

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Catherine J. Frompovich	:	
	:	
v.	:	C-2015-2474602
	:	
PECO Energy Company	:	

INITIAL DECISION

Before
Darlene D. Heep
Administrative Law Judge

INTRODUCTION

Catherine J. Frompovich filed a complaint seeking to prevent PECO, an electric distribution company (EDC), from installing a Smart Meter at her residence because of health and safety concerns. The complainant did not establish by a preponderance of the evidence that installing the Smart Meter would constitute unsafe or unreasonable service under 66 Pa.C.S. § 1501 and therefore the Complaint is dismissed.

HISTORY OF THE PROCEEDING

On March 24, 2015, Catherine J. Frompovich (Complainant) filed a formal Complaint with the Pennsylvania Public Utility Commission (Commission) against PECO Energy Company (PECO or Respondent) alleging that PECO was threatening to terminate her service because she would not allow PECO to access the meter at her residence in order to replace it with an AMI or Advanced Metering Infrastructure meter, also called a Smart Meter. The Complainant

asserted that, as a 76 year old who previously had breast cancer, she could not tolerate the radiation from a Smart Meter. She attached a letter from her physician to support her assertion.

Ms. Frompovich also attached to her Complaint a letter that she had written to PECO wherein she asserted that AMI/Smart Meters (hereinafter “AMI” or “Smart Meter”) cause fires, that there is a trend of insurance providers denying coverage for fires caused by Smart Meters and that Smart Meters are associated with higher utility bills. Complainant asked that the Commission instruct PECO to perform onsite broadcasting tests at each customer’s Smart Meter, that her electric service not be turned off, and that the Commission consider the health implications of Smart Meters as well as the legal implications in conjunction with the Americans with Disabilities Act and the U.S. Constitution.

On April 10, 2015, the Respondent filed an Answer with New Matter and Preliminary Objections. The Answer admits that the Respondent provides electric service to the Complainant at the address shown on the Complaint. The Answer contends that the Respondent was required to install AMI meters, or Smart Meters, for all of its AMR meter customers by the end of 2014 and that it has the right to terminate service for failure of the customer to permit access to the meter.

The New Matter asserted that Act 129 of 2008 directed the Respondent and other electric distribution companies to file Smart Meter procurement and installation plans with the Commission, and that the company was seeking to comply with the installation plan approved by the Commission. The Answer and New Matter requested that the Commission dismiss the Complaint.

Also on April 10, 2015, the Respondent filed Preliminary Objections contending that the Complaint is legally insufficient under 52 Pa.Code § 5.101(a)(4). The Preliminary Objections again asserted that the Respondent is installing Smart Meters in compliance with Act 129 of 2008 and the Commission’s order approving the Respondent’s Smart Meter procurement and installation plan. PECO also asserted that although the Complainant is seeking to opt out of Smart Meter installation, that she may not opt out and that she is subject to termination of service for refusing

access to her meter and installation of a Smart Meter. PECO contended that there were no genuine issues of fact present, that the company is entitled to judgment as a matter of law and that the Commission should dismiss all issues raised in the complaint.

The Preliminary Objections were assigned to Administrative Law Judge (ALJ) Elizabeth H. Barnes by notice dated April 28, 2015.

On May 11, 2015, Complaint filed a letter, again asserting that she would like to opt out of a Smart Meter due to her health concerns as a breast cancer survivor and that the Commission had misinterpreted Act 129 as requiring mandatory installation of Smart Meters.

ALJ Barnes sustained the Preliminary Objections finding that, under the current law in Pennsylvania, there is no customer opt-out option for Smart Meters and the electric distribution company, or EDC, is required to deploy and install Smart Meters in accordance with its Commission-approved Smart Meter Plan as of May 6, 2010. ALJ Barnes noted that the Commission has no authority, absent a directive in the form of legislation, to prohibit the EDC from installing a Smart Meter where a customer does not want one.

Complainant filed four exceptions in which she: 1) questioned that there is no opt out of a Smart Meter available and that the interpretation by the Commission of Act 129 as mandating Smart Meter installation in violation of the U.S. Constitution, ethics, the First and Fourth Amendments to the U.S. Constitution and the Consumer Products Safety Act; 2) asserted that the Commission's decisions stating that there is no opt out available is overreaching and overstepping the agency's statutory authority and that PECO's constant threat to consumers that their electric service will be terminated if they do not relent to installation despite legitimate health and safety concerns is emotional injury for which PECO and the Commission may be held liable; 3) contended that bills have been introduced to the legislature to provide an opt out; and 4) alleged that the Act 129 legislative record shows legislative intent to provide an opt out of Smart Meter installation.

On April 21, 2016, the Commission issued an Opinion and Order granting, in part, Complainant's exceptions and reversing the decision on the Preliminary Objections. Particularly, the Commission found that the relief sought by PECO in its Preliminary Objections is not clearly warranted and free from doubt. The Commission also determined that Complainant's allegations warranted a hearing given her "status as a breast cancer survivor with concerns over Smart Meter emissions, who fears for her health status if a Smart Meter is installed, and who remains under medical care for her condition by a physician prepared to offer his medical opinion that the radio frequencies emitted by a Smart Meter installed in the Complainant's home will interfere with her ability to heal and live cancer free." Opinion & Order at 11. As the Commission further stated:

In past cases involving Smart Meter installation, we have evaluated on an individual case-by-case basis the specific allegations presented in each complaint and reached a conclusion based on those particular circumstances. While PECO is correct that as adopted Act 129 does not provide a general opt out provision, where a complainant's objection to installation of a Smart Meter was not based upon a general objection to Smart Meters *per se*, but rather upon facts specific to the individual complainant, we have denied preliminary relief and allowed the complaint to proceed to hearing. *See Kreider v. PECO Energy Company*, Docket No. P-2015-2495064 (Order on Material Question entered September 3, 2015; Order on Reconsideration entered January 28, 2016) (*Kreider*); *Paul v. PECO Energy Company*, Docket No. C-2015-2475355 (Order entered March 17, 2016). As we stated previously, "the law does not prohibit us from considering or holding a hearing on issues related to the safety of Smart Meters, consistent with our statutory authority in Section 1501 of the Code, when a legally sufficient claim is presented." *Kreider*, Order on Material Question at 17.

As in *Kreider* and *Paul*, Ms. Frompovich has alleged factual averments specific to her that, *if proven*, could implicate, under her particular circumstances, a violation of Section 1501 of the Code, a statute the Commission has jurisdiction to administer. (emphasis added)

The matter was returned to the Office of Administrative Law Judge to address Complainant's Section 1501 allegations and assigned to Administrative Law Judges Christopher Pell and Darlene Heep.

A hearing was held on November 2-3, 2016. Complainant appeared *pro se*, testified on her own behalf and presented no other witnesses. Thirteen exhibits were admitted on behalf of Complainant.

PECO was represented by Ward Smith, Esq., Shawane Lee, Esq. and Thomas Watson, ESQ. Twenty-four PECO exhibits were admitted. Testifying on behalf of PECO were Ms. Brenda Eison, PECO Customer Service and AMI Deployment Manager; Mr. Glenn Pritchard, PECO Principal Engineer for the AMI Deployment Project; Christopher Davis, Ph.D. in Physics; and Dr. Mark Israel, Physician.

The record closed on February 21, 2017, upon filing of the final Reply Brief. By Judge Change Notice issued on March 24, 2017, the matter was reassigned to Administrative Law Judge Darlene Heep, the undersigned as the sole presiding officer.

FINDINGS OF FACT

1. Complainant is Catherine J. Frompovich, a PECO customer in Ambler, Pennsylvania (service address).
2. Respondent is PECO Energy Company (PECO), a utility under the jurisdiction of the Pennsylvania Public Utility Commission.
3. The term “AMR” stands for Automatic Meter Reading. Tr. 129.
4. Advanced Metering Infrastructure meters are also known as AMI or Smart Meters. (Tr. 131).
5. PECO is replacing its AMR meters with AMI meters (Smart Meters). (Tr. 129).
6. EMF is the abbreviation for electromagnetic fields. (Tr. 190).

7. Electric and Magnetic fields can sometimes be measured separately but often, especially in radiofrequencies, the two are measured together as electromagnetics. (Tr. 190).

8. At the time of the hearing, Ms. Frompovich was in her late seventies.

9. Complainant is a breast cancer survivor. (Tr. 16).¹

10. Complainant is an expert in nutrition and natural healing. (Tr. 30).

11. After treatment with holistic and natural medicine by Ms. Frompovich and holistic and natural medicine professionals, Ms. Frompovich's cancer went into remission. (Tr. 57).

12. Complainant has a Bachelor's and Ph.D. in Nutrition and Holistic Sciences. (Tr.22)

13. Complainant has served as a consulting nutritionist in private practice and in physician offices and has written articles and a book, "The Cancer Answer," on managing and remediating a cancerous tumor as well as made a presentation to the FDA Advisory Committee on Childhood Vaccines. (Tr. 21, Tr.27).

14. Complainant lives in a condominium community. (Tr. 14).

15. There are 132 units in the community and Complainant lives in a townhome unit, second from the end, in a row of eight. (Tr. 16, Tr. 58).

¹ Complainant wished to place into evidence a letter from her physician regarding her breast cancer. PECO objected to the letter as hearsay given that her physician was not present. The objection was sustained. Complainant's status as a breast cancer survivor was nonetheless established by her credible testimony.

16. Brenda Eison is a Customer Service Manager for PECO, currently working with the AMI Project to install AMI meters and is responsible for answering questions that customers may have related to AMI installation. (Tr. 100 – 103).

17. If a customer refuses an AMI meter, the customer is referred to Ms. Eison for consultation. Tr. 102.

18. On January 23, 2014, PECO sent a letter to Ms. Frompovich advising her that its vendor would be in the neighborhood to install an AMI meter at her home. Tr. 105, PECO Exh. BE-1.

19. On February 17, 2014, PECO received correspondence from Ms. Frompovich advising that she did not want an AMI meter installed at her residence. Tr. 105, PECO Exh. BE-2.

20. Ms. Frompovich sent letters to PECO stating her health and safety concerns about Smart Meters and asking questions about the Smart Meters that were to be installed. (BE-5, B-7).

21. On February 9, 2015, PECO sent Ms. Frompovich another letter in an attempt to install the AMI meter at her home. Tr. 107, PECO Exh. BE-5.

22. On February 14, 2015, Ms. Frompovich responded that she did not want an AMI meter installed at her residence, and requested an “opt out” from installation. Tr. 107-08, PECO Exh. BE-5.

23. On February 20, 2015, PECO’s legal department sent a reply letter to Ms. Frompovich’s February 14 letter explaining the legal authority, safety and testing of the meter to be installed. Tr. 108-09, PECO Exh. BE-6.

24. On February 25, 2015, PECO received a letter from Ms. Frompovich asking questions regarding AMI meters. Tr. 109, PECO Exh. BE-7.
25. On March 9, 2015, PECO's legal department sent Ms. Frompovich a reply letter addressing her questions. Tr. 110-111, PECO Exh. BE-8.
26. On March 16, 2015, PECO received a letter from Ms. Frompovich with an attached letter from Ms. Frompovich's physician. Tr. 111-12, 121, PECO Exh. BE-9.
27. On March 20, 2015, PECO's legal department sent Ms. Frompovich a reply letter acknowledging receipt of her March 16 letter.n
28. The March 20, 2015 letter also stated that PECO does not have an opt-out option for AMI installation and informed Complainant that continued refusal to allow installation could result in service termination. Tr. 112-13, PECO Exh. BE-10.
29. On March 24, 2015, PECO received a letter from Ms. Frompovich advising it that she had filed a formal complaint with the Commission. Tr. 113, PECO Exh. B-11.
30. Complainant used two hand held devices, a Bell model 4180 meter and a Trifield model 100XE meter, to measure electromagnetic frequencies near her home and in her community. (Tr. 14-15).
31. PECO has not installed an AMI at the service address. (Tr. 59).
32. Ms. Frompovich's neighbors have AMI meters. (Tr. 59).
33. Complainant currently has an AMR meter installed near her front door. (Tr.59).
34. Complainant does not want an AMI meter even if it is relocated away from her front door. (Tr. 60).

35. Glenn Pritchard is the manager of PECO's Advanced Grid Operations & Technology Group. Tr. 126.

36. The AMR System, also known as the Legacy System, is the system that is used by PECO to read AMR based meters. Tr. 129-31, PECO Exh. GP-1.

37. PECO began installing the AMR system in 2000 and completed installation in 2003. Tr. 131.

38. Under the AMR system, an electric meter transmits usage data once every five minutes throughout the day to a device called a MicroCell Controller. Tr. 129-30, PECO Exh. GP-1.

39. The transmissions from the meter to the Microcell Controller are radiofrequency transmissions that occur approximately every five minutes for 20 milliseconds. (Tr. 130).

40. MicroCell Controllers are typically located on poles throughout the service area. (Tr. 129).

41. Information is consolidated at the Microcell Controllers and then relayed to a device called a cell master located typically at substations. (Tr. 130)

42. Information from the cell masters are transmitted through hard telephone lines to the major server or processor that collects and manages the data and then transmits that to PECO. (Tr. 13).

43. The AMR transmission is one-way, to PECO. PECO Exh. GP-1.

44. Once the customer's data is received by PECO's internal applications, the information is processed within PECO's Meter Data Management System (MDMS), which ultimately produces customer bills. PECO Exh. GP-1.

45. The AMR system operates at a frequency of 902 to 927 megahertz, and the power output during transmission is one watt. Tr. 130-31.

46. PECO is currently using an AMI Advanced Meter Platform to read meters. PECO Exh. GP-2.

47. PECO began installing the AMI system in 2010. Tr. 137.

48. AMI meters (Smart Meters) are two-way communication meters. Tr. 132.

49. Each AMI meters has two radios- the FlexNet communication module, which communicates away from the house with the data collector, and the Zigbee radio, which transmits back and forth between the meter and the service address. (Tr. 133).

50. The AMI FlexNet module communicates with a Tower Gateway Base Station, which is a data collector that PECO has typically located in substations. Tr. 132, PECO Exh. GP-2.

51. The FlexNet communication module operates at a licensed frequency of 901.1 MHz. Tr. 135.

52. In its service territory, PECO is the sole user of its licensed communication spectrum. Tr. 135.

53. On average, AMI meters transmit ten times a day, but can also be configured or tuned to transmit at a maximum of 96 times per day, or once every 15 minutes. Tr. 133.

54. Meters in the area of the Complainant's residence are tuned to transmit on average, eight times per day. (Tr. 133).

55. Each transmission is approximately 70 milliseconds long. (Tr. 134).

56. The total transmission time per day for the FlexNet module is less than a second. (Tr. 134).

57. PECO AMI meters do not transmit with a daily periodicity of 9600 transmissions. Tr. 137.

58. The Zigbee radio, which communicates from the AMI meter to devices in the residence, operates at 2.4 GHz. Tr. 135.

59. The Zigbee radio was designed to transmit both the price and consumption signals into the home. (Tr. 170).

60. If a Zigbee radio is not paired with a smart device or appliance, it sends out a message every 30 seconds for less than one millisecond and at the power of one-tenth of a watt. (Tr. 134).

61. In order to pair the Zigbee radio with a smart device or appliance, a customer would have to call and request it. (Tr. 170).

62. If a device is paired, the number of transmissions would decrease from once every five minutes to once an hour or once a day, depending upon the device to which it is paired. (Tr. 169).

63. “Dirty electricity” is not a scientific term but is a layman’s term that refers to the possibility of harmonic disruptions to the sinusoidal wave of electricity. Tr. 140, 198.

64. Disruptions of the sinusoidal wave occur on electricity as it goes into the American home due to, for example, the earth’s magnetic field, interruptions from the sun, and any device that is plugged into the electric system, including fluorescent lights, devices that have power supplies, computers, cell phone chargers, and refrigerators. Each of these devices can disrupt the normal sinusoidal wave of electricity. Tr. 140-41.

65. A harmonic is a whole number multiple distortion of a reference signal or wave; i.e. a 60 hertz signal can enter a home and have harmonics of 60 hertz, 120 hertz, 180 hertz, 240 hertz and higher values. (Tr. 198-199).

66. A home with an AMR meter will still have significant disruption of the sinusoidal wave. Tr. 171.

67. After questions were raised as to whether the first brand of AMI meters installed by PECO were associated with fires, PECO removed all such meters and replaced them with Landis + Gyr meters in 2012. Tr. 143.

68. Since the Landis + Gyr meters were installed in 2012, there have been no reports of any fires caused by the Landis + Gyr meters. Tr. 143-44.

69. The customer decides where to put the meter socket for installation of a service address meter as long as that location meets the guidelines established in PECO’s Electric Service Tariff. Tr. 144-45, PECO Exh. GP-3.

70. PECO’s AMI meters do not use pulsed transmissions. Tr. 173, 200.

71. Dr. Christopher Davis is a professor of electrical and computer engineering at the University of Maryland in College Park and studies physics, biophysics, electrical engineering, electromagnetics, radiofrequency exposure and dosimetry. Tr. 184-189.

72. Radiofrequency fields are periodically emitted from PECO's AMR and AMI meters. (Tr. 186-189).

73. Dr. Davis has studied the types of radiofrequency fields that are periodically emitted from PECO's AMR and AMI meters. Tr. 186-189.

74. The Federal Communications Commission (FCC) has indicated that maximum permissible exposure to radiofrequency fields emitted by a Smart Meter is 0.6 mW/cm², calculated as an average exposure over time. Tr. 207, PECO Exh. CD-2.

75. Dr. Mark Israel attended the Albert Einstein College of Medicine, had an Internship and Residency at Harvard Medical School and has studied radiofrequency fields and health effects. Tr. 254.

DISCUSSION

The Pennsylvania Public Utility Code requires each public utility to provide the following:

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.

66 Pa.C.S. § 1501.

The statutory definition of “service” is to be broadly construed. *Country Place Waste Treatment Co., Inc. v. Pa. Publ. 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.A. § 102.

Section 332(a) of the Public Utility Code, 66 Pa.C.S. § 332(a), provides that the party seeking relief from the Commission has the burden of proof. Complainants seek relief from the Commission, and, therefore, has the burden of proof in this proceeding.

“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 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 Respondent submits evidence of “co-equal” weight to counter Complainant’s evidence, Complainant has not satisfied the burden of proof unless additional evidence opposing 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. Cmwlth. Ct. 282, 443 A.2d 1373 (1982), *aff’d.* 501 Pa. 443, 461 A.2d 1234.

Any decision of the Commission must be supported by substantial evidence. See, e.g., Section 704 of the Administrative Agency Law, 2 Pa.C.S. § 704. “Substantial evidence” is such relevant evidence that a reasonable mind might accept as adequate to support a conclusion. 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); *Erie Resistor Corp. v. Unemployment Comp. Bd. of Review*, 194 Pa. Superior Ct. 278, 166 A.2d 96 (1961); and *Murphy v. Comm., Dept. of Public Welfare, White Haven Center*, 85 Pa. Commonwealth Ct. 23, 480 A.2d 382 (1984).

Act 129 of 2008 (“the Act” or “Act 129”) required 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).

On June 18, 2009, the Commission ordered EDCs with greater than 100,000 customers to adhere to the guidelines established for Smart Meter technology procurement and installation. The Commission also ordered EDCs to file a Smart Meter technology procurement and installation plan.²

PECO developed a Smart Meter installation plan³ that was approved by the Commission.⁴ Under that plan, PECO is replacing AMR⁵ meters with AMI⁶ or “Smart Meters.” In 2013, the Commission concluded that there is no provision in the Code, the Commission’s Regulations or Orders that allows a PECO customer to “opt out” of smart installation (*See Maria Povacz v. PECO Energy Company*, Docket No. C-2012-2317176 (Order and Opinion entered January 24, 2013)).

Ms. Frompovich has refused installation of a Smart Meter at her home. (See Eison testimony, Tr. 100-122). Where a customer refuses the company access to its meter, the company may terminate service. The Commission’s regulations provide in pertinent part the following:

A public utility may notify a customer and terminate service provided to a customer after notice as provided in §§ 56.91-56.100 (relating to notice procedures prior to termination) for any of the following actions by the customer . . . failure to permit access to meters, service connections or other property of the public utility

² See *Smart Meter Procurement and Installation*, Docket No. M-2009-2092655 (Implementation Order entered June 24, 2009) (*Smart Meter Procurement and Installation Order*).

³ See *Petition of PECO Energy Company for Approval of its Smart Meter Technology Procurement and Installation Plan*, Docket No. M-2009-2123944 (Smart Meter Plan).

⁴ See *Petition of PECO Energy Company for Approval of its Smart Meter Technology Procurement and Installation Plan*, Docket No. M-2009-2123944 (Order entered May 6, 2010) (*PECO Smart Meter Plan Order*).

⁵ AMR is an acronym for “automatic meter reading.”

⁶ AMI is an acronym for “advanced metering infrastructure.”

for the purpose of replacement, maintenance, repair or meter reading.

52 Pa.Code § 56.81(3). The PECO Electric tariff, which has the force of law,⁷ also contains provisions for termination procedures where access to and a change of meter are refused by a customer.

Section 6.4, provides that PECO will provide, own and maintain any meter or meters. Section 14.1, states that “[t]he Company will select the type and make of metering equipment to be used for meters supplied by the Company, and may, from time to time, change or alter the equipment, its sole obligation being to supply meters that will accurately and adequately furnish records for billing purposes.” Section 10.5, provides that “[t]he Company’s identified employees shall have access to the premises of the customer at all reasonable times for the purpose of reading meters, and for installing, testing, inspecting, repairing, removing or changing any or all equipment belonging to the Company.” Under Section 18.3, the Company may terminate on reasonable notice if entry to the meter is refused, or if access to the meter is obstructed or hazardous.

Ms. Frompovich contends that PECO threatening to, or actually terminating her service because she is refusing a smart meter, is unreasonable given her health and safety allegations. Those allegations are examined below.

UNREASONABLE SERVICE

In essence, Ms. Frompovich alleges that installation of a Smart Meter at her residence would have a deleterious impact on her medical condition and constitute a violation of the 66 Pa.C.S. § 1501 requirement that a utility company provide its customers with safe and reasonable service and facilities. Specifically, Complainant contends that Smart Meters cause fires and that

⁷ A public utility’s Commission-approved tariff is *prima facie* reasonable, has the full force of law and is binding on the utility and the customer. *Id*; 66 Pa.C.S. § 316, *Kossmann v. Pa. Pub. Util. Comm’n*, 694 A.2d 1147 (Pa.Cmwlth. 1997) (*Kossmann*); and *Stiteler v. Bell Telephone Co. of Pennsylvania*, A.2d 339 (Pa.Cmwlth. 1977) (*Stiteler*).

installation of a Smart Meter will expose her to harmful EMF emissions that will counter or reverse her recovery from and the remission of her breast cancer.

a. fire

In a letter attached to her complaint, Ms. Frompovich expressed concern that the PECO AMI meters cause fires. Mr. Pritchard, a PECO Registered Professional Engineer who was the principal engineer on the AMI project, testified that there was a problem with a brand of meter initially used in the deployment. In approximately 2012, those meters were all removed and replaced with the Landis + Gyr Focus meters. Since installation of over 1.2 million of such meters, there have been no reports of fire incidents related to the meters. (Tr. 143).

A Landis + Gyr meter would be installed at Ms. Frompovich's home. The Complainant did not present any competent evidence that such meters cause fires. Therefore, Complainant cannot prevail on the claim that the AMI meter to be installed at her home would constitute an unsafe fire hazard in violation of 66 Pa.C.S. § 1501.

b. safe and reasonable service

Ms. Frompovich contends that installation of a Smart Meter at her home would counter, and negatively affect, her healing and health. She also asserts that she is protected by, and that PECO is subject to, the Americans with Disabilities Act (ADA), 42 U.S.C.S. § 12132, et seq. because she had cancer.

It is beyond the jurisdiction of Commission to determine whether Complainant has a disability as defined under the ADA. Further, a state agency's characterization of what the ADA requires is not determinative. See *McCree v. SEPTA*, 2009 U.S. Dist. LEXIS 4803 (D. Pa. 2009).

However, the Commission has recognized its duty to determine whether a utility company complies with §1501 requirements that service provided be safe and reasonable. See

Kreider, supra. Here, Ms. Frompovich contends that installation of a Smart Meter at her home is unsafe and unreasonable because emissions from a Smart Meter will adversely affect her health. The preponderance of and prevailing evidence presented does not support a finding that installing a smart meter at Complainant's home would be unsafe or unreasonable.

Ms. Frompovich appeared *pro se*. An expert in holistic and natural medicine, Ms. Frompovich testified that she, and other professionals engaged in the practice of holistic and natural medicine, successfully treated her breast cancer into remission. (Tr. 42). She has authored articles and written a book on holistic and natural medicine as well as testified and made presentations regarding such treatments. Ms. Frompovich explained during the hearing that holistic and natural medicine treatments detoxify and provide supplements to the body to support the immune system. (Tr. 53).

Complainant presented no other witnesses or experts. She testified that based on a literature search regarding EMFs and her knowledge of holistic healing, she has concluded that she will be harmed by "dirty electricity" if a Smart Meter is installed at her home. (Tr. 34). Ms. Frompovich described dirty electricity as high electrical pulses emitted by Smart Meters that occur as a result of the microwave transmissions every 15 seconds. She further contends that she will be harmed by the non-thermal health effects from microwave energy and radio frequency or electromagnetic fields (EMFs) emanating from a Smart Meter. (Tr. 34). She is of the opinion that such "radiation" and EMFs from Smart Meters will negatively affect her health, and that continued exposure to them is contrary to the natural and holistic methods that she employs in healing.

In reaching her conclusions, the Complainant also referenced the World Health Organization International Agency for Research on Cancer as classifying radiofrequency (RFs) and EMFs as possibly carcinogenic to humans, group 2B. She asserted that this conclusion is based on a finding that RFs and EMFs present an increased risk of glioma, a malignant type of associated brain cancer. (Tr. 42) (C B-1). Complainant testified that she read reports of studies involving experiments on the carcinogenicity of extremely low frequency magnetic fields. (Tr. 43). (C B2) She also referenced a report of a study of children which concluded that

microwave radiation is a class 2B carcinogen. (Tr.47) (C F) She contends that EMF electromagnetic radiation intensities damage DNA and interfere with DNA repair, a key to a healthy body and healing. (Tr. 50).

Complainant currently has an AMR meter located near her front door. She testified that she used two different devices to measure EMFs near her door and in her neighborhood and that she had to stand 15 feet away in order to get a “normal reading.” PECO would move Complainant’s meter away from her home if she chose to relocate her meter socket. Tr. 144-45. However, Ms. Frompovich testified that she would decline installation of a Smart Meter at a remote location because she believes that harmonics will send damaging EMFs into her home as long as the meter is connected to her home electric system. (Tr.60).

Complainant testified that exposure to such emissions is particularly harmful to her because she is a cancer survivor and she has eliminated anything from her home that could possibly have such emissions. She noted that she does not have a smart phone, a microwave oven or a TV, to keep things “clean.” (Tr.56). When Complainant leaves her home, she walks in a route to avoid as many of the meters of her neighbors as possible. (Tr. 61). She has no Wi-Fi or wireless internet service and she keeps her router turned off. She also has no smart appliances or electronic security. (Tr. 62).

Ms. Frompovich testified that she believes that non-ionizing non-thermal radiation from AMI Smart Meters will cause a recurrence of her cancer and adversely affect her health. (Tr. 78-79); (Tr. 51-53)(C R-1, C-K).

The dominant evidence presented at this hearing supports a finding that installation of an AMI Meter would not be unreasonable and would not be unsafe for Ms. Frompovich. Complainant based her conclusion that installation of PECO’s AMI meters would be harmful to her on information obtained through reviewing general information regarding EMFs and Smart Meters. The testimony and evidence presented by PECO at the hearing weigh against the Complainant’s conclusion.

PECO presented evidence to show that some of the emissions of concern to Ms. Frompovich do not emanate from Smart Meters and that any actual emissions from smart meters are miniscule and harmless and measure significantly less than those to which the average person is exposed daily.

Primary information about the AMI meters utilized by PECO was provided by Mr. Glenn Pritchard, a PECO registered electrical engineer who heads the PECO AMI project and is an expert in smart grid and advanced metering infrastructure systems. (Tr. 128). He testified credibly that PECO's AMI meter system does not have the emission characteristics of concern to Ms. Frompovich. He stated that while some other utilities employ a mesh system, which transfers data from meter to meter until it reaches a data collector, resulting in many transmissions, in the PECO system, messages are transmitted directly to the collector and do not have to transmit from one meter to the next in a relay, resulting in fewer transmissions. (Tr. 136).

PECO uses Landis + Gyr AMI meters in its system, one of which would be installed at Complainant's residence. These meters have two components- the Flex-Net Meter that Communicates usage data to Base Stations, and the Zigbee radio transmitter that is designed to transmit both price and consumption information. The FlexNet module operates at a frequency of 901.1 MHz, with a projected setting of transmitting ten times per day for about 70 milliseconds for each transmission. (133-135). The Zigbee radio operates at 2.4 GHz and at the power of one-tenth of a watt, transmits anywhere from every 30 seconds to once a day, depending upon whether it is paired with a smart appliance or device. (Tr. 169). When asked whether the AMI meters transmit with a daily periodicity of 9600 transmissions, the level of concern to Ms. Frompovich, Mr. Pritchard testified that they did not. (Tr. 137). Mr. Pritchard also testified that any higher measurements or readings obtained by Ms. Frompovich using her hand held meters would have included other sources in the area such as the cell phones, wireless phones, garage door openers, other AMI meters in the neighborhood, TV stations transmitting at radio frequencies, security systems and the like. (Tr. 139).

When asked about the complainant's "harmonics" concerns, Mr. Pritchard stated that harmonics in a home are inevitable because nearly all of the electricity that we generate is produced by rotating machinery, which will produce higher harmonics. Tr. 199. He stated that florescent lights have particularly strong harmonics and other devices such as computers, cell phones, and any plugged in or wired items such as refrigerators can cause such disturbances in the sinusoidal wave form. (Tr. 141). He testified that PECO AMI meters do not meaningfully contribute to harmonics and disruption of the sinusoidal wave. (Tr. 142, 200). He also noted that harmonics are present with or without a meter. (Tr. 171).

PECO expert Christopher Davis holds a Ph.D. in Physics and is a Professor of Electrical and Computer Engineering. Dr. Davis has taught extensively, written about and conducted research regarding electromagnetics and radiofrequency waves. (Tr. 184-187). Dr. Davis acknowledged that AMR and AMI meters used by PECO periodically emit radiofrequency fields. (Tr. 186-189). He stated that in everyday life, people are exposed to radiofrequency field levels from many sources that are much higher than those associated with the PECO Smart Meters, from cell phones to TVs to transmission towers. (Tr. 212-217). According to Dr. Davis, however, any emissions from smart meters are very small and will have no ill health effect. (Tr. 207, 212).

Dr. Davis noted that the Federal Communications Commission (FCC) looked at exposures that produce an effect in animals and resolved that the maximum permissible exposure to radiofrequency fields emitted by a Smart Meter is 0.6 mW/cm^2 ,² calculated as an average exposure over time. (Tr. 203-207, PECO Exh. CD-2). According to Dr. Davis, calculated per cm^2 , the unit used by the FCC, the *average* exposure from PECO's AMI meters is millions of times less than the FCC maximum permissible exposure levels and the *peak*, or highest, exposure from PECO's AMI meters is at least 37.5 times less than the FCC average-exposure standards. (Tr. 207-209). He also testified that the AMR meter currently at the Frompovich residence emits 6.4 times more radiofrequency than would an AMI meter. (Tr. 215).

As for the "harmonics" that are of concern to Ms. Frompovich, Dr. Davis was more definitive than Mr. Pritchard and testified that the AMI meters do not produce "harmonics." In

conclusion, based on the meter specifications stated by Mr. Pritchard and his own knowledge, study and expertise, Dr. Davis testified that, to a reasonable degree of scientific certainty, “AMI meters are incapable of causing any biological effects, certainly no adverse biological effects, in anybody.” (Tr. 216).

Also testifying for PECO was Dr. Mark Israel, a physician who has studied radiofrequency fields and health effects. For at least 25 years he has treated, as well as taught or supervised, the treatment of cancer patients. It is in that context that he has researched electromagnetic fields and their health effects. (Tr. 254-257). It was his medical opinion that radiofrequency fields such as those associated with PECO’s AMI meter would not interfere with the body’s ability to heal or increase stress. (Tr. 323, 325).

In response to Ms. Frompovich’s testimony that the International Agency for Research on Cancer (IARC) has categorized radiofrequency electromagnetic fields as category 2B possibly carcinogenic to humans. Dr. Israel testified that the IARC characterization of radiofrequency fields only applies to a brain tumor called glioma and acoustic neuroma. He further distinguished the term “possible” carcinogen from “probable” and actually carcinogenic. Tr. 42, 283. He also noted that the IARC designation of radio frequency fields as “possibly” carcinogenic does not apply to breast cancer. Tr. 283-84.

Ms. Frompovich asked Dr. Israel about the term “idiopathic environmental intolerance” (IEI), a reference to people who report particular sensitivities to environmental conditions. Dr. Israel testified that studies conducted on people who consider themselves sensitive to EMFs found that such people are unable to independently detect EMFs and the occurrence of symptoms appears unrelated to exposure. (Tr. 49-51). He testified that conditions and symptoms of IEI with respect to EMF exposure are not generally accepted in the scientific or medical fields. (Tr. 278).

It is Dr. Israel’s opinion that exposure to radiofrequency fields from the PECO AMR meter have not been harmful and that those from the AMI meter will not be harmful to Ms. Frompovich. (Tr. 294).

While the Commonwealth Court has stated that a Complainant may make out his or her claim through the testimony of others as well as other evidence that goes to the issue,⁸ issue, the Complainant here did not present evidence sufficient to establish her claims. To prevail a Complainant's case must be supported by substantial evidence, more than a mere trace or suspicion. 2 Pa. C.S. Section 704; *Norfolk Western, supra*. There was scant evidentiary support for Complainant's contention that installation of a Smart Meter at her home would be unreasonable or unsafe. Accordingly, the Complainant cannot prevail.

Act 129

When remanding this matter, the Commission directed a hearing to address the safety allegations of Ms. Frompovich. It is simply noted here that Ms. Frompovich contended that by disallowing an "opt-out" of Smart Meters, the Commission misinterpreted, overreached and did not follow the legislative intent of Act 129.

A plain reading of the statute may suggest that there is an "opt-in" or an "opt out" available. *See* 66 Pa.C.S. § 2807(f). However, the Commission has ruled that there is no provision in the Code, the Commission's Regulations or Orders that allows a PECO customer to "opt-out" of smart meter installation. *See Maria Povacz v. PECO Energy Company*, Docket No. C-2012-2317176 (Order adopted January 24, 2013). Moreover, the Commonwealth Court has held that federal law does not preempt the Commission's interpretation. *See Antonio Romeo v PUC*, 498 CD 2016.

The prevailing evidence did not support the claims presented by Ms. Frompovich. Accordingly, the claims are denied and the Complaint will be dismissed.

CONCLUSIONS OF LAW

⁸ *Romeo v. Pa. PUC*, 154 A.3d 422 (Pa. Commw. Ct. 2017),

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

2. The complainant has not met her burden of proof of establishing an offense in violation of the Public Utility Code, the Commission's regulations or an outstanding order of the Commission. 66 Pa.C.S. § 701.

3. The Complainant must establish her case by a preponderance of the evidence. *Samuel J. Lansberry, Inc. v. Pa. Pub. Util. Comm'n*, 578 A.2d 600 (Pa.Cmwlth. 1990), alloc. den., 602 A.2d 863 (Pa. 1992).

4. Utility companies are required to furnish and maintain adequate, efficient, safe, and reasonable service and facilities). 66 Pa.C.S. § 1501.

5. PECO did not provide Complainant with unsafe or unreasonable service in violation of 66 Pa.C.S. § 1501.

