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January 30, 2019

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

Re: James Quigley & Teresa Mendez Quigley v. PECO Energy Company
Docket No. C-2017-2617558

Dear Secretary Chiavetta:

PECO's ***Reply Exceptions*** are attached for filing.

If you have any questions about this filing, please call 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

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

James Quigley & Teresa Mendez Quigley	:	
	:	Docket No. C-2017-2617558
v.	:	
	:	
PECO Energy Company	:	

CERTIFICATE OF SERVICE

I, Ward L. Smith hereby certify that on January 30, 2019, I served a copy of PECO Energy Company's ***Reply Exceptions***, in the above matter, upon all interested parties via overnight delivery to:

James Quigley &
Teresa Mendez Quigley
401 Longfield Road
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Dated: January 30, 2019

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

James Quigley and	:	
Teresa Mendez-Quigley	:	
	:	
v.	:	**C-2017-2617558**
	:	
PECO Energy Company	:	

Reply Exceptions of PECO Energy Company

Contents

Reply Exceptions of PECO Energy Company

On December 31, 2018, PECO was electronically served with the Initial Decision ("I.D.") of Administrative Law Judge ("ALJ") Darlene Heep in this matter. Under the Commission's regulations, 52 Pa. Code §5.533, exceptions, if any, were due 20 days thereafter – in this case, because of the intervening holiday on MLK Day, on Tuesday, January 22. Reply Exceptions are due 10 days later, on Friday, February 1, 2019.

On January 2, 2019, PECO filed a "no exceptions" letter to inform the Commission that it was not filing exceptions. On January 24, 2019, PECO received a 16-page set of Exceptions from the Quigleys by regular mail (dated on their face January 19, 2019). On that same day, PECO received electronic notice from the Commission that the Commission had received and docketed the Quigleys' Exceptions on January 24, 2019.

The Quigleys did not number their Exceptions[1] and, in some cases, the same argument is made at more than one place in the 16-page Exception document. PECO has therefore taken the liberty of numbering the Exceptions and, where appropriate, has provided a single combined response to Exceptions that were made in more than one place.

Before addressing the Quigleys' individual arguments, PECO notes that throughout their Exceptions the Quigleys claim (pp. 1, 6, 13, 16) that ALJ Heep and the Commission are "deeply biased" and are "incapable of unbiased decision-making." PECO does not agree with that assessment. These Reply Exceptions demonstrate that, for each example of bias that the Quigleys claim, the I.D. accurately states and evaluates the record evidence and law.

[1] *See* 52 Pa. Code 5.533(b): "Each exception must be numbered. . . . "

I. Reply to Exception 1 (pp. 1-2 and 16): Act 129, "Opt-In," and *Ultra Vires*

During his April 17, 2018 testimony, Mr. Quigley read aloud statements made by Pennsylvania legislators that had been published in the Legislative Journal. Tr. 20-23. In their Main Brief (pp. 14-17), the Quigleys discuss these legislative materials and claim that they demonstrate that "Act 129 does not mandate said installation on all customers." Later in their Main Brief (pp. 48-49), the Quigleys specifically request that "medical opt-outs should be implemented." In PECO's Reply Brief (pp. 22-25), it demonstrated that Commission has already evaluated the specific Legislative Journal language and argument made by the Quigleys and determined that opt-outs are not available under Act. 129. The I.D. directly addresses the Quigleys' Act 129/opt-out argument (pp. 17-19), correctly concluding that the Commission has ruled that "there is no provision in the Code or the Commission's Regulations or Orders that allows a PECO customer to 'opt out' of smart meter installation."

In the Quigleys' Exception 1 (pp. 1-2), they reiterate their claim that the Commission should have implemented Act 129 as an "opt-in" or an "opt-out" rather than as a universal deployment. They also complain (pp. 1, 16) that the I.D. did not use their preferred term -- "*ultra vires*"[2] – when deciding this issue.[3]

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[2] Latin for "beyond the powers." As PECO understands it, the Quigleys are arguing that, when the Commission ruled that Act 129 requires universal deployment of meters and does not require an opt-in or allow an opt-out, that action was "beyond the powers" of the Commission because that interpretation, the Quigleys claim, does not represent the will of the General Assembly as expressed in Act 129.

[3] Quigley Exceptions (p. 16): "[T]he PUC Court [the ALJ] did not address the issue of whether the PUC's Implementation Order was ultra vires as the Complainants contend. The Quigleys are specifically asking the Court to render a decision on this point."

As set forth in PECO's Reply Brief (pp. 22-25) PECO's view is that the Commission correctly interpreted Act 129 to require universal deployment of AMI meters. The I.D. correctly states prior Commission rulings on this question.

In their Exception 1, the Quigleys reiterate that the Commission's interpretation of Act 129 is "*ultra vires*" and state (p. 16) that they are "specifically asking the [Commission] to render a decision on" their *ultra vires* argument. PECO therefore will briefly place this argument in the context of the *ultra vires* doctrine.

First, it must be noted that the Commission regularly interprets the statutes that it must implement – that is a normal course of business for the Commission, just as it is for any administrative agency. Indeed, in the Commission's 2009 Smart Meter Implementation Order, it made clear that it was following that normal process by determining the intent of the General Assembly with respect to Act 129, stating:

> *The Commission believes that it was the intent of the General Assembly to require all covered EDCs to deploy smart meters system-wide* when it included a requirement for smart meter deployment "in accordance with a depreciation schedule not to exceed 15 years." It is this system-wide deployment that will provide the foundation for the EDCs' smart meter installation plans. Therefore, it is crucial for the EDCs to develop a plan that will best meet the needs of their service territory, while at the same time operating in a manner that is both cost and time effective.

Smart Meter Procurement and Installation, Docket No. M-2009-2092655 (Implementation Order, June 24, 2009) (p. 14, emphasis added).

PECO does not believe that the Quigleys are arguing (or plausibly could argue) that the Commission does not have authority to interpret statutes that the Commission must implement (that is, the Quigleys do not appear to be claiming that the *act of interpreting* a statute is "*ultra vires*" to the Commission's powers). Rather, the Quigleys simply appear to be using the phrase "*ultra vires*" as a shorthand way of arguing that the Commission *incorrectly interpreted* Act 129

– that is, they are arguing that the act of interpreting a statute *incorrectly* is "*ultra vires*" to the Commission's powers.

PECO believes that the Commission has correctly interpreted and implemented Act 129, and that it therefore should not grant the Quigleys' Exception 1. However, the Commission could choose to couch its ruling on the Act 129 issue in the language of the *ultra vires* doctrine. To do so, PECO suggests that the Commission state that (1) the Commission has the authority to interpret statutes that it must implement, and that the act of such interpretation is not "*ultra vires*" to its authority (or, alternatively, that the act of interpreting statutes is "*intra vires*"[4]), and (2) that that Commission's interpretation and implementation of Act 129 to require universal deployment is consistent with the intent of the General Assembly and that holding is thus not "*ultra vires*" to the Commission's authority.

Whether or not the Commission decides to couch its discussion of Act 129 in the Latin term requested by the Quigleys, the Commission should reject the Quigleys' Exception 1.

II. Reply to Exception 2 (pp. 2-3): Request for an analog meter and discussion of Section 1501

In their Exception 2 (pp. 2-3), the Quigleys request an analog meter and argue that, because Section 1501 of the Pennsylvania Public Utility Code requires utilities to "make *all* such substitutions . . . as shall be necessary or proper for the accommodation . . . and safety of its patrons," PECO is required to install an analog meter at their residence. In the final section of their Exceptions (pp. 15-16), the Quigleys reiterate and expand upon their argument that they should prevail in this proceeding due to requirements of Section 1501.

[4] Latin for "within the powers."

The Quigleys' Exception 2 is effectively another request to "opt-out" of the universal deployment of AMI meters. Consequently, PECO's reply to Exception 1 applies with equal force to Exception 2.

Moreover, to prevail under a Section 1501 claim, the Quigleys would need to prove by a preponderance of the evidence that PECO's AMI meter will adversely affect their health. The Commission affirmed this framework in *Frompovich v PECO*, C-2015-2474602 (Opinion and Order, May 3, 2018), (pp. 57-58, emphasis added):

> However, the overwhelming evidence presented by PECO, in rebuttal to Ms. Frompovich's direct case, showed that some of the emissions of concern to Ms. Frompovich do not emanate from AMI meters and that any actual emissions from AMI meters are miniscule and harmless and measure significantly less than those to which the average person is exposed daily. Accordingly, *we affirm the ALJ's conclusion that the Complainant did not satisfy her burden of proving that the type of AMI meter to be installed at her home would be unreasonable or unsafe in violation of PECO's duty under 66 Pa. C.S. § 1501.*
>
> * * *
>
> Based on our adjudication of Ms. Frompovich's claims herein, we find that PECO's proposed termination of electric service to the Complainant's service address for the Complainant's refusal to permit PECO access to its meter, so that *PECO's employees can replace the existing AMR meter with an AMI meter, to be consistent with and authorized under Section 1501 of the Code*, the Commission's Regulations at 52 Pa. Code § 56.81(3), and the Company's Tariff.

In the instant proceeding, the I.D. utilized this same framework and found that the Quigleys did not present sufficient evidence to support a finding that a PECO AMI meter would violate Section 1501 (p. 32, Conclusion of Law 6):

> 6. There is insufficient evidence to support a finding that Complainant will be adversely affected by the smart meter or that PECO's use of a smart meter will constitute unsafe or unreasonable service in violation of 66 Pa.C.S. § 1501. *Kreider v. PECO Energy Co.*, Docket No. P-2015-2495064 at 23 (Order entered January 28, 2016) (citing *Woodbourne-Heaton*, 1992 Pa. PUC Lexis 160, at *12-13).

In sum, the Quigleys cannot prevail on their Section 1501 claim because they did not prevail on their evidentiary case.

III. Reply to Exception 3 (pp. 3-6): Health impacts

a. Reply to Exception 3a (pp. 3-4): Doctor's directive

In Exception 3a (pp. 3-4), the Quigleys state that the I.D. "ignored a licensed and practicing physician's recommendation for his patient."

In this argument, the Quigleys are referring to their Exhibit A-2 (also introduced as PECO's Exhibit BU-6), which is an April 4, 2014 letter that the Quigleys sent to PECO. It is from Dr. Allan Crimm and in its entirety states: "To Whom It May Concern: It is my medical recommendation that this patient reduce involuntary electromagnetic exposure including wireless transmissions." PECO objected to the admissibility of this letter (Tr. 27-28) on the grounds that it is hearsay because it contains a concluding opinion from Dr. Crimm with respect to exposure to electromagnetic fields and health, Dr. Crimm was not presented for cross-examination or to provide the basis for his opinion, and that to allow his opinion to be admitted as substantive evidence would thus violate PECO's due process rights. The ALJ sustained that objection. Tr. at 33. The I.D. did not ignore the Crimm letter. Rather, the I.D. (p. 5, Finding of Fact 24) correctly reflects that such a letter was received by PECO. However, based on the correct evidentiary ruling at hearing, the I.D. properly did not characterize Dr. Crimm's letter as being substantive evidence that supports the Quigleys' complaint.

b. Reply to Exception 3b (p. 4): Immune disorder and immune system impacts

In Exception 3b (p. 4, 13), the Quigleys state that the I.D. "did not consider the full ramifications of wireless transmissions on the immune system of the Complainants" and that the I.D. "gave no credence to the preponderance of scientific literature that the Quigleys presented."

Later (pp. 5-6, p. 13), the Quigleys state that the I.D. inappropriately dismissed "the preponderance of published, peer-reviewed scientific evidence referenced in the Quigley's Main and Reply Briefs."

In its Main Brief (pp. 15-16) and Reply Brief (pp. 10-11) PECO established that: (1) Mrs. Mendez-Quigley did not testify on health issues; (2) while Mr. Quigley testified on health issues, he was not offered or recognized as an expert in health or any other field; and (3) the published research that Mr. Quigley discussed is hearsay and cannot be used to prove the truth of the matters asserted therein. The Quigleys thus did not provide a preponderance of evidence in support of their Complaint. Moreover, PECO's scientific testimony demonstrated that there is no reliable basis to conclude that radiofrequency fields from PECO's AMI or AMR meters cause, contribute to, or exacerbate any of the medical conditions identified by the Quigleys. Tr. 341-51; PECO Exh. MI-3. The I.D. was correct to conclude (p. 30) that "The Complainants did not present a preponderance of evidence to rebut the competent and expert testimony of PECO's witnesses."

c. Reply to Exception 3c (pp. 4-5, 7): Vitamin D and Osteoporosis

In Exception 3c (pp. 4-5, 6, 7), the Quigleys claim that the I.D. did not appropriately evaluate the record evidence on Vitamin D deficiencies and osteoporosis. They also (pp. 4, 5, 6, 12) rely heavily upon an article by Trevor Marshall of the Autoimmunity Research Foundation entitled "Electrosmog and autoimmune disease" (Exh. B-2), and claim (p. 4) that the I.D. "failed to consider" the Marshall article.

Because the Quigleys repeatedly refer to and rely upon the Marshall article, it is worth briefly reviewing the methodology reported in that article. According to the article, the researchers obtained some "microwave-shielding fabric" and sewed 64 "sleeping caps," which

they distributed to 64 subjects, many of whom were undergoing drug treatment for a variety of auto-immune diseases. They asked each subject to wear their "sleeping cap" for four hours while asleep and four hours while awake, and then asked the subjects how they felt. 90% of the subjects said they felt better.

Dr, Israel provided a detailed critique of this article (Tr. 364-68). He concluded: "[T]his doesn't strike me as a substantive report that provides information, either helpful or not helpful. It's simply a description of some poorly described hats that were given to some poorly described patients, who were asked some poorly described questions. . . . [I]n my review of more than a dozen medical databases, this so-called article never came up . . . . I never heard of the organization. I never heard of the individual. And I'm pretty surprised that he doesn't have an academic affiliation."

That is the article that the Quigleys primarily rely upon for their claim that they demonstrated, by a preponderance of the evidence, that PECO's AMI meter will exacerbate Mrs. Mendez-Quigley's existing autoimmune condition.

The I.D. specifically addressed this article and the other testimony and stated (p. 28) that:

> For example, a document from the Autoimmunity Foundation presented by the Complainants was characterized by Dr. Israel as an "article" as opposed to scientific research because the writers did not follow principles of scientific studies, using no control group or placebos. (Tr. 365-367). Dr. Israel also testified that there were no studies showing radiofrequency fields affect Sjögren's or osteoporosis or Vitamin D deficiencies. (Tr. 373). He particularly found the electro-smog article referenced by the Complainants "unconvincing," not providing any data and uninformative. (Tr. 364-366).

The I.D. thus did not "fail to consider" the Marshall article from the Autoimmune Research Foundation. The I.D. considered the Marshall article and, in light of all of the record evidence, correctly concluded that the Marshall article was not convincing and not sufficient to meet the Complainants' burden of proof.

IV. Reply to Exception 4 (pp. 6-12): "Unqualified experts"

a. Reply to Exception 4a (p. 6): Overall expert conclusions

In Exception 4a (p. 6), the Quigleys make two overarching claims with respect to PECO's experts. First, the Quigleys claim (p. 6) that PECO's experts had "an inability to recognize and cite professionally researched, written, and published articles." Second, the Quigleys "remind the PUC Court that actual research has indicated that any and all RF transmissions will have an impact on Ms. Mendez-Quigley's health in a multiplicity of ways."

In its Reply Brief, PECO responded at length to the claim that its experts were not able to recognize and cite studies by citing and quoting the extensive record testimony in which Dr. Davis and Dr. Israel discussed such research in detail and at length. *See* PECO Reply Brief, pp. 12-13 (Dr. Davis) and 16-17 (Dr. Israel).

The "actual research" referred to by the Quigleys is addressed in PECO's Response to Exception 3b.

b. Reply to Exception 4b (pp. 6-7): Mr. Pritchard's expertise and testimony

In Exception 4a (pp. 6-7), the Quigleys argue that the I.D inappropriately relied on the testimony of PECO's expert witness Mr. Glenn Pritchard.

First, the Quigleys state (p. 6) that Mr. Pritchard "has no experience whatsoever with human health." Mr. Pritchard was not offered as an expert in human health, he was offered and recognized – without objection – as in expert in the design, operation, and technology of advanced meter installations. Tr. 216-17; I.D. p. 7, Finding of Fact 35. Mr. Pritchard did not offer opinions on human health. Moreover, the I.D. does not rely upon Mr. Pritchard's testimony to reach conclusions about human health. Instead, each time that Mr. Pritchard's testimony is referenced in the I.D., it pertains to some aspect of the design, operation, and technology of advanced meter installations. *See* I.D. pp. 7-9, Findings of Fact 34-56 (all related to AMI and

AMR system characteristics); I.D. pp.16, 18 (reasons for installing the AMI system); I.D. pp. 23-24 (transmission characteristics of the meters); I.D. p. 29 (the Quigleys did not present either substantial evidence or a preponderance of evidence to counter Mr. Pritchard's testimony).

Second, the Quigleys claim (p. 7) that Mr. Pritchard "attempts to overstate his expertise in shielding."

During cross-examination by Mr. Quigley, Mr. Pritchard testified (Tr. 250-51) that:

> Mr. Pritchard: The simple fact of having a wall, a smart meter is designed to, with the FlexNet radio, transmit away from the house. There's no benefit of transmitting into the house because it's trying to reach one of the TGB towers, as I defined. The ZigBee radio is designed to transmit into the house because that's where the device is it would communicate to. The absence of a ZigBee radio would eliminate any of those transmissions.
>
> Again, so the FlexNet radio transmitting outwardly the amount of signal that would be coming back is very minimal. There's the meter socket, which is a metal enclosure. That actually acts [as a] ground to reflect the signal away from the house. Furthermore, the wall will attenuate additional signal. So any signal from your meter would be very similar to the background signals that are there already today.
>
> * * *
>
> As I explained yesterday, the radio - it's very easy to assume that the meter is trying to reach a particular TGB. It's not. It actually is just broadcasting its signal. So any number of TGBs may indeed hear that meter. So that helps guarantee that the one transmission every three to four hours is heard by PECO.
>
> Mr. Quigley: What's the approximate distance to the TGB? I know that it's a probably very broad range.
>
> Mr. Pritchard: They vary. Typically, it will be between one to three miles.
>
> Mr. Quigley: So the signal has to be strong enough to travel one to three miles?
>
> Mr. Pritchard: Correct. However, that is offset by the receiver is quite sensitive to hear very, very faint or very soft signals. Furthermore, by having a licensed frequency, we are not competing with any other RF traffic or devices. So some of the smart meter systems use what's called a public frequency in the industrial, scientific, and medical band. The frequencies are specifically 902 to 928 [megahertz]. That is a shared band. So not only the metering systems, but every wireless phone, consumer products, garage door openers, even kids toys are all competing for that same frequency, which creates a noise. So just

like when you're in a crowded room or a crowded cafeteria, there's lots of noise. Here, I'm the only person speaking. That's representative of our AMI platform, that I'm not competing with any other noise. So I can speak very softly. Yet, the most distant person may hear that adequately.

In their Reply Brief (pp. 10-11), the Quigleys argued, in a single, conclusory sentence (p. 11) that "Pritchard was not recognized as an expert of electromagnetic shielding and should not have been making claims regarding it."

The I.D. discussed this testimony at pp. 23-24:

> Mr. Pritchard testified that the FlexNet radio on the meters is designed to transmit away from the house and that the wall of the service address would attenuate the signal away from the house and therefore the RFs from the meters would not be that different from background signals already present at the service address. (Tr. 250-252). He also testified that while the Zigbee radios are designed to transmit into the house and communicate with smart appliances, an Aclara meter is available to the Complainants and does not have a Zigbee radio, and the Zigbee radio on the Sensus Stratus meter, if that is installed at the service address, can be turned off. (Tr. 247-251).
>
> James Quigley expressed concern about the strength of the signal from the AMI meters, noting that if the signal is designed to transmit away from the home, it may have to communicate up to three miles away to a Tower Gateway Base Station, that will ultimately transmit user information to PECO. (Tr. 251-251). Mr. Pritchard testified that the signal strength required for that transmission in PECO's system is relatively soft because PECO operates its AMI system on a licensed frequency. This is unlike other systems that operate on a public frequency, which would require a stronger signal, competing with wireless phones, consumer products and even toys for that signal. (Tr. 252). PECO is also not using the mesh AMI system of concern to the Complainants or as described in some informational literature. (Tr. 110, 229).

The I.D. presents an accurate recitation of the underling testimony. Moreover, all of Mr. Pritchard's testimony on this issue clearly relates to the design, operation and technology of advanced meter installations, and it therefore is squarely within Mr. Pritchard's recognized field of expertise. The Quigleys' claim that Mr. Pritchard is attempting "to overstate his expertise in shielding" is incorrect, is not supported by the testimony presented by Mr. Pritchard, and provides no basis for rejecting the I.D.

c. Reply to Exception 4c (pp. 7-11): Dr. Davis's expertise and testimony

In Exception 4c (pp. 7-11), the Quigleys argue that the I.D. inappropriately relied on Dr. Davis's testimony.

First, the Quigleys state (p. 7) that Dr. Davis "has no experience in treating patients or dealing with human health. . . ." This was addressed in PECO's Reply Brief (p. 11); Dr. Davis was not offered as an expert in human health and did not offer opinions in that field.

Second, the Quigleys claim (pp. 7, 9, 10) that Dr. Davis "was not familiar with substantial amounts of published, peer-reviewed research concerning the damage caused by RF transmissions" that (p. 9) "genotoxicity has been demonstrated" and that Dr. Davis did not demonstrate familiarity with research on non-thermal effects. PECO addressed the argument that Dr. Davis is not familiar with the research in its Reply Brief (pp. 12-13) by citing and quoting the extensive record testimony in which Dr. Davis discussed such research in detail and at length.

Third, the Quigleys reiterate their argument (pp. 7, 9) that PECO relies too heavily on the FCC standards, which the Quigleys claim do not appropriately address non-thermal effects. PECO addressed this argument in its Reply Brief (p. 10), where it showed that the argument is based on inadmissible extra-record evidence. In addition, Dr. Davis testified that the FCC considered research on non-thermal effects and concluded that non-thermal effects have not been scientifically demonstrated, and that he agrees with that assessment. Exh. CD-3, p. 2.

Fourth, the Quigleys claim (p. 8) that in Dr. Davis's testimony regarding "pulsed" fields, he was "trying to obfuscate" and that his testimony "is obviously flawed." The Quigleys provide no basis for these conclusory characterizations of Dr. Davis's expert testimony.[5]

[5] Dr. Davis testified (PECO Exh CD-3, p. 1) that: "In communications physics and engineering, 'pulsed' means using (1) amplitude modulation that is (2) done in a way that produces a signal

Fifth, the Quigleys claim (p. 8) that Dr. Davis should not have relied upon the International Commission on Non-Ionizing Radiation Protections ("ICNIRP") because, they say, ICNIRP has an industry bias. They note that this argument was presented in their Main Brief at pages 28-19 and their Reply Brief, p. 14. In both of their Briefs at the cited pages, the Quigleys support this argument by referencing a letter from "EMF scientist.org" (Quigley Exh. M-7). The Quigleys again refer to this document at page 11 (in the reference to "over 200 scientists.")

In its Reply Brief (p. 15), PECO noted that: "No witness in this proceeding testified about or was asked any questions about this [EMF scientist.org] letter. It was admitted with the hearsay limitation that it may not be used to prove the truth of the matters asserted therein. Apr. 17 Tr. 162-63. It does not provide evidentiary support for the Quigleys' claim." Dr. Davis was correct to rely upon ICNIRP, and the I.D. was correct to accept his reliance on ICNIRP.

Sixth, the Quigleys claim (p. 8) that the I.D. erred in referring to Dr. Davis's testimony regarding background UHF TV transmissions because "the idea of cumulative average is used to make a momentary high RF transmission appear lower over time. The PUC Court has therefore allowed Dr. Davis to deny the impact to Ms. Mendez-Quigley's health from the short term high RF exposure of PECO's meters." Dr. Davis testified that the ongoing background exposure from UHF TV at the Quigley home is 1,600 times higher than exposure from the AMI meters over time. *See* I.D., p. 25, citing Tr. 286-87, Exh. CD-11. He also provided testimony that the peak exposure from the AMI meters, *while they are transmitting at their peak power*, is nearly 40 times less than the applicable FCC standard for average exposure. *See* I.D. p. 25. Both of these

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that has abrupt changes in the amplitude of the sine wave. PECO's AMI meters produce frequency modulated, specifically 'frequency shift keyed' regular non-pulsed sine waves. PECO's AMI meters do not emit 'spikes' – they send out regular sine waves. The sine waves are not amplitude modulated. Therefore, PECO's AMI meters do not send out pulsed signals." *See also* Tr. 278.

comparisons of RF exposure levels provide meaningful context to understand the exposure associated with PECO's AMI meters, and the I.D. was justified in restating and relying upon them.

Seventh, the Quigleys claim (p. 9) that Dr. Davis did not "present . . . the algorithms . . . he used to make his estimates," and claim that this is "considered highly unprofessional in learned circles." If the Quigleys wished to know the math underlying Dr. Davis's calculations, they could have asked for his equations in discovery or on cross. They did not do so. They provide no evidentiary support for the view that Dr. Davis's approach of presenting his conclusions and having his equations ready for discussion upon request is "considered highly unprofessional in learned circles."

Eighth, the Quigleys claim (p. 10) that Dr. Davis's estimate that Ms. Mendez-Quigley is receiving ten times as much RF exposure from her own cell phone usage as she will from the PECO AMI meter cannot be correct because she "had not testified until the very end of the trial about the specifics" of her cell phone usage, which was after Dr. Davis's testimony.

That is not correct. Ms. Mendez-Quigley testified about her cell phone usage on April 17 at transcript pages 53, 62-64, and 68. Dr. Davis provided his estimate of her cell phone exposure on April 18 at transcript pages 291-96. It is correct that, later that same day, Ms. Mendez-Quigley provided additional information about her cell phone usage at transcript pages 402-408. But in that later testimony she primarily clarified that, when she is not actually using the phone, she tends to keep it at a distance from herself. She did not change her prior estimates of how much she actually uses the phone.

Finally, the Quigleys claim that Dr. Davis should not be believed because he is paid and stated that he would not have been hired if did not agree with PECO's views. As PECO stated in its Reply Brief (pp. 11-12):

> In fact, Dr. Davis's testimony on that issue was more textured than the Quigley's summary would lead one to believe. He stated:
>
> > First of all, I would never testify for anybody where I didn't feel comfortable telling the absolute truth of what I believe is correct. And I think what you're asking doesn't make sense. I mean, any witness that's presented, you hope will help your case. And I believe that I am telling the absolute truth about what the matter is here. And clearly, that's why I like to think I'm valuable in presenting this evidence.
>
> Apr 18 Tr. 299-300. Dr. Davis is only willing to testify in matters where he is comfortable telling the absolute truth. That is a reason to believe, not disbelieve, his testimony.

In sum, the Quigleys' various arguments do not provide any reason to give lesser weight to Dr. Davis's testimony.

d. Reply to Exception 4d (pp. 11-12): Dr. Israel's expertise and testimony

In Exception 4d (pp.11-12), the Quigleys argue that the I.D. inappropriately relied on Dr. Israel's testimony.

First, the Quigleys claim (p. 11) that Dr. Israel's testimony should not be given weight because he has not treated patients with Sjogren's Syndrome. PECO answered this argument in its Main Brief (pp. 12-13, 17) and its Reply Brief (p. 15). Dr. Israel has approximately 40 years of experience in an active medical practice, and for the last 15 of those years he was Director of the Dartmouth-Hitchcock Cancer Center. He has substantial experience treating patients and supervising patient care, including patients with compromised immune systems.

Second, the Quigleys claim (p. 11, 12-13) that Dr. Israel "overlooked" and "dismissed" approximately 1,800 studies. This reference to 1,800 studies is a reference to the "BioInitiative

Report" edited by Dr. David Carpenter. In its Reply Brief (p. 17), PECO answered this argument and established that (1) the BioInitiative Report is hearsay that cannot be relied upon for the truth of the matters asserted therein; (2) Dr. Carpenter was cross-examined about the BioInitiative Report in *Myers v PPL Electric Utilities Corporation*, C-2017-2620710, and ALJ Barnes concluded that the BioInitiative Report "does not provide a balanced view of the scientific research," and (3) Dr. Israel provided an extensive discussion of the manner in which he reviewed and evaluated studies in this area. The claim that he "overlooked" material scientific information in the BioInitiative Report is incorrect.

Third, the Quigleys claim (pp. 12-13) that Dr. Israel showed unfamiliarity with studies and could not name any studies during cross-examination. PECO responded at length to this argument in its Reply Brief (pp. 16-17), including quotations from and citations to the record evidence in which Dr. Israel showed familiarity with studies and named studies when asked to do so.

Fourth, the Quigleys again turn to the article from the Autoimmunity Research Foundation and claim (p. 12) – without record citation – that this article meets the "editorial standards of and research methods of required of prestigious publications." PECO provided its response on the Autoimmunity Foundation article in response to Exception 3c. PECO further notes that the Quigleys' claim that this is a high-quality scientific study has no basis in the record evidence.

In sum, the Quigleys' various arguments do not provide any reason to give lesser weight to Dr. Israel's testimony.

V. Reply to Exception 5 (pp. 13-15): "Proceedings"

a. Reply to Exception 5a (pp. 13-14): "Intentionally deceptive language" regarding an Initial Hearing

A Prehearing Order was issued in this proceeding on September 27, 2017. It stated, in material part, that an Initial Hearing in the case would be held on April 17-18, 2018 and that:

> ***ON OR BEFORE February 20, 2018***, any party wishing to present expert testimony (medical, technical, etc.) must provide to the other party the name and business address of that expert and a written summary of the expected testimony of that expert.
>
> ***ON OR BEFORE February 20, 2018***, any party wishing to present factual testimony of any person other than the Complainant must provide to the other party the name and business address of that person and a written summary of the expected testimony of that person.
>
> *****
>
> ***ON OR BEFORE April 3, 2018***, Complainant and Counsel for PECO are directed to provide one another with copies of all exhibits and statements to be presented at the hearing.

On February 20, 2018, PECO identified its expert and fact witnesses and provided expert and fact witness reports. The Quigleys did not identify any witnesses or provide any witness reports.

On April 3, 2018, PECO served its hearing exhibits. At or about that same date, the Quigleys served PECO with dozens of documents that they proposed to submit as hearing exhibits.

At the evidentiary hearing (Tr. 28, 32), the Quigleys claimed that the use of the term "Initial Hearing" is "misleading", and that

> [I]t was our intent in this initial hearing to present the peer-reviewed case, if you will, as well as other credible literature for what we wanted to explain to the Court. It was our further intent, knowing this was the initial hearing, that in the subsequent hearing, we would subpoena and call expert witnesses.

The ALJ properly required the Quigleys to proceed with the presentation of their full evidentiary case. Tr. 32-33.

In their Exception 5a, the Quigleys ratchet up their adjectives; they previously claimed that the use of the term 'Initial Hearing" was "misleading"; in Exception 5a they claim that it is "intentionally deceptive."

The Quigleys had ample notice of the date on which they were required to identify expert witnesses and provide witness reports for those experts, because the Prehearing Order – which used the term "Initial Hearing" – explicitly stated that "***ON OR BEFORE February 20, 2018***, any party wishing to present expert testimony (medical, technical, etc.) must provide to the other party the name and business address of that expert and a written summary of the expected testimony." Given that targeted and specific language directing a date for the identification and presentation of expert witness information, the Quigleys' claim that the use of the term "Initial Notice" somehow mislead or deceived them as to the date by which they were required to identify expert witnesses is simply not plausible.

b. Reply to Exception 5b (p. 14): *Pro hac vice*

On July 16, 2018, PECO filed a Motion to Admit Thomas Carl Watson, Esquire *Pro Hac Vice*. The Complainants filed objections to that motion on July 26, 2018. On August 3, 2018, PECO provided its Reply to those objections. By Order issued on August 17, 2018, the ALJ granted PECO's Motion.

In their Exception 5b (p. 14), the Quigleys reiterate their arguments regarding *pro hac vice* admission. PECO relies upon its July 16 Motion and August 3 Reply, and will not repeat those arguments here. The ALJs August 17, 2018 Order correctly granted PECO's Motion.

c. Reply to Exception 5c (p. 15): AMR/Latency period

The I.D. states (p. 30) that "the Quigleys reported no negative effects of the AMR meter at the service address." In their Exception 5c (p. 15), the Quigleys state "[t]he PUC Court clearly missed the Quigleys concern in their Main Brief noting that her autoimmune diagnosis happened after the installation of the AMR. A latency period could reasonabl[y] be expected."

The Quigleys provided no testimony on latency periods, and did not present a claim that AMR transmissions caused Mrs. Quigley's autoimmune disease (Sjogren's Syndrome).

Nonetheless, Dr. Israel directly addressed this issue, stating (Tr. 345, emphasis added) that:

> Based on my medical evaluation, I found that there's no reliable medical basis to conclude that radiofrequency fields from PECO's AMI *or AMR meters* cause, or contribute to, or exacerbate Sjogren's syndrome.

Dr. Israel reached similar conclusions with respect to AMR exposure and all of the other health claims made by the Quigleys, including Vitamin D deficiency (Tr. 346), osteoporosis (Tr. 346), peripheral neuropathy (Tr. 347), lymphoma or other cancer (Tr. 348), and cardiovascular disease. Tr. 349-50.

d. Reply to Exception 5d (p. 15): EFs vs RFs

In their Exception 5d (p. 15), the Quigleys state that the I.D. used "EF" (electromagnetic fields, also known as "EMF") on an occasion when, in the Quigleys' opinion, it should have used "RF" (radiofrequency fields). The Quigleys assert that "This clearly indicates that the PUC Court may not understand the profound difference between EFs (electric fields) at low frequencies and RFs from much higher frequencies."

The I.D. notes (p. 2, fn 2) that the terms "EMF" (another abbreviation for EF) and "RF" were used interchangeably in the proceeding. To give but a few salient examples, in the combined testimony of the Quigleys, the term "radiofrequency" or "RF" is used approximately

50 times, while the term "electromagnetic" or "EMF" is used approximately 10 times. The note from Dr. Allan Crimm uses the term "electromagnetic" but not "radiofrequency" or "RF." The Autoimmunity Research Foundation article upon which the Quigleys heavily rely uses the term "electromagnetic" approximately 20 times, and the term "radio" twice – most notably in the sentence: "It is generally accepted that exposure to low-energy radio waves do not produce any sign of harm." The Quigleys Main Brief uses some variation of "radiofrequency" or "RF" more than 20 times and some form of "electromagnetic" or "EMF approximately 30 times. And, interestingly, their Main Brief also combines the two concepts into "RF/EMF" (p. 21) and "EMF/RF" (p. 23).

In short, the Quigleys and their sources used both RF (or radiofrequency fields) and EF (or EMF or electromagnetic fields) throughout the record. The I.D. is correct in noting that they were used interchangeably, and her use of "EF" simply reflects that she used the terms in the same manner as they were used by the Quigleys.

VI. Reply to Exception 6 (pp. 15-16) "Response to PUC Court Conclusions":

In this section of their Exceptions (pp. 15-16), the Quigleys reiterate their arguments regarding Section 1501, the "deep bias" of the ALJ and the Commission, and their request for an "*ultra vires*" ruling. Each of those is dealt with in a prior section of these Reply Exceptions. (Section 1501 is addressed in the reply to Exception 2; "deep bias" is addressed in PECO's Introduction, and "*ultra vires*" is responded to in the reply to Exception 1.)

VII. Conclusion

PECO respectfully submits that the Commission should reject the Quigleys' Exceptions and adopt the I.D.

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January 30, 2019