

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Dana Brennan	:	
	:	
v.	:	C-2019-3007121
	:	
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 her 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 or otherwise violates the Public Utility Code, any Commission order or regulation or any Commission-approved tariff of the company.

HISTORY OF THE PROCEEDING

On January 14, 2019, Dana Brennan (Complainant) filed the instant Complaint with the Pennsylvania Public Utility Commission (Commission) against PPL Electric Utilities Corporation (PPL), averring she wishes to opt out of a smart meter installation at her residence, 16 Oslo Way, Newfoundland, Wayne County, Pennsylvania (account number ending in 032) for health reasons, privacy and cyber security issues, and because she contends smart meters are fire hazards and unsafe. Complainant avers that since a smart meter has been installed, her husband has

had more frequent seizures due to the continuous electronic pulsing which causes interruption of the neurological brain function. She avers that the household members suffer from frequent headaches, trouble sleeping, drowsiness and dizziness, among other health issues, since the smart meter was installed. She requests PPL be directed to replace the meter with an analog meter and continue to provide electric service. Complaint at ¶ 7.

The Complaint was served upon PPL on January 16, 2019. On February 5, 2019, Respondent filed an Answer and New Matter. The Answer admitted that the Respondent provides electric service to the Complainant 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 that it has the right to terminate service for failure of the customer to permit access to the meter.

On February 14, 2019, a Hearing Notice was issued scheduling a hearing for September 10, 2019 and assigning the case to me as presiding officer. On February 19, 2019, Complainant filed a Rebuttal to Answer of PPL. A Prehearing Order was issued on March 7, 2019. On September 10, 2019, the hearing was held as scheduled.

At the hearing, Complainant appeared *pro se* with 7 Exhibits. Exhibit A is a PPL Website excerpt. Exhibit B is a Tucker Law Article. Exhibit F is a New York Times article. Exhibit G is a letter from Dana Brennan to PPL. Respondent appeared represented by Devin Ryan, Esquire and Curtis Renner, Esquire, with 15 exhibits and four witnesses: Kevin Durkin, Donald Vinciguerra, Christopher Davis, Ph.D., and Mark Israel, M.D. Complainant's Exhibits A, B, F and G were admitted into the record. Respondent's statements and exhibits were admitted into the record. A transcript consisting of 62 pages was filed on October 8, 2019 and the record closed the same day. This case is ripe for a decision.

FINDINGS OF FACT

1. The Complainant in this proceeding is Dana Brennan, who resides at 16 Oslo Way, Newfoundland, Pennsylvania (service address). N.T. 7.

2. Complainant requests a smart meter be removed from her service address because she is concerned with fire, privacy and health issues associated with the meter. N.T. 8-9.

3. Complainant requests that she be permitted to receive electric service with an analog meter. N.T. 7-9.

4. The Respondent in this proceeding is PPL Electric Utilities Corporation, an electric distribution company (EDC). N.T. 7.

5. 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 Statement No. 4 at 4.

6. 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 Statement No. 4 at 4.

7. The individual RF Mesh meters are used as relay points to transmit data back to PPL. PPL Electric Statement No. 4 at 5-6.

8. 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 6.

9. PPL had deployed over one million RF Mesh meters as of the September 10, 2019 hearing and none of them have caused a fire. PPL Electric Statement No. 4 at 10.

10. The RF Mesh meter to be installed for the Complainant's residential account is the Landis + Gyr Focus AXR-SD meter. PPL Electric Statement No. 4 at 6.

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

12. The Landis + Gyr Focus AXR-SD meter is compliant with the American National Standards Institute (ANSI). PPL Electric Statement No. 4 at 8, N.T. 45-48.

13. 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.

14. 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.

15. 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.

16. 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.

17. 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 5-6, 12.

18. 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.

19. 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.

20. The levels of RF fields from the Landis + Gyr Focus AXR-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.

21. 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.

22. There are nine television broadcast towers within a 50 mile radius of Complainant's location in Newfoundland, Pennsylvania. PPL Electric Statement No. 1 at 15.

23. Based on the locations of each tower and their RF power outputs, the constant background level of RF fields at Complainant's residence are 18.3 times higher than the RF signals from being three meters from the AMI meter. PPL Electric Statement No. 1 at 15, PPL Electric Exhibit CD-5.

24. One cell phone is used at the service property, but Ms. Brennan uses it infrequently, on average five minutes per day. N.T. 23-25.

25. Ms. Brennan has gone to the doctors to have blood tests done, but her bloodwork and EKG results are normal. N.T. 20, 25-26.

26. The RF exposure from a cell phone used at a person's head is 260,000 times higher than the average RF levels one meter away from the Company's new smart meter. PPL Electric Statement No. 1 at 13.

27. PPL Witness Dr. 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.

28. 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.

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

30. 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.

31. 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.

32. Claimed symptoms related to Electromagnetic Hypersensitivity (EHS) including self-reported headaches, dizziness, body aches, buzzing in ears, eye floaters, difficulty concentrating, memory loss, sleep disturbances, numbness, nausea, abdominal issues, heart palpitations, nervousness, fatigue and lethargy, among others 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.

33. There are no established medical criteria for the diagnosis or treatment of IEI. PPL Electric Statement No. 2.

34. IEI and the variety of symptoms attributed to it are not caused by exposure to RF fields. PPL Electric Statement No. 2 at 13.

35. 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.

36. Several U.S. state public health authorities 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.

37. 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.

38. 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 16-18.

39. PPL’s new AMI meters are equipped with software and mechanisms that better alert the Company if there is an issue with overheating. PPL Electric Statement No. 4 at 10.

40. Specifically, there is a heat alarm set within the meter software program, so when the temperature of the meter hits an established level, the Company is alerted to the issue. PPL Electric Statement No. 4 at 10.

41. PPL takes 15-minute interval temperature readings from the meter, so it can track the meter's temperature and identify any current issues or problematic trends. PPL Electric Statement No. 4 at 10.

42. If the Company detects an issue with the meter's temperature, PPL will dispatch a technician to investigate. PPL Electric Statement No. 4 at 10.

43. From the Company's research, "the root cause of the vast majority" of any fires involving new meters is the customer-owned meter bases wearing out and producing loose connections between the "blade" of the meter and the "jaw" of the meter base. PPL Electric Statement No. 4 at 9.

44. PPL has taken several steps to mitigate the risk of these worn out meter bases, including analyzing the materials utilized for meter bases, enhancing its inspection criteria so that its service technicians are better able to "identify loose jaws in the field," and ensuring the new AMI meters meet the American National Standards Institute ("ANSI") requirements. PPL Electric Statement No. 4 at 9.

45. The new AMI meter to be installed by the Company is not a fire or safety hazard. PPL Electric Statement No. 4 at 9-10.

46. 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 Statement No. 4 at 6 -12.

47. PPL uses firewalls to prevent anyone from obtaining unauthorized access to the AMI network. PPL Electric Statement No. 4 at 7.

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

49. PPL's cybersecurity and data privacy policies are consistent with the national standards for the industry. PPL Electric Statement No. 4 at 6-12.

50. Complainant is neither a medical professional nor an engineer. N.T. 22-23.

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).¹

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); *see also Romeo v. Pa. Pub. Util. Comm'n*, 154 A.3d 422, 429 (Pa. Cmwlth. 2017) (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”).

¹ 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).

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 v. PECO Energy Co.*, Docket No. P-2015-2495064 at 23 (Opinion and Order entered January 28, 2016) (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).

Whether simple hearsay may support a finding of an agency depends on whether the evidence meets the criteria of the *Walker/Chapman* rule. The *Walker/Chapman* rule provides that simple hearsay evidence may support an agency's finding of fact so long as the hearsay is admitted into the record without objection and is corroborated by competent evidence in the record. See *Walker v. Unemployment Compensation Board of Review*, 367 A.2d 366, 370 (Pa. Cmwlth. 1976) (*Walker*) (citations omitted); see also *Chapman v. Unemployment Compensation Board of Review*, 20 A.3d 603, 610, n.8 (Pa. Cmwlth. 2011) (*Chapman*).

Under Pennsylvania's *Walker/Chapman* Rule, it is well-established that "[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." *Walker* at 370 (citations omitted).

Health and Safety Concerns

Complainant claims she suffers from electromagnetic hypersensitivity and asthma, which requires the use of an electric air conditioner to treat her symptoms. She has had an EKG and bloodwork done, but the test results have been normal. Complainant has claimed other family members have had health issues which will be exacerbated by the Landis + Gyr Smart Meter. She offered no medical records as exhibits to support her health claims. N.T. 59-61.

Conversely, PPL contends Complainant has failed to show that any medical condition is caused by or will be exacerbated by the AMI meters installed in her neighborhood or on her service property. N.T. 57-58

Disposition

The Complainant has failed to present substantial record evidence to satisfy her burden that she suffers from electromagnetic hypersensitivity or asthma and that her child and husband have the medical conditions averred in the Complaint. Furthermore, to the extent the Complainant did present such evidence, there is also insufficient evidence to show that they were caused by or exacerbated by exposure to electromagnetic fields at intensities well below the maximum levels permitted by the FCC's radiation safety standards. In giving his opinion, Dr. Israel relied on reports, "It is the IEI-EMF individuals' belief that exposure to RF EMFs will cause harm, rather than actual exposure itself, that results in the presence of symptoms in IEI-EMF individuals." PPL Electric Statement No. 2.

I am persuaded by the credible testimony of Dr. Israel, who testified claimed symptoms related to EHS are more accurately described as IEI in which "idiopathic" means "cause unknown." PPL Electric Statement No. 2.

Dr. Israel also evaluated scientific research on RF fields and adverse health effects generally. He testified that he has been systematically examining this research over the past several decades and that many hundreds of studies have been published. PPL Electric Statement No. 2. He testified that three groups of controlled laboratory studies on animals "are particularly informative because they address fundamental biological functions that are very sensitive to any disruption: genetics, reproduction, and growth and development." PPL Electric Statement No. 2 at 8. Dr. Israel described a number of the studies in these areas which he considered good examples of well-designed and well-conducted studies. These studies found no adverse effects on genetics, fertility, reproduction, growth or development in the animals exposed to RF fields. PPL Electric Statement No. 2 at 9. Dr. Israel also provided examples of well-conducted animal studies on RF fields and cancer. He testified that these studies, which involved animals with lifetime exposures to RF fields, did not find any increased incidence in cancer in the RF exposed animals compared to non-exposed animals. PPL Electric Statement No. 2 at 9-10.

Based on the body of scientific research showing no consistent and reproducible effects from RF fields on cancer and other adverse health effects, the World Health Organization (“WHO”) has concluded that “no adverse health effects have been established as being caused by mobile phone use.” PPL Electric Statement No. 2 at 10. A number of other public health authorities, including agencies in Canada, the U.K., Sweden, Norway, the Netherlands, and New Zealand, among others, have recently reached similar conclusions. PPL Electric Statement No. 2 at 10; PPL Electric Exhibit MI-1. In addition, several U.S. state public health authorities and Public Utility Commissions have investigated claims about health effects from smart meters. These include the Maine Center for Disease Control (2010), the Vermont Department of Health (2012), the Arizona Department of Health, Office of Environmental Health (2014), and the North Carolina Department of Health and Human Services, Division of Public Health, Occupational and Environmental Epidemiology Branch (2015). These evaluations by State public health authorities and Public Utility Commissions conclude that RF fields from smart meters do not pose any public health risk. PPL Electric Statement No. 2; PPL Electric Exhibit MI-2.

There is no reliable medical basis to conclude that RF fields from the AMI meters being used by PPL Electric will cause or contribute to the development of illness or disease. PPL Electric Statement No. 2 at 16. There is no reliable medical basis to conclude that RF fields from the AMI meter being used by PPL Electric would cause, contribute to, or exacerbate any of the symptoms claimed by the Complainant, including fibroids/cysts, or any other adverse health effects. PPL Electric Statement No. 2 at 16.

Additionally, on this issue, I find credible the expert testimony of PPL witness Dr. Christopher Davis who opined the Landis + Gyr AMI meter would not cause adverse health effects. Dr. Davis co-authored 255 articles published in peer-reviewed scientific journals, two books, twelve book chapters and 324 papers presented at scientific conferences. PPL Electric Statement No. 1 at 2. He 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 5-6, 12.

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 FDA and the EPA. PPL Electric Statement No. 1 at 9-10.

The levels of RF fields from the Landis + Gyr Focus AXR-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.

Complainant testified that she uses a cell phone approximately five minutes a day. N.T. 23-25. There are nine television broadcast towers within a 50 mile radius of Complainant's location in Newfoundland, 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 18.8 times higher than the RF signals from the AMI meter. PPL Electric Statement No. 1 at 15, PPL Electric Exhibit CD-5. The RF exposure from a cell phone used at a person's head is 260,000 times higher than the average RF levels one meter away from the Company's new smart meter. PPL Electric Statement No. 1 at 14. For all of these reasons, I find in favor of PPL on this issue.

Fire Concerns

Complainant contends AMI meters have design defects making them fire hazards in comparison to analog meters. N.T. 8-10. Specifically, Complainant claimed that the AMI

meter is causing hot spots in the wiring in her home. N.T. 8. She additionally claimed that the AMI meter caused her water heater breaker to melt and her septic system to burn out. N.T. 8-10.

Conversely, PPL argues that the new AMI meters are not a fire hazard because they are equipped with software and mechanisms that better alert the Company if there is an issue with overheating. PPL Electric Statement No. 4. PPL also contends the Landis + Gyr meter meets the ANSI requirements and is certified by Underwriters Laboratories and that the meter can withstand a thermal index of 160 degrees Celsius before breaking down. PPL Statement No. 4.

Disposition

Complainant's fire risk claims are based upon hearsay evidence. Complainant has no degree in electrical engineering and she is not an electrician. N.T. 20-23. She offered no exhibits to show the AMI meter installed at her property is a fire hazard.

PPL's witness Donald Vinciguerra testified that there is no way that "hot spots" in Complainant's house wiring could be caused by the AMI meter installed at the service location. N.T. 43. He testified, "The meter is a measurement device and measurement device only. . . The meter does not use the house wiring for communications in any means whatsoever." N.T. 43-44. Additionally, Mr. Vinciguerra testified that the AMI meter could not have caused Complainant's water heater breaker to melt as the meter has no effect upon the appliances within the home. N.T. 44. He testified that the Complainant's septic system could not have been affected by the meter and he successfully refuted Complainant's claim that some of her appliances turned off without her direction due to the new meter. I find Mr. Vinciguerra's testimony that the meter could not have affected Complainant's septic tank or turned her appliances off to be credible. N.T. 44.

Mr. Vinciguerra is familiar with some cases involving fires and he reached out to other utilities to learn from their experiences. PPL Electric Statement No. 4 at 8. PPL chose a base plate material that would withstand temperatures of up to 160 degrees Celsius for a relative

thermal index. PPL Electric Statement No. 4 at 8. The meter installed at Ms. Brennan's residence met the ANSI requirements and Underwriters Laboratories. PPL Electric Statement No. 4 at 8.

Additionally, PPL trains its service technicians and independent contractors installing the AMI meter to inspect the customer's meter base and look for loose wiring or loose meter jaws. PPL Electric Statement No. 4 at 9. Mr. Vinciguerra is not aware of any fires being caused by the E-350 Focus AXR-SD meter within PPL's service territory. PPL Electric Statement No. 4 at 10. PPL has already installed 1,000,000 AMI meters within its service territory. PPL Electric Statement No. 4 at 10.

In the *Frompovich* case, *supra*, the Commission recognized PECO Energy Company (PECO) did have an issue with the initial deployment of Sensus smart meters. The Commission held:

Specifically, as to the Complainant's fire hazard claim, PECO satisfied its burden of production, or the burden of going forward with the evidence, to show that the brand of AMI to be installed at the Complainant's home – the Landis + Gyr meter – does not present a fire hazard. PECO presented evidence in this case that previously there was a fire hazard problem with a particular brand of meter PECO had initially used in the AMI deployment. However, in approximately 2012, those meters were all removed and replaced with the Landis + Gyr Focus meters. PECO showed that since the installation of over 1.2 million of Landis + Gyr Focus meters, there have been no reports of fire incidents related to the meters. Tr. at 143. PECO showed that a Landis + Gyr meter would be installed at Ms. Frompovich's home.

Additionally, we take judicial notice here that the fire hazard issue involving the prior brand of AMI meter was raised to our attention during PECO's Smart Meter Phase II Plan proceeding at Docket No. M-2009-2123944, discussed *supra*, fn 3. In the Recommended Decision for that case, it was noted that PECO had experienced several meter events involving overheating during the Phase I deployment. PECO initiated corrective action including replacement of the installed smart meters with meters manufactured by a different contractor, Landis + Gyr. PECO had completed replacing the meters on or before January 18, 2013, the date PECO filed its Smart Meter Phase II Plan. *See* Phase II R.D. at 9.

Moreover, the Complainant did not present any competent evidence in this record to show that the Landis + Gyr brand of meters causes fires or otherwise presents a fire hazard. Therefore, we agree with 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 constitute an unsafe fire hazard in violation of 66 Pa. C.S. § 1501.

Frompovich at 56-57.

PECO had an overheating issue with its initial deployment of Sensus AMI meters; however, these Sensus AMI meters were eventually removed by PECO and replaced with Landis + Gyr Focus AXR-SD meters, the same as are being deployed at residences by PPL through its Agent Grid One Solutions. *Id.* at 56. The Commission has already deemed it to be reasonable and not a fire hazard within the meaning of 66 Pa. C.S. § 1501 to allow another electric distribution company to install the Landis + Gyr Focus AXR-SD meter on residential dwellings within its service territory. The Commission found that, since the installation of over 1.2 million Landis + Gyr Focus meters, there have been no reports of fire incidents related to the meters. *Id.* At 56-57. Similarly, there is no evidence to show PPL has had any fire incidents related to the same make and model meter after deploying 1,000,000 such meters. PPL Electric Statement No. 4 at 10.

In the instant case, PPL showed that there is a heat alarm set within the meter software program, so when the temperature of the meter hits an established level, the Company is alerted of the issue. Further, PPL takes 15-minute interval temperature readings from the meter, so it can track the meter's temperature and identify any current issues or problematic trends. If the Company detects an issue with the meter's temperature, PPL will dispatch a technician to investigate. PPL Electric Statement No. 4 at 8-10. I find in favor of PPL on this issue.

Privacy Concerns

The Complainant also has raised privacy issues with the new AMI meter; specifically, she avers that PPL has no responsibility whatsoever over the electrical meter.

Complainant Exhibit A. She argues her Fourth Amendment rights to privacy are being violated and that PPL is violating Chapter 57 (Wiretapping and Electronic Surveillance) of title 18 (Crimes and Offenses) of the Pennsylvania Consolidated Statutes and 18 U.S.C. § 2511 (Interception and disclosure of wire, oral or electronic communications prohibited). N.T. 9-10, Complainant Exhibits A-E.

Conversely, PPL argues that any claim that the installation of the meter would violate the Fourth Amendment is incorrect. N.T. 58. To support its position, PPL cites the caselaw decision in *Naperville Smart Meter Awareness v. City of Naperville*, 900 F.3d 521 (7th Cir. 2018) (*Naperville*) and contends that unlike the City of Naperville, PPL is not a state actor involved in the installation of smart meters. N.T. 58.

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 7-8. 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. PPL's cybersecurity and data privacy policies are consistent with the national standards for the industry. PPL Statement No. 4 at 7-8. Additionally, if Complainant is concerned about the AMI meter's connection to smart appliances in her home, she can decline to have the ZigBee radio activated.

Regarding Complainant's argument that a mandatory smart meter would violate her Fourth Amendment rights of freedom from unreasonable searches and seizures, I agree with PPL that it is not a "state actor" in that it is not a sovereign governmental entity also responsible for law enforcement. Rather, it is a private, regulated utility company not constrained by the Fourth Amendment. See *Jackson v. Metropolitan Edison Company*, 419 U.S. 345 (1974).

Further, there is no evidence in the instant case that PPL is making its data easily accessible to law enforcement or other third parties.

In *Naperville*, the Seventh Circuit found the City of Naperville owned and operated a public utility that provides electricity to its residents. Naperville began replacing its residential customers' analog energy meters with digital smart meters. *Naperville*, 900 F.3d at 524. Naperville's Electric Utility collects residents' energy-consumption data at fifteen-minute intervals, storing it for up to three years. The Seventh Circuit concluded that the use of smart meters intruded upon reasonable expectations of privacy, thus constituting a search subject to Fourth Amendment constraints, but that such searches were "reasonable," and thus constitutionally permissible and consistent with the Fourth Amendment. In finding that the Naperville Electric Utility's use of the smart meters constituted a search, the court relied heavily on *Kyllo v. United States*, 533 U.S. 27, 31–32 (2001). The Court referenced the administrative search doctrine to find that the presumption had been overcome. *Naperville*, 900 F.3d at 528-29 (citing *Camara v. Municipal Court*, 387 U.S. 523 (1967)). In particular, City of Naperville had "no prosecutorial intent;" "public utility [e]mployees —not law enforcement officials—collect and review the data." *Id.* Thus, the Electric Utility's intrusion was more innocuous than that found to violate the Fourth Amendment in *Camara*.

The Commission has no authority to find a crime has been committed by a corporation in violation of Title 18 of the Pennsylvania Crimes Code or Title 18 of the United States Crimes Code. Charges would have to be brought by the appropriate authorities in the appropriate forum. 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 is otherwise a violation of the Public Utility Code, a Commission order or regulation or a Commission-approved tariff of the

company. Although the Complainant is genuine in her 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 her 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 of 2008 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 powerline carrier (PLC) meters are not compliant with Act 129 of 2008 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 of 2008 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, is unsafe, or an illegal invasion of privacy rights.

ORDER

THEREFORE,

IT IS ORDERED:

1. That the Formal Complaint filed by Dana Brennan against PPL Electric Utilities Corporation at Docket No. C-2019-3007121 is denied and dismissed.
2. That the docket in this proceeding be marked closed.

Date: October 16, 2019

/s/
Elizabeth H. Barnes
Administrative Law Judge