

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Alexia and Lawrence McKnight	:	
	:	
v.	:	C-2017-2621057
	:	
PECO Energy Company	:	

INITIAL DECISION

Before
Darlene Davis Heep
Administrative Law Judge

INTRODUCTION

Alexia and Lawrence McKnight (Complainants) contend that the reinstallation of an AMI¹ meter at their home would be unsafe or unreasonable in violation of 66 Pa. C.S. § 1501. Specifically, they allege that installation of an AMI meter in 2015 exacerbated the medical condition of Mrs. McKnight and her Electromagnetic Hypersensitivity (EHS) condition improved after the meter was removed. They are particularly concerned about electromagnetic fields.²

A preponderance of the evidence supports a finding that Mrs. McKnight became ill after the installation of the Landis + Gyr AMI meter when the McKnights were concurrently experiencing a voltage problem at their residence. The preponderance of the evidence does not support a finding that installation of any AMI meter will negatively affect the health of Mrs. McKnight. This Initial Decision will prohibit the reinstallation of the

¹ AMI is an acronym for “advanced metering infrastructure.” AMI meters are also known as “smart meters.”

² “Electromagnetic Fields” and “Radio Frequency Fields” were used interchangeably in these proceedings and will be referred to as EFs herein.

Landis + Gyr meter at the McKnight residence, require PECO Energy Company (PECO) to investigate voltage issues at the service address and allow PECO to install another brand of AMI meter at the Complainants' home.

HISTORY OF THE PROCEEDING

On August 27, 2017, Dr. Alexia McKnight filed a Complaint against PECO seeking to prevent PECO from reinstalling an AMI meter at her home. She stated that, when PECO initially installed an AMI meter at her home (since removed), it violated Section 1501 of the Public Utility Code "by creating many harmful illnesses in myself as soon and as long as the PECO AMI meter was deployed on my residence." She also requested that PECO be ordered to never deploy an AMI meter at her residence. Dr. Lawrence McKnight was added as a Complainant later in the proceedings. (April 10, Tr. 6).

On September 13, 2017, PECO filed its Answer, denying the material allegations in the Complaint and stating that the AMI meter was installed in accordance with its tariff and Act 129 of 2008.

On October 4, 2017, a Hearing Notice was issued, setting the hearing for April 10, 2018.

On October 23, 2017, a Prehearing Order was issued. The Prehearing Order established discovery deadlines.

On March 23, 2018, a Corrected Hearing Notice was issued, setting hearing dates of April 10, 11, and 12, 2018.

On March 23, 2018, an Order was issued setting new discovery deadlines.

On April 10-13, 2018, evidentiary hearings were held. Complainants appeared *pro se* and presented testimony and exhibits of Mrs. McKnight, Mr. McKnight, Peter Prociuk, M.D., Mr. William Bathgate, and William Rea, M.D.

PECO was represented by Ward Smith, Esq., Shawane Lee, Esq., and Tom Watson, Esq., and presented testimony and exhibits of Mr. Bryan Uber, Mr. Glenn Pritchard, Christopher Davis, Ph.D., and Mark Israel, M.D.

The transcript of the hearing is more than 1,000 pages. The record closed on July 26, 2018, the date the Complainants filed a Reply Brief.³

FINDINGS OF FACT

1. Complainants are Dr. Alexia McKnight and Dr. Lawrence McKnight, who are married to each other.
2. Complainants reside at 258 Heyburn Road, Chadds Ford, Pennsylvania (service address). (April 10, Tr. 8).
3. The McKnights have lived at the service address since 2003. (April 10, Tr. 72).
4. Dr. Alexia McKnight is a Doctor of Veterinary Medicine and works as a Veterinary Radiologist in her home. (April 10, Tr. 15:19-20).
5. Dr. Lawrence McKnight is a medical doctor, with board certification in Internal Medicine, who works as a Hospitalist and in the field of Medical Informatics. (April 10, Tr. 80-82).

³ The Complainants here and in *Bachman v PECO*, C-2017-2623504, asked to have overlapping hearing dates so that they could share expert witnesses. That request was granted. Following the completion of the hearings, the Bachmans settled with PECO and a Certificate of Satisfaction was filed on June 25, 2018.

6. Mr. McKnight was recognized as an expert as a physician, including how to make diagnoses, how to interpret medical records, and how to interpret scientific research publications. (April 10, Tr. 96-97).

7. Prior to the AMI meter installation, the service address had an AMR⁴ meter since approximately 2001. (April 10, Tr. 21).

8. Bryan Uber is a Senior Supervisor, Customer Field Operations, for PECO. (April 12, Tr. 112).

9. On November 30, 2015, PECO installed an AMI meter at the service address, a Landis + Gyr AMI meter #127832547. (April 10, Tr. 8; April 12, Tr. 117-18; PECO Exhibit BU-1 at 2; McKnight Exhibit 5).

10. Only one AMI Meter, Landis + Gyr (serial #127832547), was used at the service address. (PECO BU-1 at page 2, entry 11/30/2015; PECO BU-1 at page 4, entry 9/7/2016).

11. Mrs. McKnight was at home when the Landis + Gyr AMI meter was installed in November 2015. (April 10, Tr. 9-11).

12. Following installation of the Landis-Gyr meter, Mrs. McKnight developed various physical ailments. (April 10, Tr. 9-11).

13. Mrs. McKnight later developed cardiac ailments associated with lightheadedness, and, after taking her own pulse, found it irregular. (April 10, Tr. 12:7; April 10, Tr. 71:12-16).

⁴ AMR is an acronym for “automatic meter reading.”

14. Mr. McKnight witnessed the change in his wife when the AMI meter was installed. (April 10, Tr. 83:9).

15. When Mrs. McKnight complained of lightheadedness and palpitations, Mr. McKnight took her pulse and found it irregular and bradycardic. (April 10, Tr. 126:20-22). He then advised her to see a Cardiologist. (April 10, Tr. 67:4-5).

16. Mrs. McKnight saw a cardiologist, who conducted tests for cardiovascular symptoms on May 23, May 27, June 16 and June 20, 2016. (April 10, Tr. 39; April 10, Tr. 25:5-8).

17. At some point following installation of the Landis-Gyr meter, Mrs. McKnight was unable to sleep in her home. (April 10, Tr. 9-11).

18. Mrs. McKnight's ailments significantly improved on March 20, 2016 when the McKnights turned off power to the upstairs circuits while the AMI meter was installed. (April 10, Tr. 20:5-7).

19. In March of 2016, the Complainants contacted PECO to report stray voltage, or voltage to ground, issues. (PECO Exhibit BU-1).

20. Russel Brocato, a now retired PECO Power Quality technician, was sent to investigate and repair the stray voltage issue at the service address. (April 10, Tr. 209:1-3).

21. Stray voltage occurs when there are loose connections and an imbalance of the electrical phases. (April 10, Tr. 222).

22. A stray voltage problem is not directly related to the type of meter installed. (April 10, Tr. 222).

23. Mr. Brocato removed the meter and used jumpers to connect the power to the residence. (April 10, Tr. 209).

24. At some point in April or May of 2016, the AMI meter was reinstalled at the service address. (April 12 Tr 133-134).

25. The stray voltage issue continued through April and May of 2016. (PECO Exhibit BU-1).

26. On May 24, 2016, PECO removed the AMI meter at Complainants' request and replaced it with a jumper plate. (April 10, Tr. 8; April 10, Tr. 8:15-17).

27. When the AMI meter was removed in May 2016, Mrs. McKnight's ailments lessened, and her physical condition improved. (April 10, Tr. 12-13, 47-48, 84:8, 85).

28. Unknown to Mrs. McKnight, an AMI meter was reinstalled at the service address on or about September 9, 2016. (April 10, Tr. 53, 58).

29. In September of 2016, Mrs. McKnight began to fall ill once again. (April 10, Tr. 36-38).

30. Mr. McKnight observed his wife become ill again after reinstallation of the AMI meter. (April 10, Tr. 84:21; April 10, Tr. 84).

31. On September 27, 2016, Mrs. McKnight sent a letter to Craig Adams, who was then President of PECO, stating her concerns about installation of an AMI meter. (April 10, Tr. 15-17; Complainants' Exh. 1).

32. On October 18, 2016, the McKnights filed an executive complaint about the meter. (April 12, Tr. 119).

33. On October 19, 2016, PECO employee Brenda Eison sent Mrs. McKnight a letter responding to her letter to Mr. Adams. (April 10, Tr. 22-23; Complainants' Exh. 4).

34. On October 26, 2018, Mrs. McKnight called PECO regarding her executive complaint; PECO's AMI Department called her back the same day. (April 12, Tr. 123-24).

35. PECO called Mrs. McKnight that day to confirm receipt of the executive complaint and responded to it in writing the next day. (April 12, Tr. 120-22).

36. On November 1, 2016, the PECO Landis + Gyr AMI meter was again removed and replaced with a jumper plate. (April 10, Tr. 13-15).

37. After the AMI meter removal on November 1, 2016, Mrs.. McKnight's symptoms resolved. (April 10, Tr. 15:8-9).

38. On March 8, 2017, Mrs. McKnight's treating physician, Dr. Peter Prociuk, sent a letter to Exelon attorney Tracy Hannan, stating that installation of an AMI meter was medically contraindicated for Mrs. McKnight and requesting an accommodation under the Americans with Disabilities Act ("ADA"). (April 10, Tr. 16-17; Complainants' Exh. 2).

39. Mrs. McKnight first contacted Dr. William Rea M.D., a specialist in Electrical Hypersensitivity Syndrome (EHS), in August 2017. (April 10, Tr. 27:1-3).

40. Dr. Rea is a medical doctor who has an Environmental Medicine facility in Dallas, Texas. (April 12, Tr. 56).

41. Dr. Rea was recognized as a medical expert, with a specialty in EHS. (Apr 12 Tr. 58).

42. Dr. Rea conducted a series of tests, including exposing Mrs. McKnight to real and sham exposures of electric and/or magnetic fields (EMF), including a “blinded provocation study” and testified that she reacted to the 60 hertz, the 3 kilohertz, and 5 megahertz exposures. (April 12, Tr. 66-79; April 10, Tr. 27-29).

43. To receive the treatments of Dr. Rea, Mrs. McKnight was required to sign disclosures stating that his treatments were “not endorsed, sanctioned, or supported by the Texas Medical Board.” (April 10, Tr. 40-42; Late-file Exhibit B).

44. Dr. Prociuk is a medical doctor who practices homeopathic medicine. (April 11, Tr. 241-42).

45. Dr. Prociuk has been Mrs. McKnight’s personal physician since 2010. (April 11, Tr. 243).

46. Dr. Prociuk was recognized as an expert in medicine. (April 11, Tr. 246-47).

47. Dr. Prociuk reviewed medical records from Mrs. McKnight’s cardiologist. (April 11, Tr. 247).

48. William Bathgate is an electrical engineer who lives in Michigan. (April 11, Tr. 322-23).

49. Mr. Bathgate was recognized as an expert in electrical engineering and in the design and measurement of power systems and radio design. (April 11, Tr. 327-28).

50. Mr. Bathgate is not able to make a determination that AMI meters are unsafe. (April 11, Tr. 367-68).

51. Mr. Bathgate took readings of PECO's AMI meters with the HF35C measuring device. (April 11, Tr. 448).

52. PECO's AMI system operates in a licensed spectrum at about 901 MHz, not in the unlicensed Industrial, Scientific, and Medical Band at 902-928 MHz; Mr. Bathgate was not aware of that fact when he prepared his expert report on EF transmissions from the PECO AMI system. (April 11, Tr. 439-44).

53. Mr. Bathgate's expert testimony on EFs and emissions was based on his general understanding of AMI meter systems; it does not apply to systems that operate on a licensed spectrum such as PECO's AMI system.

54. The conducted emission standards of the Federal Communication Commission (FCC) apply to unlicensed transmitters, not licensed transmitters as used on the PECO AMI system. (April 11, Tr. 456-57; Complainant's Joint Exh. 7).

55. PECO's AMI system is not a mesh system, i.e., it is not a system designed with many information collector devices. (April 11, Tr. 451; April 12, Tr. 200).

56. Glenn Pritchard is PECO's Manager of Advanced Grid Operations. (April 12, Tr. 141).

57. Mr. Pritchard was recognized as an expert in the design, operation, and technology of Advanced Meter Installations. (April 12, Tr. 142-46).

58. From approximately 2000 until April 2017, PECO used an AMR meter system that was comprised of transmit-only meters that transmitted using radio frequencies. (April 12, Tr. 147-149).

59. The AMR system was shut down in April of 2017. (*Id.*).

60. Approximately 1.7 million electric AMI meters and 500,000 gas AMI meters have been deployed by PECO. (April 12, Tr. 113, 149, 154).
61. The McKnights are on their own transformer (April 12, Tr. 205:25).
62. PECO used a Rush Track 7000 Power Quality Meter to measure transients (voltage spikes outside the norm) and waveforms at the service address. PECO Exhibit GP-13 (April 12, Tr. 184).
63. PECO now has available for customers the Landis + Gyr, Aclara and Sensus Stratus AMI meters. (April 12, Tr. 168-169).
64. PECO's Landis + Gyr meter has a FlexNet radio module, a Zigbee radio, and switch mode power supply. (April 12, Tr. 168).
65. PECO AMI meters are Underwriter Laboratories (UL) certified, a safety certification. (April 12, Tr. 170).
66. PECO's Aclara meter has a FlexNet module and switch mode power supply, but no Zigbee radio and is UL listed. (April 12, Tr. 168-69, 170, 198-199).
67. PECO's Sensus Stratus meter became available in April 2018; it has FlexNet modules and Zigbee radios, but the Zigbee radio can be turned off remotely. The Sensus Stratus has a capacitor pump, not a switch mode power supply, and is UL listed. (April 12, Tr. 169).
68. For each of the meters used by PECO, the manufacturer and an approved testing agency obtained written equipment authorization certifications from the FCC allowing use of the meters. (April 12, Tr. 171-72; PECO Exh. GP-11).
69. PECO's AMI meters comply with FCC regulations. (April 12, Tr. 172).

70. Mr. Pritchard demonstrated that the only functional differences between AMR meters and AMI meters is the periodicity of radio transmissions, the remote connect/disconnect switch on an AMI meter, and the fact that some AMI meters have a capacitor pump rather than a switch mode power supply. (April 12, Tr. 174-78).

71. Transients exist regardless of the type of meter used – AMI, AMR, or analog – or if no meter at all is installed. (April 12, Tr. 179-81).

72. Service at the service address remains provided through a jumper plate.

73. The service address, with no meter, has various transients occurring in the household. (April 12, Tr. 183-87).

74. Because PECO uses a licensed, non-mesh system, PECO's AMI system has fewer radio transmissions than any other utility system, including the ability to "tune down" the number of transmissions from each AMI meter. (April 12, Tr. 199-202).

75. Dr. Christopher Davis is a Ph.D. physicist who is the Minta Martin Professor of Engineering and Professor of Electrical and Computer Engineering at the University of Maryland. (April 13, Tr. 9-12).

76. Dr. Davis was recognized as an expert in the fields of physics, biophysics, chemistry, electrical engineering, electromagnetics, bioelectromagnetics, and dosimetry. (April 13, Tr. 16, 18).

77. The FCC has safety standards that explain the maximum permissible exposure ("MPE") that people can be exposed to if they are near a radiofrequency transmitter. (April 13, Tr. 23-24; PECO Exh. CD-3).

78. The FCC's MPEs are designed to avoid human health effects from exposure to high levels of radiofrequency fields; conversely, exposures below the MPE levels do not cause health effects. (Id.).

79. The radiofrequency transmissions from PECO's AMI meters are approximately 5.8 million times lower than the FCC's MPE. (April 13, Tr. 26-29; PECO Exh. CD 5).

80. The FCC's MPE's are calculated on a 30-minute average exposure; The instantaneous peak transmissions from a PECO AMI meter are approximately 40 times smaller than the amount they are allowed to transmit on an averaged basis. (April 13, Tr. 29-30; PECO Exh. CD-6).

81. The radiofrequency transmissions from PECO's AMI meters are approximately 4.4 million times lower than the guidelines of the International Commission on Non-Ionizing Radiation Protection. (April 13, Tr. 31-34; PECO Exh. CD-7).

82. People are exposed to radiofrequency fields from a variety of sources, including cell towers, UHF (TV) transmitters, cell phones, and microwave ovens. (April 13, Tr. 34-35; PECO Exh. CD-8).

83. The service address is continuously exposed to radiofrequency transmissions from UHF TV transmitters. At the service address, the background exposure to radio frequency fields from UHF stations is 168 times larger than the exposure of continuously sitting one meter in front of an AMI meter 24 hours a day, seven days a week. (April 13, Tr. 36-37; PECO Exh. CD-9).

84. Radiofrequency exposure from PECO AMI meters is 79% less than exposure from PECO's previously used AMR meters. (April 13, Tr. 37-38; PECO Exh. CD-10).

85. PECO's AMI meters are not subject to the conducted emission standards of the FCC because those standards apply to unlicensed transmitters, and PECO's AMI meters use a licensed spectrum transmission. (April 13, Tr. 49-51).

86. Harmonics and transients are normal in the delivery of electric service to residences and exist whether an AMI meter is in use or not. (April 13, Tr. 70-71).

87. PECO's AMI meters do not produce 5 Hz, 3 kilohertz, or 5 megahertz fields. (April 13, Tr. 75-76).

88. Mark Israel is a medical doctor who is the Professor of Systems Biology and Pediatrics and Medicine at Dartmouth Medical School, and Executive Director of the Israel Cancer Research Fund. (April 13, Tr. 176-177).

89. Dr. Israel was recognized as an expert in medicine, medical research, and radiofrequency and electromagnetic fields and health. (April 13, Tr. 182-190).

90. Dr. Israel reviewed the medical records provided by Mrs. McKnight's cardiologist. His cardiovascular examination of these records showed that all cardiovascular outcomes were normal. (April 13, Tr. 206-213).

91. The Lamech Australian survey referenced by Dr. Procuik in support of EHS is based on self-reporting of symptoms from a population that self-identified as having EHS. (April 13, Tr. 227-28).

92. Dr. Israel's expert opinion is that there is no reliable medical basis to conclude that radiofrequency fields from PECO's AMI meters did or will cause, contribute to, or exacerbate any health condition or any symptoms or medical concerns reported by Mrs. McKnight. (April 13 Tr. 194-202; PECO Exh. MI-3).

APPLICABLE LAW

The Pennsylvania Public Utility Code (“Code”) requires each public utility to provide the following:

Every public utility shall furnish and maintain adequate, efficient, safe, and reasonable service and facilities, . . . Such service and facilities shall be in conformity with the regulations and orders of the commission.

66 Pa.C.S. § 1501.

The statutory definition of “service” is to be broadly construed. *Country Place Waste Treatment Co., Inc. v. Pa. Pub. Util. Comm'n*, 654 A.2d 72 (Pa.Cmwlth. 1995).

Service, used in its broadest and most inclusive sense, includes any and all acts done, rendered, or performed, and any and all things furnished or supplied, and any and all facilities used, furnished, or supplied by public utilities, or contract carriers by motor vehicle, in the performance of their duties under this part to their patrons, employees, other public utilities, and the public, as well as the interchange of facilities between two or more of them.

66 Pa.C.S. § 102.

Section 332(a) of the Code, 66 Pa.C.S. § 332(a), provides that the party seeking relief from the Commission has the burden of proof. The Complainants seek relief from the Commission, and, therefore, have the burden of proof here.

“Burden of proof” means a duty to establish a fact by a preponderance of the evidence, or evidence more convincing, by even the smallest degree, than the evidence presented by the other party. *Se-Ling Hosiery v. Margulies*, 364 Pa. 54, 70 A.2d 854 (1950).

If a complainant establishes a *prima facie* case, the burden of going forward with the evidence shifts to the utility. If a utility does not rebut that evidence, a complainant will prevail. If the utility rebuts a complainant’s evidence, the burden of going forward with the

evidence shifts back to a complainant, who must rebut the utility's evidence by a preponderance of the evidence. The burden of going forward with the evidence may shift from one party to another, but the burden of proof never shifts; it always remains on a complainant. *Replogle v. Pennsylvania Electric Company*, 54 Pa. PUC 528 (1980), and *Waldron v. Philadelphia Electric Company*, 54 Pa. PUC 98 (1980).

If a respondent submits evidence of “co-equal” weight to counter a complainant's evidence, the complainant has not satisfied the burden of proof unless additional evidence opposing the respondent's evidence is presented. *Morrissey v. Pa. Dept. of Highways*, 424 Pa. 87, 225 A.2d 895 (1967), and *Burleson v. Pa. Pub. Util. Comm'n*, 66 Pa. Cmwlt. 282, 443 A.2d 1373 (1982), *aff'd*. 501 Pa. 443, 461 A.2d 1234 (1983).

Decisions by the Commission must be supported by substantial evidence in the record. 2 Pa.C.S. § 704. “Substantial evidence” is an appellate standard of review and not a standard of evidence. *Samuel J. Lansberry, Inc. v. Pa. Pub. Util. Comm'n*, 578 A.2d 600, 602 (Pa. Cmwlt. 1990) (*Lansberry*). Substantial evidence is such relevant evidence that a reasonable mind might accept as adequate to support a conclusion. *Consolidated Edison Company of New York v. National Labor Relations Board*, 305 U.S. 197, 229, 59 S.Ct. 206, 217 (1938). More is required than a mere trace of evidence or a suspicion of the existence of a fact sought to be established. *Norfolk & Western Ry. Co. v. Pa. Pub. Util. Comm'n*, 489 Pa. 109, 413 A.2d 1037 (1980) (*Norfolk*); *Erie Resistor Corp. v. Unemployment Comp. Bd. of Review*, 166 A.2d 96 (Pa. Super. 1961); *Murphy v. Pa. Dept. of Public Welfare, White Haven Center*, 480 A.2d 382 (Pa. Cmwlt. 1984).

Smart Meter Deployment

PECO installed Smart Meters in response to Act 129 of 2008 (“the Act” or “Act 129”) and associated Commission Orders and directives. Act 129 directed electric distribution companies (“EDCs”) to file Smart Meter technology, procurement and installation plans with the Commission for approval. The Act provided:

(f) *Smart Meter technology and time of use rates.*

(1) Within nine months after the effective date of this paragraph, electric distribution companies shall file a Smart Meter technology procurement and installation plan with the commission for approval. The plan shall describe the Smart Meter technologies the electric distribution company proposes to install in accordance with paragraph (2).

(2) Electric distribution companies shall furnish Smart Meter technology as follows:

- (i) Upon request from a customer that agrees to pay the cost of the Smart Meter at the time of the request.
- (ii) In new building construction.
- (iii) In accordance with a depreciation schedule not to exceed 15 years.

66 Pa.C.S. § 2807(f). The Act requires that any smart meter technology utilized have bidirectional or two-way communication technology. 66 Pa.C.S. § 2807(g).

The Commission ordered EDCs with greater than 100,000 customers to adhere to the guidelines established for smart meter technology, procurement and installation on June 18, 2009. EDCs were required to file a Smart Meter technology, procurement and installation plan.⁵ The Commission approved the smart meter installation plan developed by PECO.⁶ Under that plan, PECO is replacing AMR meters with AMI or “smart meters.”

From approximately 2000 until April 2017, PECO used an AMR meter system that was comprised of transmit-only meters that transmitted using radio frequencies. That system was shut down in April 2017. Approximately 1.7 million electric AMI meters and 500,000 gas AMI meters were deployed by PECO. Apr 12 Tr. 147-149.

⁵ See *Smart Meter Procurement and Installation*, Docket No. M-2009-2092655 (Implementation Order entered June 24, 2009) (*Smart Meter Procurement and Installation Order*).

⁶ See *Petition of PECO Energy Company for Approval of its Smart Meter Technology Procurement and Installation Plan*, Docket No. M-2009-2123944 (Order entered August 15, 2013) (*Smart Meter Plan*).

In 2013, the Commission concluded that there is no provision in the Code or the Commission's Regulations or Orders that allows a PECO customer to "opt out" of smart meter installation. *See Povacz v. PECO Energy Company*, Docket No. C-2012-2317176 (Opinion and Order entered January 24, 2013).

The Commission has stated, however, that a customer should be heard on an allegation that equipment installed by PECO may be unsafe or its installation unreasonable. Recently, in *Paul v. PECO Energy Co.*, Docket No. C-2015-2475355 (Opinion and Order entered June 14, 2018) (*Paul v. PECO*) the Commission reiterated that pursuant to Section 1501 of the Code, a public utility has a duty to maintain safe, adequate and reasonable service and facilities and to make repairs, changes, and improvements that are necessary or proper for the accommodation, convenience, and safety of its patrons, employees, and the public, referencing 66 Pa.C.S. § 1501, cited above. Again, "service" is to be broadly construed. *Country Place Waste Treatment Co., Inc. v. Pa. Pub. Util. Comm'n*, 654 A.2d 72 (Pa.Cmwlth. 1995).

In *Paul v. PECO* and *Frompovich v. PECO Energy Co.*, Docket No. C-2015-2474602 (Opinion and Order entered May 3, 2018), the Commission noted that pursuant to Section 1501 of the Code, the Commission developed regulations governing electric safety standards. Under these regulations, an EDC must use reasonable efforts to properly warn and protect the public from danger. The EDC must also exercise reasonable care to reduce the hazards to which customers may be subjected to by reason of the EDC's provision of electric utility service and its associated equipment and facilities. *See* 52 Pa. Code § 57.28(a)(1).

The Commission has also stated, "[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 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 (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 (Opinion and Order entered May 3, 2018 at 10).

DISCUSSION

The McKnights contend that installation of a smart meter at their home would be unsafe and unreasonable in violation of Section 1501 and are seeking to prohibit reinstallation of a smart meter at their home. The McKnights would like the jumper plate to remain in place at their home or installation of an analog meter. (April 10, Tr. 21; McKnight Main Brief at 14). This decision grants the relief requested, in part, and denies the relief requested, in part.

The evidence presented by the McKnights established that Mrs. McKnight began to experience negative health effects after the November 30, 2015, installation of the Landis + Gyr AMI meter at her home replacing an AMR meter. (April 10, Tr. at 9-11). She soon was unable to sleep in her home and began to sleep in a boat in her yard. (April 10, Tr. 9-11). In response, she consulted a cardiologist and Dr. Prociuk, who has been Mrs. McKnight's personal physician since 2010. (April 11, Tr. 243; Tr. April 10, Tr. 25:5-8). Mr. McKnight, a physician, took his wife's pulse and found that it was irregular and bradycardic after installation of the meter. (April 10, Tr. 126:20-22). He then advised her to see a cardiologist (April 10, Tr. 67:4-5).

During the period of March and April of 2016, the McKnights also reported stray voltage problems at their home. PECO sent out a technician to investigate and, on at least one occasion, the meter was removed and replaced with a jumper to provide electricity to the household. PECO records show that Mrs. McKnight contacted PECO on May 17, 2016 and reported that she experienced electric shock while in her home. (PECO Exhibit BU-1). When the AMI meter was removed on May 24, 2016, Mrs. McKnight's health improved. (April 10, Tr. 47-48).

A Landis + Gyr meter was reinstalled at the McKnight residence in early September 2016. Mrs. McKnight again began to experience ill health. (April 10, Tr. 13- 15). On November 1, 2016, at Mrs. McKnight's request, a PECO employee again removed the AMI meter and replaced it with a jumper plate (no meter). Her health and physical symptoms again improved. (April 10, Tr. 13-15).

PECO suggests that Mrs. McKnight began to show ill health effects after the installation of the meter because she was at home at the time and was aware that the smart meter was being installed. However, Mrs. McKnight credibly testified that she was on a business trip when the meter was reinstalled in September of 2016, thus she was not aware of the reinstallation when she again began to suffer ill health effects. (April 10, Tr. 53, 58).

PECO correctly notes that Mrs. McKnight suffered some health issues prior to installation of the meter. (April 10, Tr. 9-11). PECO expert witness Dr. Mark Israel also noted that a review of Mrs. McKnight's medical records provided by Mrs. McKnight's cardiologist showed that all cardiovascular outcomes were normal and did not report that Mrs. McKnight has the cardiovascular symptom that she claims. (April 13, Tr. 206-213).

However, the cardiologist tests were not conducted until after the meter was removed. The meter was removed sometime in May 2016. It was still installed and operating on May 9, 2016. (April 12, Tr. 117-18). Mrs. McKnight saw a cardiologist for her cardiovascular symptom and tests were conducted on May 23, May 27, June 16 and June 20, 2016. (April 10, Tr. 39).

The evidence shows that Mrs. McKnight began to suffer ill health effects after installation of the Landis + Gyr meter on both occasions, concurrently with the stray voltage issues experienced by the McKnights. However, "the record in this particular case" (*Kreider*) supports a finding that Mrs. McKnight became ill when a particular meter, Landis + Gyr (serial #127832547) was installed at this particular service address under these particular circumstances. Therefore, re-installation of the Landis + Gyr smart meter at the service address would be unreasonable under Section 1501.

However, the evidence does not support a finding that all AMI meters or that AMI meters in and of themselves will have a negative health effect upon Mrs. McKnight or that Mrs. McKnight suffers from EHS and that smart meters in general would have a negative effect on her health.

In support of their position, the McKnights called Dr. Peter Prociuk, M.D., to testify. He is a medical doctor who practices homeopathic medicine. (April 11, Tr. 241-42). Dr. Prociuk has been Mrs. McKnight's personal physician since 2010. (April 11, Tr. 243). Dr. Prociuk was recognized as an expert in medicine, but not as an expert in EHS. (April 11, Tr. 246-47). Dr. Prociuk testified that the smart meter was injurious to Mrs. McKnight's health and the cause of her palpitations. (April 11, Tr. 258:21-25.). He believed that harmonics created by smart meters were at the core of the problem. (April 11, Tr. 312:8-11). His opinion is based on reports that her symptoms worsened after the installation of the smart meter, the Lamech Australian survey on EHS and a 1991 study of persons believed to suffer from EHS by Dr. Rea. (April 11, Tr. 258, 260, 268).

As a physician, Dr. Lawrence McKnight was qualified as an expert in making medical diagnoses and in interpreting medical records and research. (April 10, Tr. 95). He testified that based on his review of the literature, there were three possible mechanisms of EF transmission which need to be mitigated. These 3 mechanisms include 'dirty electricity' (conducted transients), radio frequency from the AMI's primary antenna, and a secondary antenna effect where the EF is coupled onto household wiring (April 10, Tr. 90:7-22; 200:1-6). In reaching his conclusion that EHS is a real condition, and not a nocebo effect, Mr. McKnight relied upon: (1) a 1991 study by Dr. Rea; (2) a study of a single patient by Dr. Andrew Marino; and (3) his observations of his wife. He felt that there were other studies that are "suggestive studies that in and of themselves are not sufficient evidence but can be combined together, and there's a lot of things pointing in this direction." (April 10, Tr. 165-68).

Mr. McKnight considered that his wife was experiencing a "nocebo" effect, which occurs when a person believes that exposure to an agent will make them ill and, consequently, when they perceive they have been exposed to that agent, they become ill, even if they have not been exposed and even if the agent in fact does not cause illness. At some point, when the AMI meter was installed, Mr. McKnight began to turn the power off before going to bed and Mrs. McKnight was able to sleep even though the AMI meter was still installed. (April 10, Tr. 186). He ultimately rejected the nocebo effect and concluded that Mrs. McKnight has EHS. (April 10, Tr. 102-110). Mr. McKnight does not agree with the studies of EHS that did

not report a relationship between EMF exposure and symptoms, noting that the authors discussed and dismissed the argument that their results were “false negatives,” or “Type II” errors. (April 10, Tr. 168-175). Mr. McKnight also does not agree with the World Health Organization conclusion that EHS is not caused by exposure to EMF. He believes that in reaching that conclusion, the World Health Organization committed a Type II error. (April 10, Tr. 174-75).

William Bathgate also testified on behalf of the McKnights. He was recognized as an expert in electrical engineering and in the design and measurement of power systems and radio design. (April 11, Tr. 327-28).

PECO now has available three AMI meters - the Landis + Gyr, the Aclara and the Sensus Stratus. Mr. Bathgate performed conducted emission tests of 2 versions of the Aclara meter proposed by PECO to be installed at the service address. (April 11, Tr. 342:25; Complainant Joint Exhibit 5 at page 10). He reported that both meters produced transients, known in layman’s terms as “dirty electricity,” of over 300 millivolts. (Complainant Joint Exhibit 5 at page 3-4) which is more than 1,200 times the FCC class B specification for unintended conducted emissions of other devices like this in households. (April 11, Tr. 348:14-16; 354:20). He also tested other meters, including the Landis + Gyr, and testified that they have the same problem with extremely high conducted transients. (April 11. Tr/ 366:2-4).

Mr. Bathgate also testified that the AMI meters result in what he described as a secondary antenna effect, which he described as the antenna of the AMI meter in close proximity to other wires within the meter box, creating a secondary antenna effect on other household wires and ground. (April 11, Tr. 389:17-390:4). He also testified that he has conducted similar conducted electromagnetic field emission tests on numerous AMI meters made by at least five different manufacturers and found that effectively all of them violate the FCC’s conducted emission standards. (April 11, Tr. 365-66).

However, countervailing evidence was more persuasive with respect to AMI meters in general. The cross examination of Complainants’ witnesses elicited information

weighing against a finding that all AMI meters will harm Mrs. McKnight or that Mrs. McKnight suffers from EHS.

Dr. Prociuk's concerns with the AMI meter are "entirely related to EMF." (April 11, Tr. 312). The Australian study that Dr. Prociuk reviewed and referenced in support of his theory was by Lamech. As Dr. Prociuk stated, in that study, people who self-identified as having EHS and who perceived that they had changes in health after a mandatory smart meter rollout in Australia were invited to report their perceived health changes to an internet site. Dr. Prociuk stated "This type of study can be used to formulate a new hypothesis but can only make limited statements on causality." (April 11, Tr. 269-70). Although he believes that EHS is a "real thing," Dr. Prociuk stated that EHS has not reached the level of being a formal diagnosis. (April 11, Tr. 271). There is no diagnostic test for EHS, (April 11, Tr. 277-78). Also, Dr. Prociuk is "not sufficiently versed in the literature on EMF" to know whether studies have been published since 1991 that use the same methodology as Dr. Rea's 1991 study upon which he relied. Before the conclusions of the Rea study could be considered "established scientifically," larger independent studies would have to be performed. (April 11, Tr. 281-82). When speaking of a connection between exposure to AMI meters and EHS, Dr. Prociuk acknowledges that the clinical science demonstrating such a connection is not well-established. (April 11, Tr. 289).

Also, Mr. Bathgate acknowledged that it is possible to make an AMI meter that meets the FCC's conducted emission standards (April 11, Tr. 366). Mr. Bathgate is not able to make a determination that AMI meters are unsafe. (April 11, Tr. 367-68). Mr. Bathgate also acknowledged that his concerns about AMI meters were not directly applicable to PECO AMI meters because PECO's AMI system operates on a private, licensed spectrum. (April 11, Tr. 439-44; April 12, Tr. 10-11; April 12, Tr. 172).

PECO also presented its own rebuttal testimony and evidence. Glenn Pritchard is PECO's Manager of Advanced Grid Operations. (April 12, Tr. 141). He testified that for each of the meters used by PECO, the manufacturer and an approved testing agency obtained written equipment authorization certifications from the FCC allowing use of the meters. (April 12, Tr. 171-72). Copies of the certifications were introduced into the record. (PECO Exh. GP-11).

Evidence also showed that PECO's AMI meters comply with FCC regulations. (April 12, Tr. 172).

Mr. Pritchard also disputed the testimony of Mr. Bathgate suggesting that transients created by the AMI meter were a problem. He testified that transients exist regardless of the type of meter used – AMI, AMR, or analog – or if no meter at all is installed. (April 12, Tr. 179-81). He also testified that he used a higher quality transient measuring meter than that used by Mr. Bathgate and found that, even in the absence of an electric meter, readings of transients at the service address were “very noisy, representing different transients . . . that are occurring in the household.” (April 12, Tr. 183-87). Mr. Pritchard also rebutted any theory that there was a secondary antenna effect causing a problem at the service address, specifically questioning the measuring device used by Mr. Bathgate. Mr. Pritchard obtained an HF35C meter, which Mr. Bathgate had used for his measurements and found the readings unreliable. (April 12, Tr. 187-190; April 12, Tr. 190-91; April 12, Tr. 191-92). The device picked up a broad range of signals and yet did not pick up a signal when he attempted to measure a spot where he knew a cable was buried. *Id.*

Mr. Pritchard also testified that because PECO uses a licensed, non-mesh system, PECO's AMI system has fewer radio transmissions than other utility systems. He also stated that the company can “tune down” the number of transmissions from each AMI meter. (April 12, Tr. 199-202). Therefore, Mr. Bathgate's general concerns about AMI systems were not applicable to the PECO system. Mr. Pritchard was of the opinion that if the millions of deployed meters had a problem with FCC Class B certification for conducted emissions, it would have been discovered by now. (April 12, Tr. 231).

PECO also presented Dr. Christopher Davis. He is a Ph.D. physicist who is the Minta Martin Professor of Engineering and Professor of Electrical and Computer Engineering at the University of Maryland. (April 13, Tr. 9-12). He was recognized as an expert in the fields of physics, biophysics, chemistry, electrical engineering, electromagnetics, bioelectromagnetics, and dosimetry. (April 13, Tr. 16, 18).

The McKnights note that Dr. Davis does not have formal training in biology, (Tr. April 13 at 17:5-11). However, for the past 50 years, he has worked closely with biologists, M.D.s, engineers and physicists examining bioelectromagnetics (April 13, Tr. at 17).

Dr. Davis also testified that while he believes that people who are said to have idiopathic environmental intolerance (IEI, also called electromagnetic hypersensitivity (EHS)) have symptoms, "nobody has been able to show that the symptoms are caused by exposure to electromagnetic fields." (April 13, Tr. 154). Dr. Davis was particularly certain that PECO's AMI meters are not harmful. In his opinion, there is no reliable scientific basis to conclude that radiofrequency fields from PECO's AMI meters are capable of producing any adverse biological effects. (April 13, Tr. 42-44; PECO Exh. CD-13).

Dr. Davis explained that the FCC has safety standards and a maximum permissible exposure ("MPE") that people can be exposed to if they are near a radiofrequency transmitter. They are designed to avoid human health effects from exposure to high levels. (April 13, Tr. 23-24; PECO Exh. CD-3).

He testified that PECO's AMI meters do not create ionizing radiation and the transmissions from them are not capable of breaking chemical bonds. (April 13, Tr. 24-26; PECO Exh. CD-4). He also noted that the radiofrequency transmissions from PECO's AMI meters are approximately 5.8 million times lower than the FCC's MPE. (April 13, Tr. 26-29; PECO Exh. CD 5). He also stated that even the peak transmissions, when the meter is sending, from a PECO AMI meter are approximately 40 times smaller than the amount they are allowed to transmit on an averaged basis. (April 13, Tr. 29-30; PECO Exh. CD-6). Additionally, he noted, the radiofrequency transmissions from PECO's AMI meters are approximately 4.4 million times lower than the guidelines of the International Commission on Non-Ionizing Radiation Protection. (April 13, Tr. 31-34; PECO Exh. CD-7).

According to Dr. Davis, people generally are exposed to radiofrequency fields from a variety of sources, including microwave ovens, cell towers, UHF(TV) transmitters and cell phones. (April 13, Tr. 34-35; PECO Exh. CD-8). He determined that the service address is

continuously exposed to radiofrequency transmissions. He also calculated that radio frequency fields from UHF stations at the service address are 168 times larger than the exposure of continuously sitting one meter in front of an AMI meter 24 hours a day, seven days a week. (April 13, Tr. 36-37; PECO Exh. CD-9).

Dr. Davis also stated that compared to the AMR meter previously installed at the service address, the AMI meters would reduce the McKnights' radiofrequency exposure by 79%. (April 13, Tr. 37-38; PECO Exh. CD-10). He also addressed the tests performed by Dr. Rea and the report that Mrs. McKnight responded to exposure to 60 hertz, 3 kilohertz and 5 megahertz. Dr. Davis testified that electric power to your home and power lines is 60 hertz and that AMI meters do not produce 5 megahertz or 3 kilohertz fields. (April 13, Tr. 75-76).

Dr. Davis also rebutted the testimony of Mr. Bathgate that PECO's AMI meters produced transients, or dirty electricity, of more than 1,200 times the FCC class B specification. (infra. At 53). Dr. Davis stated that PECO's AMI meters and conducted emissions standards are not subject to the conducted emission standards of the FCC because those standards apply to unlicensed transmitters, and PECO's AMI meters use a licensed spectrum transmission. (April 13, Tr. 49-51). He further noted that PECO's AMI meters do not transmit transients every six to seven minutes as Mr. Bathgate testified regarding PECO's AMI meters. Dr. Davis used "expensive and extensive high-quality measurement equipment," to make his calculations because the AMI meters "emit so infrequently, that you need extremely sophisticated equipment to capture these brief on/off periods of the RF transmissions from the meters." He was not able to say with certainty what Mr. Bathgate was measuring, other than they were sources other than a single AMI meter, and that AMI meters "don't transmit with that regularity." (April 13, Tr. 51-53).

Dr. Davis measured transients both with and without an AMI meter present, for all three models of PECO AMI meters currently in use. His measurement showed that there were transients coming into a residence when only an analog meter was used. For all of the AMI meters, the addition of the AMI meter reduced the transients, so according to Dr. Davis the smart meters were not generating additional transients. (April 13, Tr. 58-61).

He testified that PECO's AMI meters have radiofrequency transmission levels that are extremely low compared to the many other sources of radiofrequency fields in the environment. (April 13, Tr. 68). As for harmonics and transients, he stated that they are normal in the delivery of electric service to residences, and that they exist whether an AMI meter is in use or not. (April 13, Tr. 70-71).

Dr. Davis reviewed Dr. Rea's 1991 study and concluded, for numerous reasons related to its design and methods, that the 1991 paper is not scientifically reliable. (April 13, Tr. 61-67).

Also persuasive was the testimony of Dr. Mark Israel, M.D. on behalf of PECO. He is a medical doctor and the Professor of Systems Biology and Pediatrics and Medicine at Dartmouth Medical School. He is also Executive Director of the Israel Cancer Research Fund. (April 13, Tr. 176-177). Dr. Israel was recognized as an expert in medicine, medical research, and radiofrequency and electromagnetic fields and health. (April 13, Tr. 182-190).

For more than 30 years, Dr. Israel has evaluated scientific studies on power frequency, radiofrequency, related research and health. (April 13, Tr. 178-179). He has taught pediatrics, anatomy, endocrinology, immunology, hematology, neurology, neurosurgery, cardiology, biochemistry, cell biology, genetics, molecular genetics, medical oncology and radiation oncology. (April 13, Tr. 181). In his testimony, rather than the term EHS, Dr. Israel used the term IEI (idiopathic environmental intolerance) as it is the term used by the World Health Organization, stating " it's medically a more neutral term. And it also calls attention to the fact that it's idiopathic," i.e, cause is unknown." (April 13, Tr. 195-196). Dr. Israel has extensively reviewed the literature, studies and reports regarding health and electromagnetic fields and radiofrequency. Those studies show that IEI, EHS, and the variety of symptoms attributed to it are not caused by radiofrequency fields. (April 13, Tr. 194-202; PECO Exh. MI-3).

Like Dr. Davis, Dr. Israel does believe that people who purportedly have IEI or EHS have real symptoms (April 13, Tr. 285:24-25). Also, like Dr. Davis, he is certain that electromagnetic and radiofrequency fields are not the cause of those symptoms.

As for any suggestion that Mrs. McKnight has a heart condition that would be negatively affected by an AMI meter, Dr. Israel reviewed the medical records provided by Mrs. McKnight's cardiologist. He showed that all cardiovascular outcomes were normal. (April 13, Tr. 206-213). Also, he did not find that there was any indication that Mrs. McKnight had an elevated risk of developing the cardiovascular symptom suggested. (April 13, Tr. 214).

Dr. Israel also questioned Dr. Rea's diagnosis and medical treatment of Mrs. McKnight. He testified that the EHS studies relied upon and conducted by Dr. Rea were not well founded and not scientifically sound. (April 13, Tr. 225-28). He also questioned that Dr. Rea did not send Mrs. McKnight to see a specialist or prescribe treatment for her alleged ailments. (April 13, Tr. 217, 219). PECO also introduced evidence that two state medical boards questioned the EHS treatments of Dr. Rea. (April 12, Tr. 85; PECO Rea Cross Exh. 3; April 12, Tr. 108; April 12, Tr. 82; PECO Rea Cross Exh. 1). Based on his extensive knowledge regarding the research, Dr. Israel's expert opinion is that there is no reliable medical basis to conclude that radiofrequency fields from PECO's AMI meters did or will cause, contribute to, or exacerbate IEI, EHS, or any symptoms or medical conditions reported by Mrs. McKnight. (April 13, Tr. 194-202; PECO Exh. MI-3).

There was evidence presented by the Complainants that Mrs. McKnight became ill after the Landis + Gyr AMI meter #127832547 was installed at the service address. This was not rebutted by PECO. However, concurrently the McKnights were having a voltage problem at their residence, which PECO made every attempt to repair. This suggests some interaction with that meter and the environment of the service address.

Substantial evidence does not support a finding that Mrs. McKnight suffers from EHS that would be negatively affected or worsen if any AMI meter is installed. The evidence does not support a finding that EHS is a condition accepted by the medical community or that

Mrs. McKnight suffers from the EFs present as background in her home. (April 13, Tr. 36-37; PECO Exh. CD-9). Also, Mrs. McKnight had a greater exposure to EFs when her home had an AMR meter and the record does not support a finding that she suffered the same ailments as she now presents as due to the AMI meter, which reduces EF exposure by 79%. (April 13, Tr. 37-38; PECO Exh. CD-10).

Further, it was shown that Mr. Bathgate's concerns about smart meters in general did not apply to the PECO AMI system. Also, Mr. Bathgate could not definitively say that AMI meters are unsafe. Also, Dr. Davis and Dr. Israel persuasively discounted any studies purportedly showing that AMI meters or EFs at the level emitted by AMI meters cause health problems. PECO AMI meters operate well under the safety standards set by the FCC and meet UL certification safety standards. (FOFs 65, 79-81).

There are no actions by PECO that would constitute a violation requiring imposition of a penalty against PECO. By installing the AMI meter at the service address, PECO attempted to comply with Act 129 and its Commission approved deployment plan. PECO also responded to the inquiries and concerns of the McKnights (FOFs 19-36). However, the fact remains that after Landis + Gyr AMI meter #127832547 was installed, Mrs. McKnight began to experience health problems.

Therefore, this Initial Decision will grant the relief requested with respect to Landis + Gyr AMI meter #127832547 and deny the request to prevent installation of any AMI meter at the McKnight residence and allow PECO to install its Stratus or Aclara AMI meter at the service address. There was no showing that these meters, or their specifications, would be harmful to Mrs. McKnight. PECO will also be required to investigate any remaining voltage issues present at the service address.

CONCLUSIONS OF LAW

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

2. Utility companies are required to furnish and maintain adequate, efficient, safe, and reasonable service and facilities. *Mary Paul v. PECO Energy Company*, Docket No. C 2015-2475355 (Order and Opinion entered June 14, 2018); 52 Pa. Code § 57.194.

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) (“*Woodbourne-Heaton*”).

6. “[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. 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 will be determined based on the record in this particular case and 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).

8. There is sufficient evidence to support a finding that Mrs. McKnight will be adversely affected by reinstallation of the Landis + Gyr AMI meter #127832547 and that reinstallation of the Landis + Gyr AMI meter #127832547 would constitute unsafe or unreasonable service in violation of 66 Pa.C.S. § 1501. *Kreider v. PECO Energy Co.*, Docket No. P-2015-2495064 at 23 (Order entered Jan. 28, 2016) (citing *Woodbourne-Heaton*, 1992 Pa. PUC Lexis 160, at *12-13).

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

ORDER

THEREFORE,

IT IS ORDERED:

1. That the claims and relief requested in the Complaint at Docket No. C-2017-2621057, are granted in part and denied in part.

