PECO
An Exelon Company

Legal Department
2301 Market Street / S23-1
Philadelphia, PA 19103

Direct Dial: 215.841.6863

June 4, 2018

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
Harrisburg, PA 17120

Re: Cynthia Randall & Paul Albrecht v. PECO Energy Company
Docket No. C-2016-2537666

Dear Secretary Chiavetta:

Reply Exceptions of PECO Energy Company in the above-referenced proceeding are attached for filing.

If you have any questions about this filing, please do not hesitate to contact me at 215.841.6863.

Very truly yours,

Ward L. Smith
Counsel for PECO Energy Company

WS/adz
Enclosures

c: Honorable Darlene D. Heep, ALJ
Certificate of Service

4606139

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Cynthia Randall & Paul Albrecht	:	
	:	
v.	:	Docket No. C-2016-2537666
	:	
PECO Energy Company	:	

CERTIFICATE OF SERVICE

I, Ward L. Smith hereby certify that I served a copy of PECO Energy Company's ***Reply Exceptions*** upon all interested parties via email and overnight delivery mail to:

Stephen G. Harvey, Esquire
Steve Harvey Law, LLC
1880 John F. Kennedy Blvd.
Suite 1715
Philadelphia, PA 19103

Dated: June 4, 2018

Ward L. Smith
Counsel for PECO Energy Company
2301 Market Street, S23-1
Philadelphia, PA 19103
Phone: (215) 841-6863
Fax: 215.568.3389
Ward.Smith@exeloncorp.com

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Cynthia Randall and Paul Albrecht	:	
	:	
v.	:	**C-2016-2537666**
	:	
PECO Energy Company	:	

Reply Exceptions of PECO Energy Company

Contents

Reply Exceptions of PECO Energy Company

On March 20, 2018, the Commission issued the Initial Decision ("I.D.") of Administrative Law Judge ("ALJ") Darlene Heep in three related matters: *Murphy v PECO*, C-2015-2475726, *Povacz v PECO*, C-2015-2475023 and *Randall/Albrecht v PECO*, C-2016-253766. On May 14, 2018, counsel for the three above-named Complainant filed materially identical Exceptions in each proceeding[1]. Pursuant to the Commission's April 27, 2018 Secretarial Letter, Reply Exceptions are due June 3, 2018, which results in a required filing date of June 4, 2018.[2] Pursuant to 52 Pa. Code §5.533, PECO hereby files its Reply Exceptions.

I. Reply to Introduction: *Murray v Motorola*; the Commission should not refrain from deciding this case; there is no justification to replace these cases with notice and comment rulemaking

The Introduction of Complainants' Exceptions contains argument not found elsewhere in the Exceptions: (1) their citation to *Murray v Motorola*; (2) their argument that the Commission should refrain from deciding this case; and (3) their request for notice and comment rulemaking.

Murray v Motorola: On pages 2-3 of their Introduction, Complainants argue that the ALJ was incorrect in stating "that there is 'no scientific basis to conclude' that RF exposure from PECO's smart meters is capable of causing any health effects in humans." In support of this

[1] The various Exceptions had some minor pagination differences. In these Reply Exceptions, all page number references to the Exceptions are calibrated to the pagination of the *Murphy* Exceptions. PECO's Reply Exceptions will be filed separately in each docket, but except for name changes will be materially identical in all three dockets. Two of these proceedings (*Murphy, Povacz*) have a single Complainant; one proceeding (*Randall/Albrecht*) has two Complainants; throughout its Reply Exceptions in all dockets PECO will refer to the Complainants using the plural "they".

[2] The April 27, 2018 Secretarial Letter states that Reply Exceptions are due on June 3, 2018. Since that date is a Sunday, by Commission rule, 52 Pa. Code §1.12(b), these Reply Exceptions are due on Monday, June 4.

argument, the Complainants quote the October 20, 2016 Opinion in *Murray v Motorola*, CAB-8479-01 (D.C. Court of Appeals). According to the Complainants, the ALJ's conclusion that there is "no scientific basis to conclude that RF exposure causes harm in humans" is wrong because the *Murray* court said:

> The consensus throughout the scientific community is that the present state of the science does not permit any definitive answer to the question of whether cell phone RF radiation causes cancer or any other adverse health effects. . . . Most organizations agree that there is a need for new, better, more controlled research to determine whether cell phone radiation poses a threat to human health.

This quotation is completely consistent with ALJ Heep's conclusion. The *Murray* court says: "the present state of the science does not present any definitive answer" regarding causation; the ALJ says that there is "no scientific basis to conclude" that causation has been demonstrated.

Moreover, the *very next sentence* of the *Murray Opinion* directly addresses the precise conclusion made by the ALJ, and demonstrates that her characterization of the state of the science is completely correct. The *Murray* court said (sentences that were omitted by Complainants in italics):

> The consensus throughout the scientific community is that the present state of the science does not permit any definitive answer to the question of whether cell phone RF radiation causes cancer or any other adverse health effects. *This is largely because many of the studies that have been conducted so far (including INTERPHONE and Hardell) have significant methodological shortcomings undermining their reliability, and most of the ecological evidence does not show a rise in brain tumors coinciding with the rise in cell phone use.* Most organizations agree that there is a need for new, better, more controlled research to determine whether cell phone radiation poses a threat to human health. *In the meantime, the definitive evidence of causation is just not there.*

ALJ Heep concluded that "there is no scientific basis to conclude that RF exposure causes harm in humans." The *Murray* court concluded that "definitive evidence of causation is

just not there." The *Murray Opinion* does not undercut ALJ Heep's I.D.; it demonstrates that the I.D. is correct in its summation of the state of the science.

The request to refrain from deciding the case: On page 4 of the Introduction, Complainants state that "neither the ALJ nor the Commission is equipped to decide either the scientific issues about the health risks of RF exposure in general or the Complainant's individual health issues." Complainants thus argue that the Commission should "refrain from deciding the causation issue on the grounds that there is no definitive scientific answer."

Complainants initiated this proceeding via complaint and demanded an evidentiary hearing, and they have the burden of proof in this proceeding. They cannot know request that the Commission refrain from rendering a decision in this proceeding.

Moreover, if the Commission were to accept the invitation to "refrain from deciding the causation issue," then the Commission would need to dismiss the Complaints because "refraining" from deciding the case would mean, perforce, that the Complainants failed to meet their burden of proof.

Request for notice and comment rulemaking: On pages 5-6 of the Introduction, Complainants suggest that the Commission should refuse to issue a decision in this case and instead "engage in notice and comment rulemaking on the subject of the health risks of RF exposure." (Given the Complainants' previously expressed view that the Commission is not "equipped" to evaluate health issues, it is unclear what Complainants believe could be accomplished through a notice and comment rulemaking on health issues.) The rationale for this suggestion is that the Complainants claim that it is unfair to expect individual utility customers, such as the Complainants, to engage in full scale litigation.

Evidentiary hearings were held in these dockets *because Complainants demanded them.* Moreover, these Complainants in fact did engage in full scale litigation. Written testimony, in two of the cases exceeding 1,000 pages of testimony and exhibits, was exchanged as early as April 18, 2016. The exchange of written and verbal testimony continued after that time for more than nine months, until January 27, 2017, with at least 11 full days devoted to evidentiary hearings. (June 7-8, September 14-16, September 27, and December 5-8, 2016 and January 25, 2017). Each Complainant presented extensive testimony from themselves and from their treating physicians. The Complainants presented extensive testimony from two expert witnesses – Dr. Martin Pall and Dr. Andrew Marino – who Complainants say are the leading experts in the world on EF health issues.[3] Complainants hired two law firms who represented them throughout this proceeding, with counsel appearing on every hearing day and signing every filing. Briefing was extended several times at Complainants' request and took nearly a year to complete. In sum, the Complainants had a full and fair opportunity to present their case.

The I.D. properly concluded[4] that: "A review of the history in this matter shows that the Complainant has had the opportunity to be heard during several weeks of administrative procedures and hearings spread over a year. That opportunity continued with briefs submitted by her attorneys and the instant decision addressing her concerns about PECO meters. There is no violation of Complainant's due process rights here." There is no basis for the Complainants'

---

[3] *See, for example*, Murphy Statement No. 2, p. 9: "I consider myself very privileged that Dr. Pall agreed to act as my expert witness, because Dr. Pall understands [the issues addressed in his testimony], I believe better than anyone else in the United States or perhaps the world . . . "; in each of the Complainants' Main Briefs, (pp. 40-41 of *Murphy)* filed on September 25, 2017, there is a section entitled: "Dr. Marino's Background . . . Uniquely Qualifies Him to Testify Credibly on the Issues Before the Commission."

[4] *Murphy* I.D., p. 23. Materially the same quote can be found at *Povacz* I.D., pp. 21-22 and *Randall/Albrecht* I.D., p. 13.

claim that they were unable to effectively litigate this matter and thus need a new notice and comment rulemaking process to be fully heard.

PECO recognizes that Complainants now argue (p. 4) that the extensive litigation process "hardly did [the subject] justice," but the Complainants had every opportunity to make their case. If Complainants had additional evidence or witnesses to present or additional arguments to make, they should have taken the opportunity afforded by those hearings to adduce such evidence, present such witnesses, or make such arguments. The fact that Complainants now express dissatisfaction with the case they presented provides no basis to overturn the I. D., nor to provide Complainants with another opportunity to attempt to prove their case.

II. Reply to Exceptions

a. Reply to Exception 1: The ALJ properly gave weight to the testimony of PECO's expert witnesses

In Complainants' first Exception (pp. 7-8) they argue that the ALJ erred by giving weight to the testimony of PECO's expert witnesses. Complainants' view is that one of their expert witnesses -- Dr. Andrew Marino[5] – has done research regarding EF exposure and health, and consequently whenever the experts disagreed the ALJ was *required by law* to give Dr. Marino's views greater weight. The ALJs failure to favor Dr. Marino's testimony, they claim, was "arbitrary and capricious" and thus constitutes reversible error.

The Complainants provided no citation to any case, regulation, statute, or precedent suggesting that the ALJs determination of the weight and credibility to be given to expert witness testimony is constrained by the factors articulated by the Complainants.

[5] Complainants also presented the testimony of expert witness Dr. Martin Pall, but chose not to rely upon his testimony in their briefs. *See, for example*, Murphy Main Brief, p. 27, fn1.

PECO's witnesses are highly qualified, and the ALJ was correct to adjudge them credible and to give weight to their testimony. As the I.D. correctly noted,[6] Dr. Christopher Davis is "a professor of electrical and computer engineering at the University of Maryland in College Park who studies, researches, teaches, and serves on national and international panels related to physics, biophysics, electrical engineering, electromagnetics, radiofrequency exposure and dosimetry." He also "conducted a substantial amount of research on radio frequency fields of the type [and] periodicity produced by PECO's AMI meters." PECO Statement No 3 (Davis) in *Murphy*, p. 5. Dr. Israel "attended the Albert Einstein College of Medicine, had an internship and residency at Harvard Medical School, has worked at the National Institutes of Health and has been a professor of medicine and medical research at numerous medical schools. He has studied radiofrequency fields and health effects. Dr. Israel began to examine the research on electromagnetic fields, including radiofrequency fields and health effects during his tenure at the National Cancer Institute more than 25 years ago. He has continued to follow the research literature on this subject since that time."

It should also be noted that, in this section of their Exceptions, the Complainants did not identify any specific instance in which they claim that Dr. Marino's testimony should have been given greater weight. Instead, they generically claim that there were "numerous important points" about which the experts disagreed and on which, they assert, the ALJ was required to believe Dr. Marino. (Presumably, the "numerous important points" are the issues that Complainants detailed in their other Exceptions, and PECO will respond to them in the order presented.) However, as a general matter it should further be noted that, as to the ultimate

---

[6] Dr. Davis: *Murphy* I.D. p. 13 (F.O.F. 50) and p. 27; *see also Povacz* I.D. p. 24; *Randall/Albrecht* I.D. p. 10. Dr. Israel: *Murphy* I.D. p. 15 (F.O.F. 61-62) and p. 29; *see also Povacz* I.D. p. 25; *Randall/Albrecht* I.D. p. 18.

question in this case – whether EFs from PECO AMI meters will cause harm to Complainants – even Dr. Marino did not testify that it has been demonstrated that EFs would harm the Complainants. *See* PECO's Main Brief, pp. 24-28, where PECO demonstrated that Dr. Marino's overall opinions, even if accepted as true, do not meet the Complainant's burden of proving that EFs would harm the Complainants. The I.D. correctly concluded[7] that even Dr. Marino "would not say definitely that the EFs from the PECO smart meters would cause harm. . . . Dr. Davis and Dr. Israel were definite that they would not." Thus, even if the ALJ had assigned additional weight and credibility to the testimony of Dr. Marino, the proper conclusion on the ultimate issue in this case still would have been that the Complainants did not meet their burden of proof.

b. Reply to Exception 2: The ALJ correctly evaluated the individual studies and scientific arguments relied upon by the Complainants

In Complainants' second Exception (pp. 8-15), they argue that the ALJ "erred in rejecting the evidence that forced exposure to RF presents a risk of harm."

First, the Complainants discuss Dr. Marino's testimony that EF from PECO's smart meters would present a material addition to Complainants' homes. That issue also forms the basis for Complainants third Exception, and PECO will defer discussion of the issue until then.

Second, the Complainants reiterate Dr. Marino's testimony that one of the reasons that he was not able or willing to testify that PECO's AMI smart meters would cause the Complainants harm is because, in his view, it would be cost-prohibitive to conduct individualized research on the Complainants' themselves. This testimony does not prove that "forced exposure to RF presents a risk of harm;" to the contrary, it proves that in Dr. Marino's view *it was too costly to*

[7] *Murphy* I.D. p. 32; *see also Randall/Albrecht* I.D. p. 23.

collect evidence and consequently he was not able to present any evidence that "forced exposure to RF presents a risk of harm." The I.D correctly *accepted* (not rejected) this testimony as a basis for concluding that Complainants had failed to meet their burden of proof, stating[8]: "Dr. Marino, though knowledgeable and proficient in his field, would not say definitively that the EFs from the PECO smart meters would cause harm."

It should be underscored that Complainants have frankly admitted throughout this proceeding that they did not meet the burden of proof with respect to causation. *See, e.g.*, Complainants' Main Briefs, Section I.G. "Effects on Complainants": "Dr. Marino is of the opinion that EE from a PECO meter could cause harm to the health [of Complainants], but he could not say whether it will cause harm;" Complainants' Reply Briefs, Section II introduction: "Dr. Marino also testified that, because there is no consensus clinical diagnosis, he could not testify whether RF exposure did cause or will cause adverse health consequences for the Complainants. PECO acts as if this is a revelation PECO exposed, but in fact the Complainants pointed this out in their Opening Briefs."

In their Exceptions, Complainants repurpose this argument to claim (p. 10) that "PECO offered no response at all to Dr. Marino's testimony" and that "Dr. Marino's testimony about the potential for harm as proved by animal and epidemiological studies is unrebutted." It is true that, given the fact that both Dr. Marino and the Complainants admitted that they had not meet the burden of proof on causation, PECO did not find it necessary *in its briefs* to analyze every study that was discussed in 11 days of evidentiary hearings. But the record evidence contains an extensive, point-by-point, response on the scientific research in the form of the testimony of Drs.

[8] *Murphy* I.D. p. 32; *see also, Randall/Albrecht* I.D. p. 23.

Davis and Israel – testimony that the ALJ found to be persuasive and credible. That is a far cry from giving "no response at all."

Third, Complainants discuss a study that Dr. Marino conducted to determine whether one study subject could sense the presence of EF in a controlled environment and thus arguably had electromagnetic hypersensitivity, or "EHS." Although the I.D. does not discuss this individual study, there was no reason that the I.D. needed to isolate and discuss this specific study. As PECO stated in its Main Brief, p.31:

> [As to] Dr. Marino's EHS study. He candidly testified that, prior to his study, there were no published studies that any person is able to detect the presence of absence of electromagnetic energy. (He thinks all of the studies other than his were poorly designed. September 15, 2016 Transcript, p. 614.) His study involved one (1) subject. September 15, 2016 Transcript, p. 609. He further testified that, even taking into consideration his own study, his opinion is that the AMI meters have the potential to "trigger EHS, not cause it, trigger it," but that "I believe my speculation is that's the case, but I don't have direct evidence to say that." September 17, 2016 Transcript, p. 779.

Finally, the Complainants discuss a 2016 draft report on research being conducted by the National Toxicological Program, or "NTP," and claim that the I.D. inappropriately "rejected" Complainants' evidence with respect to the draft NTP Report.

PECO's expert witnesses Dr. Mark Israel and Dr. Christopher Davis both testified regarding the NTP Report, and described many critiques of and limitations to the Report. For example, Dr. Israel testified about the Report over a two-day period, through both direct and cross-examination. He stated that the he had reviewed and evaluated the NTP Report, found that it had design weaknesses and other weaknesses, including that it had not yet gone through normal peer-review and publication (notwithstanding the fact that internal peers at the NTP had reviewed the draft publication), and that it was a draft study of partial results. He placed the NTP results into context with other research, stated that he reviewed it in forming his overall

opinion in this matter, and stated that it did not alter his overall conclusions that EF from PECO's AMI meters have not been shown to cause, contribute to, or exacerbate health effects. *See* December 8, 2016 Transcript, pp. 1527-29 (Direct Testimony on the NTP Report) and December 9, 2016 Transcript, pp. 1603-17 (Cross-Examination on the NTP Report). Indeed, one of the last questions and answers in the cross-examination of Dr. Israel on the NTP Report was (December 9, 2016 Transcript, p. 1614):

> Q. Did you take that [the NTP Report] into consideration in your opinions that you have --your ultimate opinion expressed here today?
>
> A. I took it into consideration. I didn't give it the kind of weight I would give to completed studies that were peer reviewed.

Amazingly, the Complainants only response to Dr. Israel's testimony on the NTP Report was to claim (p. 13) that it never happened! They claim that Dr. Israel "testified that he was unfamiliar with the [NTP] report and did not consider it in forming his opinion," that (pp. 13-14) this was "a serious failure of proof of the part of PECO," that "any competent expert" would have known about and considered the NTP report, and that "Dr. Israel's failure to do this was inexcusable."

That is a patently incorrect characterization of Dr. Israel's testimony on the NTP Report. Dr. Israel testified about the NTP Report at length; he said that he considered it and, in the context of the other scientific research on the issue, he did not give it substantial weight. Complainants have provided no answer to any of that testimony; indeed, by their own statements in their Exceptions they apparently are not even aware that this testimony is part of the record.

Dr. Davis also testified about the NTP Report, and the I.D. concluded[9] that Dr. Davis "persuasively dismissed" the NTP Report because it is still a draft report that has not been normally peer-reviewed and because the exposure levels in that study were high as compared to exposures from PECO's AMI meters. Those are two valid critiques of the NTP Report.

In their Exceptions, Complainants attempt to rehabilitate the NTP Report on these two critiques. First, as to peer review they note that internal reviewers at the NTP provided a form of peer review for the draft report. They then direct the Commission's attention to the NTP website – using extra-record information that is not a part of the evidence in this proceeding – to provide additional information about the NTP Report. From that, they wish the Commission to conclude that Dr. Davis was incorrect in his assessment that the NTP Report has not been fully peer-reviewed.

Dr. Israel provided the context to compare the type of internal peer review done for the NTP Report with the normal pre-publication peer review (December 9, 2017 Transcript, pp. 1614-15):

> Q. Do you or do not know that [the NTP Report] was reviewed by expert reviewers selected by the NTP including people from the National Institutes of Health?
>
> A. Well here's an interesting point. . . . You just said and the website says: "Was reviewed by expert peer reviewers selected by the NTP and the National Institutes of Health." Peer review in our world has a very special meaning. This would not qualify as peer review in the world that I live in as a scientist.
>
> Peer review is done by experts that are anonymously chosen by an editor, or a department head, or a chairman of a granting agency, and the anonymity is considered a key part of the peer review process . . . . Anonymity and a sort of lack of association with . . . seeking a particular outcome is a key part of the peer review and so we should distinguish between peer review by people that I would select to review my paper before I submitted

[9] *Murphy* I.D., p. 28; *Randall/Albrecht* I.D., p. 21. Ms. Povacz made no claims regarding cancer, and the *Povacz* I.D. contains no discussion of the NTP Report.

it [for publication to offer me helpful suggestions] . . . That's different than the peer review that helps me to give weight to scientific studies.

The Complainants provided no response to or analysis of this testimony, presumably because they were unaware that Dr. Israel had testified regarding the NTP.

As to Complainants' request that the Commission should update its knowledge by reference to post-hearing updates on the NTPs website, that of course is an attempt to introduce extra-record evidence that may not be considered by the Commission.[10]

Finally, the Complainants state (p. 12) that the I.D. was wrong in accepting Dr. Davis's testimony that the NTP Report is not relevant because it is at "a relatively high-power density that's not relevant." Complainants then suggest (pp. 12-13) that Dr. Davis is making an irrelevant comparison because his comparison, they say, was based on average power from an AMI meter and the peak power from an AMI meter is higher than its average power.

To be clear, Dr. Davis testified that the radio frequency fields used in the NTP research were done at a "relatively high power density," and then put numbers that comparison, testifying that the RF fields used in the NTP research were *approximately 300 million times greater than* the "incredibly low exposures that you get from PECO's AMI and AMR meters." December 6,

[10] The Complainants request (p. 12) that the Commission take "judicial notice" of the contents of the NTPs website. This is not an appropriate use of judicial notice. Multiple expert witnesses reviewed and evaluated the NTP Report and issued their expert opinions regarding its meaning and the weight to be given to it in making a scientific determination. None of that analysis and opinion can be replicated or updated merely by looking at the NTP website. Moreover, no good cause has been shown to re-open the record. *See* 52 Pa. Code §5.431(b) and *Frompovich v PECO*, C-2015-2474601, Opinion and Order, May 3, 2018 (pp. 46-48).

To the extent that the Commission does wish to consider the NTP website, PECO would like to balance that evaluation by pointing out that the current drafts of the NTP Report, available on the NTP website, all contain the following disclaimer on their face: "This DRAFT Technical Report is distributed solely for the purpose of predissemination peer review under the applicable information quality guidelines. It has not been formally disseminated by the NTP. It does not and should not be construed to represent NTP determination or policy."

2016 Transcript, pp. 1090-91. This is not a question of averaging vs peak values; the power densities used in the NTP research are so high that Dr. Davis testified that they are "not relevant" to review of AMI meters, and the ALJ correctly accepted that testimony.

In sum, when one reviews the record evidence on the individual studies and research which the Complainants relied upon but which the ALJ "rejected," one finds that the ALJ was correct in her judgment.

c. Reply to Exception 3: The ALJ correctly evaluated the testimony on background exposure, the FCC's limits on exposure, and comparison of peak and average exposure

In their third Exception (pp. 15-19), Complainants argue that: (1) the ALJ should have accepted Dr. Marino's testimony regarding background electromagnetic exposure ("EE"); (2) the ALJ should not have relied upon Dr. Davis's calculations because they compare peak and average exposures, and (3) the ALJ should not have relied upon the FCCs limits because they have not been updated in decades. All of these claims can be dismissed based on the responses that were provided in PECO's Main Brief.

Dr. Marino's testimony regarding background EE: PECO responded to this issue in its October 24, 2017 Main Brief, pp. 28-30 (Section II.B. "Dr. Marino's testimony regarding background EE.") As PECO noted in its Main Brief, there are two reasons that this testimony should be doubted. First, Dr. Marino did not do any measurements or calculations of background or ambient fields at the Complainants' residences or places of work. Second, Dr. Davis testified that people's exposure to fields from everyday sources, including nearby UHF radio stations, is much higher the fields from PECO's AMI meters.

Peak vs average exposures: Complainants claim that Dr. Davis's testimony regarding exposure to fields from everyday sources should be rejected because, they claim, it is based on a comparison of peak vs. average fields. This issue was addressed in PECO's October 24, 2017 Main Brief in the section on Background EE (pp. 28-30), where PECO stated that: (1) the FCC, which is the federal agency tasked with regulating safety and health concerns for radio frequency transmissions from smart meters, calculates exposure as average exposure over time, and (2) Dr. Davis also compared the peak emissions from the AMI meters to the continuous, ongoing levels of radio frequency fields from nearby UHF stations. PECO also notes that Dr. Davis compared the peak emissions from its AMI meters to the FCC limits, and demonstrated that even the peak emissions are 37.5 times smaller than the exposure that is allowed on an average basis. *See, for example*, Murphy Statement No. 3 (Davis), Exhibit CD-3.

The claim that the FCC's standards are outdated: In their Exceptions (p. 16), Complainants claim that: "There is no evidence that the basis for the FCC limit has been re-evaluated in the [past] 31 years." In its October 24, 2017 Main Brief, pp. 45-46, PECO described the record evidence that demonstrates that the FCC continues to re-evaluate the science and update its standards (emphasis added):

> In setting its standards, the FCC considered claims of both thermal and non-thermal effects; it set the standards to avoid thermal effects because the scientific studies did not show any non-thermal effects. *The FCC continues to consider whether there are adverse biological effects from non-thermal exposure levels*, but considers the scientific evidence for such effects to be "ambiguous and unproven." Murphy Rebuttal Testimony of Christopher Davis at 14-15; Povacz Rebuttal Testimony of Christopher Davis at 14-16. *The claim made by Dr. Marino that the FCC is out-of-date is thus untrue. The FCC keeps up-to-date on claims that radiofrequency fields can cause non-thermal effects. It just doesn't believe that they have been demonstrated sufficiently to warrant change to the FCC standards.*

d. Reply to Exception 4: The ALJ properly accepted the evidence of PECO's witnesses

In their fourth Exception (pp. 19-23), Complainants suggest a variety of reasons why they believe that the ALJ should not accept the testimony of PECO's expert witnesses. Briefly:

Dr. Davis's quote from the FCC: The I.D. notes [11] that Dr. Davis testified that "any scientific evidence purporting to show that EFs from smart meters causes biological harm was ambiguous and unproven." In support of that statement, Dr. Davis quoted a Q and A from the FCC's online FAQ. The Complainants note that Dr. Davis did not quote the final two sentences from the FCC's FAQ; the implication they apparently wish the Commission to draw is that there is something in the two additional sentences that undercuts Dr. Davis's conclusion that the FCC deems the science to be ambiguous and unproven. Here is the entire quote, with the phrase discussed by Dr. Davis underlined and the omitted sentences italicized:

> At relatively low levels of exposure to RF radiation, *i.e.*, levels lower than those that would produce significant heating, the evidence for production of harmful biological effects is ambiguous and unproven. Such effects, if they exist, have been referred to as "non-thermal" effects. A number of reports have appeared in the scientific literature describing the observation of a range of biological effects resulting from exposure to low levels of RF energy. However, in most cases, further experimental research has been unable to reproduce these effects. Furthermore, since much of the research is not done on whole bodies (*in vivo*), there has been no determination that such effects constitute a human health hazard. *It is generally agreed that further research is needed to determine the generality of such effects and their possible relevance, if any, to human health. In the meantime, standards-setting organizations and government agencies continue to monitor the latest experimental findings to confirm their validity and determine whether changes in safety limits are needed to protect human health.*

There is nothing in the final two sentences of this quote that contradicts the conclusion of the first sentence (with which Dr. Davis agreed) that the science is "ambiguous and unproven." Indeed, the omitted sentences *support* the conclusion that proof of harmful biological effects in

[11] *Murphy* I.D. p. 32. The *Povacz* I.D. and the *Randall/Albrecht* I.D. do not discuss this quote.

ambiguous and unproven because they make it clear that "further research is needed to determine the generality of such effects and their possible relevance, if any, to human health."

However, the final sentence of the FCC quote does completely undercut the contention *of Complainants,* made in their third Exception, that the FCC is not continuing to monitor the science and update its standards. It states: "In the meantime, standards-setting organizations and government agencies continue to monitor the latest experimental findings to confirm their validity and determine whether changes in safety limits are needed to protect human health." Clearly, the FCC does continue to monitor the research and reassess its safety limits.

The International Agency for Research on Cancer: Complainants also claim (pp. 21-22) that both Dr. Davis and Dr. Israel's overall conclusions are "at odds" with the determination by the International Agency for Research on Cancer ("IARC") that radio frequency fields are a "possible" carcinogen. This issue was addressed in PECO's Main Brief, p. 37:

> This section [of Complainants' Main Brief] also notes that the International Agency for Research on Cancer ("IARC") has classified electromagnetic energy as a "possible" carcinogen. Dr. Israel provided context for understanding that classification:
>
> > IARC said that there was limited evidence that radio frequency fields could contribute to cancer and there was limited evidence in animals and those criteria that there's not sufficient evidence to identify it as a probable cause, because there's limited evidence in humans and limited evidence in animals, it gets designated as a category 2B which stands for "possible." I've always been uncomfortable with "possible" because "possible" to me is misleading to the population that I have to take care of because I think what IARC means is that there's limited evidence in humans and limited evidence in animals. "Possible" in the lay language of the people I have to take care of, means my God it might be possible or oh, well anything is possible, so I should pay attention to this. So I really always focus when I talk to people about the fact they're just isn't evidence to identify this as even a probable carcinogen.
>
> December 9, 2016 Transcript at 1630-31.

Dr. Davis's statements regarding scientific consensus: Dr. Davis testified regarding the scientific consensus on radio frequency fields; the Complainants "observe" (pp. 21-22) that his

testimony is "a subjective, non-scientific statement," and that PECO "offered no response" to that "observation."

PECO's responded to that "observation" in its Main Brief, pp. 32-33 (where PECO addresses Dr. Marino's view that certain scientists are "bonded to industry") and at pp. 39-40 (Section IV.D., which is PECO's response to "The claim that Dr. Davis mischaracterized the scientific consensus"). At pp. 39-40, PECO stated that:

> In this proceeding, each of the expert witnesses claimed at various times that their opinion represents the scientific consensus.
>
> The argument presented in this portion of the Complainant's Main Briefs is essentially a variation on the theme that certain groups are "bonded to industry," which PECO responded to in Section II.E. Essentially, Dr. Marino believes that certain groups are bonded to industry and should be ignored. Dr. Marino believes that the only valid scientific stakeholders whose views should be considered in determining the scientific consensus are scientists outside of the "bonded" group – that is, people who agree with him on non-thermal effects. It is not surprising that Dr. Marino, having surrounded himself solely with like-minded people, finds that they all think the same way he does. But that does not constitute a consensus scientific view.
>
> Drs. Davis and Israel, on the other hand, do not automatically dismiss the views of those who believe differently than they. For example, Dr. Israel reviews both positive and negative studies, and also reviews the findings of public health groups to determine whether they provide any insights that he missed and to see if they reached conclusions that are inconsistent with his initial determinations. Murphy Rebuttal Testimony of Mark Israel at 3-5; Povacz Rebuttal Testimony of Mark Israel at 3-5.
>
> The proof of this issue is in the pudding. Dr. Marino's "consensus" excludes the Federal Communication Commission, the International Commission on Non-Ionizing Radiation Protection, European Commission's Scientific Committee on Emerging and Newly Identified Health Risks, September 15, 2016 Transcript, p. 837-841, an arm of the World Health Organization, id. p. 849, and potentially many other federal agencies. September 15, 2016 Transcript, p. 834. His opinions do not represent the scientific consensus, other than the consensus of a group of like-minded individuals to whom he is willing to listen because they agree with him and thus are not, by his definition, "bonded to industry."

PECO again offers that response to Complainants' claim that its witnesses' views on scientific consensus were "subjective" and "non-scientific."

Arguments regarding Dr. Israel: Complainants next make a series of short arguments regarding Dr. Israel's testimony. First, they claim that he was not familiar with the NTP Report;

PECO debunked that idea in its response to Complainants' second Exception. Next, they argue that Dr. Israel misunderstood the IARC results; that claim was addressed earlier in the reply to Complainants' fourth Exception. Next, they argue that Dr. Israel's testimony had "various flaws" which they identify as being detailed in Complainants Main Brief at pp. 50-53 ("Dr. Israel's Testimony Based Exclusively on Negative Studies is Irrelevant"); PECO responded to that argument in its Main Brief at page 39 (Section IV.C., PECO's response to "The claim that Dr. Israel's Testimony Based Exclusively on Negative Studies is Irrelevant") and pages 49-50 (Section V.B.1, "Dr. Israel reviewed the scientific literature on radiofrequency fields and health . . ."). Finally, they argue that Dr. Israel's conclusion – that there is no scientific basis to conclude that radio frequency fields from PECO's AMI meters causes, contributes to, or exacerbates Complainants' health conditions – is irrelevant because, they say, they do not need to meet that burden of proof in order to prevail. PECO will address that claim in its response to the Complainants' fifth Exception.

e. Reply to Exception 5: The ALJ properly concluded that the law requires Complainants to prove causation of harm

In their fifth Exception (pp. 23-24), Complainants reiterate their ongoing position that they do not have to prove that exposure to EMF from AMI meters *will* cause them harm, only that it *might* cause them harm. (Complainants also make this argument at page 6, under the heading of "Legal Standards" and made it throughout their briefs.)

This issue was fully briefed by both parties. *See* Complainants' September 25, 2017 Main Brief, pp. 75-77 (Section V: "There is No Requirement for Complainants to Prove Medical Causation as if This Were a Toxic Tort Case"); PECO's October 24, 2017 Main Brief, pp. 12-24 (Section I: "The Complainants have the burden of proving, by a preponderance of the

evidence, that PECO's AMI meter will cause, contribute to, or exacerbate their adverse health conditions"); Complainants' November 6, 2017 Reply Brief, pp. 5-18 (Section I: "The Plain Language of the Section 1501 Mandates that Complainants Need Prove Only That Forced Exposure to PECO Smart Meters is Neither Safe Nor Reasonable, Without Any Requirement That They Prove Medical Causation as if This Were a Tort Action Seeking Monetary Damages"); PECO's November 13, 2017 Reply Brief, pp. 4-19 (Section I: "The Complainants' Reply Briefs are incorrect in their analysis of burden of proof"). PECO will not repeat its extensive arguments here, but instead refers the Commission to its briefs on this issue.

Other than a general restatement of the broad outlines of their argument, the only specific argued by Complainants in this exception is that they repeat their analogy to electrocution, which was originally presented in their briefs. They state (p. 24): "If an electric facility presented a 10% risk of death by electrocution, surely that risk would support a conclusion that the facility is unsafe or unreasonable. That could still be true of a 1% risk or even a .001% risk or lower."

PECO provided its response to Complainants' electrocution analogy in its November 13, 2017 Reply Brief, pp. 15-16:

> 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.
>
> 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.

After reviewing the extensive arguments set forth in the parties' briefs, the ALJ correctly concluded that the Complainants have the burden of proving, by a preponderance of the

evidence, that exposure to EF from a PECO AMI meter has or will cause, contribute to, or exacerbate their adverse health. Complainants' summary overview of their burden of proof argument does not provide any reason to reject the I.D.

f. Reply to Exception 6: The ALJ correctly concluded that Complainants are not entitled to an opt out

Complainants' sixth Exception (pp. 24-26) is initially phrased as a challenge to whether PECO acted reasonably in accordance with its Act 129 Plan and Section 1501. However, upon reading the section it quickly becomes clear that the focus of this Exception is Complainants' claim that, because they think they have proved that AMI meters may harm them, then Section 1501 requires the specific accommodation of an opt out (the Complainants reject all other potential accommodations, such as meter relocation).

The Complainants recognize that the Commission has issued prior orders rejecting an opt out, but claim (p. 25) that the legal issue is still alive because: "The Commission's prior decision that there is no opt out right under Act 129 does not answer the question whether the General Assembly intended for every single customer to be forced to accept a smart meter, even if they object based on a doctor's recommendation." They then claim that PECO's "silence on that issue is deafening." Complainants then plead that they should be granted an "accommodation," which they specify as "not using smart meters for such customers" – that is, an opt out.

The Commission's most recent order on an opt out claim is *Frompovich v PECO*, C-2017, 2474602, Initial Decision issued May 11, 2017; Commission Opinion and Order issued May 3, 2018. Ms. Frompovich argued that, as a breast cancer survivor, she was entitled to an AMI opt out. After a full evidentiary hearing, the I.D. stated as follows (p. 24):

> When remanding this matter, the Commission directed a hearing to address the safety allegations of Ms. Frompovich. It is simply noted here that Ms. Frompovich contended

> that by disallowing an "opt-out" of Smart Meters, the Commission misinterpreted, overreached and did not follow the legislative intent of Act 129.
>
> A plain reading of the statute may suggest that there is an "opt-in" or an "opt out" available. *See* 66 Pa.C.S. § 2807(f). However, the Commission has ruled that there is no provision in the Code, the Commission's Regulations or Orders that allows a PECO customer to "opt-out" of smart meter installation.

The Commission did not disturb this portion of the I.D. in its May 3, 2018 Opinion and Order. There is thus clearly now a Commission decision stating that "the General Assembly intended for every single customer to be forced to accept a smart meter, even if they object" based on health concerns.

Moreover, PECO was not "silent" on the issue of opt out or accommodation. *See, for example*, PECO's POs against opt outs and PECO's Main Brief, pp. 50-51 (Section VI: "PECO offers its customers, including Complainants, reasonable alternatives regarding AMI meter installation.") PECO offered to work with the Complainants in the relocation of their meter boards to create greater distance from their homes, s*ee, for example*, Murphy I.D., p. 27, and is still willing to work with any of the Complainants on that accommodation. Moreover, when Complainants suggested that PECO should use alternatives such as a fiber optic AMI system, PECO provided extensive testimony that it fully considered such options but was not able to implement them due to lack of commercial availability, cost, and operational issues. *See, for example*, PECO Statement No. 2 (Pritchard) in Murphy, Section IV ("Use of Fiber Optics, Wired Communications, and Analog Meters"). PECO was not "silent" on accommodation. The issue is that Complainants will accept one and only one accommodation – an opt out – and that accommodation is not available to them.

Finally, it should be reiterated that Complainants did not prove, and admit that they did not prove, that PECO's AMI meters will cause them harm. There is thus no plausible argument that they proved a conflict between Section 1501 and Act 129.

g. Reply to Exception 7: The ALJ appropriately addressed Complainants' substantive due process argument

In Complainants' seventh Exception (pp. 26-27), they claim that the ALJ erred in rejecting their substantive due process claim. In a nutshell, Complainants' substantive due process claim is that they have a "right to be free of state-sponsored *invasion of a person's bodily integrity*," and they argue that such a right would be violated by installation of an AMI meter. They further state that the I.D. "confused" the argument because it addressed it as a procedural (rather than substantive) due process claim. Finally, they assert that they raised this claim in their opening brief and "PECO did not address it."

PECO addressed this claim in its November 11, 2017 Reply Brief. In a section literally entitled: "*PECO did not ignore Complainants' arguments regarding the Federal and Pennsylvania constitutions*," (Section I. H., pp. 19-20), PECO stated that:

> 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.

PECO stands by that analysis, and requests that the Commission do the same. The Complainants did not meet their burden of proving that they will be harmed by PECO's AMI meters; consequently, Complainants did not prove the factual predicate necessary for their substantive due process argument.

The Complainants are correct that the I.D. discussed the due process argument as a procedural, rather than a substantive, due process argument.[12] But if that is error, it is harmless, because elsewhere the I.D. made the determination that Complainants did not meet their burden of proving that EFs from PECO's AMI meters would harm them.[13] The I.D. thus correctly concluded that the factual predicate of the substantive due process argument -- "harm to bodily integrity" – was not proven. The substantive due process argument should thus be dismissed because, quite simply, the Complainants did not prove (and in fact admit that they did not prove) that they would be harmed by PECO's AMI meters.

h. Reply to Exception 8: The I.D. does not "override the judgment of medical professionals"

In their eighth Exception (pp. 28-31), Complainants claim that the I.D. "override[s] the judgment of medical professionals" and that there is "no precedent" to do so.

In making this argument, Complainants did not cite to or quote the testimony of their treating physicians. PECO summarized that testimony in its Main Brief (pp. 35-36):

> Dr. Prociuk (Murphy) testified that "with respect to this syndrome of electromagnetic sensitivity, we're in this sort of clinical stage of infancy. . . . So when I say yes, there could be a connection, I am very mindful of the fact that the clinical science is not well established." December 5, 2016 Transcript at 82.

---

[12] As noted previously in these Reply Exceptions, the ALJs procedural due process analysis is an important response to the Complainants' claims that they have not had the opportunity to be fully heard.

[13] *Murphy* I.D., p. 32; *Randall/Albrecht* I.D., pp. 23-24. The *Povacz* I.D., p. 28, found that Ms. Povacz had not met her burden of proof that exposure to EF from PECO's AMI meters would harm her. For PECO's response to the I.D.s conclusion, p. 28, that Ms. Povacz proved that "some other aspect" of PECO's AMI meters would harm her, see PECO's response to Complainants' eight Exception and PECO's May 14, 2018 Exceptions in the *Povacz* docket.

> Dr. Honebrink (Randall) was asked: "In your opinion, has it been scientifically demonstrated that RF [radio frequency] fields from the PECO AMI meter can cause cancer?" She responded: "I really don't have an opinion on that because I have not studied the PECO fields." She was further asked: "In your opinion, has it been scientifically demonstrated that RF [radio frequency] fields from the PECO AMI meter can exacerbate cancer?" She answered: "Again, that is not something I have specifically studied." September 27, 2016 Transcript at 29.
>
> Dr. Talmor (Povacz) testified that the body is like a computer hard drive that stores information received from radio frequencies in the water between cells, and that manmade sources of radio frequency fields puts misinformation in the body. June 7, 2016 Transcript at 94- 95. He accepted Ms. Povacz's self-diagnosis of EHS without doing additional diagnostic tests. Id. at 105.

Individually or collectively, this testimony from the treating physicians does not support the Complainants' burden of proving that they were or will be harmed by PECO's smart meters.

Complainants end their eighth Exception by quoting from the Initial Decision in *Povacz* (p. 28): "While there is no showing that EFs from smart meters are causing this problem, and PECO successfully rebutted any such claim, the preponderance of the evidence does suggest that some other aspect of the PECO smart meters is inimitably perceptible by and contrary to the health and well-being of the individual Ms. Povacz." Complainants request that the same treatment should be extended to the other Complainants.

In response, PECO notes that it filed 17 pages of Exceptions in the *Povacz* proceeding on May 14, 2018, which were wholly devoted to demonstrating why the Commission should not adopt this passage from the *Povacz* I.D. In those Exceptions, PECO demonstrated, among other things, that there is no record evidence to support this conclusion and that it would be bad policy to adopt it. Those Exceptions are already a portion of the *Povacz* record; rather than repeat the arguments here, PECO requests that the Commission incorporate those Exceptions into the record of *Murphy* and *Randall/Albrecht*, as part of these Reply Exceptions.

In addition, PECO notes that on May 24, 2018, Ms. Povacz filed Reply Exceptions in which she stated (p. 2): "Complainant agrees with PECO in so far as her evidence did not prove that some aspect of PECO's smart meters other than RF emissions caused harm to her health." Since Ms. Povacz has acknowledged that the I.D.'s conclusion on this issue is not supported by record evidence, it cannot form the basis of relief in any of the three proceedings.

III. Conclusion

PECO respectfully submits that the Commission should reject each of the eight Exceptions presented by the Complainants and adopt the Initial Decision (with the exception of the section of the *Povacz* I.D. to which PECO took exception in its May 14, 2018 Exceptions in that docket).

Respectfully submitted,

Ward Smith
Shawane Lee
Assistant General Counsel
PECO Energy Company
Ward.smith@exeloncorp.com
Shawane.lee@exeloncorp.com
215-841-6863
Romulo L. Diaz, Jr.
Vice-President and General Counsel
PECO Energy Company

Tom Watson
Watson & Renner
tw@w-r.com
202-258-6577
Counsel to PECO Energy Company

June 4, 2018