

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Nelson Hess	:	
	:	
v.	:	C-2018-3003337
	:	
PPL Electric Utilities Corporation	:	

**INITIAL DECISION**

Before  
Elizabeth H. Barnes  
Administrative Law Judge

**INTRODUCTION**

A residential customer filed a complaint seeking to prevent an electric distribution company (EDC) from installing a smart meter a/k/a “Advanced Metering Infrastructure (AMI) meter” or “Radio Frequency (RF) meter” on his residence. In the alternative, the customer requests a delay of installation until the end of year 2022 or a directive to the EDC to relocate the meter away from his residence on his property. The complaint will be dismissed for failure to prove by a preponderance of evidence that the installation of the smart meter constitutes unsafe or unreasonable service under 66 Pa. C.S. § 1501 or that the company violated any other provision of the Public Utility Code, Commission order or regulation or a Commission-approved tariff of the company.

**HISTORY OF THE PROCEEDING**

On July 6, 2018, Nelson Hess (Complainant) filed the instant Complaint requesting that PPL Electric Utilities Corporation (PPL or Respondent) be precluded from installing a radio

frequency (RF) meter on his residence at 2408 Crow Foot Drive, Auburn, Pennsylvania for health, safety, and privacy reasons. Complaint at 3.

The Complaint was served upon PPL on July 11, 2018.<sup>1</sup> On July 31, 2018, Respondent filed an Answer. The Answer admits that the Respondent provides electric service to the Complainant. Respondent contends that it is required to install AMI, or smart meters, for all automatic meter reading (AMR) customers and denies that the new AMI meter has caused, contributed to, or exacerbated any illnesses.

On August 10, 2018, a Notice was issued scheduling a prehearing conference for August 29, 2018 and assigning the case to me. A Prehearing Conference Order was issued on August 9, 2018. The prehearing conference was held as scheduled wherein various procedural matters were discussed. A transcript of the prehearing conference was filed on September 13, 2018. On September 4, 2018, a Telephonic Hearing Notice was issued scheduling the hearing for January 9, 2019, and a Prehearing Order was issued. An Amended Complaint was filed on October 19, 2018. On October 25, 2018, a Second Prehearing Order was issued. On November 14, 2018, PPL filed an Answer to the Amended Complaint. On April 4, 2019, a Protective Order was entered. On May 3, 2019, Complainant filed a Second Amended Complaint with Complainant Exhibits 1 and 2 attached. On May 9, 2019 PPL was served the Second Amended Complaint. On May 13, 2019, PPL filed an Answer to the Second Amended Complaint.

At the hearing on May 14, 2019, Complainant appeared *pro se* with two exhibits including: 1) *Smart Meter Effects* article; and 2) an *eenews.net* article regarding cybersecurity. Respondent appeared represented by Devin Ryan, Esquire and Curtis Renner, Esquire with four written statements, 15 exhibits and four witnesses: Kevin Durkin, Donald Vinciguerra, Christopher Davis, Ph.D., and Mark Israel, M.D. Respondent's Statements 1-4 and Exhibits CD-1 – CD-5; MI-

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<sup>1</sup> PPL signed a waiver of the Section 702 requirement for registered or certified mail service of formal complaints, 66 Pa. C.S. § 702, and agreed to electronic service under the Commission's waiver of 702 program. *See In Re: Electronic Service of Formal Complaints*, Secretarial Letter Dated December 22, 2014, at Docket Nos. M-2013-2398153 *et al.* Service is listed in the electronic Audit History of the case as entered by the Secretary's Bureau as having been effective on July 11, 2018. Thus, PPL's Answer filed on July 31, 2018 is deemed timely filed.

1-MI-3; KD-1-KD-6 and DV-1 were admitted into the record. Tr. 3.<sup>2</sup> A second transcript consisting of 45 pages was filed and the record closed on May 23, 2019. This case is ripe for a decision.

### FINDINGS OF FACT

1. The Complainant in this proceeding is Nelson Hess, who resides at 2408 Crow Foot Drive, Auburn, Schuylkill County, Pennsylvania (service address). Tr. 7-8.
2. Complainant resides alone in a gated community on top of a mountain near a lake. Tr. 8.
3. Complainant has been employed as a night manager of a hotel in New York City. Tr. 7.
4. Complainant uses a cell phone as little as possible. Tr. 8.
5. Complainant requests PPL be precluded from installing an AMI meter on his service property and directed to continue electric service with the meter he currently has. Tr. 8-9, 12.
6. Alternatively, Complainant requests the installation be delayed until December 31, 2022, as that is within the deadline provided in Act 129 of 2008. Tr. 13, 17.
7. Complainant claims that when he goes to his sister's house, because she has a smart meter, he gets headaches within 10 minutes, and cannot stay there very long. Tr. 9-10.

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<sup>2</sup> All citations to transcripts reference the May 23, 2019 hearing transcript.

8. The Respondent in this proceeding is PPL Electric Utilities Corporation, an electric distribution company (EDC). Tr. 9.

9. Powerline carrier (PLC) meters do not emit radio frequency (RF) fields and are often referred to by customers as analog meters. PPL Electric Statement No. 4 at 5.

10. A PLC meter uses the power lines as a means of communication with pulses encoded on the 60 Hertz line frequency so that PPL can record the data to the proper account. PPL Electric Statement No. 4 at 5.

11. Complainant has a PLC meter on his service property. PPL Electric Statement No. 3 at 4.

12. On June 30, 2014, PPL filed its new Smart Meter Plan intended to comply with all the requirements of Act 129 and the Commission's Smart Meter Implementation Order. PPL Electric Exhibit No. DV-1, *PPL Smart Meter Technology Procurement and Installation Plan*, June 30, 2014.

13. PPL selected Radio Frequency ("RF") Mesh meters and metering system because the Company determined that the RF Mesh system would support the 15 capabilities required by Act 129 and the Smart Meter Implementation Order. PPL Electric Exhibit No. DV-1.

14. The RF Mesh system allows the Company to receive data from the customer's meter wirelessly, unlike PPL's previous PLC system that used the customer's actual wires. PPL Statement No. 3 at 6-7.

15. Under the Smart Meter Plan, the RF Mesh meters are to be deployed by the end of 2019. PPL Electric Statement No. 4 at 6.

16. PPL intends to install a Landis + Gyr E350 FOCUS AXR-SD meter at Complainant's service property. PPL Electric Statement No. 4 at 6, PPL Exhibit No. DV-1.

17. The Federal Communications Commission (FCC) identification number for the new AMI meter is R7PEG1R1S2. PPL Electric Statement No. 4 at 6.

18. The Landis + Gyr Focus AXR-SD meter is certified by the Underwriters Laboratories at UL 2735. PPL Statement No. 4 at 8.

19. The Landis + Gyr Focus AXR-SD meter is compliant with the American National Standards Institute (ANSI) C12.10. PPL Statement No. 4 at 8.

20. PPL Witness Davis has a Ph.D. in Physics and is a fulltime Professor with an endowed Chair at the University of Maryland, where for over 30 years he has taught Physics, Electrical Engineering, Electromagnetics, and RF Electromagnetics to undergraduate and graduate students. PPL Electric Statement No. 1 at 1-5.

21. In addition to his teaching, Dr. Davis is an active scientific researcher in the fields of Physics, Biophysics, Electrical Engineering, Bioelectromagnetics and RF Bioelectromagnetics, conducting many scientific studies in these fields and publishing over 250 studies in peer-reviewed scientific journals. PPL Electric Statement No. 1 at 1-5.

22. Dr. Davis conducted a substantial amount of research on RF fields of the type produced by the AMI meters being used by PPL. PPL Electric Statement No. 1 at 3.

23. RF fields are part of the lower energy, non-ionizing portion of the electromagnetic spectrum which consists of lower frequency signals that do not have enough energy to break chemical bonds in cells or DNA. PPL Electric Statement No. 1 at 5-6.

24. RF fields come from many sources in our everyday environments, including AM/FM radio, television broadcast, cell phones and their communication networks,

portable phones, garage door openers and Wi-Fi networks. PPL Electric Statement No. 1 at 5-7, 12.

25. “Dirty electricity” is a non-scientific term that sometimes is used to refer to electrical characteristics (harmonics and transients) that can be found on household wiring. Tr. 75-76, PPL Electric Statement No. 1 at 8.

26. The FCC has determined safe public exposure levels for RF fields from devices that transmit RF signals, such as the AMI meters. PPL Electric Statement No. 1 at 9-10.

27. The FCC safe public exposure limits are based on evaluations of the body of scientific research on RF fields and were adopted in consultation with other federal agencies, including the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA). PPL Electric Statement No. 1 at 9-10.

28. The levels of RF fields from the Landis + Gyr Focus AX-SD AMI meters are 98,000 times lower than the RF exposure safety limits established by the FCC. PPL Electric Statement No. 1 at 15, PPL Electric Exhibit CD2.

29. RF signals from the AMI meter are of very short duration and will occur for only a total of 84 seconds over a 24-hour period. PPL Electric Statement No. 1 at 7.

30. The RF field exposure 30 feet from a person using a cell phone are three times larger than the RF fields from the AMI meter. PPL Electric Statement No. 1 at 14, PPL Electric Exhibit CD4.

31. RF fields from using cell phones near the head can be over 260,000 times higher than the RF fields from the AMI meter. Tr. 14, PPL Electric Exhibit CD4.

32. Complainant used his cell phone for 36,481 minutes over the past 12 months. PPL Electric Statement No. 1 at 16.

33. Complainant would have to stay within 1 meter of an AMI meter for 7,197 years to receive an equivalent amount of RF exposure from the AMI meter. PPL Electric Statement No. 1 at 16, Tr. 37-38.

34. There are eight television broadcast towers within a 50-mile radius of Complainant's location in Auburn, Pennsylvania. PPL Electric Statement No. 1 at 15.

35. Based on the locations of each tower and their RF power outputs, the constant background level of RF fields at Complainant's residence are 3.94 times higher than the RF signals from the AMI meter. PPL Electric Statement No. 1 at 15, PPL Electric Exhibit CD-5.

36. The level of RF fields from AMI meters being used by PPL is far too low to cause a thermal or heating effect. PPL Electric Statement No. 1 at 13-14.

37. PPL Witness Israel received his undergraduate degree from Hamilton College and his medical degree from the Albert Einstein College of Medicine, and he completed his medical training at Harvard Medical School. PPL Electric Statement No. 2 at 1.

38. Dr. Israel is a Professor of Medicine, Pediatrics, and Molecular and Systems Biology at the Dartmouth Medical School and the Executive Director of the Israel Cancer Research Fund in New York, an international charitable fund for medical and scientific research programs. PPL Electric Statement No. 2 at 1.

39. Dr. Israel is board certified and licensed to practice medicine. PPL Electric Statement No. 2 at 3.

40. Dr. Israel has conducted medical research for 40 years in a wide variety of areas, including systems biology, biochemistry, cell biology, cancer, molecular biology, and molecular genetics and has published over 245 medical research studies in leading peer-reviewed scientific journals. PPL Electric Statement No. 2 at 3-4.

41. Dr. Israel also has taught medicine and science for more than 30 years to medical students, graduate students, interns, residents, and practicing physicians in a number of fields, including endocrinology, immunology, hematology, neurology, cardiology, biochemistry, cell biology, genetics, molecular genetics, medical oncology, and radiation oncology. PPL Electric Statement No. 2 at 3.

42. Claimed symptoms related to Electromagnetic Hypersensitivity (EHS) are more accurately described as “Idiopathic Environmental Intolerance” (“IEI”), in which “idiopathic” means “cause unknown,” rather than electromagnetic hypersensitivity. PPL Electric Statement No. 2 at 12-13.

43. There are no established medical criteria for the diagnosis or treatment of IEI. PPL Electric Statement No. 2 at 15-16.

44. IEI and the variety of symptoms attributed to it are not caused by exposure to RF fields. PPL Electric Statement No. 2 at 15-16.

45. The World Health Organization and a number of other public health authorities have concluded that the scientific research on RF exposures from cell phone use, which are far higher than the RF from PPL’s smart meters, has not shown that RF fields cause adverse health effects. PPL Electric Statement No. 2 at 10-16, PPL Electric Exhibit MI-1.

46. Several state public health authorities in the United States have also investigated claims about health effects from smart meters and have concluded that there is no credible scientific evidence that RF fields from smart meters will cause or contribute to any adverse health effects. PPL Electric Statement No. 2 at 11, PPL Electric Exhibit MI-2.

47. There is no reliable medical basis to conclude that RF fields from the AMI meters being used by PPL will cause or contribute to the development of illness or disease. PPL Electric Statement No. 2 at 16.

48. There is no reliable medical basis to conclude that RF fields from the AMI meters being used by PPL would cause, contribute to, or exacerbate any of the symptoms claimed by the Complainant, or any other adverse health effects. PPL Electric Statement No. 2 at 15-16.

49. As a part of its Smart Meter Plan proceeding, PPL filed a detailed AMI Customer Privacy Policy, which sets forth the data PPL will collect through the new smart meter, the steps the Company will take to protect the data, and the ways in which PPL will use the data. PPL Electric Exhibit No. DV-1.

50. PPL uses firewalls to prevent anyone from obtaining unauthorized access to the AMI network. PPL Statement No. 4 at 7-8.

51. Customer data is encrypted to make the data readable to only PPL personnel who can decode the encryption. PPL Statement No. 4 at 7-8.

52. PPL's cybersecurity and data privacy policies are consistent with the national standards for the industry. Tr. 24-26, PPL Statement No. 4 at 7-8.

## DISCUSSION

### Legal Standards

Under Section 332(a) of the Public Utility Code, 66 Pa. C.S. § 332(a), “the proponent of a rule or order has the burden of proof.” It is well-established that “[a] litigant’s burden of proof before administrative tribunals as well as before most civil proceedings is satisfied by establishing a preponderance of evidence which is substantial and legally credible.” *Samuel J. Lansberry, Inc. v. Pa. Pub. Util. Comm’n*, 578 A.2d 600, 602 (Pa. Cmwlth. 1990). The preponderance of evidence standard requires proof by a greater weight of the evidence. *Commonwealth v. Williams*, 557 Pa. 207, 732 A.2d 1167 (1999). This standard is satisfied by

presenting evidence more convincing, by even the smallest amount, than that presented by another party. *Brown v. Commonwealth*, 940 A.2d 610, 614 n.14 (Pa. Cmwlth. 2008).

If the party seeking a rule or order from the Commission sets forth a *prima facie* case, then the burden shifts to the opponent. *MacDonald v. Pa. R.R. Co.*, 348 Pa. 558, 36 A.2d 492 (1944). Establishing a *prima facie* case requires either evidence sufficient to make a finding of fact permissible or evidence to create a presumption against an opponent which, if not met, results in an obligatory decision for the proponent. Once a *prima facie* case has been established, if contrary evidence is not presented, there is no requirement that the party seeking a rule or order from the Commission must produce additional evidence to sustain its burden of proof. *See Replogle v. Pa. Elec. Co.*, 54 Pa. PUC 528, 1980 Pa. PUC LEXIS 20 (Order entered Oct. 9, 1980); *see also Dist. of Columbia's Appeal*, 21 A.2d 883 (Pa. 1941); *Application of Pennsylvania-American Water Co. for Approval of the Right To Offer, Render, Furnish or Supply Water Serv. to the Pub. in Additional Portions Of Mahoning Twp., Lawrence County, Pa.*, Docket No. A-212285F0148, 2008 Pa. PUC LEXIS 874 (Order entered Oct. 29, 2008).<sup>3</sup>

In addition, a person does not sustain his or her burden of proof in an electric and magnetic field exposure case when the record evidence, “taken as a whole, leads to the ultimate finding and conclusion that the scientific studies at present are inconclusive.” *Letter of Notification of Phila. Elec. Co. Relative to the Reconstructing and Rebuilding of the Existing 138 kV Line to Operate as the Woodbourne-Heaton 230 kV Line in Montgomery and Bucks Counties*, 1992 Pa. PUC Lexis 160, at \*210-11 (June 29, 1992) (Initial Decision) (“*Woodbourne-Heaton*”). Rather, the person must demonstrate by a preponderance of the evidence that such exposure actually causes adverse health effects. *Id.* at \*211. Specifically, in AMI meter-related matters, the Commission has held that “[t]he Complainant will have the burden of proof during the

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<sup>3</sup> In addition, any finding of fact necessary to support an adjudication of the Commission must be based upon substantial evidence. *Met-Ed Indus. Users Grp. v. Pa. Pub. Util. Comm'n*, 960 A.2d 189, 193 n.2 (Pa. Cmwlth. 2008) (citing 2 Pa.C.S. § 704). Substantial evidence is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. *Borough of E. McKeesport v. Special/Temporary Civil Serv. Comm'n*, 942 A.2d 274, 281 n.9 (Pa. Cmwlth. 2008) (citation omitted). Although substantial evidence must be “more than a scintilla and must do more than create a suspicion of the existence of the fact to be established,” *Kyu Son Yi v. State Bd. of Veterinary Med.*, 960 A.2d 864, 874 (Pa. Cmwlth. 2008) (citation omitted), the “presence of conflicting evidence in the record does not mean that substantial evidence is lacking.” *Allied Mech. and Elec., Inc. v. Pa. Prevailing Wage Appeals Bd.*, 923 A.2d 1220, 1228 (Pa. Cmwlth. 2007) (citation omitted).

proceeding to demonstrate, by a preponderance of the evidence, that [the utility] is responsible or accountable for the problem described in the Complaint.” *Kreider v. PECO Energy Co.*, Docket No. P-2015-2495064, p. 18 (Order entered Sept. 3, 2015) (*Kreider*); *see also Romeo v. Pa. Pub. Util. Comm’n*, 154 A.3d 422, 429 (Pa. Cmwlth. 2017) (*Romeo*) (finding that the smart meter complainant should have a hearing to try to prove his claim through “the testimony of others as well as other evidence that goes to that issue”).

Section 701 of the Public Utility Code provides that “any person . . . having an interest in the subject matter . . . may complain in writing, setting forth any act or thing done or omitted to be done by any public utility in violation, or claimed violation, of any law which the commission has jurisdiction to administer, or of any regulation or order of the commission.” 66 Pa. C.S. § 701. Therefore, a complainant must generally demonstrate that the public utility violated the Public Utility Code or a Commission regulation or order.

The Commission has exclusive jurisdiction to adjudicate “issues involving the reasonableness, adequacy, and sufficiency” of a public utility’s facilities and services. *See Elkin v. Bell of Pa.*, 420 A.2d 371, 374 (Pa. 1980) (citations omitted). Section 1501 of the Public Utility Code states, in pertinent part, that:

Every public utility shall furnish and maintain adequate, efficient, safe, and reasonable service and facilities, and shall make all such repairs, changes, alterations, substitutions, extensions, and improvements in or to such service and facilities as shall be necessary or proper for the accommodation, convenience, and safety of its patrons, employees, and the public. Such service also shall be reasonably continuous and without unreasonable interruptions or delay. Such service and facilities shall be in conformity with the regulations and orders of the commission. Subject to the provisions of this part and the regulations or orders of the commission, every public utility may have reasonable rules and regulations governing the conditions under which it shall be required to render service. . .

66 Pa. C.S. § 1501.

Section 57.28(a)(1) of the Commission's Regulations provides:

An electric utility shall use reasonable effort to properly warn and protect the public from danger, and shall exercise reasonable care to reduce the hazards to which employees, customers, the public and others may be subjected to by reason of its provision of electric utility service and its associated equipment and facilities.

52 Pa. Code § 57.28(a)(1).

When presented with a challenge to an AMI meter installation, the Commission has pronounced that “[t]he ALJ’s [Administrative Law Judge’s] role . . . will be to determine based on the record in this particular case, whether there is sufficient evidence to support a finding that the Complainant was adversely affected by the smart meter or whether [the utility’s] use of a smart meter will constitute unsafe or unreasonable service in violation of Section 1501 under the circumstances in this case.” *Kreider* (citing *Woodbourne-Heaton*, 1992 Pa. PUC Lexis 160, at \*12-13). *Frompovich v. PECO Energy Co.*, Docket No. C-2015-2474602 at 10 (Opinion and Order entered May 3, 2018).

#### Opt-Out and Alternative Requests

Complainant seeks an opt-out accommodation under Act 129 of 2008. Alternatively, he requests PPL be directed to move the meter at least 100 feet from his residence and delay installation of a smart meter until December 31, 2022. Tr. 39.

PPL is willing to move the meter as long as costs associated with moving the meter board/base would be the responsibility of the customer in accordance with PPL’s tariff provisions at Rule 4(I)(1) and (2), Supplement No. 59, Electric Pa. PUC No. 201, PPL Electric Exhibit KD-6. PPL contends there is no opt-out provision in Act 129 and the Company should not be required to delay installation of Complainant’s meter until December 31, 2022 as its plan for full deployment by the end of 2019 has been approved by the Commission. Tr. 40-42.

## Disposition

Act 129 amended Chapter 28 of the Public Utility Code (Code), 66 Pa. C.S. §§ 2801-2815, and required EDCs with more than 100,000 customers to file smart meter technology procurement and installation plans for Commission approval and to furnish smart meter technology within its service territory in accordance with the provisions of the Act. While Act 129 does not provide customers a general “opt-out” right from smart meter installation at a customer’s residence, a customer’s formal complaint that raises a claim under Section 1501 of the Code, 66 Pa. C.S. § 1501, related to the safety of a utility’s installation and use of a smart meter at the customer’s residence is legally sufficient to proceed to an evidentiary hearing before an ALJ. *See Povacz v. PECO Energy Company*, Docket No. C-2012-2317176 (Order entered January 24, 2013) (*January 2013 Povacz Order*); *see also Kreider v. PECO Energy Company*, P-2015-2495064 (Order entered January 28, 2016) (*Kreider*).

To the extent that the Complainant desires the ability to “opt out” of the smart meter installation, he could advocate for such ability before the General Assembly, which is considering amending Section 2807(f) in some pending bills including: PA House Bill Nos. 1564 and 1565; and Senate Bill No. 443. These bills are not law. The Commission has held that it has no authority, absent directive in the form of legislation, to prohibit an EDC from installing a smart meter where a customer does not want one. *See January 2013 Povacz Order*. PPL would be in violation of the law if they did not install a smart meter at similarly situated residences. *Id.* The Commission has held that there is no provision in Pennsylvania law to allow a customer to opt out from the installation of an AMI meter, and thus, this requested relief is outside of the Commission’s jurisdiction and authority. *Hoffman-Lorah v. PPL Electric Utilities Corporation*, C-2018-2644957 (Opinion and Order entered May 23, 2019) at 43-44. Accordingly, I find in favor of Respondent on this issue.

The Commission has raised the question of whether an EDC can offer some accommodation or alternative to customers who have concerns about AMI meters. In its January 28, 2016 Order, the Commission elaborated upon the kinds of accommodations or alternatives that might be possible, stating:

It may be possible, for example, for the Respondent [company] to install the smart meter in a different location other than outside of the Complainant's bedroom or to use a different type of smart meter at this Complainant's home.

*Kreider at 23.*

In *Povacz v. PECO*, C-2015-2475023 (Initial Decision issued March 20, 2018), the ALJ gave the residential customer an option to notify the EDC whether she would relocate the meter socket at her service address. If timely done, the ALJ further ordered the customer to pay the costs to move her meter socket and ordered the EDC to bear the costs associated with connecting its service to a new location of a meter socket. *Id.* at 32, Ordering Paragraphs Nos. 1-9. An Opinion and Order was entered on March 28, 2019.

The Commission found “that PECO’s tariff provisions that permit a customer to relocate the meter board and socket including to a location away from the house structure, at the customer’s costs, provide a reasonable accommodation, consistent with PECO’s duty to provide reasonable service under Section 1501 of the Code.” (p. 95)

But, the Commission “reject[ed] the ALJ’s directive that PECO shall absorb the costs on its side of the meter to the extent any costs are anticipated to be incurred by PECO should the Complainant opt to relocate the meter board on her property” p. 95

In the instant case, PPL Witness Durkin testified PPL Electric Rule 4(I)(1) refers to the relocation of facilities, which would include the meter. Rule 4(I)(1) and (2) provide:

(1)The relocation of customer’s facilities due to moving or rearranging Company’s facilities at the direction of either the federal, state or local government is the customer’s responsibility and expense.

(2) The relocation of Company facilities, when done at the request of others, is at the applicant’s expense and payment of the company’s estimated cost of the relocation is required in advance of construction. When the request is from an affected property owner and the facilities are on the customer’s property, the charges for relocation of distribution system facilities are limited to estimated contractor costs, estimated direct

labor and estimated material costs, less an amount equal to any estimated maintenance expense avoided as a result of the relocation.

Rule 4(I)(1) and (2), Supplement No. 59, Electric Pa. PUC No. 201, PPL Electric Exhibit KD-6, PPL Electric Statement No. 3 at 10. Mr. Durkin's testimony that a meter is considered part of a Company's facilities is unrefuted. PPL Electric Statement No. 3 at 10.

A public utility's Commission-approved tariff is prima facie reasonable, has the full force of law and is binding on the utility and the customer. 66 Pa.C.S. § 316, *Kossman v. Pa. Pub. Util. Comm'n*, 694 A.2d 1147 (Pa. Cmwlth. 1997); *Stiteler v. Bell Telephone Co. of Pennsylvania*, A.2d 339 (Pa. Cmwlth. 1977). Thus, I find Tariff Rule 4(I)(1) and (2) to be binding upon the parties and Complainant has failed to show the tariff provision to be unreasonable. Under PPL's Tariff Rule 4(I)(1) and (2), Complainant has the option of relocating his meter to a different location because while PPL chooses the type of meter, the customer chooses the location of the meter board and socket. If Mr. Hess would like a different location for the AMI meter, he can hire an electrician to move the meter board/socket to a new location on the service property. This will, in some situations require work on the PPL system as well to extend its conductors to the new meter board location. PPL will limit charges for relocation of distribution system facilities to estimated contractor costs, estimated direct labor and estimated material costs, less an amount equal to any estimated maintenance expense avoided as a result of the relocation in accordance with its tariffed provisions. This option remains open to the parties. However, there is no tariff provision requiring PPL to move an AMI meter solely at the EDC's expense. This is consistent with the Commission's decision in *Torres v. PPL C-2018-2641883* (Final Order entered November 30, 2018 adopting Initial Decision issued October 17, 2018).

Finally, Complainant has not presented any sufficient reason that PPL be directed to delay the installation of a smart meter until December 31, 2022. Thus, I find in favor of Respondent on this issue.

## Health and Safety Concerns

Complainant requests PPL be precluded from installing an AMI meter on his service property and be directed to continue electric service with his current meter for health and safety reasons. Specifically, Complainant complained of headaches when he is around his sister's smart meter. He averred in his Amended Complaint that he is "very sensitive to the types of frequencies" from AMI meters and expressed a concern about possible cancer risk from RF fields. Amended Complaint ¶ 4.

Conversely, Respondent contends that Complainant has failed to meet his burden of proving there is a conclusive causal connection between low-level RF fields from a PPL smart meter and any adverse health effects.

## Disposition

Recently, in *Povacz v. PECO*, Docket No. C-2015-2475023 (Opinion and Order entered March 28, 2019), the Commission held Ms. Povacz failed to prove she suffered from electromagnetic hypersensitivity syndrome as she had self-diagnosed the illness. *Id.* at 59-60. Without independent diagnostic evidence to corroborate a Complainant's self-diagnosis, Complainant failed to prove that she was electromagnetically hypersensitive. *Id.* at 60. Specifically, the Commission held:

Based on the foregoing analysis and discussion, we believe the Complainant's evidence is not sufficient to establish a *prima facie* case under 66 Pa. C.S. § 332(a) in demonstrating that the RF exposure levels from a PECO smart meter will cause adverse health effects for the Complainant.

*Id.* at 60.

Similarly, in the instant case, I find Complainant has not established a *prima facie* case to show that any RF exposure levels from a Landis + Gyr Focus AXR-SD meter will cause adverse health effects to Complainant. The assertions of Complainant that his health will

deteriorate because of radiofrequency fields emitted by an AMI meter are bald assertions, which do not constitute evidence. *Bervinchak v. PPL Electric Utilities Corporation*, Docket No. C-2016-2572824 (Final Order entered on October 2, 2018). *See also, Pa. Bureau of Corrections v. City of Pittsburgh*, 532 A.2d. 12 (Pa. 1987).

No corroborative medical evidence was proffered to support Complainant's testimony. There is insufficient evidence to show that an AMI meter will cause him to suffer deleterious health effects such as headaches. PPL raised a hearsay objection to Complainant's Exhibits 1 and 2, a *Smart Meter Effects* article and an *eenews.net* article regarding cybersecurity. Although I admitted these exhibits over the hearsay objections of PPL's counsel, I give little or no weight to these exhibits as the Commission follows the *Walker/Chapman* rule espoused in *Walker v. Unemployment Compensation Board of Review*, 367 A. 2d 366, 370 (Pa. Cmwlth. 1976) (*Walker*) (citations omitted) and *Chapman v. Unemployment Compensation Board of Review*, 20 A. 3d 603, 610, fn. 8 (Pa. Cmwlth. 2011) (*Chapman*). *Id.* at 15-18.<sup>4</sup> Further, the articles are less persuasive than the peer-reviewed studies published in medical and scientific journals relied upon by PPL expert witnesses Mark Israel and Christopher Davis.

Complainant is neither a medical expert nor an engineer. His testimony as to the deleterious health effects of an AMI smart meter was refuted by the credible testimony of PPL's expert witness Mark Israel, a Professor of Medicine, Pediatrics, and Molecular and Systems Biology at the Dartmouth Medical School and the Executive Director of the Israel Cancer Research Fund in New York, an international charitable fund for medical and scientific research programs. PPL Electric Statement No. 2 at 1. Dr. Israel is board certified and licensed to practice medicine. PPL Electric Statement No. 2 at 3. Dr. Israel has conducted medical research for 40 years in a wide variety of areas, including systems biology, biochemistry, cell biology, cancer, molecular biology, and molecular genetics and has published over 245 medical research

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<sup>4</sup> Under the *Walker/Chapman* rule, a party's "[h]earsay evidence, properly objected to, is not competent evidence to support a finding." Even if hearsay evidence is "admitted without objection," the ALJ must give the evidence "its natural probative effect and may only support a finding...if it is corroborated by any competent evidence in the record," as "a finding of fact based solely on hearsay will not stand." *Hoffman-Lorah v. PPL Electric Utilities Corporation*, C-2018-2644957 (Opinion and Order entered May 23, 2019 at 16), citing *Walker* at 370 (citations omitted).

studies in leading peer-reviewed scientific journals. PPL Electric Statement No. 2 at 3-4. Dr. Israel also has taught medicine and science for more than 30 years to medical students, graduate students, interns, residents, and practicing physicians in a number of fields, including endocrinology, immunology, hematology, neurology, cardiology, biochemistry, cell biology, genetics, molecular genetics, medical oncology, and radiation oncology. PPL Electric Statement No. 2 at 3.

Claimed symptoms related to EHS are more accurately described as “Idiopathic Environmental Intolerance” (“IEI”), in which “idiopathic” means “cause unknown,” rather than electromagnetic hypersensitivity. PPL Electric Statement No. 2 at 13. There are no established medical criteria for the diagnosis or treatment of IEI. PPL Electric Statement No. 2, p. 16, lines 8-9. IEI and the variety of symptoms attributed to it are not caused by exposure to RF fields. PPL Electric Statement No. 2 at 15.

The World Health Organization and a number of other public health authorities have concluded that the scientific research on RF exposures from cell phone use, which are far higher than the RF from PPL’s smart meters, has not shown that RF fields cause adverse health effects. PPL Electric Statement No. 2 at 10-15, PPL Electric Exhibit MI-1.

Several state public health authorities in the United States also have investigated claims about health effects from smart meters and have concluded that there is no credible scientific evidence that RF fields from smart meters will cause or contribute to any adverse health effects. PPL Electric Statement No. 2 at 11, PPL Electric Exhibit MI-2. There is no reliable medical basis to conclude that RF fields from the AMI meters intended for installation by PPL will cause or contribute to the development of illness or disease. PPL Electric Statement No. 2. There is no reliable medical basis to conclude that RF fields from the AMI meters being used by PPL would cause, contribute to, or exacerbate any of the symptoms claimed by the Complainant, or any other adverse health effects. PPL Electric Statement No. 2 at 14-15.

Complainant’s testimony was also refuted by PPL’s expert witness Dr. Davis, who has a Ph.D. in Physics and is a fulltime Professor with an endowed Chair at the University

of Maryland, where for over 30 years he has taught Physics, Electrical Engineering, Electromagnetics, and RF Electromagnetics to undergraduate and graduate students. PPL Electric Statement No. 1 at 1-5. In addition to his teaching, Dr. Davis is an active scientific researcher in the fields of Physics, Biophysics, Electrical Engineering, Bioelectromagnetics and RF Bioelectromagnetics, conducting many scientific studies in these fields and publishing over 250 studies in peer-reviewed scientific journals. PPL Electric Statement No. 1 at 1-5.

Dr. Davis conducted a substantial amount of research on RF fields of the type produced by the AMI meters being used by PPL. PPL Electric Statement No. 1 at 3. RF fields are part of the lower energy, non-ionizing portion of the electromagnetic spectrum which consists of lower frequency signals that do not have enough energy to break chemical bonds in cells or DNA. PPL Electric Statement No. 1 at 5-6. RF fields come from many sources in our everyday environments, including AM/FM radio, television broadcast, cell phones and their communication networks, portable phones, garage door openers and Wi-Fi networks. PPL Electric Statement No. 1 at 5-7, 12.

“Dirty electricity” is a non-scientific term that sometimes is used to refer to electrical characteristics (harmonics and transients) that can be found on household wiring. PPL Electric Statement No. 1 at 8. AMI meters do not generate electricity, do not generate harmonics and transients that are significant compared to the harmonics and transients already present on the 60 Hz power coming into the home and do not interfere with the operation of household wiring.

The FCC has determined safe public exposure levels for RF fields from devices that transmit RF signals, such as the AMI meters. PPL Electric Statement No. 1 at 9-10. The FCC safe public exposure limits are based on evaluations of the body of scientific research on RF fields and were adopted in consultation with other federal agencies, including the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA). PPL Electric Statement No. 1 at 9-10.

The levels of RF fields from the Landis + Gyr Focus AX-SD AMI meters are 98,000 times lower than the RF exposure safety limits established by the FCC. PPL Electric Statement No. 1 at 15, PPL Electric Exhibit CD2. RF signals from the AMI meter are of very short duration and will occur for only a total of 84 seconds over a 24-hour period. PPL Electric Statement No. 1 at 7.

The RF field exposure 30 feet from a person using a cell phone are three times larger than the RF fields from the AMI meter. PPL Electric Statement No. 1 at 14, PPL Electric Exhibit CD4. RF fields from using cell phones near the head can be over 260,000 times higher than the RF fields from the AMI meter. PPL Electric Exhibit CD4. Complainant has a cell phone, which he used for 36,481 minutes over the past twelve months. Complainant would have to stay within one meter of an AMI meter for 7,197 years to receive an equivalent amount of RF exposure from the AMI meter. PPL Electric Statement No. 1 at 16, Tr. 37-38.

Additionally, there are eight television broadcast towers within a 50-mile radius of Complainant's location in Auburn, Pennsylvania. PPL Electric Statement No. 1 at 15. Based on the locations of each tower and their RF power outputs, the constant background level of RF fields at Complainant's residence are 3.94 times higher than the RF signals from the AMI meter. PPL Electric Statement No. 1 at 15, PPL Electric Exhibit CD-5. Thus, given the background RF exposure to the service property compared to the minimal RF exposure from the AMI meter, Complainant has failed to satisfy his burden to demonstrate that the AMI meter will cause a deleterious health effect. This holding is consistent with recent caselaw precedent including: *Hoffman-Lorah, supra.*; *Benhayon v. PPL Electric Utilities Corporation*, Docket No. C-2018-3003491 (Final Order entered April 29, 2019, adopting Initial Decision issued March 25, 2019) and *Lesniewski v. PPL Electric Utilities Corporation*, Docket No. C-2018-3004594 (Final Order entered April 29, 2019, adopting Initial Decision issued March 25, 2019).

#### Data Privacy

Complainant contends it is unreasonable that the new AMI meter invades his privacy because the meter is able to check how often he uses electricity and which appliances are

being used. Complainant avers the meters are not cyber secure. Complainant offers as evidence the eeneews.net article, Complainant Exhibit 2.

Conversely, PPL argues its witnesses' testimonies have successfully refuted Complainant's lay testimony regarding data privacy issues. Tr. 40-41.

### Disposition

As a part of its Smart Meter Plan proceeding, PPL filed a detailed AMI Customer Privacy Policy, which sets forth the data PPL will collect through the new smart meter, the steps the Company will take to protect the data, and the ways in which PPL will use the data. PPL Electric Exhibit No. DV-1. PPL uses firewalls to prevent anyone from obtaining unauthorized access to the AMI network. PPL Statement No. 4 at 6-8. Customer data is encrypted to make the data readable to only PPL personnel who can decode the encryption. PPL Statement No. 4 at 6-8. PPL's cybersecurity and data privacy policies are consistent with the national standards for the industry. PPL Statement No. 4 at 8. Additionally, if Complainant is concerned about the AMI meter's connection to smart appliances in his home, he can decline to have the ZigBee radio activated. *See Lesniewski, Id.* at 24, wherein the Commission found in favor of PPL regarding the same data privacy issue. Specifically, the Commission held that Ms. Lesniewski had an option to decline activation of the ZigBee radio device located within the AMI meter. For these reasons, I find in favor of Respondent on this data privacy issue.

### CONCLUSION

For all of these aforementioned reasons, the complaint will be dismissed for failure to prove by a preponderance of evidence that the installation of a smart meter constitutes unsafe or unreasonable service under 66 Pa. C.S. § 1501 or that the company violated any other provision of the Public Utility Code, Commission order or regulation or a Commission-approved tariff of the company. Further, Complainant's requests that installation be delayed until end of 2022 and moved off his residence at PPL's sole expense are denied. Although the Complainant is genuine in his concerns, the Commission's decisions cited above are controlling.

## CONCLUSIONS OF LAW

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

2. PPL Electric Utilities Corporation's smart meter procurement and installation plan, which was approved by Commission Order in the case of *Petition of PPL Electric Utilities Corp. for Approval of Its Smart Meter Technology Procurement and Installation Plan*, Docket No. M-2014-2430781, p. 24 (Order Entered Sept. 3, 2015) does not contain a provision for customers to opt out of smart meter installation.

3. Under Section 332(a) of the Pennsylvania Public Utility Code, the proponent of a rule or order has the burden of proof. 66 Pa. C.S. § 332(a). It is well established that "[a] litigant's burden of proof before administrative tribunals as well as before most civil proceedings is satisfied by establishing a preponderance of evidence which is substantial and legally credible." *Samuel J. Lansberry, Inc. v. Pa. Pub. Util. Comm'n*, 578 A.2d 600, 602 (Pa. Cmwlth. 1990).

4. The preponderance of evidence standard requires proof by a greater weight of the evidence. *Commonwealth v. Williams*, 557 Pa. 207, 732 A.2d 1167 (1999). This standard is satisfied by presenting evidence that makes the existence of a contested fact more likely than its nonexistence. *Brown v. Commonwealth*, 940 A.2d 610, 614 n.14 (Pa. Cmwlth. 2008) (citation omitted).

5. A person does not sustain his or her burden of proof in an electric and magnetic field exposure case when the record evidence, "taken as a whole, leads to the ultimate finding and conclusion that the scientific studies at present are inconclusive" rather, the person must demonstrate by a preponderance of the evidence that such exposure actually causes adverse health effects. *Letter of Notification of Phila. Elec. Co. Relative to the Reconstructing and Rebuilding of the Existing 138 kV Line to Operate as the Woodbourne-Heaton 230 kV Line in*

*Montgomery and Bucks Counties*, 1992 Pa. PUC Lexis 160, at \*210-11 (June 29, 1992) (Initial Decision).

6. In AMI meter-related matters, the Commission has held that “[t]he Complainant will have the burden of proof during the proceeding to demonstrate, by a preponderance of the evidence, that [the utility] is responsible or accountable for the problem described in the Complaint.” *Kreider v. PECO Energy Co.*, Docket No. P-2015-2495064, p. 18 (Order entered Sept. 3, 2015).

7. Section 701 of the Public Utility Code provides that “any person . . . having an interest in the subject matter . . . may complain in writing, setting forth any act or thing done or omitted to be done by any public utility in violation, or claimed violation, of any law which the commission has jurisdiction to administer, or of any regulation or order of the commission.” 66 Pa. C.S. § 701.

8. Complainant has failed to sustain his burden of proof that Respondent violated Section 1501 of the Public Utility Code. 66 Pa. C.S. § 1501.

9. The Commission has exclusive jurisdiction to adjudicate “issues involving the reasonableness, adequacy, and sufficiency” of a public utility’s facilities and services. See *Elkin v. Bell of Pa.*, 420 A.2d 371, 374 (Pa. 1980) (citations omitted).

10. When presented with a challenge to an AMI meter installation, the Commission has pronounced that “[t]he ALJ’s role . . . will be to determine based on the record in this particular case, whether there is sufficient evidence to support a finding that the Complainant was adversely affected by the smart meter or whether [the utility’s] use of a smart meter will constitute unsafe or unreasonable service in violation of Section 1501 under the circumstances in this case.” *Kreider v. PECO Energy Co.*, Docket No. P-2015-2495064, p. 23 (Order entered Jan. 28, 2016) (citing *Woodbourne-Heaton*, 1992 Pa. PUC Lexis 160, at \*12-13).

11. Complainant has failed to sustain his burden of proof that installing the new AMI meter would violate the Public Utility Code or any Commission regulation or order. See 66 Pa. C.S. §§ 332(a), 701.

12. PPL is legally required to install the RF Mesh meter on the Complainant's property by Act 129 and Commission orders. See 66 Pa. C.S. § 2807(f); *Smart Meter Procurement and Installation*, Docket No. M-2009-2092655, pp. 9, 14 (Order entered June 24, 2009).

13. Act 129 of 2008 does not provide a provision for a customer to "opt-out" of a smart meter installation. *Starr v. PECO Energy Co.*, Docket No. C-2015-2516061, p. 11 (Order Entered Sept. 1, 2016).

14. The Commission previously determined that the Company's existing PLC meters are not compliant with Act 129 and the Commission's Smart Meter Implementation Order. See, *Petition of PPL Electric Utilities Corporation for Approval of Smart Meter Technology Procurement and Installation Plan*, Docket No. M-2009-2123945, p. 24 (Order entered June 24, 2010).

15. Under the Company's Commission-approved Smart Meter Plan, PPL must replace all of the PLC meters with the RF Mesh meters, which the Commission declared as meeting all of the requirements of Act 129 and the Commission's Smart Meter Implementation Order. See, *Petition of PPL Electric Utilities Corp. for Approval of Its Smart Meter Technology Procurement and Installation Plan*, Docket No. M-2014-2430781, p. 24 (Order Entered Sept. 3, 2015).

16. The Complainant has failed to demonstrate that the new AMI meter causes, contributes to, or exacerbates any adverse health effect.

17. A public utility's Commission-approved tariff is prima facie reasonable, has the full force of law and is binding on the utility and the customer. 66 Pa.C.S. § 316,

*Kossman v. Pa. Pub. Util. Comm'n*, 694 A.2d 1147 (Pa. Cmwlth. 1997); *Stiteler v. Bell Telephone Co. of Pennsylvania*, A.2d 339 (Pa. Cmwlth. 1977).

18. PPL is not violating its tariff by refusing to move a meter to another location on Complainant's property at its sole cost.

19. Complainant may move his meter base at his cost pursuant to PPL's tariffs.

ORDER

THEREFORE,

IT IS ORDERED:

1. That the Formal Complaint filed by Nelson Hess against PPL Electric Utilities Corporation at Docket No. C-2018-3003337 is denied and dismissed.

2. That the docket in this proceeding be marked closed.

Date: June 11, 2019

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/s/  
Elizabeth H. Barnes  
Administrative Law Judge