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May 16, 2018

VIA ELECTRONIC FILING

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor North
P.O. Box 3265
Harrisburg, PA 17105-3265

Re: John Kline v. PPL Electric Utilities Corporation
Docket No. C-2017-2621072

Dear Secretary Chiavetta:

Enclosed for filing is the Main Brief of PPL Electric Utilities Corporation in the above-referenced proceeding. Copies will be provided as indicated on the Certificate of Service.

Respectfully submitted,

Devin Ryan

DTR/jl
Enclosures

cc: Honorable Elizabeth Barnes
Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

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Date: May 16, 2018



Devin T. Ryan

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

| | | |
|-------------------------------------|---|---------------------------|
| John Kline, | : | |
| | : | |
| Complainant, | : | |
| | : | |
| v. | : | Docket No. C-2017-2621072 |
| | : | |
| PPL Electric Utilities Corporation, | : | |
| | : | |
| Respondent. | : | |

**MAIN BRIEF OF
PPL ELECTRIC UTILITIES CORPORATION**

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I. INTRODUCTION

On August 24, 2017, PPL Electric Utilities Corporation (“PPL Electric” or the “Company”) was served with the above-captioned Formal Complaint filed by John Kline (“Complainant”) with the Pennsylvania Public Utility Commission (“Commission”). In his Complaint, the Complainant contests PPL Electric’s planned installation of a new automated metering infrastructure (“AMI”) meter at his property, 5611 Stradford Drive, Harrisburg, Pennsylvania.

As explained in this Main Brief, the Complainant failed to sustain his burden of proof that installing the new AMI meter on his property would constitute a violation of the Public Utility Code or any Commission regulation or order. Therefore, the Commission should dismiss the Complaint in its entirety and with prejudice.

II. STATEMENT OF THE CASE

On August 24, 2017, PPL Electric was served with the above-captioned Formal Complaint filed by the Complainant.

On September 13, 2017, PPL Electric filed its Answer to the Complaint.

On October 3, 2017, a Notice was issued scheduling a telephonic hearing for January 31, 2018, before Administrative Law Judge Elizabeth H. Barnes (the “ALJ”).

On October 4, 2017, the ALJ issued the First Prehearing Order, which set forth certain procedural rules in this proceeding.

On December 18, 2017, PPL Electric filed a Motion for Admission Pro Hac Vice of Curtis S. Renner, Esquire, as additional counsel on behalf of the Company.

On December 21, 2017, PPL Electric filed a letter requesting that the January 31, 2018 hearing be rescheduled for March 29, 2018, because the Company's expert witnesses were unavailable for the hearing on January 31, 2018.

On December 22, 2017, the ALJ issued the Second Prehearing Order, which, among other things, rescheduled the evidentiary hearing for March 29, 2018, and directed the parties to exchange all exhibits, reports, and statements by March 15, 2018.

On January 8, 2018, the ALJ issued an Interim Order granting the Motion for Admission Pro Hac Vice.

On February 14, 2018, PPL Electric filed a Notice and Withdrawal of Appearance.

On February 20, 2018, PPL Electric filed a letter requesting that any expert testimony and exhibits be presented in written form in advance of the hearing and exchanged by the parties on or before March 15, 2018.

On March 15, 2018, PPL Electric and the Complainant exchanged their exhibits, reports, and statements.

On March 26, 2018, the Complainant sent additional exhibits (*i.e.*, Complainant's Exhibits CCC through FFF) via email to PPL Electric.

On March 27, 2018, the Complainant sent additional exhibits (*i.e.*, Complainant's Exhibits GGG and HHH) via email to PPL Electric.

On March 28, 2018, PPL Electric filed a Motion in Limine to exclude the Complainant's exhibits.

The parties engaged in discovery at various points in the proceeding before the evidentiary hearing.

On March 29, 2018, the telephonic evidentiary hearing was held as scheduled at 10:00 AM.

On March 30, 2018, the ALJ issued a Briefing Order setting forth requirements for the briefs to be submitted in this proceeding.

III. QUESTIONS PRESENTED

1. Whether the Complainant has failed to sustain his burden of proof that PPL Electric's installation of a new AMI meter at his premises would violate the Public Utility Code, a Commission order, or a Commission regulation.

Suggested answer: *in the affirmative.*

2. Whether the Company has a legal right to terminate a customer's service if it is denied reasonable access to the customers' premises to replace the Company-owned meter.

Suggested answer: *in the affirmative.*

IV. LEGAL STANDARDS

A. BURDEN OF PROOF

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

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

If the party seeking a rule or order from the Commission sets forth a *prima facie* case, then the burden shifts to the opponent. *MacDonald v. Pa. R.R. Co.*, 348 Pa. 558, 36 A.2d 492 (1944). Establishing a *prima facie* case requires either evidence sufficient to make a finding of fact permissible or evidence to create a presumption against an opponent which, if not met, results in an obligatory decision for the proponent. Once a *prima facie* case has been established, if contrary evidence is not presented, there is no requirement that the party seeking a rule or order from the Commission must produce additional evidence to sustain its burden of proof. See *Replegle v. Pa. Elec. Co.*, 54 Pa. PUC 528, 1980 Pa. PUC LEXIS 20 (Order entered Oct. 9, 1980); see also *Dist. of Columbia's Appeal*, 21 A.2d 883 (Pa. 1941); *Application of Pennsylvania-American Water Co. for Approval of the Right To Offer, Render, Furnish or Supply Water Serv. to the Pub. in Additional Portions Of Mahoning Twp., Lawrence Cnty., Pa.*, Docket No. A-212285F0148, 2008 Pa. PUC LEXIS 874 (Order entered Oct. 29, 2008).¹

In addition, a person does not sustain his or her burden of proof in an electric and magnetic field exposure case when the record evidence, “taken as a whole, leads to the ultimate finding and conclusion that the scientific studies at present are inconclusive.” *Letter of Notification of Phila. Elec. Co. Relative to the Reconstructing and Rebuilding of the Existing 138 kV Line to Operate as the Woodbourne-Heaton 230 kV Line in Montgomery and Bucks Cntys.*,

¹ In addition, any finding of fact necessary to support an adjudication of the Commission must be based upon substantial evidence. *Met-Ed Indus. Users Grp. v. Pa. PUC*, 960 A.2d 189, 193 n.2 (Pa. Cmwlth. 2008) (citing 2 Pa.C.S. § 704). Substantial evidence is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. *Borough of E. McKeesport v. Special/Temporary Civil Serv. Comm'n*, 942 A.2d 274, 281 n.9 (Pa. Cmwlth. 2008) (citation omitted). Although substantial evidence must be “more than a scintilla and must do more than create a suspicion of the existence of the fact to be established,” *Kyu Son Yi v. State Bd. of Veterinary Med.*, 960 A.2d 864, 874 (Pa. Cmwlth. 2008) (citation omitted), the “presence of conflicting evidence in the record does not mean that substantial evidence is lacking.” *Allied Mech. and Elec., Inc. v. Pa. Prevailing Wage Appeals Bd.*, 923 A.2d 1220, 1228 (Pa. Cmwlth. 2007) (citation omitted).

1992 Pa. PUC Lexis 160, at *210-11 (June 29, 1992) (Initial Decision) (“*Woodbourne-Heaton*”). Rather, the person must demonstrate by a preponderance of the evidence that such exposure actually causes adverse health effects. *Id.* at *211. Specifically, in AMI meter-related matters, the Commission has held that “[t]he Complainant will have the burden of proof during the proceeding to demonstrate, by a preponderance of the evidence, that [the utility] is responsible or accountable for the problem described in the Complaint.” *Kreider v. PECO Energy Co.*, Docket No. P-2015-2495064, p. 18 (Order entered Sept. 3, 2015); *see also Romeo v. Pa. PUC*, 154 A.3d 422, 429 (Pa. Cmwlth. 2017) (finding that the smart meter complainant should have a hearing to try to prove his claim through “the testimony of others as well as other evidence that goes to that issue”).

B. APPLICABLE LEGAL STANDARDS

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

Section 1501 of the Public Utility Code states, in pertinent part, that:

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

and regulations governing the conditions under which it shall be required to render service. . . .

Id. § 1501. The Commission has exclusive jurisdiction to adjudicate “issues involving the reasonableness, adequacy, and sufficiency” of a public utility’s facilities and services. *See Elkin v. Bell of Pa.*, 420 A.2d 371, 374 (Pa. 1980) (citations omitted).

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

V. SUMMARY OF ARGUMENT

The Complaint should be denied in its entirety and with prejudice because the Complainant has failed to sustain his burden of proof that installing the new AMI meter would violate the Public Utility Code or any Commission regulation or order.

PPL Electric is legally required to install new AMI meters for all of its customers in accordance with Act 129 and Commission orders. The type of meter currently installed on the Complainant’s property was declared by the Commission not to be compliant with Act 129 and the Commission’s *Smart Meter Implementation Order*. Further, nothing in Act 129, the Commission’s orders, or PPL Electric’s Commission-approved Smart Meter Plan allows a customer to “opt-out” of the new AMI meter.

In addition, installing the new AMI meter would not constitute unsafe and unreasonable service. First, the Complainant has failed to demonstrate that the new AMI meter causes, contributes to, or exacerbates an illness. The Complainant did not present any expert medical or scientific testimony to support his claim that the AMI meters present a risk to human health generally or to him specifically. The Complainant submitted a number of hearsay documents as exhibits to try to prove that the new AMI meters cause adverse health effects, but those documents are not credible or competent evidence in support of his claims. None of them can support a finding of fact in this case because they were properly objected to by the Company as hearsay, they are unreliable, and they lack scientific merit.

Second, the Company's expert witnesses offered thorough and persuasive testimony that: (1) there is no reliable scientific basis to support the Complainant's claim that very low, non-thermal levels of Radio Frequency ("RF") fields from the Company's meters can or will cause any biological effects; and (2) there is no reliable medical basis to conclude that RF fields from the AMI meters cause, contribute to, or exacerbate any disease, symptoms, or illness alleged by the Complainant. Indeed, the levels of RF fields from the AMI meters being used by PPL Electric are 98,000 times lower than the levels of RF fields the Federal Communications Commission ("FCC") has designated as safe for long-term public exposures.

Third, the Complainant has failed to show that the new AMI meter is otherwise unsafe and would cause fires. The meter is composed of fire-resistant materials and has alarms designed to alert the Company if the meter's temperature reaches a certain level. The Company also has established protocols to dispatch personnel if there is an issue with the meter's temperature. Therefore, the new AMI meter can actually help prevent fires.

Fourth, the Complainant's privacy and cybersecurity concerns are unfounded. The Company collects total usage at the premises, and the usage of any individual appliance or device is indistinguishable from any other one. Through the new AMI meter, PPL Electric only collects the electric usage data required by Act 129 and the Commission's orders and about significant events, such as outages, voltage, heat alarms, and meter tampering alerts. Furthermore, PPL Electric takes the security of its customers' information very seriously and takes several steps to prevent such data from public disclosure, including encrypting the data and adhering to strict cybersecurity protocols.

Finally, PPL Electric has a legal right under the Public Utility Code, the Commission's regulations, and the Company's Commission-approved tariff to terminate a customer's service if the Company is denied reasonable access to the premises to replace the meter. The Complainant placed a lock on the meter, which prevents the Company access to the meter. Therefore, although the Company never sent the Complainant a notice of termination, its correspondence directing the Complainant to remove the lock was not improper.

For these reasons, and as further explained in detail below, the Commission should deny the Complaint with prejudice.

VI. ARGUMENT

A. BACKGROUND

On November 14, 2008, Act 129 of 2008 became effective and required electric distribution companies ("EDCs"), such as PPL Electric, to file smart meter technology procurement and installation plans with the Commission within nine months. On June 24, 2009, the Commission issued its *Smart Meter Implementation Order*, which set forth requirements for the smart meter plans and procedures for the submission, review, and approval of the smart

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

On August 14, 2009, PPL Electric filed its initial Smart Meter Plan in compliance with Act 129 and the Commission’s *Smart Meter Implementation Order*. As explained in that proceeding, the Company previously deployed AMI meters and metering system between 2002 and 2004, which were a part of a power line carrier (“PLC”) metering system. See *Petition of PPL Electric Utilities Corporation for Approval of Smart Meter Technology Procurement and Installation Plan*, Docket No. M-2009-2123945, p. 5 (Order entered June 24, 2010) (“*2010 Smart Meter Order*”). The Company contended that its existing PLC system met the requirements under Act 129 and the *Smart Meter Implementation Order*. However, the Commission ultimately held that PPL Electric’s existing PLC meters did not fully meet these requirements. See *2010 Smart Meter Order*, p. 24. Accordingly, the Commission directed PPL Electric to develop a new Smart Meter Plan that would deploy a new AMI technology that fully meets these requirements. See *id.*

On June 30, 2014, PPL Electric filed its new Smart Meter Plan intended to comply with all the requirements of Act 129 and the Commission’s *Smart Meter Implementation Order*. (See PPL Electric Exhibit No. 3) To meet those requirements, the Company proposed RF Mesh meters and metering system. PPL Electric selected this technology because the Company determined that the RF Mesh system would support the 15 capabilities required by Act 129 and the *Smart Meter Implementation Order*. (See PPL Electric Exhibit No. 3, pp. 5-6, 20-22) The RF Mesh system allows the Company to receive data from the customer’s meter wirelessly, unlike PPL Electric’s previous powerline carrier (“PLC”) system that used the customer’s actual wires. (Tr. 84-86) The individual RF Mesh meters are used as relay points to transmit data back

to PPL Electric. (Tr. 86) Under the Smart Meter Plan, the RF Mesh meters would be deployed between 2017 and 2019 for all of PPL Electric's 1.4 million customers. (PPL Electric Exhibit No. 3, pp. 3, 32; Tr. 85)

On September 3, 2015, the Commission entered its Opinion and Order approving the new Smart Meter Plan, as modified, finding that unlike the Company's existing PLC meters, the new RF Mesh meters meet the requirements of Act 129 and the Commission's *Smart Meter Implementation Order*. See *Petition of PPL Electric Utilities Corp. for Approval of Its Smart Meter Technology Procurement and Installation Plan*, Docket No. M-2014-2430781 (Order Entered Sept. 3, 2015) ("2015 Smart Meter Order").

The instant proceeding concerns PPL Electric's installation of the new RF Mesh meter pursuant to Act 129, *Smart Meter Implementation Order*, and Commission-approved Smart Meter Plan. On May 1, 2017, PPL Electric sent the Complainant a letter notifying him that it intended to install the new RF Mesh meter on his property within approximately the next three weeks. (PPL Electric Exhibit No. 2; Tr. 52) Specifically, the RF Mesh meter to be installed for the Complainant's residential account is the Landis+Gyr Focus AX-SD meter. (Tr. 85) The Complainant then initiated the instant Formal Complaint proceeding to contest PPL Electric's planned installation of the new AMI meter for his account.

B. THE COMPLAINANT HAS FAILED TO SUSTAIN HIS BURDEN OF PROOF

The Complainant has failed to sustain his burden of proof that PPL Electric would violate the Public Utility Code or any Commission regulation or order by installing the new AMI meter. PPL Electric is legally required to install the new AMI meter by Act 129 and several Commission orders, and the Complainant has failed to prove that installing the meter would

constitute unsafe and unreasonable service in violation of 66 Pa. C.S. § 1501. Therefore, the Complaint should be denied in its entirety and with prejudice.

1. PPL Electric's Installation of the New AMI Meter Is Required by Law

PPL Electric is legally required to install the RF Mesh meter on the Complainant's property by Act 129 and Commission orders. Section 2807(f) of the Public Utility Code prescribes that EDCs, like PPL Electric, must file smart meter plans and "**shall** furnish smart meter technology" in any of the following situations: (1) "[u]pon request from a customer that agrees to pay the cost of the smart meter at the time of the request"; (2) "[i]n new building construction"; and (3) "[i]n accordance with a depreciation schedule not to exceed 15 years." 66 Pa. C.S. § 2807(f)(1)-(2) (emphasis added). In interpreting the smart meter provisions of Act 129, the Commission declared that EDCs must "deploy smart meters system-wide" because of the requirement that smart meters be deployed "in accordance with a depreciation schedule not to exceed 15 years." *Smart Meter Implementation Order*, p. 14. The Commission also "recognize[d] that deployment of smart meters on a piecemeal or individual basis could involve greater costs than a systematic system-wide deployment." *Id.*, pp. 9, 14.² Therefore, PPL Electric must install the new smart meters for every customer in its service territory, including the Complainant.

In addition, nothing in Act 129 permits a customer to "opt-out" of a smart meter installation. Indeed, the Commission previously has found in several cases that Act 129 contains no such opt-out language. *See, e.g., Starr v. PECO Energy Co.*, Docket No. C-2015-2516061, p.

² *See also Springirth v. Nat'l Fuel Gas Distrib. Corp.*, 1991 Pa. PUC LEXIS 44, at *1-3, 6, 16-17 (Order entered Apr. 12, 1991) (dismissing complaint of customer seeking to make installation of automated meter reading devices optional, noting that the Commission previously found in another case that "[t]he customer should not be given the option of refusing installation of equipment" because "[t]o permit customer discretion in this area would be inefficient and uneconomical") (quoting *Stenker v. The York Water Co.*, Docket No. C-871318 (Order entered July 27, 1987)).

11 (Order Entered Sept. 1, 2016) (footnote omitted). Specifically, in *Starr*, the Commission observed that it has “rejected similar claims that the installation of smart meters is not mandatory or that an opt-out is permissible under Act 129.” *Id.* Although bills have been proposed in the General Assembly to add such an opt-out (see, e.g., House Bill 1564 of 2017-2018 Session), they have not been enacted.³ Thus, a customer cannot opt-out of the AMI meter installation under Act 129.

Moreover, PPL Electric must comply with the relevant Commission orders directing the Company to deploy the new AMI meters. As mentioned previously, the Commission determined that the Company’s existing PLC meters are not compliant with Act 129 and the Commission’s *Smart Meter Implementation Order*. See *2010 Smart Meter Order*, p. 24. Under the Company’s Commission-approved Smart Meter Plan, PPL Electric must replace all of the PLC meters with the RF Mesh meters, which the Commission declared as meeting all of the requirements of Act 129 and the Commission’s *Smart Meter Implementation Order*. See *2015 Smart Meter Order*, p. 24. PPL Electric is not permitted to install any other type of meter under its Smart Meter Plan and cannot leave the existing, non-compliant PLC meter in place. (Tr. 85-86) Therefore, if the Company does not install the new RF Mesh meter on the Complainant’s residence in accordance with the Commission-approved deployment schedule,⁴ PPL Electric may violate the

³ The Complainant also submitted proposed legislation from Oklahoma as Complainant’s Exhibit O. As explained in PPL Electric’s Motion in Limine, the proposed legislation has not been passed by the Oklahoma legislature and has no bearing on Pennsylvania law. (PPL Electric Motion in Limine ¶ 16)

⁴ Although Act 129 uses the language “not to exceed 15 years,” the Commission encouraged EDCs “to expedite the deployment process if it will provide increased customer benefits in a cost effective manner.” *Smart Meter Implementation Order*, p. 14. The Commission also recognized that system-wide deployment of smart meters would involve “more than just the meter hardware attached to the customer’s premises.” *Id.*, p. 6. EDCs would need time to select the technology, train personnel, and deploy the entire AMI network, including any associated hardware and software. *Id.* For PPL Electric, the Company’s Commission-approved Smart Meter Plan states that the smart meters are to be deployed system-wide from 2017 through 2019 with additional actions beyond 2019 to get the full network up and running. (PPL Electric Exhibit No. 3, pp. 3, 32; Tr. 85) Notably, in approving the Company’s Smart Meter Plan, the Commission found that the deployment of PPL Electric’s new RF Mesh meters “should be done sooner rather than later.” *2015 Smart Meter Order*, p. 36.

Commission's *2010 Smart Meter Order*, *2015 Smart Meter Order*, and *Smart Meter Implementation Order*.

For these reasons, PPL Electric must install the new RF Mesh meter on the Complainant's residence or else the Company may violate Section 2807(f) of the Public Utility Code and the Commission's *2010 Smart Meter Order*, *2015 Smart Meter Order*, and *Smart Meter Implementation Order*.

2. Installing the New AMI Meter Would Not Constitute Unsafe or Unreasonable Service

The Complainant has failed to meet his burden of proof that installing the new AMI meter would constitute unsafe or unreasonable service. In this proceeding, the Complainant generally has alleged that the new AMI meter causes adverse health effects, causes fires, and raises privacy and cybersecurity concerns. In support of his various claims, the Complainant personally testified and presented several written exhibits. (*See, e.g.*, Complainant's Exhibits 1, D, L through N2, P through R, Z, 2A, 2B, 2F, 2I, 2J, 2T through 2W, 2Z, 3C, 3E, 3G, and 3H; Tr. 13-48) No other persons testified on the Complainant's behalf.

As explained in more detail below, the Complainant's claims are unsubstantiated, unreliable, and almost entirely predicated on exhibits that are hearsay and wholly lack merit. In contrast, PPL Electric presented substantial, credible, and reliable evidence that wholly rebutted the Complainant's contentions. Therefore, the Complainant has failed to meet his burden of proof that installing PPL Electric's new AMI meter would be unsafe or unreasonable service in violation of Section 1501 of the Public Utility Code.

a. The Complainant Has Failed to Demonstrate that the New AMI Meter Causes, Contributes to, or Exacerbates Any Adverse Health Effect

The Complainant contends that PPL Electric should not install the new AMI meter because he has concerns that there could be health risks due to radio frequency (“RF”) fields from the new meter. Although he raises concerns about health risks generally, the Complainant does not claim that he or anyone else living in his residence has a medical condition caused by or that could be made worse by RF fields from the new AMI meter.

The Complainant did not offer any expert scientific or medical testimony in support of his allegations about health risks from RF fields. Instead, all of his evidence on this issue consists of hearsay documents from anti-smart meter and anti-EMF websites, articles, and other documents that are not competent evidence of a link between adverse health effects and RF fields. (*See, e.g.*, Complainant’s Exhibits 1, L through N2, P through R, Z, 2A, 2B, 2F, 2I, 2J, 2T through 2W, 2Z, 3C, 3E, 3G, and 3H) As explained in more detail below, the Complainant’s testimony and exhibits wholly fail to sustain his burden of proof that the new AMI meter causes, contributes to, or exacerbates any adverse health effects for several reasons.

i. There Is No Reliable Scientific Basis to Support the Complainant’s Allegations that the Very Low Non-Thermal RF from AMI Meters Cause Biological Effects

There is no reliable scientific basis to support the Complainant’s claim that very low, non-thermal (non-heating) levels of RF fields from the Company’s AMI meters can or will cause any biological effects.

Dr. Christopher Davis is a highly experienced scientific researcher and teacher in Physics, Electrical Engineering, Electromagnetics, and Radio Frequency Electromagnetics.⁵ Dr.

⁵ Dr. Davis is the Minta Martin Endowed Professor of Engineering and Professor of Electrical and Computer Engineering at the University of Maryland in College Park, Maryland. (PPL Electric Statement No. 1, p.

Davis has a Ph.D. in Physics and is a full Professor with an endowed Chair at the University of Maryland, where for over 30 years he has taught Physics, Electrical Engineering, Electromagnetics, and RF Electromagnetics to undergraduate and graduate students. In addition to his teaching, Dr. Davis is an active scientific researcher in the fields of Physics, Biophysics, Electrical Engineering, Bioelectromagnetics and RF Bioelectromagnetics. He has conducted many scientific studies in these fields and has published over 250 studies in peer-reviewed scientific journals. (PPL Electric Statement No. 1, p. 1, line 12 to p. 2, line 19) In particular, he has conducted a substantial amount of research on RF fields of the type produced by the AMI meters being used by the Company. (PPL Electric Statement No. 1, p. 3, lines 5-6)

Dr. Davis has served on expert committees that have evaluated the scientific research on RF fields, including the Institute of Electrical and Electronic Engineers (“IEEE”) Committee on Man and Radiation (“COMAR”) and as chair of the Subcommittee on Radio Frequency Fields, which consists of experts who examine the scientific research on RF fields and evaluate the IEEE exposure guidelines. He has also provided expert advice on electromagnetic fields, including RF fields dosimetry and proposed mechanisms for biological effects other than heating, to the United Kingdom Health Protection Agency, the U.S. National Institutes of Health and the U.S. Food and Drug Administration's Center for Devices and Radiological Health. Dr. Davis is a Fellow of the IEEE and a Fellow of the Institute of Physics. (PPL Electric Statement No. 1, p. 3, line 7 to p. 4, line 22)

Dr. Davis explained that RF fields are part of the lower energy, non-ionizing portion of the electromagnetic spectrum, which consists of lower frequency signals that do not have enough

1, lines 9-10) He earned a BA with Honors in Natural Sciences from Trinity College at Cambridge University and a Ph.D. in Physics at the University of Manchester. (PPL Electric Statement No. 1, p. 1, lines 12-18) In this proceeding, Dr. Davis was certified as an expert in physics, biophysics, chemistry, electrical engineering, electromagnetics, bioelectromagnetics, radiofrequency bioelectromagnetics, and dosimetry. (Tr. 104)

energy to break chemical bonds in cells or DNA. (PPL Electric Statement No. 1, p. 5, line 15 to p. 6, line 6; PPL Electric Exhibit CD1) RF fields come from many sources in our everyday environments, including AM/FM radio, television broadcast, cell phones and their communication networks, portable phones, garage door openers and wifi networks. (PPL Electric Statement No. 1, p. 5, line 22 to p. 6, line 4; p. 11, lines 6-10; PPL Electric Exhibit CD1)

There is nothing unusual about the RF fields from the AMI meters being deployed by the Company. (PPL Electric Statement No. 1, p. 11, lines 6-10) Dr. Davis testified that the FCC has determined safe public exposure levels for RF fields from devices that transmit RF signals, such as the AMI meters. (PPL Electric Statement No. 1, p. 8, line 13-15; Tr. 110-11) The FCC safe public exposure limits are based on evaluations of the body of scientific research on RF fields and were adopted in consultation with other federal agencies, including the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA). (PPL Electric Statement No. 1, p. 8, line 15 to p. 9, line 3) The FCC continues to coordinate with the agencies and to consider whether new scientific research shows any adverse effects from RF fields. (PPL Electric Statement No. 1, p. 9, lines 3-6)

Based on the engineering specifications for the Landis & Gyr AMI meter being deployed by the Company, Dr. Davis calculated that the levels of RF fields from the AMI meters are **98,000 times lower** than the RF exposure safety limits established by the FCC. (PPL Electric Statement No. 1, p. 10, lines 8-12; *see* PPL Electric Exhibit CD2) As a result, Dr. Davis found that “the RF field levels from the AMI meters being used by PPL Electric more than comply with the applicable FCC RF exposure limit.” (PPL Electric Statement No. 1, p. 10, lines 8-10) Moreover, the RF signals from the AMI meter are of very short duration and will occur for only a total of 84 seconds over a 24-hour period. (PPL Electric Statement No. 1, p. 7, lines 21-23)

Dr. Davis also testified that there are many sources of RF signals in the everyday environment and the RF fields from the AMI meter are much lower than from other typical sources. For example, RF fields from using cell phones can be over 260,000 times higher than the RF fields from the AMI meter, and RF exposures from microwave ovens can be over 820,000 times higher. (PPL Electric Statement No. 1, p. 11, lines 14-21) Even 30 feet away from a person using a cell phone, the RF fields are 3 times higher than from the AMI meter. (PPL Electric Statement No. 1, p. 11, lines 16-17) The Complainant reported that he used his cell phone for 8,580 minutes over a 5-month period. (Tr. 43-44; PPL Electric Exhibit No. 10) The RF field exposure from this amount of cell phone usage is equivalent to 1,692 years of continuous RF exposure at a distance of approximately 1 meter from the AMI meter. (PPL Electric Statement No. 1, p. 13, lines 4-7)

In addition, the existing background levels of RF fields at Complainant's residence are many times higher than the fields from the AMI meter. Dr. Davis testified that there are seven television broadcast towers with a 50 mile radius of Complainant's location. (PPL Electric Statement No. 1, p. 13, lines 8-9) Based on the locations of each tower and their RF power outputs, the constant background level of RF fields at Complainant's residence are **20 times higher** than the RF signals from the AMI meter. (PPL Electric Statement No. 1, p. 12, lines 4-11; see PPL Electric Exhibit CD-5) Therefore, the un rebutted expert testimony about RF field levels in this case is that the existing and continuous background level of RF fields at Complainant's residence is many times higher than the very low and short duration RF signals from the AMI meter.

In this proceeding, Dr. Davis was recognized as an expert in Physics, Biophysics, Chemistry, Electrical Engineering, Electromagnetics, Bioelectromagnetics, and Radio Frequency

Bioelectromagnetics and Dosimetry. Based on his education, training and experience in those fields of expertise, Dr. Davis concluded overall that:

1) The levels of RF fields from the AMI meters being used by PPL Electric are extremely low (98,000 times lower than the RF exposure safety limits established by the FCC). (PPL Electric Statement No. 1, p. 13, lines 18-20)

2) These extremely low level RF fields are many times lower than the RF fields people are commonly encounter from everyday sources, including the background levels of RF fields at Complainant's residence. (PPL Electric Statement No. 1, p. 13, lines 20-22)

3) There is no reliable scientific basis in physics, biophysics, bioelectromagnetics or RF bioelectromagnetics to conclude that the very low levels of RF fields from the AMI meters being deployed by the Company can or will cause any adverse thermal or non-thermal biological effects in people. (PPL Electric Statement No. 1, p. 14, lines 1-4)

ii. There Is No Reliable Medical Basis to Support the Complainant's Allegations that the AMI Meters Cause Adverse Health Effects

There is no reliable medical basis to conclude that the new smart meter causes, contributes to, or exacerbates any illness, disease, or symptoms alleged by the Complainant.

Dr. Mark Israel⁶ is an eminent physician and medical researcher. Over the course of his 40 year medical career, he has been responsible for diagnosing and treating patients, conducting medical and biological research, and directing a major medical care center. He is Professor of Medicine, Pediatrics, and Molecular and Systems Biology at the Dartmouth Medical School and the Executive Director of the Israel Cancer Research Fund in New York, an international

⁶ Dr. Israel received his undergraduate degree from Hamilton College and his medical degree from the Albert Einstein College of Medicine. He completed his medical training at Harvard Medical School and the National Institutes of Health. (PPL Electric Statement No. 2, p. 1, lines 16-23) Dr. Israel was certified as an expert in medicine and medical research, in particular as related to RF fields and health. (Tr. 134)

charitable fund for medical and scientific research programs. Previously, Dr. Israel was the Director of the Cancer Center at Dartmouth Medical School and the Dartmouth Hitchcock Medical Center. As Director of the Cancer Center, Dr. Israel oversaw a major medical health care facility providing care to more than 5,000 new patients each year and he managed research programs with an annual budget of more than \$250 million. (PPL Electric Statement No. 2, p. 1, lines 5-14; p. 2, line 17 to p. 3, line 2)

Prior to becoming Director of the Cancer Center, Dr. Israel treated patients, taught medical students and directed a medical research laboratory at the University of California at San Francisco (“UCSF”), where he also directed the Preuss Laboratory of Molecular Neuro-oncology. Before joining UCSF, Dr. Israel spent 14 years conducting research and treating patients at the US National Institutes of Health (“NIH”), where he was the Head of the Molecular Genetics Section of the Pediatrics Branch at the National Cancer Institute and also worked in the National Institute of Allergy and Infectious Diseases. His research at the NIH identified specific genes responsible for the cause of certain childhood cancers and contributed to improvements in the diagnosis and treatment of childhood cancer, as well as early developments in the field of cancer gene therapy. (PPL Electric Statement No. 2, p. 2, lines 3-16)

Dr. Israel is board certified and licensed to practice medicine. (PPL Electric Statement No. 2, p. 3, lines 3-6) He has conducted medical research for 40 years in a wide variety of areas, including systems biology, biochemistry, cell biology, cancer, molecular biology, and molecular genetics. He has published over 245 medical research studies in leading peer-reviewed scientific journals. Dr. Israel also has taught medicine and science for more than 30 years to medical students, graduate students, interns, residents, and practicing physicians subjects in a number of fields, including endocrinology, immunology, hematology, neurology, cardiology, biochemistry,

cell biology, genetics, molecular genetics, medical oncology, and radiation oncology. (PPL Electric Statement No. 2, p. 3, line 9 to p. 4, line 2)

Dr. Israel is an elected Fellow of the American Association for the Advancement of Science, an elected member of the Association of American Physicians, and an elected member of the American Society for Clinical Investigation, each of which is based on peer recognition of the scientific merit of his work and commitment to advancing medical science. He has been asked to provide scientific advice and direction to a number of organizations by serving on their advisory boards, such as the Science Advisory Board for the Yale Cancer Center, which he chaired for almost a decade, and the External Advisory Boards for the Children's Cancer Research Institute at the University of Texas Health Science Center, the University of Nebraska Eppley Cancer Center, the Carbone Cancer Center at the University of Wisconsin, and the National Brain Tumor Society, among others. He also served on the Board of Scientific Counselors for the NCI. During his work at the NCI, he was awarded two U.S. Public Health Service commendation medals. In 1998, he received the Farber Award, which is awarded annually by the American Association of Neurological Surgeons for excellence in cancer research. In 2014, he received the C. Everett Koop Courage Award for the pursuit of evidence-based medicine. (PPL Electric Statement No. 2, p. 5, lines 3-18)

Dr. Israel evaluated scientific research on RF fields and adverse health effects. He testified that he has been systematically examining this research over the past several decades and that many hundreds of studies have been published. (PPL Electric Statement No. 2, p. 6, lines 7-15; p. 7, line 20 to p. 8, line 3) He testified that three groups of controlled laboratory studies on animals "are particularly informative because they address fundamental biological functions that are very sensitive to any disruption: genetics, reproduction, and growth and

development.” (PPL Electric Statement No. 2, p. 8, lines 13-17) Dr. Israel described a number of the studies in these areas which he considered good examples of well-designed and well-conducted studies. These studies found no adverse effects on genetics, fertility, reproduction, growth or development in the animals exposed to RF fields. (PPL Electric Statement No. 2, p. 8, line 17 to p. 9, line 20) Dr. Israel also provided examples of well-conducted animal studies on RF fields and cancer. He testified that these studies, which involved animals with lifetime exposures to RF fields, did not find any increased incidence in cancer in the RF exposed animals compared to non-exposed animals. (PPL Electric Statement No. 2, p. 9, line 13 to p. 10, line 5)

Dr. Israel also noted that claimed symptoms related to EHS are more accurately described as “Idiopathic Environmental Intolerance” (“IEI”), in which “idiopathic” means “cause unknown,” rather than electromagnetic hypersensitivity. (PPL Electric Statement No. 2, p. 11 to p. 12, line 5) (emphasis added) Dr. Israel evaluated the scientific research on IEI and found that “[r]eliable studies dating back to at least 2002 and also recent reviews of the studies by experts and reviews by expert panels of public health authorities have found IEI and the variety of symptoms attributed to it are not caused by exposure to RF fields.” (PPL Electric Statement No. 2, p. 12, lines 8-10) For example, a systematic review of 46 studies involving 1,175 individuals who claimed IEI symptoms found that people claiming IEI symptoms from RF fields could not replicate the claimed effect under controlled laboratory conditions. (PPL Electric Statement No. 2, p. 12, lines 19-23) Another recent study found that people who claimed IEI symptoms from RF fields reported lower levels of well-being when they knew they were exposed to RF fields, but when they did not know if they were being exposed, their reports of symptoms were not associated with RF fields. (PPL Electric Statement No. 2, p. 13, lines 3-11) That study concluded that “it is IEI-EMF individuals’ belief that exposure to RF EMFs will cause harm,

rather than actual exposure itself, that results in the presence of symptoms in IEI-EMF individuals.” (PPL Electric Statement No. 2, p. 13, lines 9-11)

In addition, the research on IEI has been evaluated by credible public health entities and expert groups, including the United Kingdom Health Protection Agency (2012), the Royal Society of Canada (2013), the New Zealand Ministry of Health (2015), and the European Commission’s Scientific Committee on Emerging and Newly Identified Health Risks (2015). Based on their reviews of the scientific research, these entities concluded there is no reliable scientific evidence that exposure to RF fields causes claimed IEI symptoms. (PPL Electric Statement No. 2, p. 13, line 15 to p. 14, line 10; PPL Electric Exhibit MI3) The World Health Organization has found that “There is little scientific evidence to support the idea of electromagnetic hypersensitivity.” (PPL Electric Statement No. 2, p. 14, lines 5-7) These findings from public health entities and expert panels show that the theory of IEI caused by exposure to RF fields has not been generally accepted in the medical community. (PPL Electric Statement No. 2, p. 14, lines 7-9)

Based on the body of scientific research showing no consistent and reproducible effects from RF fields on cancer and other adverse health effects, the World Health Organization (“WHO”) has concluded that “no adverse health effects have been established as being caused by mobile phone use.” (PPL Electric Statement No. 2, p. 10, lines 6-9) A number of other public health authorities, including agencies in the Canada, the U.K., Sweden, Norway, the Netherlands, and New Zealand, among others, have recently reached similar conclusions. (PPL Electric Statement No. 2, p. 10, lines 12-22; PPL Electric Exhibit MI1) In addition, several U.S. state public health authorities and Public Utility Commissions have investigated claims about health effects from smart meters. These include the Maine Center for Disease Control (2010), the

Vermont Department of Health (2012), Arizona Department of Health, Office of Environmental Health (2014), and North Carolina Department of Health and Human Services, Division of Public Health, Occupational and Environmental Epidemiology Branch (2015). These evaluations by State public health authorities and Public Utility Commissions conclude that RF fields from smart meters do not pose any public health risk. (PPL Electric Statement No. 2, p. 11, lines 1-11; PPL Electric Exhibit MI2)

Dr. Israel also examined the scientific research relevant to the long list of medical conditions and illnesses that the Complainant claims are caused by exposure to RF fields. Dr. Israel testified that this list of claimed conditions was not an accurate statement of the science and that there was no reliable scientific basis to conclude that RF fields caused any of these conditions or symptoms. (Tr. 147-48) Dr. Israel also testified that the Complainant's many exhibits downloaded from the internet, including activist documents such as the International Scientist Appeal and other materials, were not scientific studies and did not provide a reliable scientific basis to conclude that RF fields from AMI meters would cause or contribute to adverse health effects. (Tr. 135-46; PPL Electric Statement No. 2, p. 14, line 11 to p. 15, line 22) (see also, discussion of individual exhibits below)

Overall, as an expert in medicine and medical research, particularly as related to RF fields and health, Dr. Israel found, based on his medical education, training and experience, and his evaluation of the scientific research, and to a reasonable degree of medical certainty, that:

- 1) There is no reliable medical basis to conclude that RF fields from the AMI meters being used by PPL Electric will cause or contribute to the development of illness or disease. (PPL Electric Statement No. 2, p. 16, lines 12-15)

2) There is no reliable medical basis to conclude that RF fields from the AMI meter being used by PPL Electric would cause, contribute to, or exacerbate any of the symptoms claimed by the Complainant, or any other adverse health effects. (PPL Electric Statement No. 2, p. 16, lines 19-21)

iii. The Complainant's Exhibits Cannot Support Any Findings of Fact

In support his allegations that the new AMI meters cause, contribute to, or exacerbate any illnesses, the Complainant submitted and relies on a number of exhibits, such as various documents, reports, articles, excerpts of articles, lists of studies, press releases, and letters. None of these documents can support any findings of fact because they are hearsay and lack scientific and evidentiary merit.

First, the documents should not be relied upon by the ALJ because they are hearsay and are not subject to a hearsay exception. Specifically, the Complainant has presented many exhibits that were not written by him and were offered to prove the truth of the matter asserted. (See Complainant's Exhibits D, F, K through N2, P through R, T, X through Z, 2A, 2B, 2F, 2H 2J, 2S through 2Z, and 3A, 3C, and 3E through 3H; PPL Electric Motion in Limine ¶¶ 16-25) None of the authors of these statements were presented as witnesses to authenticate the veracity of their contents. Therefore, the documents are hearsay.

Under Pennsylvania's "Walker Rule," it is well-established that "[h]earsay evidence, properly objected to, is not competent evidence to support a finding." *Walker v. Unemployment Comp. Bd. of Review*, 367 A.2d 366, 370 (Pa. Cmwlth. 1976) (citations omitted). Even if hearsay evidence is "admitted without objection," the ALJ must give the evidence "its natural probative effect and may only support a finding . . . if it is corroborated by any competent

evidence in the record;” as “a finding of fact based solely on hearsay will not stand.” *Id.* at 370 (citations omitted).⁷

Here, PPL Electric objected to these documents because they are hearsay and not subject to a hearsay exception. (See PPL Electric Motion in Limine ¶¶ 16-25; Tr. 16-23, 28-29). Although these exhibits were admitted into the record,⁸ the exhibits should not be used to support any findings of fact. (Tr. 31-38) Indeed, PPL Electric has a statutory right to cross-examine persons “as may be required for a full and true disclosure of the facts.” 66 Pa. C.S. § 332(c). Because the authors of these hearsay statements did not testify, the Company was denied this right and unable to test the veracity of their statements. It is for this reason such hearsay is generally inadmissible and should not be relied upon in this proceeding.⁹

Moreover, even assuming *arguendo* that the evidence was not properly objected to, the Complainant has presented no “competent evidence” to corroborate those statements. *Walker* at 370. As explained in more detail below, the exhibits contain many flaws and mischaracterizations and cannot be used to form a reliable opinion. Therefore, as the Commission has previously held, “[w]hether the ALJ erred by initially admitting the hearsay evidence is an issue we need not address” because “[e]ven if such evidence can be admitted, it is clear that . . . such evidence may not be given any weight in an administrative proceeding.”

⁷ The “Walker Rule” has been affirmed by the Pennsylvania Supreme Court. *Rox Coal Co. v. Workers’ Comp. Appeal Bd. (Snizaski)*, 570 Pa. 60, 807 A.2d 906 (2002).

⁸ PPL Electric continues to maintain that these exhibits should not have been admitted into the record because they are hearsay and not subject to a hearsay exception.

⁹ The Company notes that expert witnesses can rely on hearsay in forming their opinions, where such material is of a type customarily relied on by experts in their profession. See *Lower Makefield Twp. v. Lands of Dalgewicz*, 4 A.3d 1114, 1122 (Pa. Cmwlth. 2010), *affirmed*, 67 A.3d 772 (Pa. 2013); *Collins v. Cooper*, 746 A.2d 615, 618 (Pa. Super. 2000); *Primavera v. Celotex Corp.*, 608 A.2d 515, 520-21 (Pa. Super. 1992); Pa.R.E. 703. However, the Complainant is not an expert witness, and he presented no expert witnesses, let alone ones who could rely on these materials. Moreover, although hearsay statements, such as articles, studies, and treatises, can be relied upon by expert witnesses in forming their opinions, the substance of those hearsay statements is not permitted to be entered into the record to prove the truth of the matter asserted. See *Klein v. Aronchick*, 85 A.3d 487, 503-04 (Pa. Super. 2014) (citing *Aldridge v. Edmunds*, 750 A.2d 292, 297-98 (Pa. 2000)); *Nigro v. Remington Arms Co.*, 637 A.2d 983, 993 (Pa. Super. 1993) (citations omitted).

Anserphone, Inc. & Elite Answering Serv. v. The Belle Tele. Co. of Pa., 1993 Pa. PUC LEXIS 70, at *29-30 (Order entered April 1, 1993). Thus, the Complainant's hearsay documents cannot support a finding of fact that the new AMI meters cause, contribute to, or exacerbate any illnesses.

Second, the Complainant's exhibits about alleged health effects of RF fields completely lack scientific and evidentiary merit, and should be afforded no weight. Specifically, these exhibits contain the following flaws and mischaracterizations:

- Exhibit D – Charts purporting to show “Recover Act Selections for Smart Grid Investment Grant Awards – by State.”
 - The document is irrelevant because it concerns grants issued to other utilities besides PPL Electric and in other states besides Pennsylvania. The document also lacks authenticity because the document's author was not presented to authenticate the accuracy of the factual statements in the document.
- Exhibit L – A document titled “International Appeal: Scientists Call for Protection from Non-ionizing Electromagnetic Field Exposure.”
 - The exhibit is irrelevant because it does not address RF fields from the AMI meters being used by PPL Electric. The document also lacks authenticity because its authors were not presented to authenticate the accuracy of the statements in the document. Further, the document is inherently unreliable because it is an online petition that represents opinions by anti-EMF/RF advocates, not scientific information. Indeed, both of PPL Electric's expert witnesses testified that the document does not reflect the consensus view on RF fields and health. (Tr. 108, 135-36) Dr. Israel also testified that the exhibit does not provide a reliable scientific basis to reach a conclusion that the RF fields from AMI meters would cause, contribute to, or exacerbate any adverse health effects. (Tr. 136)
- Exhibit M – “NTP Technical Report on the Toxicology and Carcinogenesis Studies in B6C3F1/N Mice Exposed to Whole-body Radio Frequency Radiation at a Frequency (1,900 MHz) and Modulations (GSM and CDMA) Used by Cell Phones”
 - The document is irrelevant because it concerns RF fields from cell phones and does not address RF fields from the AMI meters being used by PPL Electric. Moreover, the document lacks authenticity because its authors were not presented to authenticate the accuracy of the statements in the document. Further, as shown on the document and explained by Dr. Davis, the document is stamped “DRAFT” and “NOT FOR ATTRIBUTION” and states on its cover that “This DRAFT Technical Report is distributed solely for the purpose of predissemination peer review under the applicable information quality guidelines. It has not been formally disseminated by the NTP. It

does not represent and should not be construed to represent NTP determination or policy.” (Complainant’s Exhibit M) (emphasis added); (Tr. 105-07) Dr. Davis also testified that the draft NTP study should not be compared to the RF fields being emitted from the new AMI meter because “the NTP exposure is 3.3 million times higher than what one would experience if one approached PPL’s Smart Meter.” (Tr. 107) (emphasis added)

- Exhibit N1 – August 29, 2013 Letter sent by the American Academy of Pediatrics to the Federal Communications Commission and the U.S. Food and Drug Administration.
 - The exhibit is irrelevant because it addresses RF fields from cell phones and does not address RF fields from the AMI meters being used by PPL Electric. Moreover, the document lacks authenticity because its authors were not presented to authenticate the accuracy of the statements in the document.
- Exhibit N2 – A two-page document titled “The American Academy of Pediatrics Recommendations about Cell Phones, Cell Towers and Wireless” by Environmental Health Trust.
 - The exhibit is irrelevant because it concerns RF fields from cell phones and does not address RF fields from the AMI meters being used by PPL Electric. Furthermore, the document lacks authenticity because its authors were not presented to authenticate the accuracy of the statements in the document. The exhibit also is inherently unreliable because it was prepared by the activist group Environmental Health Trust to look like a document from the American Academy on Pediatrics (“AAP”), but it is not an AAP document. (Tr. 136-37) As Dr. Israel explained, the document is not a scientific study and does not provide a reliable scientific basis to conclude that RF fields from AMI meters would cause, contribute to, or exacerbate any adverse health effects. (Tr. 137-38)
- Exhibit P – Letters from Frank Marcinowski and Norbert Hankin of the United States Environmental Protection Agency’s (“EPA”) Radiation Protection Division sent to Janet Newton of The EMR Network in 2002.
 - The July 6, 2002 letter merely contains a single EPA staffer’s purported opinion about the basis of the FCC’s RF exposure standard. The letter even notes that although the EPA had some reservations with the standard, the EPA ultimately recommended the FCC adopt the standard. (Exhibit P, p. 2) The documents also lack authenticity because their authors were not presented to authenticate the accuracy of the statements in the document.
- Exhibit Q – A document titled “Peer-reviewed scientific studies on EMF related subjects” by an unknown author.
 - The exhibit is a composite of selected portions of abstracts from multiple sources and authors. As Dr. Israel testified, it is not possible to conduct a reliable evaluation of scientific studies based on the information provided in the abstracts because “[a]bstracts often times don’t give sufficient information to actually understand what the scientific

study actually did.” (Tr. 139-40) Indeed, the “totality of the data in the study” never appears in the abstract. (Tr. 140) Furthermore, the exhibit is inherently unreliable. Portions of the abstracts have been altered from the originals, and Dr. Israel was unable to find any evidence suggesting that the document was prepared by anyone at NIH, as alleged on the first page. (Tr. 138) Finally, the exhibit is irrelevant because it: (1) does not address RF fields from AMI meters used by PPL Electric; and (2) addresses health and other conditions other than those alleged by Complainant.

- Exhibit R – A document titled “Bibliography of Reported Biological Phenomena (‘Effects’) and Clinical Manifestations Attributed to Microwave and Radio-frequency Radiation” by the Naval Medical Research Institute, dated October 4, 1971.
 - The exhibit is irrelevant because it does not address RF fields from AMI meters used by PPL Electric. Moreover, the document lacks authenticity because its authors were not presented to authenticate the accuracy of the statements in the document. Furthermore, the document is not a scientific study published in a peer-reviewed scientific journal. (Tr. 141) Rather, it is merely a bibliography of various studies. (Tr. 141) Such a document does not “provide any substantive information” and cannot, by itself, be relied upon when evaluating scientific research. (Tr. 141) In addition, as Dr. Israel explained, the document states that any “effects are listed without comment or endorsement since the literature abounds with conflicting reports. In some cases the basis for reporting an ‘effect’ was a single or a non-statistical observation which may have been drawn from a poorly conceived (and poorly executed) experiment.” (Complainant’s Exhibit R, p. 7); (Tr. 142) Finally, the document clarifies that “[t]he comments upon and criticisms of the literature made in this report, and the recommendations and inferences suggested, are those of the author, and do not necessarily reflect the views of the Navy Department or of the Naval Service.” (Complainant’s Exhibit R, p. 2)
- Exhibit Z – An article from statnews.com by Bob Tedeschi titled “With patients demanding experimental drugs, ‘right to try’ is becoming the law of the land,” dated March 23, 2017.
 - The document is irrelevant because the article concerns “right to try” experimental drugs and has nothing to do with PPL Electric or its AMI meters. It also lacks authenticity because the author or authors of these statements in the article were not presented to authenticate the accuracy of the statements.
- Exhibit 2A – A letter purportedly sent by Robert Godshall to Teresa Roh, dated June 12, 2017.
 - The document lacks authenticity because the author of this letter was not presented to authenticate the accuracy of the statements in the letter. Nevertheless, the document actually bolsters PPL Electric’s position, by stating that the Commission, Energy Association of Pennsylvania (“EAP”), the Office of Consumer Advocate (“OCA”), and the Office of Small Business Advocate (“OSBA”) support the system-wide deployment of the new AMI meter, not individual opt-outs.

- Exhibit 2B – A webpage URL of <https://votesmart.org/candidate/campaign-finance/9143/robert-godshall#> purporting to show Robert Godshell’s campaign finances.
 - The webpage is irrelevant because it concerns Robert Godshell’s campaign finances and has nothing to do with PPL Electric’s AMI meters or the issues properly before the Commission. Further, the webpage lacks authenticity because the author of this webpage was not presented to authenticate the accuracy of the information on the webpage.
- Exhibit 2F – A document by an unknown author listing the docket numbers of various complaints before the Commission and characterizing the complaints.
 - The document is irrelevant because the instant proceeding solely concerns the Complainant’s Complaint against PPL Electric, not any other customer’s complaint against the Company or any other electric utility. Nothing in the record states that the Complainant is authorized to represent these other customers. Further, some of the complaint dockets listed are unrelated to PPL Electric’s AMI meter installations. Finally, none of the persons who filed these complaints was presented to authenticate the accuracy of their statements in those complaints.
- Exhibit 2I – Technical manual by Landis + Gyr about their E330 FOCUS AX, E350 FOCUS AX-SD, E331 FOCUS Axe, E351 FOCUS AXe-SD meters, dated April 15, 2014.
 - The document lacks authenticity because the author of the document was not presented to authenticate the accuracy of the statements contained therein. Further, PPL Electric witness Larson observed that the document is dated April 15, 2014, and testified that it is not appropriate to use this older version of the manual. (Tr. 94)
- Exhibit 2J – A February 7, 2014 letter and enclosed document sent by Willie R. Taylor from the Office of Secretary, United States Department of the Interior, to Eli Veenendaal at the U.S. Department of Commerce about the impact of communication towers on migratory birds.
 - The document is irrelevant because it does not concern the RF fields being emitted by the new AMI meter. It is a letter about the impact of communication towers on migratory birds. Furthermore, the exhibit lacks authenticity because its author was not presented to authenticate the accuracy of the statements in the document.
- Exhibit 2T – “Dirty electricity, chronic stress, neurotransmitters and disease” by Samuel Milham and David Stetzer, dated January 16, 2013.
 - The exhibit lacks authenticity because its authors were not presented to authenticate the accuracy of the statements in the document. Furthermore, this is not the as-published version of this document.
- Exhibit 2U – Letters about “EMFs, the Birds and the Bees, and the Canadian Environmental Assessment Processes Review” sent by Margaret Friesen.

- The exhibit is irrelevant because it addresses alleged effects on birds and honey bees, which are not issues in this proceeding. The document also lacks authenticity because its author was not presented to authenticate the accuracy of the statements in the document. Furthermore, Dr. Israel explained that this exhibit is not a scientific study. (Tr. 143) Rather, the exhibit consists of letters from one person to another and a poster at the end of the document about the effects of EMFs on honey bees. (Tr. 143-44) In Dr. Israel's expert opinion, a document relating to bees cannot be used as the basis for determining the potential effects on humans. (Tr. 144)
- Exhibit 2V – “Possible Effects of Electromagnetic Fields from Phone Masts on a Population of White Stork” by Alfonso Balmori.
 - The document is irrelevant because it addresses alleged effects on wild stork populations, which is not an issue in this proceeding. In fact, Dr. Israel testified that observations about storks do not provide a reliable basis for reaching conclusions about human health. (Tr. 144) Moreover, the document lacks authenticity because its authors were not presented to authenticate the accuracy of the statements in the document.
- Exhibit 2W – An article titled “Radiofrequency EMFs and Health Risks: Section 6 Animals, Birds, Insects and Plants” by Alasdair and Jean Philips, dated June 7, 2017.
 - The exhibit is irrelevant because it addresses alleged effects on animals, insects and plants, which are not issues in this proceeding, and does not address RF fields emitted from the AMI meters being used by PPL Electric. Moreover, the document lacks authenticity because its authors were not presented to authenticate the accuracy of the statements in the document. Further, as Dr. Israel testified, the document is not a scientific study published in a peer-reviewed scientific journal. (Tr. 145) It is an article from an online advocacy website for individuals claiming that EMFs could cause health effects. (Tr. 145) In Dr. Israel's expert opinion, this online advocacy article does not provide a reliable scientific basis to conclude that RF fields from the new AMI meter cause, contribute to, or exacerbate any adverse health effects. (Tr. 145-46)
- Exhibit 2Z – An article titled “The Firefighters Wake Up Call to Us All” by Susan Foster.
 - The exhibit is irrelevant because it concerns an alleged opposition of firefighters to cell towers being installed in their fire stations. It has nothing to do with AMI meters. Moreover, the document lacks authenticity because its author was not presented to authenticate the accuracy of the statements in the document.
- Exhibit 3C – A document titled “A review on Electromagnetic fields (EMFs) and the reproductive system,” by Ali Asghari, et al, dated July 2016.
 - The document is irrelevant because it does not address RF fields from the AMI meter being used by PPL Electric. Furthermore, the exhibit lacks authenticity because its authors were not presented to authenticate the accuracy of the statements in the document.

- Exhibit 3E – A document titled “Exposure and Testing Requirements for Mobile Phones Should Be Reassessed” dated July 2012 by the Government Accountability Office.
 - The document is irrelevant because it does not address RF fields from the AMI meter being used by PPL Electric. Furthermore, the exhibit lacks authenticity because its authors were not presented to authenticate the accuracy of the statements in the document.
- Exhibit 3G – A press advisory titled “The American Academy of Environmental Medicine Calls for Immediate Caution regarding Smart Meter Installation,” dated April 12, 2012.
 - The exhibit lacks authenticity because its authors were not presented to authenticate the accuracy of the statements in the document. Moreover, Dr. Davis explained that the document contains several statements that are misleading and scientifically inaccurate. (Tr. 112-15) Indeed, the document’s passage “magnetic vector potential” was “not written by people who understand the physics and engineering of electromagnetic fields.” (Tr. 115)
- Exhibit 3H – A document titled “Why children absorb more microwave radiation than adults: The consequences,” by L. Lloyd Morgan, Santosh Kesari, and Devra Lee Davis.
 - The document lacks authenticity because its authors were not presented to authenticate the accuracy of the statements in the document. Moreover, as Dr. Davis testified, the claim that children absorb more microwave radiation than adults is incorrect. (Tr. 111-12) In fact, Dr. Davis stated that “[a]bsolutely no research has ever been done about” that claim. (Tr. 112)

For these reasons, the Complainant’s exhibits lack merit, should be afforded no weight, and cannot support any findings of fact in this proceeding.

Based on the foregoing, the Complainant has failed to sustain his burden of proof that PPL Electric’s new AMI meter causes, contributes to, or exacerbates any disease, symptom or illness.

b. The Complainant Has Failed to Prove that the New AMI Meter Is Unsafe and Would Cause Fires

The Complainant also alleges that the new AMI meter is unsafe and would cause fires because, according to him, there have been other incidents where AMI meters have caused fires. (Complainant’s Exhibits 1, 2X, 2Y) The Complainant’s allegations that the new AMI meter is unsafe and would cause fires lack merit for several reasons.

First, the new AMI meters actually are equipped with software and mechanisms that better alert the Company if there is an issue with overheating. Specifically, there is a heat alarm set within the meter software program, so when the temperature of the meter hits an established, “very conservative” level, the Company is alerted of the issue. (Tr. 88, 91-92) Further, PPL Electric takes 15-minute interval temperature readings from the meter, so it can track the meter’s temperature and identify any current issues or problematic trends. (Tr. 88) If the Company detects an issue with the meter’s temperature, PPL Electric will dispatch a technician to investigate. (Tr. 90-91) Thus, the new AMI meter actually can help prevent a fire. (Tr. 87-92)

Second, PPL Electric has examined the issues with other meters and taken many steps to prevent fire incidents similar to the ones alleged by the Complainant. PPL Electric witness Larson testified that the “root cause of a many of these fires was “loose connections within the meter base.” (Tr. 87) When there are loose connections within the meter base, there could be rapid heat built up. (Tr. 87-88) PPL Electric has taken several steps to mitigate this risk. The Company enhanced its inspection criteria so that its service technicians are better able to identify any issues. (Tr. 88) The Company also monitors the meter’s temperature in 15-minute intervals. (Tr. 88) PPL Electric also ensures that the new AMI meters meet the American National Standards Institute (“ANSI”) requirements. (Tr. 88-89)

Furthermore, PPL Electric set stringent qualifications during its testing and selection of the available RF Mesh meters. (Tr. 88-89) Among those qualifications was a requirement that AMI meter’s materials be able to withstand a thermal index of 160 degrees Celsius before breaking down. (Tr. 88-89) The AMI meter selected by PPL Electric was “the only meter that met and exceeded” the Company’s qualifications. (Tr. 89) Indeed, PPL Electric “tested every available meter on the market” when selecting its new AMI technology, and the AMI meter the

Landis+Gyr AMI meter “performed the best out of every meter” that was tested. (Tr. 89) More importantly, PPL Electric has deployed approximately 720,000 new AMI meters in its service territory, and Mr. Larson is aware of no fires being caused by the E350 Focus AX-SD meter. (Tr. 89-90)

Third, the Complainant’s fire risk claims are entirely predicated on hearsay and irrelevant materials. The Complainant wholly relies on Exhibits 2X, and 2Y to support his claims about the AMI meter being a fire risk.¹⁰ As explained in the Company’s Motion in Limine and on the record at the proceeding, these exhibits contain hearsay statements alleging that other utilities’ meters cause fires. (PPL Electric Motion in Limine ¶ 16; Tr. 21) These hearsay statements are not subject to a hearsay exception, were properly objected to, and are not corroborated by anything in the record. (PPL Electric Motion in Limine ¶¶ 16-25; Tr. 21) Therefore, as explained previously, such exhibits cannot support any finding of fact in this case.

In addition, the Complainant’s hearsay materials are irrelevant to whether the specific meter being installed by PPL Electric is a fire risk. For example, Exhibit 2X concerns a fire in North Cornwall Township, which is not in PPL Electric’s service territory. (Tr. 21); *see* Supplement No. 59 to Electric Pa. P.U.C. No. 201, Fourth Revised Page No. 4 (detailing the areas in Lebanon County served by the Company). Moreover, nothing in this article provides details about: (1) the type of meter that was installed on the residence; or (2) the cause of the fire. Furthermore, Exhibit 2Y is inherently unreliable because it contains only selected excerpts from various articles and activist websites. (PPL Electric Motion in Limine ¶ 16) Although the document sets forth conclusory statements about smart meters allegedly causing fires, notably absent in the document is any statement that the specific meter being installed by PPL Electric

¹⁰ In addition to their other faults, these exhibits lack authenticity because their authors were not presented to authenticate the accuracy of the statements in the documents. (PPL Electric Motion in Limine ¶ 16)

causes fires or is otherwise a safety risk. Likewise, nothing in the record demonstrates that these other utilities implemented all of the same mechanisms and protocols as PPL Electric to prevent any such incidents.

For these reasons, the Complainant has failed to prove that the new AMI meter is unsafe and would cause fires.

c. The Complainant Has Failed to Prove that the New AMI Meter Is a Privacy and Cybersecurity Risk

The Complainant also has raised privacy and cybersecurity issues with the new AMI meter, specifically whether the Company takes appropriate steps to encrypt a customer's data and protect against hacking, whether the new AMI meter can be physically compromised through its optical port, and whether the meter can tell if certain appliances are being used by a person. (Complainant's Exhibit 1, Part 6; Tr. 95-100) The Company's testimony demonstrated that the Complainant's privacy and cybersecurity concerns are without merit.

First, PPL Electric witness Larson testified that PPL Electric "provide[s] the most advanced security that [it] can to ensure data privacy as well as the ability to avoid any type of hacking or penetration." (Tr. 98) The Company uses firewalls to prevent anyone from obtaining unauthorized access to the AMI network. (Tr. 57, 87) The customer's data also is "highly encrypted" to make the "data look illegible to someone who doesn't know what the correct encryption keys are." (Tr. 57, 87) Rules also are established as to who can have access to those applications. (Tr. 87) Specifically, the Company "use[s] authentication and access controls, which refer to how [PPL Electric] restrict[s] access to the AMI systems to the people that require the use of that" information "for business purposes through user IDs and passwords which are changed on a regular basis." (Tr. 57) Indeed, "multiple levels of passwords . . . are required" for the applications used by the Company, and there are "active directory passwords within the

organization.” (Tr. 86, 98) Further, cybersecurity and data privacy were addressed at length in PPL Electric’s Smart Meter Plan (see PPL Electric Exhibit No. 3), and the Company has been following the processes established therein for cybersecurity and data privacy. (Tr. 87)

Second, PPL Electric explained in detail that an unauthorized person cannot obtain information through the optical port of the new AMI meter. (Tr. 95-97) PPL Electric witness Larson testified that to obtain information through the optical port, a person would have to possess the correct tools, applications, and passwords. (Tr. 96) The person first would have to insert an optical probe and have “the proper application to be able to go onto the meter software.” (Tr. 96) Next, the person would have to have the proper credentials, which includes “active directory passwords” and the active “security token that is received daily.” (Tr. 96-97) Even if those credentials are obtained, there are “five levels of passwords that are required” to communicate with the meter’s software, “with any type of usage data being at the highest level of those five passwords.” (Tr. 97) Moreover, “[t]hose five passwords are designed out to 20 digit[s].” (Tr. 97) Even if all of those protections were bypassed, “any type of access, whether it be a false attempt or manipulation to the meter itself, the system would be made aware of that.” (Tr. 97) The system could then “move to shutdown or not support” the access attempt “if there was a sense of break involved.” (Tr. 97) Thus, this is a prime example of the “multiphase security” the Company has implemented to protect a customer’s data. (Tr. 97)

Third, the new AMI meter cannot tell if a customer is using a particular appliance, as alleged by the Complainant. (Tr. 98) As PPL Electric witness Larson explained, “The meter cannot make the determination of what device is being used at what time.” (Tr. 99) PPL Electric “only make[s] a record of how much electricity the entire home is consuming at any given time.” (Tr. 99) Moreover, as a part of its Smart Meter Plan proceeding, PPL Electric filed

a detailed AMI Customer Privacy Policy, which sets forth the data PPL Electric will collect through the new smart meter, the steps the Company will take to protect the data, and the ways in which PPL Electric will use the data. (Tr. 56; PPL Electric Exhibit No. 5) Consistent with that policy, the Company will collect data on the total amount of electricity used at the premises as well as significant event information, such as outages, voltage, heat alarms, and meter tampering alerts. (Tr. 56-57; PPL Electric Exhibit No. 5, Section 1.2)

For these reasons, the Complainant has failed to prove that the new AMI meter is a privacy and cybersecurity risk.

3. Conclusion

Based on the foregoing, the Complainant has failed to sustain his burden of proof that installing the new AMI meter would constitute a violation of the Public Utility Code or any Commission regulation or order. Accordingly, the Complaint should be denied in its entirety and with prejudice.

C. PPL ELECTRIC HAS A LEGAL RIGHT TO TERMINATE SERVICE IF IT IS DENIED REASONABLE ACCESS TO ITS METER

The Complainant also has raised an issue with a communication he received in August 2017, directing him to remove the lock from his existing meter.¹¹ (Tr. 72-73; *see* Complainant's Exhibit 2C) Such correspondence also stated that PPL Electric has the right to terminate service if that lock is not removed. (Tr. 72-73; *see* Complainant's Exhibit 2C) However, PPL Electric never issued the Complainant a notice of termination. (Tr. 61) As explained below, nothing about the August 2017 correspondence was improper.

¹¹ The Complainant also submitted as Complainant's Exhibit 2S an electronic newsletter purportedly from Michigan State Senator Patrick Colbeck about shut-off notices sent by DTE Energy Co. due to customers' refusal of new AMI meters. (Complainant's Exhibit 2S) As explained in PPL Electric's Motion in Limine, this document is hearsay and not subject to a hearsay exception. (PPL Electric Motion in Limine ¶¶ 16-25) Moreover, the exhibit is irrelevant because it concerns the actions of a Michigan utility and has nothing to do with Pennsylvania or PPL Electric. (PPL Electric Motion in Limine ¶ 16) Further, the document lacks authenticity because its author was not presented to authenticate the accuracy of the statements in the document. (PPL Electric Motion in Limine ¶ 16)

The Complainant fails to recognize that PPL Electric has a legal right to terminate the Complainant's service if it is denied reasonable access to the Company's meter. Rule 2F of the Company's Commission-approved tariff states that PPL Electric "shall have access at all reasonable hours to customer's premises, without charge, for the purpose of inspecting, installations, installing meters, reading, testing, removing, replacing, or otherwise maintaining or disposing of any of Company's property." (PPL Electric Exhibit No. 6) (emphasis added) It is well-established that public utilities' tariffs have the force and effect of law and are binding on the utilities and their customers. *See PPL Elec. Utils. Corp. v. Pa. PUC*, 912 A.2d 386, 402 (Pa. Cmwlth. 2006) (citing 66 Pa. C.S. § 1303 and *Pa. Elec. Co. v. Pa. PUC*, 663 A.2d 281, 284 (Pa. Cmwlth. 1995)). Therefore, the Complainant must grant the Company reasonable access to the property to replace the existing meter.

In fact, the Company would be expressly permitted to terminate service if it is prevented from replacing the meter. *See* 66 Pa. C.S. § 1406(a)(4); 52 Pa. Code § 56.81(3); (PPL Electric Exhibit No. 7). Both the Public Utility Code and the Commission's regulations provide that "[f]ailure to permit access to meters, service connections or other property of the public utility for the purpose of replacement, maintenance, repair or meter reading" is grounds for terminating service. *See* 66 Pa. C.S. § 1406(a)(4); 52 Pa. Code § 56.81(3). Moreover, Rule 10(B)(2)(g) of PPL Electric's tariff similarly states that the Company is authorized to terminate service when: (1) its "representatives cannot gain admittance or are refused admittance to the premises for the purpose of reading meters, making repairs, making inspections, or removing Company property"; (2) "the customer interferes with Company representatives in the performance of their duties; or (3) "the meters or other equipment of the Company are not accessible during reasonable hours." (PPL Electric Exhibit No. 7, p. 2)

Here, by the Complainant placing a lock on a meter, the Company is prevented from removing or installing the Company-owned meter. (Tr. 59) As a result, the Company would be within its rights to terminate service to the Complainant, although it has chosen not to do so. Thus, there was nothing improper about the Complainant receiving correspondence directing him to remove the lock on the Company's meter.¹²

For these reasons, even though the Company never sent the Complainant a notice of termination, the Company has a legal right to terminate service if it is prevented from reasonably accessing its meter to install a new meter or replace an existing one.

¹² Moreover, PPL Electric witness Hennegan explained that placing a lock on a meter can create a safety concern. (Tr. 73-74) If something occurs in the residence where the flow of electricity needs to stop, "not being able to remove the meter because there's a lock on it would prevent [the Company] from doing that and delay the termination [of] electricity into the house." (Tr. 73-74)

VII. CONCLUSION

WHEREFORE, PPL Electric Utilities Corporation respectfully requests that Administrative Law Judge Elizabeth H. Barnes recommend and the Pennsylvania Public Utility Commission deny the Formal Complaint of John Kline with prejudice.

Respectfully submitted,



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Date: May 16, 2018

Attorneys for PPL Electric Utilities Corporation

Appendix A

Appendix A – Proposed Findings of Fact

1. On June 30, 2014, PPL Electric Utilities Corporation (“PPL Electric” or the “Company”) filed its new Smart Meter Plan intended to comply with all the requirements of Act 129 and the Pennsylvania Public Utility Commission’s (“Commission”) *Smart Meter Implementation Order*. (See PPL Electric Exhibit No. 3)

2. To meet those requirements, the Company selected Radio Frequency (“RF”) Mesh meters and metering system because the Company determined that the RF Mesh system would support the 15 capabilities required by Act 129 and the *Smart Meter Implementation Order*. (See PPL Electric Exhibit No. 3, pp. 5-6, 20-22)

3. The RF Mesh system allows the Company to receive data from the customer’s meter wirelessly, unlike PPL Electric’s previous powerline carrier (“PLC”) system that used the customer’s actual wires. (Tr. 84-86)

4. The individual RF Mesh meters are used as relay points to transmit data back to PPL Electric. (Tr. 86)

5. Under the Smart Meter Plan, the RF Mesh meters are to be deployed between 2017 and 2019 for all of PPL Electric’s 1.4 million customers. (PPL Electric Exhibit No. 3, pp. 3, 32; Tr. 85)

6. The Company currently is in the process of deploying the RF Mesh meters for all of its 1.4 million customers pursuant to its Commission-approved Smart Meter Plan. (Tr. 85; PPL Electric Exhibit No. 3)

7. On May 1, 2017, PPL Electric sent the Complainant a letter notifying him that it intended to install the new automated metering infrastructure (“AMI”) meter, *i.e.*, the RF Mesh

meter, on his property within approximately the next three weeks. (PPL Electric Exhibit No. 2; Tr. 52)

8. The RF Mesh meter to be installed for the Complainant's residential account is the Landis+Gyr Focus AXR-SD meter. (Tr. 85)

9. The Complainant contests PPL Electric's planned installation of the new AMI meter at his property, 5611 Stradford Drive, Harrisburg, Pennsylvania. (Complainant's Exhibit 1)

10. The Complainant generally has alleged that the new AMI meter causes adverse health effects, causes fires, and raises privacy and cybersecurity concerns. In support of his various claims, the Complainant personally testified and presented several written exhibits. (*See* Complainant's Exhibits 1, A through S, U, Y, Z, 2A through 2F, 2I through 2Z, and 3A through 3H; Tr. 13-48)

11. The Complainant contends that PPL Electric should not install the new AMI meter because he has concerns that the new meter will affect his health. (*See, e.g.,* Complainant's Exhibit 1, Parts 7-8)

12. The Complainant has submitted documents from anti-smart meter and anti-EMF websites, articles, and other documents attempting to prove a link between adverse health effects and RF fields. (*See, e.g.,* Complainant's Exhibits 1, L through N2, P through R, Z, 2A, 2B, 2F, 2I, 2J, 2T through 2W, 2Z, 3C, 3E, 3G, and 3H)

13. Dr. Christopher Davis is a highly experienced scientific researcher and teacher in Physics, Electrical Engineering, Electromagnetics, and RF Electromagnetics. (PPL Electric Statement No. 1, p. 1, line 12 to p. 5, line 5)

14. Dr. Davis has a Ph.D. in Physics and is a full Professor with an endowed Chair at the University of Maryland, where for over 30 years he has taught Physics, Electrical Engineering, Electromagnetics, and RF Electromagnetics to undergraduate and graduate students. (PPL Electric Statement No. 1, p. 1, line 9 to p. 2, line 8)

15. In addition to his teaching, Dr. Davis is an active scientific researcher in the fields of Physics, Biophysics, Electrical Engineering, Bioelectromagnetics and RF Bioelectromagnetics, conducting many scientific studies in these fields and publishing over 250 studies in peer-reviewed scientific journals. (PPL Electric Statement No. 1, p. 2, lines 10-19)

16. In particular, Dr. Davis has conducted a substantial amount of research on RF fields of the type produced by the AMI meters being used by the Company. (PPL Electric Statement No. 1, p. 3, lines 5-6)

17. Dr. Davis explained that RF fields are part of the lower energy, non-ionizing portion of the electromagnetic spectrum which consists of lower frequency signals that do not have enough energy to break chemical bonds in cells or DNA. (PPL Electric Statement No. 1, p. 5, line 15 to p. 6, line 6)

18. There is nothing unusual about the RF fields from the AMI meters being deployed by the Company. (PPL Electric Statement No. 1, p. 11, lines 6-10)

19. RF fields come from many sources in our everyday environments, including AM/FM radio, television broadcast, cell phones and their communication networks, portable phones, garage door openers and wifi networks. (PPL Electric Statement No. 1, p. 5, line 22 to p. 6, line 4; p. 11, lines 6-10; PPL Electric Exhibit CD1)

20. Dr. Davis testified that the FCC has determined safe public exposure levels for RF fields from devices that transmit RF signals, such as the AMI meters. (PPL Electric Statement No. 1, p. 8, line 13-15; Tr. 110-11)

21. The FCC safe public exposure limits are based on evaluations of the body of scientific research on RF fields and were adopted in consultation with other federal agencies, including the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA). (PPL Electric Statement No. 1, p. 8, line 15 to p. 9, line 3)

22. Based on the engineering specifications for the Landis & Gyr AMI meter being deployed by the Company, Dr. Davis calculated that the levels of RF fields from the AMI meters are 98,000 times lower than the RF exposure safety limits established by the FCC. (PPL Electric Statement No. 1, p. 10, lines 8-12; *see* PPL Electric Exhibit CD2)

23. As a result, Dr. Davis found that “the RF field levels from the AMI meters being used by PPL Electric more than comply with the applicable FCC RF exposure limit.” (PPL Electric Statement No. 1, p. 10, lines 8-10)

24. Moreover, the RF signals from the AMI meter are of very short duration and will occur for only a total of 84 seconds over a 24-hour period. (PPL Electric Statement No. 1, p. 7, lines 21-23)

25. Dr. Davis also testified that RF fields from using cell phones can be over 260,000 times higher than the RF fields from the AMI meter, and RF exposures from microwave ovens can be over 820,000 times higher. (PPL Electric Statement No. 1, p. 11, lines 14-21)

26. Even 30 feet away from a person using a cell phone, the RF fields are 3 times higher than from the AMI meter. (PPL Electric Statement No. 1, p. 11, lines 16-17)

27. The Complainant reported that he used his cell phone for 8,580 minutes over a 5-month period. (Tr. 43-44; PPL Electric Exhibit No. 10)

28. The RF field exposure from this amount of cell phone usage is equivalent to 1,692 years of continuous RF exposure at a distance of approximately 1 meter from the AMI meter. (PPL Electric Statement No. 1, p. 13, lines 4-7)

29. Dr. Davis testified that there are seven television broadcast towers with a 50 mile radius of Complainant's location. (PPL Electric Statement No. 1, p. 13, lines 8-9)

30. Based on the locations of each tower and their RF power outputs, the constant background level of RF fields at Complainant's residence are 20 times higher than the RF signals from the AMI meter. (PPL Electric Statement No. 1, p. 12, lines 4-11; *see* PPL Electric Exhibit CD-5)

31. There is no reliable scientific basis in physics, biophysics, bioelectromagnetics or RF bioelectromagnetics to conclude that the very low levels of RF fields from the AMI meters being deployed by the Company can or will cause any adverse thermal or non-thermal biological effects in people. (PPL Electric Statement No. 1, p. 14, lines 1-4)

32. Dr. Mark Israel is an eminent physician and medical researcher. (PPL Electric Statement No. 2, p. 1, line 5 to p. 6, line 18)

33. Dr. Israel received his undergraduate degree from Hamilton College and his medical degree from the Albert Einstein College of Medicine, and he completed his medical training at Harvard Medical School. (PPL Electric Statement No. 2, p. 1, lines 16-20)

34. Dr. Israel is Professor of Medicine, Pediatrics, and Molecular and Systems Biology at the Dartmouth Medical School and the Executive Director of the Israel Cancer

Research Fund in New York, an international charitable fund for medical and scientific research programs. (PPL Electric Statement No. 2, p. 1, lines 11-14)

35. Dr. Israel is board certified and licensed to practice medicine. (PPL Electric Statement No. 2, p. 3, lines 3-6)

36. Dr. Israel has conducted medical research for 40 years in a wide variety of areas, including systems biology, biochemistry, cell biology, cancer, molecular biology, and molecular genetics and has published over 245 medical research studies in leading peer-reviewed scientific journals. (PPL Electric Statement No. 2, p. 3, line 9 to p. 4, line 2)

37. Dr. Israel also has taught medicine and science for more than 30 years to medical students, graduate students, interns, residents, and practicing physicians subjects in a number of fields, including endocrinology, immunology, hematology, neurology, cardiology, biochemistry, cell biology, genetics, molecular genetics, medical oncology, and radiation oncology. (PPL Electric Statement No. 2, p. 3, lines 14-17)

38. Dr. Israel evaluated scientific research on RF fields and adverse health effects and testified that he has been systematically examining this research over the past several decades and that many hundreds of studies have been published. (PPL Electric Statement No. 2, p. 6, lines 7-15; p. 7, line 20 to p. 8, line 3)

39. Dr. Israel testified that three groups of controlled laboratory studies on animals “are particularly informative because they address fundamental biological functions that are very sensitive to any disruption: genetics, reproduction, and growth and development.” (PPL Electric Statement No. 2, p. 8, lines 13-17)

40. Dr. Israel described a number of the studies in these areas which he considered good examples of well-designed and well-conducted studies. These studies found no adverse

effects on genetics, fertility, reproduction, growth or development in the animals exposed to RF fields. (PPL Electric Statement No. 2, p. 8, line 17 to p. 9, line 20)

41. Dr. Israel also provided examples of well-conducted animal studies on RF fields and cancer and testified that these studies, which involved animals with lifetime exposures to RF fields, did not find any increased incidence in cancer in the RF exposed animals compared to non-exposed animals. (PPL Electric Statement No. 2, p. 9, line 13 to p. 10, line 5)

42. Dr. Israel testified that claimed symptoms related to EHS are more accurately described as “Idiopathic Environmental Intolerance” (“IEI”), in which “idiopathic” means “cause unknown,” rather than electromagnetic hypersensitivity. (PPL Electric Statement No. 2, p. 11 to p. 12, line 5) (emphasis added)

43. Dr. Israel evaluated the scientific research on IEI and testified that “[r]eliable studies dating back to at least 2002 and also recent reviews of the studies by experts and reviews by expert panels of public health authorities have found IEI and the variety of symptoms attributed to it are not caused by exposure to RF fields.” (PPL Electric Statement No. 2, p. 12, lines 8-10)

44. In addition, Dr. Israel testified that the research on IEI has been evaluated by credible public health entities and expert groups, including the United Kingdom Health Protection Agency (2012), the Royal Society of Canada (2013), the New Zealand Ministry of Health (2015), and the European Commission’s Scientific Committee on Emerging and Newly Identified Health Risks (2015). Based on their reviews of the scientific research, these entities concluded there is no reliable scientific evidence that exposure to RF fields causes claimed IEI symptoms. (PPL Electric Statement No. 2, p. 13, line 15 to p. 14, line 10; PPL Electric Exhibit MI3)

45. Dr. Israel further reported that the World Health Organization and a number of other public health authorities have concluded that the scientific research on RF exposures from cell phone use, which are far higher than the RF from PPL Electric's smart meters, has not shown that RF fields cause adverse health effects. (PPL Electric Statement No. 2, p. 10, lines 6-22; PPL Electric Exhibit MI1)

46. Several U.S. state public health authorities also have investigated claims about health effects from smart meters and have concluded that there is no credible scientific evidence that RF fields from smart meters will cause or contribute to any adverse health effects. (PPL Electric Statement No. 2, p. 11, lines 1-11; PPL Electric Exhibit MI2)

47. Dr. Israel also examined the scientific research relevant to the long list of medical conditions and illnesses that the Complainant claims are caused by exposure to RF fields. Dr. Israel testified that this list of claimed conditions was not an accurate statement of the science and that there was no reliable scientific basis to conclude that RF fields caused any of these conditions or symptoms. (Tr. 147-48)

48. Dr. Israel also testified that the Complainant's many exhibits downloaded from the internet, including activist documents such as the International Scientist Appeal and other materials, were not scientific studies and did not provide a reliable scientific basis to conclude that RF fields from AMI meters would cause or contribute to adverse health effects. (Tr. 135-46; PPL Electric Statement No. 2, p. 14, line 11 to p. 15, line 22)

49. There is no reliable medical basis to conclude that RF fields from the AMI meters being used by PPL Electric will cause or contribute to the development of illness or disease. (PPL Electric Statement No. 2, p. 16, lines 12-15)

50. There is no reliable medical basis to conclude that RF fields from the AMI meter being used by PPL Electric would cause, contribute to, or exacerbate any of the symptoms claimed by the Complainant, or any other adverse health effects. (PPL Electric Statement No. 2, p. 16, lines 19-21)

51. The Complainant also has claimed that the new AMI meter is otherwise unsafe and would cause fires. (Complainant's Exhibit 1, Part 9)

52. The Company's new AMI meters actually are equipped with software and mechanisms that better alert the Company if there is an issue with overheating. Specifically, there is a heat alarm set within the meter software program, so when the temperature of the meter hits an established, "very conservative" level, the Company is alerted of the issue. (Tr. 88, 91-92)

53. PPL Electric also takes 15-minute interval temperature readings from the meter, so it can track the meter's temperature and identify any current issues or problematic trends. (Tr. 88)

54. If the Company detects an issue with the meter's temperature, PPL Electric will dispatch a technician to investigate. (Tr. 90-91)

55. PPL Electric has examined the issues with other meters and taken many steps to prevent fire incidents similar to the ones alleged by the Complainant. (Tr. 87-89)

56. PPL Electric witness Larson testified that the "root cause of a many of these fires was "loose connections within the meter base." (Tr. 87)

57. When there are loose connections within the meter base, there could be rapid heat built up. (Tr. 87-88)

58. PPL Electric has taken several steps to mitigate this risk, such as enhancing its inspection criteria so that its service technicians are better able to identify any issues and monitoring the meter's temperature in 15-minute intervals. (Tr. 88)

59. PPL Electric also ensures that the new AMI meters meet the American National Standards Institute ("ANSI") requirements. (Tr. 88-89)

60. PPL Electric set stringent qualifications during its testing and selection of the available RF Mesh meters. (Tr. 88-89)

61. Among those qualifications was a requirement that AMI meter's materials be able to withstand a thermal index of 160 degrees Celsius before breaking down. (Tr. 88-89)

62. The AMI meter selected by PPL Electric was "the only meter that met and exceeded" the Company's qualifications. (Tr. 89)

63. PPL Electric "tested every available meter on the market" when selecting its new AMI technology, and the AMI meter the Landis+Gyr AMI meter "performed the best out of every meter" that was tested. (Tr. 89)

64. PPL Electric has deployed approximately 720,000 new AMI meters in its service territory, and Mr. Larson is aware of no fires being caused by the E350 Focus AX-SD meter. (Tr. 89-90)

65. The new AMI meter to be installed by the Company is not a fire or safety hazard. (Tr. 87-92)

66. The Complainant also raised privacy and cybersecurity concerns with the new AMI meter. (Complainant's Exhibit 1, Part 6; Tr. 95-100)

67. PPL Electric witness Larson testified that PPL Electric “provide[s] the most advanced security that [it] can to ensure data privacy as well as the ability to avoid any type of hacking or penetration.” (Tr. 98)

68. The Company uses firewalls to prevent anyone from obtaining unauthorized access to the AMI network. (Tr. 57, 87)

69. The customer’s data also is “highly encrypted” to make the “data look illegible to someone who doesn’t know what the correct encryption keys are.” (Tr. 57, 87)

70. Rules also are established as to who can have access to those applications. (Tr. 87)

71. Specifically, the Company “use[s] authentication and access controls, which refer to how [PPL Electric] restrict[s] access to the AMI systems to the people that require the use of that” information “for business purposes through user IDs and passwords which are changed on a regular basis.” (Tr. 57)

72. Indeed, “multiple levels of passwords . . . are required” for the applications used by the Company, and there are “active directory passwords within the organization.” (Tr. 86, 98)

73. Further, cybersecurity and data privacy were addressed at length in PPL Electric’s Smart Meter Plan (see PPL Electric Exhibit No. 3), and the Company has been following the processes established therein for cybersecurity and data privacy. (Tr. 87)

74. PPL Electric also explained in detail that an unauthorized person cannot obtain information through the optical port of the new AMI meter. (Tr. 95-97)

75. PPL Electric witness Larson testified that to obtain information through the optical port, a person would have to possess the correct tools, applications, and passwords. (Tr. 96)

76. The person first would have to insert an optical probe and have “the proper application to be able to go onto the meter software.” (Tr. 96)

77. Next, the person would have to have the proper credentials, which includes “active directory passwords” and the active “security token that is received daily.” (Tr. 96-97)

78. Even if those credentials are obtained, there are “five levels of passwords that are required” to communicate with the meter’s software, “with any type of usage data being at the highest level of those five passwords.” (Tr. 97)

79. Moreover, “[t]hose five passwords are designed out to 20 digit[s].” (Tr. 97) Even if all of those protections were bypassed, “any type of access, whether it be a false attempt or manipulation to the meter itself, the system would be made aware of that.” (Tr. 97)

80. The system could then “move to shutdown or not support” the access attempt “if there was a sense of break involved.” (Tr. 97)

81. This is a prime example of the “multiphase security” the Company has implemented to protect a customer’s data. (Tr. 97)

82. The new AMI meter cannot tell if a customer is using a particular appliance, as alleged by the Complainant. (Tr. 98)

83. As PPL Electric witness Larson explained, “The meter cannot make the determination of what device is being used at what time.” (Tr. 99)

84. PPL Electric “only make[s] a record of how much electricity the entire home is consuming at any given time.” (Tr. 99)

85. Moreover, as a part of its Smart Meter Plan proceeding, PPL Electric filed a detailed AMI Customer Privacy Policy, which sets forth the data PPL Electric will collect

through the new smart meter, the steps the Company will take to protect the data, and the ways in which PPL Electric will use the data. (Tr. 56; PPL Electric Exhibit No. 5)

86. Consistent with that policy, the Company will collect data on the total amount of electricity used at the premises as well as significant event information, such as outages, voltage, heat alarms, and meter tampering alerts. (Tr. 56-57; PPL Electric Exhibit No. 5, Section 1.2)

87. Therefore, the new AMI meter does not raise privacy and cybersecurity concerns. (Tr. 57, 87, 95-100)

88. The Complainant received a written communication in August 2017, directing him to remove the lock from his existing meter. (Tr. 72-73; *see* Complainant's Exhibit 2C)

89. Such correspondence also stated that PPL Electric has the right to terminate service if that lock is not removed. (Tr. 72-73; *see* Complainant's Exhibit 2C)

90. PPL Electric never issued the Complainant a notice of termination. (Tr. 61)

91. By the Complainant placing a lock on a meter, the Company is prevented from removing or installing the Company-owned meter. (Tr. 59)

Appendix B

Appendix B – Proposed Conclusions of Law

1. 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. PUC*, 578 A.2d 600, 602 (Pa. Cmwlth. 1990).

2. 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 is more likely than its nonexistence. *Brown v. Commonwealth*, 940 A.2d 610, 614 n.14 (Pa. Cmwlth. 2008) (citation omitted).

3. 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 Cntys.*, 1992 Pa. PUC Lexis 160, at *210-11 (June 29, 1992) (Initial Decision) (“*Woodbourne-Heaton*”).

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

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

6. Section 1501 of the Public Utility Code states, in pertinent part, that:

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

Id. § 1501.

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

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

9. Under Pennsylvania’s “Walker Rule,” it is well-established that “[h]earsay evidence, properly objected to, is not competent evidence to support a finding.” *Walker v. Unemployment Comp. Bd. of Review*, 367 A.2d 366, 370 (Pa. Cmwlth. 1976) (citations omitted).

10. Even if hearsay evidence is “admitted without objection,” the ALJ must give the evidence “its natural probative effect and may only support a finding . . . if it is corroborated by any competent evidence in the record;” as “a finding of fact based solely on hearsay will not stand.” *Id.* at 370 (citations omitted).

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

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

13. Nothing in Act 129 permits a customer to “opt-out” of a smart meter installation. *See, e.g., Starr v. PECO Energy Co.*, Docket No. C-2015-2516061, p. 11 (Order Entered Sept. 1, 2016).

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

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

16. If the Company does not install the new RF Mesh meter on the property where the Complainants reside in accordance with the Commission-approved deployment schedule, PPL Electric may violate the Commission's *2010 Smart Meter Order*, *2015 Smart Meter Order*, and *Smart Meter Implementation Order*.

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

18. The Complainants has failed to sustain their burden of proof that installing the new AMI meter would constitute unsafe or unreasonable service in violation of 66 Pa. C.S. § 1501.

19. PPL Electric is permitted under Rule 2F of its Commission-approved to access the Complainant's property for the purpose of installing the new AMI meter. (PPL Electric Exhibit No. 6) (emphasis added)

20. Public utilities' tariffs have the force and effect of law and are binding on the utilities and their customers. See *PPL Elec. Utils. Corp. v. Pa. PUC*, 912 A.2d 386, 402 (Pa. Cmwlth. 2006) (citing 66 Pa. C.S. § 1303 and *Pa. Elec. Co. v. Pa. PUC*, 663 A.2d 281, 284 (Pa. Cmwlth. 1995)).

21. The Public Utility Code, the Commission's regulations, and PPL Electric's tariff expressly permit the Company to terminate service if a customer fails to provide the Company with access to the property in order to replace the meter. *See* 66 Pa. C.S. § 1406(a)(4); 52 Pa. Code § 56.81(3); (PPL Electric Exhibit No. 7).

22. Because the Complainant installed a lock preventing the Company from removing or installing the Company-owned meter, there was nothing improper about the Complainant receiving the August 2017 correspondence directing him to remove the lock.

Appendix C

Appendix C – Proposed Ordering Paragraphs

1. That the Formal Complaint filed by John Kline against PPL Electric Utilities Corporation at Docket No. C-2017-2621072 is hereby dismissed in its entirety with prejudice.
2. That this matter is marked closed.