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November 13, 2017

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, Second Floor
Harrisburg, PA 17120

RE: Maria Povacz v. PECO Energy Company
Docket No. C-2015-2475023

Dear Ms. Chiavetta:

Enclosed for filing with the Commission is the ***Reply Brief of PECO Energy Company***.

Very truly yours,

Ward L. Smith
Counsel for PECO Energy Company

WS/ab
Enclosure

cc: Darlene D. Heep, ALJ

#4559415

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Maria Povacz	:	
	:	Docket No. C-2015-2475023
v.	:	
	:	
PECO Energy Company	:	

CERTIFICATE OF SERVICE

I, Ward L. Smith, hereby certify that I served a copy of the Reply Brief of PECO Energy Company via e-mail to:

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Maria Povacz	:	
	:	
v.	:	**C-2015-2475023**
	:	
PECO Energy Company	:	

Reply Brief of PECO Energy Company

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Introduction

The Complainants allege that PECO's installation of an Advanced Meter Installation ("AMI") meter or Advanced Meter Reader ("AMR") meter[1] at their residences violates 66 Pa. C.S. §1501 because, they claim, the radiofrequency fields that the AMI meter uses to communicate (both with the PECO backbone system and with smart appliances in the home) have harmed or will harm their health.

Radio frequency transmissions from smart meters, including PECO's Advanced Meter Installation ("AMI") meters, are regulated by the Federal Communications Commission (the "FCC"). It is uncontested that radio frequency transmissions from PECO's AMI meters are millions of times smaller than allowed by the FCC. *See* PECO Main Brief, pp. 45-46.

The Complainants, however, do not believe that the FCC limits are adequate. Indeed, they think that the FCC is "bonded to the industry" and that, consequently, for decades the FCC has ignored proof that radiofrequency transmissions harm human health through "non-thermal effects," thus leaving its exposure standards at levels that actually harm human health.

The Complainants see that as a regulatory void that should be filled by this Commission. Complainants ask the Commission to step into that perceived regulatory void and find that the installation of AMI meters at Complainants' residences is "unsafe" and thus violates §1501.

Complainants' expert witness, Dr. Andrew Marino, testified that, while he believes that there is potential or possible risk from exposure to AMI meters – that is, that they "could" cause harm -- there is "no evidence to warrant the statement" that a PECO AMI meter "did", "will," or

[1] One Complainant – Ms. Murphy – claimed that PECO's AMR caused adverse health conditions between 2002 and 2015. For purposes of this Reply Brief, the arguments are nearly identical as to whether Complainants have proved their allegations with respect to either the AMI meter or AMR meter. PECO therefore will generally only refer to AMI meters, but its arguments apply with equal force to claims about AMR and AMI meters.

"would," harm the Complainants. *See* PECO Main Brief, p. 26. And in their Reply Briefs (p. 18), Complainants frankly "concede, as they must, that their testimony and that of their doctors would not meet the high burden of proving causation. . . . "

For its part, PECO presented substantial, persuasive expert testimony that demonstrates that its AMI meters will not cause, contribute to, or exacerbate health effects in the Complainants. *See* PECO Main Brief, pp. 44-49.

Commission precedent is clear that the Complainants have the burden of proving, by a preponderance of the evidence, that PECO's AMI meters have caused (or contributed to, or exacerbated) or will cause (or contribute to, or exacerbate) adverse health effects. Since Complainants frankly concede that they have not met that burden, their Complaints should be dismissed.

Summary of Argument

The Complainants have the burden of proving their claim that PECO's AMI meter has or will cause, contribute to, or exacerbate their adverse health. This characterization of the burden is supported by:

- The Commission's jurisprudence in *Woodbourne-Heaton* and other transmission line siting cases;
- The *Kreider Order*;
- The *Romeo decision*; and
- Analysis of the proper role for the Commission to act in a quasi-judicial vs a quasi-legislative function;

None of the contrary arguments offered by Complainants, including their electrocution analogy, their use of Websters' Dictionary definitions, or their many references to "toxic torts" changes that conclusion.

Complainants concede that they have not proven causation. Complainants did not successfully rehabilitate Dr. Marino's testimony regarding background electromagnetic energy fields at the Complainants' homes, nor did they successfully impugn the FCC's ongoing review of the science in this area.

Utility Commissions in other states have reviewed the science on smart meters and health and have concluded that installation of smart meters is safe and reasonable.

Given the above, the installation and use of AMI meters constitutes "reasonable utility service" for purposes of 66 Pa. C.S. §1501.

Argument

I. The Complainants' Reply Briefs are incorrect in their analysis of burden of proof

A. The Commission's transmission line siting cases, including the *Woodbourne-Heaton* case, are appropriate precedent for the burden and standard of proof in these proceedings

The seminal Commission Order that initiated evidentiary hearings on AMI meters and health was *Susan Kreider v PECO*, P-2015-2495064 (Opinion and Order issued January 28, 2016). In ordering hearings in that proceeding, the Commission referenced an early 1990s PECO transmission line siting case – the *Woodbourne-Heaton* case -- as a precursor of the hearings that it anticipated in the AMI meter cases, stating (pp. 21-22) that:

> Consistent with our legal duty to provide the parties appearing before us with the opportunity to be heard and to present their case, we have held hearings on similar issues concerning the alleged health effects of customers relating to utility equipment. Following a ruling from the Commonwealth Court, we held several days of hearings to address whether customers would be adversely affected by PECO's reconstruction of a transmission line given the customers' allegations of increased risk of fires and the risk of EMFs from the line causing negative health effects, including cancer. *See, Letter of Notification of Philadelphia Electric Company Relative to the Reconstructing and Rebuilding of the Existing 138 kV Line to Operate as the Woodbourne-Heaton 230 kV Line in Montgomery and Bucks Counties,* 1992 Pa. PUC Lexis 160.

Later in the *Kreider Order* (p. 23) the Commission, while discussing burden of proof, again referenced the *Woodbourne-Heaton* proceeding as guidance of how the burden of proof should be addressed in the AMI/health cases:

> The ALJ's role in the proceeding will be to determine, based on the record in this particular case, whether there is sufficient evidence to support a finding that the Complainant was adversely affected by the smart meter or whether PECO' s use of a smart meter to measure this Complainant's usage will constitute unsafe or unreasonable service in violation of Section 1501 under the circumstances in this case. *See, Letter of Notification of Philadelphia Electric Company, supra,* at* 12-13

(stating that the ALJ's role was to determine whether there was sufficient record evidence to support a finding that the petitioners would be adversely affected by the reconductoring of the transmission line at issue).

In their Main Briefs (p. 75), the Complainants discussed the *Kreider Order* as it relates to burden of proof, but did not mention or discuss the *Woodbourne-Heaton* proceeding.[2]

In PECO's Main Brief (pp. 15-18), it discussed the *Woodbourne-Heaton* proceeding at length. In its *Woodbourne-Heaton* discussion, PECO demonstrated that the burden of proof related to EMF exposure and health, as discussed in *Woodbourne-Heaton*, is that in order to "support a finding and/or conclusion that such exposure [to EMFs] is harmful to human health," the Complainants must make a "clear and convincing demonstration of such causality" by a "preponderance of the evidence."[3]

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[2] Complainants were fully aware of the *Kreider Order* and its discussion of the *Woodbourne-Heaton* case. As discussed in PECO's Main Brief, pp. 13-14, fn 6, one of the Complainants, Laura Sunstein Murphy, filed an *amicus* brief in that proceeding and argued that: "Evidence of negative health effects . . . . is crucial to the determination of whether PECO is providing service in violation of Section 1501."

[3] *Woodbourne-Heaton* stated (pp. 73-72) (emphasis added) that:

> In view of all of the foregoing conflicting expert scientific studies, testimony and conclusions on the issue presented, i.e., whether exposure to EMFs causes adverse human health effects, the evidence of record in this proceeding, taken as a whole, leads to the ultimate finding and conclusion that the scientific studies at present are inconclusive; and therefore, *the record evidence does not support a finding and/or conclusion that such exposure is harmful to human health. That is to say, that there has been no clear and convincing demonstration of such causality, nor is the preponderance of the evidence sufficient to support such a finding and/or conclusion. Thus, within the framework of the issue framed by the Commonwealth Court and the Commission in this case, it cannot be said that the record evidence supports a finding and/or conclusion that exposure to EMFs causes adverse human health effects. The scientific evidence of record is inconclusive at this point in time.*

In their Reply Briefs (pp. 14-15), Complainants address *Woodbourne-Heaton* for the first and only time. Their analysis of why the Commission should not rely on *Woodbourne-Heaton*, stated in its entirety, is:

> First, the Commission in that case did not consider the statutory interpretation question raised here. Second, that case concerned exposure to transmission lines that apparently ran near the complainants' properties. It did not consider exposure to RF based on the placement of devices on the complainants' homes or property. That consideration makes a world of difference because forcing a customer to accept EE away from their home or property is very different from forcing them to accept exposure by installation of a device on their own home or property. [Third], the *Re Philadelphia Elec. Co.* decision mentions but does not address in any meaningful detail whether the exposure could be unreasonable even without conclusive evidence that exposure causes harm. *Id.* at *22-25. [Fourth], to the extent that the Commission may have held in *Re Philadelphia Elec. Co.* that a utility customer complaining of the potential for harm must prove either tort law causation or that exposure "is harmful to human health," *id.* at *7, the decision is wrong. Something that is not proven safe and yet not proven harmful may present a risk of harm. Even if the precise magnitude of the risk is uncertain, it could still be unreasonable to expose people to it in their homes and property against their wishes and the recommendation of their doctors, particularly where, as here, there is no compelling reason for forcing exposure as there are quite reasonable alternative employed by utilities all over the country.

PECO will address each of these four arguments in turn.

Complainants' first argument is that *Woodbourne-Heaton* should not be used to provide guidance on burden of proof because "the Commission in that case did not consider the statutory interpretation question raised here."

That is simply not true. The positions taken by the Complainants in this case with respect to burden of proof and the positions taken by the Protestants in *Woodbourne-Heaton* with respect to burden of proof are virtually identical. In the instant proceedings, the Complainants have argued that the Commission is required to analyze the "risk" or "potential" for harm, and that such a case does not require proof of causation. *See, e.g.,* Complainants Reply Brief, pp. 9-10: (pp. 9-10 "There is not a single suggestion or even a hint in the language of Section 1501 (or elsewhere) that a customer must prove causation of harm as required in a tort claim for

damages.") That same position was taken by the local residents in *Woodbourne-Heaton.* Here is how the *Woodbourne-Heaton* Protestants presented the argument in their Reply Exceptions:[4]

> [T]here is an unreasonable risk of danger . . . because there are scientific studies that indicate adverse health effects of EMF exposure and many scientists who back these findings. And there are both scientists who back these findings and those who dispute them who are jointly advocating continued research. There need not be conclusive evidence of a 'causal connection' for there to be conclusive evidence that there is a risk.

In other words, in *Woodbourne-Heaton* the Commission was deciding the precise issue that is being posed by Complainants in the instant case, and it held that the Complainants must prove, by a preponderance of the evidence, that exposure has caused or will cause adverse human health effects. It is not enough to raise the potential or possibility or risk of harm.

It should also be noted that, while the *Kreider Order* only referred to *Woodbourne-Heaton*, the Commission has continued to use that same analysis in transmission line/EMF/health cases in the decades since *Woodbourne-Heaton.*[5] To give but one example, in the 2010 PPL *Susquehanna-Roseland* transmission proceeding,[6] Administrative Law Judge Colwell made her finding in terms of causality (slip op. at 53): "[T]here is no reliable scientific basis to conclude that exposure to power frequency EMF from the proposed S-R Line will cause

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[4] *Quoted in* the Commission's March 26, 1993 *Woodbourne-Heaton Order*, 78 Pa. P.U.C. 486, 492-93; 1993 WL 383052, slip copy at 6.

[5] On page 15 of their Reply Briefs, the Complainants take a somewhat backhanded slap at the fact that *Woodbourne-Heaton* was decided over 25 years ago, noting in passing that: "PECO reaches back to the Commission's 1993 [*Woodbourne-Heaton*] decision to argue . . . " The Commission (not PECO) was correct in the *Kreider Order* when it directed the parties to "reach back" to *Woodbourne-Heaton. Woodbourne-Heaton* was the seminal Pennsylvania case on transmission lines and EMF, and any discussion of the burden of proof for scientific and medical claims at the Pennsylvania Commission thus must begin with *Woodbourne-Heaton.* That same burden of proof framework continues to be used by the Commission in transmission line/EMF cases to this day. *See, for example*, the *Susquehanna-Roseland* case discussed next in text.

[6] *Application of PPL for Approval of the Siting and Construction of the Proposed Susquehanna-Roseland 500 kV Transmission Line*, 2010 WL 637063 (Pa. P.U.C. 2010), slip copy at 50-54.

or contribute to adverse health effects in children or adults along the proposed route of the line." In sum, *Woodbourne-Heaton* and subsequent similar cases looked directly at the question of what burden of proof Complainants must meet when arguing that a public utility facility is unsafe, and have decided that proof of causality is needed, not merely proof of "potential" or "risk" of harm. Complainants' first reason for rejecting *Woodbourne-Heaton* is not correct.

Complainants' second reason for rejecting *Woodbourne-Heaton* is: "[Woodbourne-Heaton] concerned exposure to transmission lines that apparently ran near the complainants' properties. It did not consider exposure to RF based on the placement of devices on the complainants' homes or property. That consideration makes a world of difference because forcing a customer to accept EE [electromagnetic energy] away from their home or property is very different from forcing them to accept exposure by installation of a device on their own home or property."

PECO first notes that Complainants do not provide any reasoning to support the conclusion that the placement of the facilities affects the burden of proof. The Complainants have the evidentiary burden of proving that PECO's facilities are unsafe. Why would the evidentiary burden change depending upon whether the utility facility is located on vs next to the Complainants' property?

Second, this argument further reflects a lack of knowledge of the arguments that were before the Commission in *Woodbourne-Heaton* (and other transmission line cases). In *Woodbourne-Heaton*, the challenged transmission line was built along a railroad right-of-way that abutted a series of residences. One of the primary claims being made by the local residents in *Woodbourne-Heaton* was that EMF from the transmission line would cross onto their

properties and force them to accept exposure from the line while they were in or near their homes, thus harming their homes and home activities.[7]

The Protestants in *Woodbourne-Heaton* clearly believed that, if the transmission line was energized, their homes would be at risk. The ruling on burden of proof made in *Woodbourne-Heaton* was created in the specific context of that claim. That burden of proof rule thus applies equally to the Complainants' claim in this proceeding. The fact that the current Complainants also claim that their homes will be put at risk does not warrant a different approach to the *Woodbourne-Heaton* burden of proof rule.

The Complaints' third reason for rejecting *Woodbourne-Heaton* is that the decision "mentions but does not address in any meaningful detail whether the exposure could be unreasonable even without conclusive evidence that exposure causes harm. Id. At 22-25."

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[7] For example, in the *Woodbourne-Heaton* proceeding Mr. Koerper claimed (p. 19) that if transmission line was energized his family would have to stop using the children's swings and the family patio; Mrs. Lawler stated (pp. 19-20) that her daughter would have to stop sunbathing in the yard and her family would have to stay indoors, stay away from the house, or move; Mr. Henry stated (p. 20) that he would not let his daughter play at her friend's house near the line; Mrs. Dalrymple stated (p. 21) that her family would give up outdoor activities and consider moving; Ms. Hall stated (p. 21) that she would not visit friends or allow her children to visit friends who lived near the line ; Mrs. Glathorn expressed concern (pp. 21-22) that her family would have to give up outdoor activities; Mr. Matiriko testified (p. 22) that he would "curtail the majority of use of the backyard"; Mr. Bontempo stated (p. 22) that he would give up family soccer, horseshoes, and stickball with his grandchildren; Ms. Cohen stated (p. 23) that "we just feel it is unfair that something is being put alongside my home that potentially can harm the children and it is really outside of my control"; Mrs. Dempsey stated (p. 24) stated that she would stay away from her house; Mr. English stated (p. 24) that he would abandon his property; Mrs. Monarch testified (p. 26) that she would move; Ms. Maier testified (p. 26) that she could not afford to move, but would find somewhere to go; Mr. Small stated (p. 27) that his back yard would become a "wasteland" and that he would move; Mr. Bianchimano testified (p. 28) that he would move from his dream house; Mr. Fox stated (p. 29) that he would move; Mr. Kelly stated (p. 29) that he would consider relocating his business; Mr. Lawlor stated (p. 30) that he would drive his kids to another neighborhood to play; and Ms. Kupcinski (p. 30) would no longer allow her children to play outside and might move. All citations are to page numbers of the slip op. of the Commission's March 26, 1993 Opinion and Order.

This claim – that a utility facility can be unreasonable even without conclusive evidence that exposure causes harm – is exactly the claim that the *Woodbourne-Heaton* Protestants made in their Reply Exceptions, as set forth above.[8] The Commission rejected that argument. After hearing that argument, the Commission, in its November 12, 1993 final Opinion and Order on remand, 1993 WL 855896 (Pa. P.U.C. 1993), slip copy at 11, nonetheless approved the Woodbourne-Heaton line, ordering:

> That by reason of the fact that the additional scientific research and studies presented of record at the hearing in the remanded proceedings do not support a finding or conclusion that there is a conclusive causal connection between exposure to EMFs and adverse human health effects because of the inconclusive nature of said research and studies, when viewed in totality, the Commission's February 9, 1990 Order approving the Letter of Notification filed by the Philadelphia Electric Company for the Woodbourne-Heaton Line be and is, hereby, affirmed; And provided that the Woodbourne-Heaton Line must be operated and maintained in compliance with the National Electrical Safety Code and with all applicable statutes, regulations and codes for the protection of the public and the natural resources of the Commonwealth of Pennsylvania.

Complainants' fourth reason for rejecting *Woodbourne-Heaton* is that they believe that the decision is wrong. PECO does not agree. The rule established in *Woodbourne-Heaton* has been utilized by the Commission to decide transmission line siting cases for a quarter of a century, and it is an appropriate approach to resolving claims that exposure to a utility facility is unsafe. Indeed, one might ask what the outcome in a transmission line siting case would be under the burden of proof advocated by the Complainants in this proceeding. The answer is that, under the Complainants' view of burden of proof, an individual complainant who lived near a proposed transmission line would be able to veto the siting, construction, and energization of the

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[8] [T]here is an unreasonable risk of danger . . . because there are scientific studies that indicate adverse health effects of EMF exposure and many scientists who back these findings. And there are both scientists who back these findings and those who dispute them who are jointly advocating continued research. There need not be conclusive evidence of a 'causal connection' for there to be conclusive evidence that there is a risk."

transmission line without actually proving that EMF from the line would harm anyone, as long as they showed "potential" or "risk" of harm – meaning as long as they had one witness who would testify that EMF "may" be harmful. No transmission line could ever be built under that regime. Indeed, since all energized electrical facilities create EMF, under that regime such a Complainant could veto any substation, distribution line, transformer, or other utility facility, all without proving that it would harm anyone.

A similar analysis applies for smart meters. If a Complainant can prevail without proving, by a preponderance of the evidence, that radio frequency fields cause adverse health effects, then they can veto the installation of an AMI meter at their residence. In effect, the rule would create an "opt out" that does not otherwise exist. And, on that same rationale, if Complainants believed that their neighbors' AMI meters had the potential to harm them, they could veto the installation of those AMI meters, by claiming but not proving that the neighbors' meters would harm them. Or they could veto the backbone towers that communicate back to the AMI meters using radio frequency transmissions. Simply, if Complainants can veto any part of the system without proving that AMI meters cause human health effects, then they can veto all of the system without proving that AMI meters cause AMI human health effects. Utility systems cannot be run with that kind of fractionalization.

In the *Kreider Order*, the Commission directed the parties' attention to *Woodbourne-Heaton*, specifically as to burden of proof. The burden of proof, as established in *Woodbourne-Heaton*, is that Complainants must prove, by a preponderance of evidence, that exposure to radio frequency fields from PECO's AMI meters has caused or will cause adverse human health effects. Complainants' four arguments against *Woodbourne-Heaton* do not withstand close

inspection. Your Honor should thus follow the Commission's lead and utilize the burden of proof, as set forth in *Woodbourne-Heaton*, to analyze the record evidence in this proceeding.

B. The *Kreider Order* and the *Renney Thomas* Initial Decision cited therein support PECO's position regarding burden of proof

In their respective Main Briefs, both parties claim that the *Kreider Order* supports their view of the burden of proof. PECO's view is that the *Kreider Order* speaks in the language of cause and effect – it discusses Ms. Kreider's claim of "specific health effects she experienced," and states that she will have to show that she was "adversely affected" by PECO. Couple that with the fact that the *Kreider Order* directed the parties to *Woodbourne-Heaton*, and it seems quite clear that the *Kreider Order* supports PECO's view on burden of proof.

In their Reply Briefs, however, Complainants correctly note that the *Kreider Order* also used the phrase "potential health hazard" in one part of its discussion. The Complainants state (pp. 13-14) that:

> The Commission did suggest, however, that the relevant inquiry is the *potential* for harm. *Id.* at 21 ("For instance, we conducted a hearing to address a complaint alleging that the smart meter was a *potential* fire hazard and a *potential* health hazard to the complainant's pregnant wife in order to provide the complainant with an opportunity to be heard on the safety allegations." *Id.* at 21 (emphasis added) (citing *Renney Thomas v. PECO Energy Company, Docket No. C-2012-2336225* final order entered December 31, 2013.

PECO does not believe that the scope of the hearing in the *Renney Thomas* offers any support for the Complainants' view on burden of proof. In *Renney Thomas*, the Complainant claimed (in his November 18, 2012 formal complaint) that: "The electromagnetic fields pose a threat to fetal brain development" and other body functions. This claim was made pre-*Kreider*, and on December 12, 2012, PECO thus filed a Preliminary Objection claiming that a hearing on health matters was not allowed. In what he later described as "perhaps an excess of caution,"

Administrative Law Judge Buckley convened oral argument on PECO's preliminary objections because he "wished to give the Complainant an opportunity to be heard on the alleged safety issue." *Renney Thomas v PECO*, Nov. 12, 2013 Initial Decision, p. 3. At the oral argument "Complainant provided no evidence that 'smart meters' constitute a health hazard through the production of electro-magnetic fields (EMFs), as a fire hazard, or in any other way." *Id.* ALJ Buckley therefore granted PECO's Preliminary Objections as a matter of law and dismissed the case without a full evidentiary hearing. There is nothing in *Renney Thomas* that suggests the use of a lower standard of proof based on "potential" risk.

C. The Commonwealth Court's *Romeo* Decision supports PECO's view on burden of proof

In its Main Brief (p. 15), PECO noted that the Commonwealth Court's Order in *Romeo v. Pa. PUC*, 154 A.3d 422 (Pa. Commw. 2017) used causation language in describing the case, thus supporting the view that these cases are about causation. The *Romeo* court stated (emphasis added):

> Romeo claimed that the smart meters *cause* safety and fire hazards and have a negative health impact. Just because he cannot personally testify as to the health and safety effects does not mean that his complaint is legally insufficient. He could make out his claim through the testimony of others as well as other evidence that goes to that issue.

In their Reply Briefs (p. 15), Complainants reviewed this same language and concluded that: "Nowhere did the court state that Romeo had the burden of proving causation of harm, in the tort law sense."

To which PECO simply replies that the *Romeo* court did state that the remand was for the purpose of allowing Mr. Romeo to prove causation – the language highlighted above is quite clear. It does not say that the case was remanded to allow a discussion of "potential" or "risk."

That decision is therefore more consistent with PECO's view of the burden of proof than with Complainants' view of the burden of proof.

D. The Complainants' references to "toxic tort causation" do not change the burden of proof required in this proceeding

In their Reply Briefs (p. 6), Complainants state the issue regarding burden of proof as:

> [T]he precise issue presented here, [is] namely, does the Complainants' burden include proof of tort causation?

PECO submits that the real question is not, as Complainants suggest, a dichotomous choice between toxic tort causation on the one hand, and the Complainants' "possibility of a risk" analysis on the other hand. (Complainants seem to be proceeding on the unstated and unproven assumption that there are only two alternative burden of proof possibilities; tort causation, or the Complainants' proposal.) Rather, the question is simply what burden and standard of proof Complainants must meet in this proceeding. As demonstrated above, the Commission already answered that question in the *Kreider Order*. Complainants must prove, by a preponderance of the evidence, that AMI meters cause (or contribute to, or exacerbate) adverse human health effects. And they must do so even if that standard of proof bears similarity to toxic tort jurisprudence.

PECO recognizes that the burden of proof that is set forth in *Woodbourne-Heaton* and the other cases discussed above has a great deal in common with causation theories that are used in toxic tort litigation. But labelling the argument as being similar to toxic tort causation does not provide any insights into whether it is the proper burden of proof for use in this proceeding. To that point, PECO notes that while the Complainants cite numerous cases that describe what one

must prove in a toxic tort case,[9] not a single one of those cases discusses what standard the Commission should use in its cases.

E. Complainants' electrocution analogy does not support their argument on burden of proof

At page 8 of their Reply Briefs, Complainants make an analogy to electrocution to argue that they should not have to demonstrate causation by a preponderance of the evidence, stating:

> Taking PECO's position to its logical but absurd conclusion, it does not matter how much of a risk of harm is presented, no customer could establish a violation of Section 1501 unless they could prove by a preponderance of evidence (51%) that they have been or will be harmed. Under that reasoning, a 25% risk of electrocution of an electricity customer through the action of a Pennsylvania utility would be deemed to be safe and not a violation of Section 1501. That cannot be right. The General Assembly could not have intended this, and the plain meaning of 'safe' does not permit it.

Complainants are mixing apples and elephants. Electrocution is a known phenomenon that is known to cause adverse health effects. If a grounded person touches an energized facility without protective gear, the electric current will seek ground through the person's body. Depending upon the voltage and amperage of the energized facility, the person might experience a shock, injury, or even death. That general proposition certainly can be demonstrated by a preponderance of the evidence. And, if it was demonstrated by a preponderance of the evidence that a piece of utility equipment had a 25% chance of causing electrocution, it would of course be deemed unsafe.

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[9] *See, for example, Polett v Public Communications, Inc.*, 126 A. 3d 895 (Pa. 2015); *Smith v. German*, 253 A. 2d 107 (Pa. 1969); *Pitchard v Dow Agro Sciences*, 705 F. Supp. 2d 471; *Perry v Novartis Pharmaceuticals Corp.*, 564 F. Supp. 2d 452 (E.D. Pa. 2008); *Brandon v Ryder Truck Rental, Inc.* 34 A.3d 104 (Pa. Super. Ct. 2011); *Viguers v Phillip Morris USA Inc.*, 837 A. 2d 534 (Pa. Super Ct. 2003); *Spino v. John S. Tilley Ladder Co.*, 696 A. 2d 1169 (Pa. 1997).

For radio frequency fields, Complainants admit that they have not demonstrated, by a preponderance of the evidence, that exposure causes injury or death. In that critical way, radio frequency fields are not analogous to electrocution.

F. In this quasi-judicial proceeding, the Commission should not use the "weight of the evidence" approach or other methods developed for use in quasi-legislative functions

In Complainants' Main Briefs (pp. 23, 75-77), they argued that the Commission should utilize its quasi-legislative function to make a ruling in this docket using a much lower standard of proof, stating (Complainants Main Brief p. 23): "This Commission's role in deciding the issue is quasi-judicial and quasi-legislative, which means that the issue is part policy decision." In their Reply Briefs (p. 16), Complainants state that they never made that argument: "Complainants are not asking the Court to act in a quasi-legislative capacity, as PECO wrongly suggests."

Let's set aside that somewhat confusing sequence. In its Main Brief, PECO responded to the claim that the Commission should use a quasi-legislative burden of proof. *See, for example*, PECO Reply Brief, pp. 14-15):

> It will become apparent in the ensuing discussion that, even though the instant proceeding is an exercise of the Commission's quasi-judicial function, the Complainants seek to have the Commission apply a standard of proof that would normally be used only in a legislative or quasi- legislative proceeding, such as a rulemaking. Indeed, the Complainants' Briefs directly state (p. 23) that: "This Commission's role in deciding the issue is quasi-judicial and quasi-legislative. . . ." But this is a complaint proceeding, which is quasi-judicial in nature – not quasi-legislative. The standards used in the quasi-legislative rulemaking function are useful when the Commission is exercising its rulemaking function, but are not appropriate when, as here, the Commission is exercising its quasi-judicial function. "
>
> *See also* discussion at PECO Reply Brief, pp. 15, 20-23.

Regardless of the label that Complainants now put on this argument, they continue to argue (p. 10) that the burden of proof of an administrative agency "is reasonably lower than that appropriate in tort law."

In support of that argument, Complainants first continue to rely upon a quotation from *Allen v Pennsylvania Engin. Corp.*, 102 F. 3r 194 (5th Cir. 1996). In PECO's Main Brief (pp. 22-23), it demonstrated that Complainants' quote from *Allen* was not given in full context, and that when read in full context it actually disproves Complainants' argument. Complainants' did not address PECO's discussion, but simply repeated the out-of-context quote. PECO therefore answers the *Allen* quote by referring back to its analysis at pages 22-23 of its Main Brief.

Complainants' second argument (p. 11) in favor of using a lower, quasi-legislative burden of proof is to claim that "PECO turns this around and argues that the Commission should not base its decision 'solely upon policy and political considerations' . . . . Complainants never suggested that the Commission should decide these cases solely upon considerations of policy."

PECO feels compelled to point out that the quoted phrase -- "solely upon policy and political considerations" -- is not a statement of PECO's position. PECO is quoting from one of the articles cited by Complainants, which PECO used to demonstrate that even the author of that article did not support the position taken by Complainants.

Complainants' third argument in favor of using a quasi-legislative burden of proof that they would like the Commission to decide this case using the "weight of the evidence" methodology that is sometimes used by regulatory agencies in their quasi-legislative function. PECO responded by demonstrating (p. 23) that:

> When Complainants ask Your Honor and the Commission and the Commission to use a lower standard of proof based on the quasi-legislative model, they are asking you to adopt a methodology that has been rejected for use in judicial settings because it is not scientifically acceptable.

Complainants' reply (p. 17) is somewhat confusing – they say that "PECO's discussions of WOE methodology as insufficient to prove tort law causation is a red herring." PECO is not arguing that WOE methodology is insufficient to prove tort law causation – although the case cited by Complainants clearly says that it is insufficient for that purpose. PECO is arguing that the WOE methodology, *which Complainants advocate using in the instant proceeding*, should not be used because, in other judicial settings it has been rejected *as not being scientifically acceptable*. PECO stands by the position that the Commission should not adopt a burden of proof in this proceeding that has been rejected by the courts as not being scientifically acceptable.

Other than that, PECO relies upon the quasi-legislative arguments made in its Main Brief. The Commission is not acting in a quasi-legislative capacity in this proceeding, and it cannot and should not utilize a burden of proof from the quasi-legislative function in deciding the issues before it in this quasi-judicial docket.

G. The Complainants' argument regarding the Statutory Construction Act and reliance on the Merriam-Webster dictionary is misplaced

In their Reply Briefs (pp. 6-8) Complainants argue that there is a "threshold issue" in this proceeding related to the Statutory Construction Act. Complainants then look to the definition of "safe" in the Merriam-Webster Dictionary and argue that it compels the Commission to assign a lower burden of proof to Complainants.

It is interesting that, even though Complainants describe this as a "threshold issue," they did not mention it in their Main Briefs.

In any event, since the Commission has a well-developed body of law regarding burden of proof that is specific to this kind of medical/scientific controversy, it would not be appropriate to supplant that precedent with the Merriam-Webster dictionary.

In addition, PECO notes that the three cases that Complainants cite for this argument – *Branton v Nicholas Meat, LLC*, 159 A. 3d 540 (Pa. Super 2017); *Miller v. Bethlehem City Council*, 760 A. 2d 446 (Pa. Commw. 2000), and *Seeton v. Pa. Game Comm.*, 937 A. 2d 1028 (Pa. 2007) – are sufficiently far afield that they should not be used to disrupt the Commission's established jurisprudence on this issue. While *Branton* does support the view that one way to ascertain the meaning of a statutory term is by looking at a dictionary, in *Branton,* the court turned to Black's Law Dictionary to distinguish between the terms "lawful" and "legal," and that is not helpful in this case. *Miller* went to Webster's Third New International Dictionary to demonstrate that "competent medical evidence" can only be provided by a licensed physician. And in *Seeton*, the Court *rejected* the Pennsylvania Game Commission's reliance on a dictionary definition of "wild" to hold that, regardless of how the dictionary defines "wild," wild boars fenced onto private land for a private hunt are still wild animals for purposes of game protection laws (and, in a subsidiary discussion, that a pet squirrel named "Nutkin" was also "wild").

None of these cases suggest that the Commission should abandon its decades-long burden of proof jurisprudence in favor of a new approach plucked from a dictionary.

H. PECO did not ignore Complainants' arguments regarding the Federal and Pennsylvania Constitution

In the midst of their burden of proof arguments, Complainants also reiterate their argument that placement of AMI at their homes would violate the 14th Amendment of the U.S. Constitution and Article 1, Section 11 of the Pennsylvania Constitution, stating (p. 12) that:

> The Commission should also reach this decision because to read Section 1501 to permit PECO to force RF exposure on its customers, by placement of smart meters on their homes or properties, would violate the due process clause of the 14th Amendment of the United States Constitution, and Article 1, Section 11, of the Constitution of the Commonwealth of Pennsylvania, an argument that Complainants raised in their Opening Briefs. *Main Brief of Laura Sunstein Murphy* at 77-78. PECO did not respond.

PECO entire Main Brief was a response to this argument. Complainants' due process argument, as set forth in their Main Briefs (pp. 77-78), is that installing AMI meters would violate the Complainants' "due process right to bodily integrity." PECO's Main Brief demonstrates that Complainants have not shown that AMI meters will harm their bodily integrity. PECO thus negated the underlying factual predicate for the legal argument.

II. The Complainants did not meet their burden of proving, by a preponderance of the evidence, that PECO's AMI meter will cause, contribute to, or exacerbate their adverse health conditions

The remainder of Complainants' Reply Briefs (pp. 18-44) addresses the scientific and medical evidence in this proceeding, the availability of reasonable alternatives such as relocating the AMI meters, and the results of smart meter investigations by other state Commissions. Most of the arguments raised in these sections of the Complainants' Reply Briefs were addressed in PECO's Main Brief. PECO will not conduct a comprehensive review and repeat of all of the arguments made in its Main Brief, but does believe that the arguments made in its Main Brief remain true even in light of the comments made in the Complainants' Reply Brief.

There are a few arguments regarding these issues made in Complainants' Reply Briefs, however, that PECO would like to highlight or respond to.

A. Complainants concede that they have not met the burden of proof as to causation

Complainants' Reply Brief states (p. 18) that their expert witness: "could not testify whether RF exposure did cause or will cause adverse health consequences for the Complainants."

Complainants further "concede, as they must, that their testimony and that of their doctors would not meet the high burden of proving causation. . . . " (p. 18)

B. The Complainants did not rehabilitate Dr. Marino's testimony regarding background EE

In Complainants' Main Briefs (pp. 28-30), they recount Dr. Marino's view that, unless PECO's AMI meters produce radio frequency fields of a greater magnitude than background or ambient field levels, he does not believe that they could produce biological or health effects. Dr. Marino testified that he believes that the AMI meters do produce fields that are higher than ambient, largely because he believes that the Complainants' efforts to reduce radio frequency fields at their homes has successfully resulted in a "quiet" environment.

In PECO's Main Brief (pp. 28-29), PECO stated several reasons to disbelieve this testimony, including that: "Dr. Marino did not do any measurements or calculations of background or ambient fields at the Complainants' residences or places of work. He simply accepted the representations of Complainants' counsel that they had made efforts to reduce fields at their homes, and he thus assumed that the fields would be similar to "quiet homes" at which he has made measurements in the past. *See, for example*, September 15, 2016 Transcript, pp. 582-84, 687, 692-93. He thus has no data or baseline for the ambient levels at the Complainants' households upon which to base his comparison – only what counsel told him to assume."

In their Reply Briefs (pp. 23-24), Complainants attempt to rehabilitate this testimony by noting that "calculations are not only much easier [than measurements] but 'much more reliable.'" They then note that PECO's witness Dr. Davis used "calculations (not measurements)" in much of his testimony.

PECO agrees that calculations are easier and more reliable than measurements in determining background levels of radio frequency fields and EMF, and its witnesses certainly used calculations. But that misses the point of PECO's concern with Dr. Marino's testimony. PECO's concern with Dr. Marino's testimony is that *he did not use measurements or calculations* to confirm the information given to him by counsel.

> Mr. Watson: Is it accurate to say that you did not attempt to verify the accuracy or the reliability of any of the information that Mr. Harvey gave you about the complainants' . . . exposure to manmade electromagnetic fields?
>
> Dr. Marino: That's correct.

September 15, 2017 transcript at 687.

Calculations are more accurate than measurements, but Dr. Marino did not use either one.

C. The Complainants did not successfully impugn the Federal Communications Commission

In their Reply Briefs (pp. 35-36), Complainants claim that PECO has misstated the record as to whether the FCC consulted with other agencies prior to establishing its radio frequency exposure guidelines. According to the Complainants, the record evidence only establishes that the FCC consulted with these agencies "in establishing the limits, with no reference to maintaining the limits," citing to Dr. Davis's written rebuttal testimony.

During cross-examination by Mr. Harvey, Dr. Davis elaborated on this point and stated that the FCC's ongoing review is done in coordination with other agencies. December 7, 2016 Transcript at 1349:

> Mr. Harvey: Now you say that the FCC considered possible non-thermal effects?
>
> Dr. Davis: It continues to consider and look at the literature. If somebody ever produces some conclusive evidence that it was a problem, they would probably revise the standards. We've been talking about this. You know these various standards continue to look and they have concluded that there is no conclusive evidence that is a thermal effect.
>
> Mr. Harvey: And so the science research staff at the FCC you presume is watching this issue?
>
> Dr. Davis: In conjunction with the other government agencies that they consult with.

PECO did not "misstate" this record when it stated that the FCC continues to coordinate with other agencies.

Complainants also claim (p. 35) that the Commission should give no credence to Dr. Davis's testimony that the FCC continues to monitor the scientific research because "he failed to explain how he knows that the FCC continues to monitor the issue." Dr. Davis in fact provided the following lengthy explanation of how he came to that knowledge (December 7, 2016 Transcript at 1349-1350:

> Mr. Harvey: And so the science research staff at the FCC you presume is watching this issue?
>
> Dr. Davis: In conjunction with the other government agencies that they consult with.
>
> Mr. Harvey: The FCC scientific research staff, how many people -- do you have any idea how many people work for the scientific research for the FCC?
> Dr. Davis: Well there is several labs that I visit in Maryland, but I don't know the total number.
>
> Mr. Harvey: It's almost none, correct?

Dr. Davis: It isn't almost none. As I just said, I've been to their facility in Maryland and there are several scientists there.

Mr. Harvery: It is nothing like the research capacity of the FDA, right?

Dr. Davis: I mean, the FDA numbers of staff that have looked at this issue is moderately large to my knowledge. I don't know exactly how many people there are at the FCC but I'm not quite sure what the point is here.

MR. HARVEY: Do you know something about the FCC's ability – I mean, people in laboratories that you know of looking at this issue is there a significant FCC scientific staff looking at this issue?

Dr. Davis: There is because I've worked with them.

Mr. Harvey: When was that?

Dr. Davis: About five years ago. We were carrying out the study on cell phone testing and one of the participating laboratories was the FCC laboratory in Maryland. So I went there. They make measurements on human patterns with cell phones and they look at the SAR produced by various phones to verify that manufacturers can successfully test phones and prove that they are within compliance of the FCC SAR standards.

That is a reasonably detailed – and frankly compelling -- explanation of how Dr. Davis knows that the FCC continues to review and update its knowledge. He has worked with the FCC scientists in their labs on research projects in recent years.

D. The Commission should be aware of the decisions of other state Commissions that have reviewed smart meter/health claims

In its Main Brief (pp. 52-56), PECO noted that there have been numerous evidentiary investigations by state utility commissions into whether smart meters are safe and unreasonable utility service. Those other state commission investigations variously concluded that radiofrequency fields from smart meters fall well under established guidelines, are not a threat to human health, and do not warrant additional state utility commission regulation – in other words, that the use of such meters is reasonable.

PECO believes that it is important for the Commission to know that other utility commissions have reviewed this same issue, and that all of them have found that the use of AMI meters is safe and reasonable. That kind of benchmarking legal survey of other-jurisdiction investigations and findings is appropriate – and is arguably required – to give the Commission complete knowledge of the regulatory landscape in which its decision will be made.

In their Main Briefs, Section VIII, and in their Reply Briefs (pp. 39-44) Complainants claim that these other state Commission proceedings should not be persuasive because, they claim, all of the states involved offer an opt-out.[10]

In its Main Brief (p. 52), PECO replied to this position by stating that:

> The findings to which PECO brings this Commission's attention have nothing to do with an opt-out, and could not be altered by the presence or absence of an opt-out. To give but one example, the District of Columbia Commission stated that: " ... the Commission has found no credible, scientific evidence to show that the level of RF emissions from the Pepco smart meters is a threat to human health." It's difficult to imagine how the presence or absence of an opt-out could alter that finding.

In their Reply Briefs (p. 39), Complainants provide the following additional argument of how an opt out could affect the noted findings: "This one factor is sufficient to distinguish all of the other state PUC decisions cited by PECO." But other than this conclusory statement, Complainants provide no discussion of how this factor distinguishes the decisions, or how it would mean that the Pennsylvania Commission would not want to know that a dozen other state commissions have reviewed this controversy and concluded that installation of AMI meters is safe and reasonable.[11]

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[10] PECO takes no position regarding whether other states have allowed opt outs, but notes that the Complainants' claim regarding the scope of opt out offerings in other states has no support in the record evidence.

[11] In its Main Brief, PECO noted that the Maine Public Utilities Commission had found that the use of smart meters "is a safe, reasonable, and adequate utility service as required by statute.

III. Conclusion

PECO respectfully submits that, on the record evidence in this proceeding, the Commission should find that there is no reliable medical basis to conclude that radio frequency fields associated with AMI devices cause, contribute to, or exacerbate any health effects, including Complainants' conditions. PECO therefore submits that the Commission should conclude that the use of AMI meters to provide service to Complainants is safe and reasonable utility service for purposes of 66 Pa. C.S. §1501.

Complainants spend several pages (pp. 41-43) discussing the Maine decision, quoting at length from the separately-issued opinions of Commissioners Lettell and Vannoy. All that needs to be said about that discussion is found at page 23 of the 2014 Maine PUC decision: "Both Commissioner Littell and Commissioner Vannoy concur . . . regarding the safety of the AMI meters and network use in Maine."

Proposed Conclusions of Law

1. The Commission has jurisdiction over the parties and the subject matter of this proceeding. 66 Pa.C.S. § 701.

2. The Complainants must establish their case by a preponderance of the evidence. *Samuel J. Lansberry, Inc. v. Pa. Pub. Util. Comm'n*, 578 A.2d 600 (Pa. Cmwlth. 1990), alloc. den., 602 A.2d 863 (Pa. 1992).

3. The Complainant have not met their burden of proof of establishing an offense in violation of the Public Utility Code, the Commission's regulations or an outstanding order of the Commission. 66 Pa.C.S. § 701.

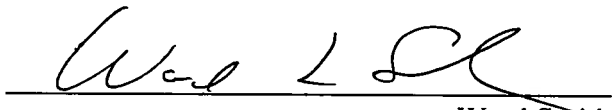
4. PECO did not provide unsafe or unreasonable service in violation of 66 Pa.C.S. § 1501.

Proposed Ordering Paragraphs

For the reasons set forth above, PECO respectfully requests that the Commission issue an Order that states:

1. That the Complaint is dismissed; and
2. That PECO may install AMI meters at the Complainants' residences.

Respectfully submitted,



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