

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Jonathan Barris

v.

PPL Electric Utilities Corporation

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C-2018-3003579

**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. 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.

**HISTORY OF THE PROCEEDING**

On July 20, 2018, Jonathan Barris (Complainant) filed the instant Complaint requesting that PPL Electric Utilities Corporation (PPL or Respondent) be precluded from installing a RF meter on his residence at 150 Skinner Hill Road, Stroudsburg, Pennsylvania (account number ending in 021) for health reasons. Complainant avers that “RF smart metering is unsafe and dangerous to human life” and “The ‘dirty electricity’ and radiofrequency exposure from RF smart meters has been classified by our FCC as radiation/class 2B carcinogen.” Complaint Par. 4. Complainant requests exemption from mandatory RF smart metering and a continuation of electric service with the existing analog meter. Complaint at Par. 5.

The Complaint was served upon PPL on July 24, 2018.<sup>1</sup> On August 13, 2018, Respondent filed an Answer. The Answer admitted that the Respondent provides electric service to the Complainant and notified him that it would be installing a new AMI meter at the address shown on the Complaint. The Answer contends that the Respondent 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 14, 2018, a Telephone Prehearing Conference Notice was issued scheduling a prehearing conference for August 29, 2018 and assigning the case to me as presiding officer. After the prehearing conference, a Notice of Initial Telephonic Hearing and a Prehearing Order were issued on September 4, 2018, scheduling a hearing for February 7, 2019. On September 13, 2018, a transcript of the prehearing conference was filed. On September 18, 2018, I received a written request for continuance of the hearing from Complainant. A continuance was granted and on October 4, 2018, a Telephone Hearing Notice was issued scheduling a Telephone Hearing for April 11, 2019. A Second Prehearing Order was issued on October 4, 2018. On March 7, 2019, Respondent's Motion to Compel Discovery was filed. On March 25, 2019, an Order granting the Motion to Compel was issued. On April 10, 2019, Respondent filed a Motion to Dismiss.

At the hearing on April 11, 2019, Complainant appeared *pro se* with no exhibits. Respondent appeared represented by Devin Ryan, Esquire, and Curtis Renner, Esquire with four written statements, 16 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-1-MI-4; KD-1-KD-6 and SL-1 were admitted into the record.<sup>2</sup> Tr. 2.<sup>3</sup> At the hearing, oral argument was heard regarding Respondent's Motion to Dismiss and Complainant's oral Motion

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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 effected on July 24, 2018. Thus, PPL's Answer filed on August 13, 2018 is deemed timely filed.

<sup>2</sup> Donald Vinciguerra adopted the written testimony of Scott Larson and sponsored Exhibit SL-1. Tr. 27-31.

<sup>3</sup> All transcript citations refer to the hearing transcript dated April 11, 2019.

for a Continuance. The untimely motions were denied during the hearing. Tr. 7-13. A transcript consisting of 51 pages was filed and the record closed on April 17, 2019. This case is ripe for a decision.

### FINDINGS OF FACT

1. The Complainant in this proceeding is Jonathan Barris, who resides at 150 Skinner Hill Rd., Stroudsburg, Pennsylvania (service address). Tr. 14.

2. Complainant has resided at the service address since 2009 and since 2010, he has experienced ringing in his ears, headaches, dizziness, and mild exhaustion. Tr. 16-22.

3. Complainant requests PPL: 1) be precluded from installing an AMI meter on his service property; 2) be directed to remove the current powerline carrier (PLC) meter; and 3) continue electric service with an analog meter replacement. Tr. 14-16.

4. The Respondent in this proceeding is PPL Electric Utilities Corporation, an electric distribution company (EDC). Tr. 14.

5. PLC meters are often referred to by customers as analog meters and they were installed throughout PPL's service territory from 2002 through 2004. Tr. 25, PPL Electric Statement No. 4 at 5.

6. 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.

7. PLC meters do not emit radio frequency fields. PPL Electric Statement No. 4 at 5.

8. 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 Nos. SL-1, “PPL Smart Meter Technology Procurement and Installation Plan,” June 30, 2014.

9. 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. SL-1.

10. 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.

11. The individual RF Mesh meters are used as relay points to transmit data back to PPL. Tr. 48.

12. Under the Smart Meter Plan, the RF Mesh meters are to be deployed between 2017 and 2019 for all of PPL’s 1.4 million customers. PPL Electric Statement No. 4 at 3-5.

13. PPL intends to install a Landis + Gyr E350 Focus AXR-SD meter at Complainant’s service property. PPL Electric Statement No. 3 at 6, PPL Exhibit No. SL-1.

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

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

16. 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.

17. 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.

18. 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.

19. 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.

20. 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.

21. “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.

22. 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. Tr. 8-9.

23. The Federal Communications Commission (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.

24. 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.

25. 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.

26. 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.

27. 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.

28. 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.

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

30. Based on the locations of each tower and their RF power outputs, the constant background level of RF fields at Complainant's residence are 49.3 times higher than the RF signals from the AMI meter. PPL Electric Statement No. 1 at 15, PPL Electric Exhibit CD-5.

31. The level of RF fields from AMI meters being used by PPL is far too low to cause a thermal or heating effect. Tr. 39-40, PPL Electric Statement No. 1 at 13.

32. 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.

33. 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.

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

35. 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.

36. 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.

37. 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 13.

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

39. 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.

40. 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.

41. 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.

42. 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 17-18.

43. 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 18.

## 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>4</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 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.*

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<sup>4</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).

*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.

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* (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).

### Health and Safety Concerns

Complainant requests PPL: 1) be precluded from installing an AMI meter on his service property; 2) be directed to remove the current powerline carrier (PLC) meter; and 3) continue electric service with an analog meter replacement. Tr. 14-16.

Conversely, Respondent contends that any health symptoms described by Complainant are not due to the powerline carrier (PLC) meter, which was installed at the service property sometime between 2002 – 2004. Further, PLC meters do not emit RF fields. PPL Electric Statement No. 4 at 5. PPL contends the installation of the new AMI meter will not produce adverse health effects. Tr. 47.

### Disposition

Complainant resides at 150 Skinner Hill Rd., Stroudsburg, Pennsylvania (a single family dwelling service property) in a rural/suburban neighborhood. Tr. 14, 18. Complainant has resided at the service address since 2009 and since 2010, he alleges that he has experienced ringing in his ears, headaches, dizziness, and mild exhaustion. Tr. 16-22. These symptoms are consistent with a diagnosis of electromagnetic hypersensitivity (EHS). Recently, in *Povacz v. PECO*, 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 his complained of symptoms are caused by or exacerbated by the current PLC meter or 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 he suffers from symptoms consistent with EHS that will become exacerbated by 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).

Complainant is not credible in his assertion that the PLC meter has been causing his deleterious health symptoms since 2010. I find credible PPL Witness Durkin's testimony that the PLC meter has been at the service property since 2004. Although Complainant began residing at the service property in 2009, he claims his health symptoms began in 2010, when he believed a PLC meter was installed at his premises. The current PLC meter does not emit RF fields. Also, there is a lack of correlation between when the PLC meter was on the premises and the complained of symptoms as they are a year apart.

However, even accepting as true Complainant's averments that these medical symptoms occurred or worsened after the PLC meter was installed, there is insufficient evidence to show the PLC meter installed at the service property is causing or exacerbating these symptoms. In other words, there is insufficient evidence for me to find that but for the installation of the PLC meter, these symptoms would not have occurred or that the PLC meter is the actual cause of or exacerbation of the health symptoms complained of.

Also, there is insufficient evidence to show Complainant suffers from EHS or that an AMI meter will cause him deleterious health effects. I find credible the testimony of PPL's 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 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 16.

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 at 17-18. 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 18.

I find credible PPL Witness 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. Tr. 75-76, 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 13, 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.

Additionally, there are fifteen television broadcast towers within a 50-mile radius of Complainant's location in Stroudsburg, 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 49.3 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, I am not persuaded to conclude the PLC or AMI meter will cause a deleterious health effect to Mr. Barris.

### 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. 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 her 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. Nothing in Act 129 permits a customer to “opt-out” of a smart meter installation. See, e.g., *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. The Complainant has failed to sustain his burden of proof that installing the new AMI meter would constitute unsafe or unreasonable service in violation of 66 Pa. C.S. § 1501.

### ORDER

THEREFORE,

IT IS ORDERED:

1. That the Formal Complaint filed by Jonathan Barris against PPL Electric Utilities Corporation at Docket No. C-2018-3003579 is denied and dismissed.

