melissa Kirtley. I'm a resident of Fayette county, and I live at 1961 Blairmore Rd in Lexington. I appreciate the opportunity to address the Commission tonight.

I am a concerned citizen who is here to voice my opposition to the proposed implementation of wireless Smart Grid technology and the use of dynamic pricing in Kentucky's utility companies. Based on the findings from other states that have already rolled out Smart Meters, we have a wealth of data that shows us there are significant risks and downsides associated with the use of Smart Meters – these risks include health, safety, security, privacy, and economic issues. The benefits of this technology do not outweigh its risks.

On your web site, the PSC's stated mission is to "Ensure that utilities charge fair, just and reasonable rates for the services provided and that those services are adequate, efficient, safe and reliable."

Given the facts available at this time, I don't think you can deem Smart Grid technology to be sufficiently "adequate, efficient, safe and reliable" for Kentuckians. Here are some key concerns:

- **Increased Exposure to Radiofrequency Radiation - Wireless** "smart" meters have been found to violate FCC limits on human exposure to radiofrequency radiation (*Assessment of Radiofrequency Microwave Radiation Emissions from Smart Meters*, Sage Associates Environmental Consultants, 1/26/11).

The **World Health Organization** that radiofrequency radiation, like that of a smart meter, is a suspected carcinogen. After an exhaustive review of the peer-reviewed science, the WHO placed it into Category 2B of possible carcinogens, the same category as

DDT, lead, chloroform and engine exhaust. This announcement came on the heels of the **Council of Europe's Resolution 1815** (47 countries – 5/13/11) calling for a dramatic reduction in electromagnetic radiation exposure. And, in 2011, the **Seletun Scientific Statement** was issued by the Karolinska Institute in Sweden – this is the same university that selects Nobel laureates in physiology and medicine.

This Seletun Statement, based on a **large and growing body of evidence** showing biological effects from electro-magnetic radiation, called for greatly reduced exposure limits for electro-magnetic radiation from wireless technologies, and said governments should take decisive action **now** to protect biological function as well as the health of future generations. It reads, “The combined effect (of all wireless technologies) places billions of people around the world at risk for cancer, neurological disease and reproductive and developmental impairments”... “Safety standards also ignore the developing fetus, and young children who are more affected.”

It goes on to say, “The SmartGrid concept could require every home to have a wireless electric and gas meter in place of their existing meters. If implemented, it will greatly increase the intensity of new wireless emissions in homes, schools, and every other building that uses electricity and gas”... “The Scientific Panel urges a halt to the rollout of new wireless technologies, especially those that cause exposures for pregnant women and for children.” Numerous **other international scientific committees** after considering thousands of peer-reviewed studies, have warned that this type of radiation is especially harmful to children, pregnant women, the unborn, elderly, and immune-compromised.

Radiation from a single “smart” meter was judged by national radiation expert, Daniel Hirsch, to be 100 times the amount emitted by a cell phone because it exposes the whole body (not just the head) and is continuous, 24-7. Plus, the “smart” meter signals consist of extremely high-intensity, millisecond bursts of RF (called “pulsed”) that are emitted continuously, around-the-clock, and cannot be turned off by residents.

- **Adverse Health Effects** - Most disturbing is that thousands of people who already have wireless “smart” meters in California, Texas, Maine, and far-reaching places such as Australia, England, and Canada have suffered remarkably similar adverse physical symptoms after their “smart” meters were installed: headaches, nausea, dizziness, sleep disturbances, constant ear-ringing, heart palpitations, etc. These are consistent with published studies associating these symptoms with exposure to electromagnetic fields. There are also reports of “smart” meter interference with heart pacemakers, diabetic pumps, deep brain stimulators for Parkinsons Disease, and other medical implants and devices.
- **No Reduction in Carbon Emissions and Radiation Harms Plant and Wildlife** - “Smart” meters do nothing to cut carbon emissions and there is substantial evidence the radiation they emit harms bees (colony collapse) and birds (migration patterns), reduces animal fertility, and damage plants. No environmental impact review has ever been conducted regarding the implementation of “smart” meters. Agriculture is extremely important to Kentucky’s economy – what’s the potential impact on our poultry, equine and cattle production?
- **No Energy Savings and Questionable Costs** - Reuters reports that “smart” meters do not result in energy savings but may actually increase energy usage due to the power required for their operation. “Smart” meters themselves do not save any energy, but are merely billing devices. In other states and countries

where “smart” meters have been installed, ratepayers have seen dramatic increases in their electric bills – in some cases, 2 to 3 times their usual amount with the same usage. Following mass complaints, thousands of meters have been found to be malfunctioning, although it is extremely difficult for individual homeowners to prove that their own meter is giving inaccurate readings.

- **Potential Unfair Pricing** – Dynamic pricing, where electricity may cost considerably more when used during peak demand periods, i.e. from approximately 9:00 a.m. to 7:00 p.m., will punish and discriminate against the elderly, retired, disabled homebound, people raising small children at home, people who work from home, people who work nights, and anyone else who has no choice but to use energy in their home during “peak daytime periods.” Much of Kentucky’s population lives in close proximity to a neighboring state – what will happen if we institute dynamic pricing but the neighboring states do not? This decision can have an impact on the value of our homes, and it has the potential to deter economic development in our state.
- **Fire and Safety Risks** - Fires and explosions have been reported with “smart” meters, with their high-intensity bursts of radiofrequency being named the culprit. Fire authorities have reported the meters to smoke, catch fire, explode, or create over-current conditions on electrical lines. Many Smart Meters ***have not been UL tested or certified for safety***, nor have there been any human health studies on people living with “smart” meters.
- **Appliance and Electronics Damage** - Numerous complaints of damage to appliances and electronics have been reported

when “smart” meters were installed. Refrigerators, radios, televisions, security systems, garage door openers, baby monitors, computers, ceiling fans, etc., are vulnerable to interference and over-heating from high-intensity RF bursts which have caused malfunction, damage, or total loss. Most utilities have denied responsibility for such damage and instead blame the homeowner for faulty wiring in the home.

- **Invasion of Privacy** - Of major concern is that “smart” meters invade our right to privacy. By way of monitoring near real-time electric usage data (readings every 15 minutes), they enable the utility to know when you get up, when you go to bed, when you are home, and when you are not. Plans call for antennas to be installed in every appliance so they will “talk” to the “smart” meter, allowing the utility to glean even more data (when you eat dinner, when you do laundry, what brand of appliance you use) for possible consumer profiling and the ability to turn down or turn off your appliances. This detailed data is highly valuable to utilities and third parties – marketers, insurance companies, creditors, law enforcement, and government agencies. Appliances are already being outfitted with antennas.
- **Cyber-security Risks** - Despite utility assurances, numerous cyber-security experts have warned that wireless meters are easily hacked, enabling criminals to obtain personal identity information and personal energy usage patterns which could lead to burglaries and other serious crimes. Especially with a wireless system, private data can be lost, stolen, or accessed. Nationally, authorities are very worried that terrorists might

install viruses which could remotely manipulate or shut down the grid. Our nation will be at greater risk for terrorism.

- Kentucky is a large target because of Ft Campbell, Ft Knox, plus our role in key logistics and supply chain role with the interstate highways, river transport, rail and 2 major international logistics companies with hubs here. Hacking is serious business. If our own federal government, and some of the world's largest retailers, including Target and Home Depot, are hacked, moving to Smart Grid technology would greatly endanger Kentuckians.

So, there are a multitude of reasons why it is not wise to implement Smart Grid technologies and dynamic pricing for utilities in Kentucky. Because of this, I hope you will prevent this technology from further implementation in Kentucky.

In the event the PSC elects to move forward with Smart Technology in some capacity, I ask you to give your fellow Kentuckians – including your family, friends and neighbors -- the right to choose which kind of utility meter they want to use.

Please give us the right to opt-out of Smart Meters. I also ask that you require the utility companies be price neutral on the meters, so they are offered at the same price to consumers. This is important so Kentuckians of all income levels can truly have a choice.

Thank you for your time and consideration in this matter.

Public Service Commission Hearing on Smart Grid Case
Comments by Charles A. Bowsher
December 17, 2014

First, I would like to take this time to thank the Members and Staff of the Public Service Commission who not only work on our behalf here at the PSC, but throughout their careers have seen fit to not only serve the public here in Kentucky (land that I love), but also nationally and some I would assume internationally as well. Thank you.

As a "leader" of sorts in my local electric usage area (in terms of the quarterly rankings sent by KU) wherein I typically rank among the most conservative two or three households I want to focus my comments in the area of conservation. As I think more and more of our planet's dwindling natural resources, it seems illogical for any of our utilities to have rate schedules which charge less and less as the quantity used by the consumer (individual or corporate) increases. This is true for electric, gas and water rates. This flies in the face of basic supply and demand. I realize there are efficiencies of scale which are achieved, but when we are talking about a limited resource such as coal, natural gas or nuclear and water it makes no sense to continue with a system that assumed we would never run out of supply. Those using the least should be paying the lowest rates, those using the most should be paying higher rates. It is excessive or wasteful usage which creates much of the need for building excess capacity. This is an avoidable expense if adequate conservation and usage incentives are implemented. Smart meters and Peak Pricing are obviously wise steps, though old fogey that I am I really don't trust those new fangled electronic meters. I'll accept a smart meter if you'll let me keep my spinning dial, thank you very much!

I also support net metering with solar, wind or other alternatives on a kilowatt for kilowatt basis as long as proper safeguards are in place to protect utility workers restoring power or working in the area. They must be protected. Alternative energy is the necessary future if we are serious about passing a liveable planet on to future generations. We absolutely must adopt 50, 100, and 500 year planning time-lines when it comes to our resources.

Thank you,

Charles A. Bowsher