

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Jay Larry Moyer, Complainant**

**v.**

**PPL Electric Utilities Corporation, Respondent**

**Docket No. C-2011-2273645**

**Docket No. C-2014-2444864**

---

**COMPLAINANT'S POST-HEARING BRIEF**

---

## Table of Contents

	Page
I. INTRODUCTION -----	4
II. BACKGROUND-----	4
III. SUMMARY OF ARGUMENT -----	5
IV. ARGUMENT	
A. The Complainant is marginalized and penalized-----	5
B. Complainant’s PV system is wrongly designated as “commercial”-----	10
C. Complainant’s bills are inaccurate -----	12
D. Supplemental spreadsheets fail to resolve inconsistencies -----	18
E. Billing process for virtual meter aggregation must be automated -----	20
V. CONCLUSION AND REQUEST FOR RELIEF -----	22
VI. PROPOSED ORDERING PARAGRAPHS -----	24

## **TABLE OF AUTHORITIES**

### **CASES**

Fat Katz Tattooz v. National Fuel Gas Distribution Corporation Docket # C-2013-2359146

Laura Maisch v. PECO Energy Company (C-2009-2118649)

### **STATUTES**

AEPS Act (Act of July 17, 2007 P. L. 114, No. 35)

66 Pa. C.S. § 316

66 Pa. C.S. § 315(b)

66 Pa. C.S. § 502

66 Pa. C.S. § 701

66 Pa. C.S. § 1403

### **REGULATIONS**

52 Pa. Code § 54.2

52 Pa. Code § 54.3

52 Pa. Code § 54.4

52 Pa. Code § 54.5

52 Pa. Code § 75.1

52 Pa. Code § 75.12

52 Pa. Code § 75.13(c)

52 Pa. Code § 75.13(d)

52 Pa. Code § 75.13(e)

52 Pa. Code § 75.14(e)

52 PA 75.13(i)

52 Pa. Code § 75.61

52 Pa. Code § 75.62(a)(b)

52 Pa. Code § 75.62(c)

52 Pa. Code § 75.67(a)(1)

### **OTHER ORDERS OF THE COMMISSION**

Final Rulemaking Order, entered June 23, 2006 (L-00050174; M-00051865)

Opinion and Order, entered January 9, 2014 (C-2011-2273645)

## **I. INTRODUCTION**

The Complainant respectfully submits this post-Hearing Brief, pursuant to the Briefing Order on Remand issued by Honorable ALJ Judge Cynthia W. Fordham on May 18, 2015 in the consolidated Complaints above.

The consolidated Complaints, above, and the Record of the Formal Hearing on April 21, 2015, present the Complainant's long-standing grievance.

## **II. BACKGROUND**

In 2007, The Complainant contacted PPL Electric to inquire about the possibility of installing a PV solar generating facility (JLM-1). A representative of PPL Electric explained the AEPS Act and described the Law's provision for virtual meter aggregation. In 2008, the Company authorized the Complainant's PV system and identified a specific PPL Utility Pole where interconnection could be completed.

From March, 2009 to April, 2010, the Complainant did not receive any credit for generation. When credit began appearing, there was no supporting data to explain the credit. The absence of monthly credit and the indecipherable data on his bills prompted the Complainant to file an Informal Complaint, which he did in December, 2010. In the meantime, without informing the Complainant, PPL discontinued all generation credit on the Complainant's account.

In February, 2011, responding to the Informal Complaint, the Bureau of Consumer Services supported the Company. Subsequently, the Complainant sought representation from PennFuture, which filed a Formal Complaint in November, 2011 (C-2011-2273645).

A Formal hearing was conducted on August 15, 2012, followed by an Initial Decision by ALJ Honorable Judge Cynthia W. Williams, which concluded that the Complainant had been properly billed and credited. The Complainant submitted a filing of exceptions and a request that the Case be re-opened. The Commission, in its Opinion and Order issued on January 9, 2014, agreed to re-open the Case for purposes of reviewing the billing history and granted the Complainant an opportunity for a new Hearing.

In September, 2014, the Complainant filed a second Formal Complaint (C-2014-2444864) which included two sets of bills and presented an itemized list of billing irregularities. That Complaint was consolidated with the first Complaint, and a second Hearing was held on April 21, 2015. This Post-Hearing Brief presents the Argument of the Complainant based on the Record of that Hearing.

### **III. SUMMARY OF ARGUMENT**

Since 2009, PPL Electric has pursued a billing process for virtual meter aggregation that seeks to avert the necessity of automation. The Company continues to pursue a manual billing process that is deeply flawed, has been modified repeatedly, and has not succeeded in producing bills that comport with the requirements of the PA Utility Code. Throughout that time, PPL Electric has persisted in issuing bills to the Complainant that are incomplete, inconsistent, inaccurate and indecipherable. It is evident from the Record that automation is required to produce a billing process that complies fully with the requirements of virtual meter aggregation as delineated in the Pa. Utility Code.

### **IV. ARGUMENT**

#### **A. AS A RESIDENTIAL CUSTOMER WHO ELECTED VIRTUAL METER AGGREGATION, THE COMPLAINANT IS MARGINALIZED AND PENALIZED BY PPL ELECTRIC'S BILLING PRACTICES.**

**The Complainant, a virtual meter aggregation customer-generator, is not regarded by PPL Electric as a “net metering customer” for billing purposes.**

The AEPS Act is unequivocal in stating, “Virtual meter aggregation... shall be eligible for net metering”<sup>1</sup>. Like the AEPS Act, the Utility Code is clear on this recognition: “Meter aggregation may be completed through physical or virtual meter aggregation”<sup>2</sup>. There is no ambiguity about the Complainant’s eligibility for net metering.

Nevertheless, Mr. Aloysius P. Cannon, PPL’s witness, acknowledged the Company’s failure to regard the Complainant as a net metering customer for purposes of billing. In one instance, he said, “I’m including virtual accounts as non-net metering systems” (Tr. 154). In another comment, he testified that “virtual net metering host accounts are not tagged as a, quote, net metering customer for purposes of billing” (Tr. 155).

Later in the hearing, Mr. Cannon elaborated further: “[Moyer’s account] may be the first two-meter residential account that ever existed at PPL. I would have loved to have been able to make that work, but it didn’t or I would make you a net metering customer in a heartbeat with two meters and this goes away. But there are too many controls in the application that you couldn’t deal with this two-meter residential account, and it just doesn’t exist.” (Tr. 182)

The idea of virtual net metering was proposed to the Complainant by a PPL representative in 2007 (JLM-1). In 2008, the Complainant decided to “take advantage of the virtual net metering” (JLM-2), and in 2009, his PV generating system was approved on that basis. (Moyer Direct at 5; Rebuttal at 14; JLM-24) Interconnection was completed, and the system began operating in March, 2009. Now, six years after his PV system was installed, the Complainant’s monthly bills still do not report aggregation

---

<sup>1</sup> Section 1, Alternative Energy Portfolio Standards Act (#213) (2004)

<sup>2</sup> 52 Pa. Code § 75.12: “meter aggregation”

or reflect his status as a net metering customer. Even recent bills are unreliable records of generation, credit, aggregation, and compensation.<sup>3</sup>

**The Complainant is a virtual metering customer and may not be compelled to adopt physical meter aggregation.**

During the Hearing on April 21, the Honorable Judge Cynthia W. Fordham solicited comment from Mr. Cannon about physical meter aggregation (Tr. 217).<sup>4</sup> In his reply, Mr. Cannon emphasized that this option would be available for “Mr. Moyer or anyone, if they wired the generation to their house” (Tr. 212). That option, of course, does exist, but it is the “customer’s choice” whether to elect physical or virtual metering, as Mr. Cannon pointed out (Tr. 218).

Under the Utility Code, virtual meter aggregation is clearly available to homeowners who install renewal energy systems “within two miles” of their property.<sup>5</sup> Curiously, Mr. Cannon seems to disdain this provision, saying “It’s unfortunate you’ve got this much of a span between the generation site and the house” (Tr. 218). The distance between the meters is immaterial so long as it meets the “two-mile” standard. The Complainant’s system meets the standard; he has chosen virtual meter aggregation; and his bills should provide information that fully reflects that choice.

The option of physical metering or the “single meter situation”, as Mr. Cannon calls it (Tr. 218), is clearly untenable for the Complainant. The house and the solar panels are separated by a ravine, a stream and a wooded area. Bringing wires across them to his house would be “possible”, but impractical and prohibitively expensive. Should PPL Electric agree to re-wire the system at its expense, the Complainant might well re-consider that option. In the meantime, the Complainant is a residential customer-generator who elected virtual meter aggregation and who remains in a “two-meter situation”,

---

<sup>3</sup> The Complaint filed in September, 2014, included bills from May to August, 2014.

<sup>4</sup> “The physical rewiring of all meters regardless of rate class on properties owned or leased and operated by a customer-generator to provide a single point of contact for a single meter to measure electric service for that customer-generator.” (75.12: “Physical meter aggregation”)

<sup>5</sup> 52 Pa. Code § 75.14(e)

as Mr. Cannon calls it. The Complainant’s renewable system was approved, and operates, under provisions of virtual meter aggregation, and the Company may not simply wish it away.

### **The Company issues two separate bills without justification**

Since 2009, PPL Electric has employed the complicated process of issuing two separate bills to the Complainant. The Company argues that “Virtual metering applies to two separate meters that are read and billed independently.” (JLM-9). That argument is explicitly contradicted by the Utility Code, which requires “the combination of readings and billing”<sup>6</sup>

*“Virtual meter aggregation—The combination of readings and billing for all meters regardless of rate class on properties owned or leased and operated by a customer-generator by means of the EDC’s billing process, ...” (75.12) (emphasis added)*

As a result of PPL’s two-bill system, the Complainant also incurs double charges for access to PPL’s infrastructure. Both of the bills issued by the Company (solar bills and house bills) include “distribution charges”. The Complainant is reimbursed for a portion of those charges at “full-retail value”, but only for the amount that he uses. The Complainant is not compensated at full-retail value for his excess generation. If there are excess kilowatt hours at the end of the year, they are reimbursed by PPL at the lower rate of the “price-to-compare”, which excludes the distribution charges. Consequently, the Complainant pays distribution charges twice for the generation that exceeds his use (See, for example, 2012 and 2013; JLM-32 and JLM-34).

This “double-charge” is not imposed on physical metering customers, who receive only one bill and incur only one distribution charge (Rebuttal at 7). It also violates a provision of the Utility Code, which explicitly limits the monthly charges that may be imposed on a virtual metering customer.<sup>7</sup>

### **The Company mandates two separate accounts without justification**

---

<sup>6</sup> 52 Pa. Code § 75.12: “virtual meter aggregation”

<sup>7</sup> 52 Pa. Code § 75.14(e)

PPL Electric persists in regarding the Complainant as two entities with two separate accounts. The use of two accounts for billing purposes is a severe impediment to virtual meter aggregation. The consequences are reflected in Mr. Cannon's own words, "We have a process which unfortunately we are not designed to deal with. We cannot take two unique accounts and somehow bundle their activity together." (Tr. 187)

In both physical and virtual metering, there must be "aggregation" of the generation and usage data. The difference between the two modes is the number of meters and the way in which the "aggregation" occurs: either "through physical rewiring" (75.12 - "Physical Meter Aggregation") or "by means of the EDC's billing process" (75.12 - "virtual meter aggregation"). A single account is standard for physical metering on a residential system, and a single account is appropriate for virtual metering on a residential system, as well.

Section 75.14(e) refers explicitly to "processing his account on a virtual meter aggregation basis". The use of the singular noun speaks for itself, and a single account is specified. PPL Electric has wrongly conflated the idea of two meters with the idea of "two accounts".

PPL imposes two accounts routinely, even for residential customers who elect virtual meter aggregation. This "default" practice discriminates against the Complainant and ignores the Code which says:

**"An EDC shall provide net metering at nondiscriminatory rates identical with respect to rate structure, retail rate components and any monthly charges to the rates charged to other customers that are not customer-generators." 52 PA 75.13(i)**

Residential customers who are not customer-generators do not incur two account charges unless they operate a business or request a new account. In the Complainant's case, there is no commercial purpose, nor was there a request for a second account.

It is true, of course, that residential customers sometimes request a second account.<sup>8</sup> Such a request may be for adding a business, a shop, an office, or a second property. In those cases, the multiple accounts are not mandated; they are voluntary and appropriate. Given that no such provision has been “specifically authorized” by the Commission, as required by Section 75.13(j), the costly and burdensome imposition of a second account is unjustified.

**B. THE COMPLAINANT’S PV SYSTEM IS WRONGLY DESIGNATED BY PPL ELECTRIC AS A COMMERCIAL (GS-1) FACILITY.**

As shown above in A.1, the Complainant, like all other virtual metering customer-generators, is not regarded as a net metering customer for purposes of billing (Tr. 155). As a residential customer-generator, however, the Complainant is further marginalized and penalized in a unique way. In imposing a GS-1 account on the Complainant, PPL has cast the Complainant as a commercial entity, which he is not.

The Complainant’s PV solar generating system has only one purpose ---- to provide electricity to his residence. The Complainant’s renewable energy system was approved by PPL Electric explicitly as a “residential” system, as attested by the “PP&L Service Cut-In Request” which was part of the approval process (JLM-21). The Document is proof of inspection “in accordance with PP&L Rules” and designates the structure classification as “Residential Solar Panels”. Mr. Cannon confirmed this point when he said, “... yes, you were going to support your residential service. So I can see you weren’t a commercial entity.” (Tr. 211)

The Complainant’s solar panels, like those in physical meter aggregation for other homeowners, are merely detached components of a single, residential renewable energy system. Although they are ground-mounted, the Complainant’s solar panels function the same as rooftop solar panels on a home

---

<sup>8</sup> “The company may connect service on request...” (PPL Electric Utilities Corporation, General Tariff, Supplement No. 102, Electric Pa. P.U.C. No. 201, Fourth Revised Page No. 6)

that uses physical meter aggregation. The Complainant's PV system is not associated with a service station, a rental property, a methane digester, a shop, or an office. The solar panels do not serve any commercial function, and the renewable system is not connected to a business in any way.

The GS-1 rate schedule is described by the Company's own Tariff (PPL Tariff, Supplement No. 125, Electric Pa. P.U.C. No. 201, Twenty-Sixth Revised Page No. 24): "This Rate Schedule [GS-1] is for small general single phase non-residential service at secondary (C) voltage and other applications outside the scope of the Residential Rate Schedule." (emphasis added)

Many virtual customers are, indeed, commercial entities. Mr. Cannon testified that "The majority of these customers are mid-size commercial and up." (Transcript at 182). Virtual meter aggregation is not restricted to commercial entities, either by the AEPS Act, the utility Code, or the Company's Tariff. Virtual meter aggregation is available to customers "regardless of rate class" (75.12). The Complainant, a residential customer, cannot be required to establish a commercial (GS-1) account or be forced into a different Rate Schedule as a consequence of electing virtual meter aggregation. The Complainant's system was installed only for residential use and merits a residential (RS) Rate Schedule.

The imposition of commercial status is a severe penalty to the Complainant. It carries a higher monthly customer charge than a residential account and imposes an unfair burden on the Complainant by sharply reducing his generation credit. The second account places an enormous burden on the Complainant's tiny residential system and reduces the Complainant's total generation credit by as much as 50% (Moyer Direct at 24).

The imposition of commercial status on the Complainant further undermines the intent of the AEPS Act itself. The Commission has said clearly that "The principal intent of the Act's net metering provision is to provide incentives to small customer-generators to use alternative energy sources"<sup>9</sup> (JLM-5). Those incentives extend to residential customers, and are not restricted to commercial entities.

---

<sup>9</sup> Final Rulemaking Order, entered June 23, 2006 (L-00050174) (p. 12)

By imposing on a residential customer-generator the penalty of a second account and the commercial monthly charge, PPL creates a severe disincentive to homeowners who might benefit from choosing virtual meter aggregation.

**C. THE BILLS ISSUED TO THE COMPLAINANT FOR HIS VIRTUAL METERING SYSTEM SINCE 2009 ARE INCONSISTENT, INCOHERENT, AND OFTEN INACCURATE.**

The billing process used for the Complainant's bills is a manual process. Although PPL Electric has implemented an automated system to achieve physical meter aggregation, the Company continues to use a manual process for virtual metering. It is undisputed that this manual billing process does not achieve virtual meter aggregation, as defined in the Utility Code<sup>10</sup>. Mr. Cannon expressed this clearly when he said, "the system cannot currently transfer data from two separate meters" (Rebuttal at 10).

Further, in his Rebuttal, Mr. Cannon refers to PPL's "experiments" with metering and billing (Rebuttal at 40). Instead of implementing a coherent, automated billing process for virtual meter aggregation, PPL Electric has relied on a shifting, unreliable manual process that is fraught with irregularities. Mr. Cannon testified that the Complainant's virtual net metering system "may be the first two-meter residential account that ever existed at PPL. I would have loved to have been able to make it work, but it didn't" (Tr. 182). The discrepancies, contradictions, omissions, and errors in the bills issued to the Complainant have been detailed in written testimony (Moyer Direct at 30-34). A few representative examples are recounted below.

**Essential information is routinely omitted or withheld from the bills.**

---

<sup>10</sup> 52 Pa. Code § 75.12: "virtual meter aggregation"

1. The Kilowatt hour, which PPL identifies as “the basic unit of electric energy” (“Understanding your bill”, JLM-134 to JLM-169), is never used to report generation on the solar bills<sup>11</sup>. PPL’s witness confirmed this omission. (All bills, JLM-101 to JLM-169; Tr. 190)
  - a) The solar bills do not report the number of kilowatt hours generated.
  - b) The solar bills do not report the kilowatt hours used to offset the Complainant’s “requirements”.
  - c) The solar bills do not report the kilowatt hours of excess generation “carried forward”.
2. Solar bills provide no meaningful data for purposes of virtual meter aggregation, as Mr. Cannon testified when he was questioned about the solar bills (JLM-169):
3. The house bills, similarly, fail to provide credit data in kilowatt hours (All bills, JLM-202 to JLM-267).<sup>12</sup> Credit appears only as a dollar amount without any supporting data.
4. Section 052 PA Code § 54.4(b)(3)(A) requires that “Generation charges shall be presented as a standard pricing unit for electricity in actual dollars or cents per kilowatt hour.” (Emphasis added) However, no such pricing unit is presented in the solar bills provided to the Complainant by PPL. (JLM-101 to JLM-169)
5. Section 75.13(c) of the Utility Code requires that generation be credited against the Complainant’s usage (or carried forward in the case of excess generation) “at the full retail rate”. The “full retail rate” is never specified, however, either in the solar bills or the house bills provided to the Complainant by PPL. (cf. all bills)
6. There is no indication on the solar bills that generation occurs at all. The only indication of generation appears, ironically, on the house bills in the form of a dollar amount, and only after September, 2011.
7. Section 54.4 of the Utility Code requires that all “basic” information must be shown in a bill, including the generation, transmission, and distribution charges. As the default service provider (DSP), PPL Electric is subject to this requirement.<sup>13</sup> Since March, 2011, however, solar bills provided to the Complainant by PPL show only distribution charges, but not generation or transmission charges. (JLM-127 to JLM-169)
8. Section 56.15(2) requires that bills issued by PPL Electric report “the beginning and ending meter readings for the billing period”. However, beginning and ending meter readings are

---

<sup>11</sup> From May, 2009 to December, 2010 (JLM-104 to JLM-124), solar bills report kilowatt hours of use.

<sup>12</sup> The Commission ruled in 2006 that “the credit mechanism remains a kWh credit per kWh produced” (JLM-6) Final Rulemaking Order, entered June 23, 2006 (L-00050174L) (page 17)

<sup>13</sup> “The default service provider will be considered to be an EGS for the purposes of this section.” 52 Pa. Code § 54.4(b).

frequently identical on solar bills provided to the Complainant, meaning that no meter activity is reported. (JLM-127 to JLM-169).

9. Section 56.262 requires that “a utility shall render bills based on actual meter readings by utility company personnel”. However, meter readings reported on the Complainant’s solar bills are updated no more frequently than once a year (JLM-127 to JLM-142), and in one case were not updated for a period of two years (JLM-142 to JLM-166). The fact that solar bills do not report actual, current meter readings was confirmed by Mr. Cannon at the hearing on April 21, 2014 (Tr. 160).

Moyer: “You would agree that what is provided in my bill does not correspond to the actual meter reading.”

Cannon: “Yes”

10. Some financial transactions are omitted from the bills, which yields inaccurate account balances. Two checks (JLM-27; JLM-28) were issued to the Complainant in April, 2010, but neither the payments nor the corresponding generation data is reported on any bills. Similarly, payments for cashout checks (JLM-215 and JLM-231) issued in 2012 and 2013 are omitted from the billing record.

**The billing process has produced numerous inconsistencies, including the sporadic appearance and disappearance of pertinent information.**

11. Over the period between 2009 and 2014, the billing format used by PPL has been altered numerous times. Note the many alterations in Exhibits JLM-103, 104, 115, 116, 127, 128, 129, and 134.
12. Generation and transmission charges, which appeared on many<sup>14</sup> of the Complainant’s solar bills in 2009 and 2010, have since been removed. The most recent solar bill on which PPL reported these “basic” charges, as identified in Section 54.4 of the Utility Code, was in December 2010 (JLM-124).
13. Solar bills that reported electric use in 2009 and 2010 suddenly ceased doing so, and have not reported any use since December, 2010.
14. “Excess Credit” that appears sporadically on solar bills in 2009 and 2010 (JLM- 115; JLM-116; JLM-118; JLM-119; JLM-120; JLM-121; JLM-122; JLM-123) is unexplained and ceases abruptly in December, 2010.
15. The Commission ruled in 2006 that credit should be applied on a monthly basis (JLM-13).<sup>15</sup> In spite of the clear Rule, PPL Electric did not adopt that procedure for the Complainant until five

---

<sup>14</sup> Transmission charges were omitted on the bill for July, 2010 (JLM-118)

<sup>15</sup> Final Rulemaking Order, entered June 23, 2006 (L-00050174L) (page 14)

years later, in December, 2011 (Rebuttal at 23). Though PPL may have been “still learning”, as Mr. Cannon attests (Tr. 149), the company’s failure to update its billing process with sufficient urgency is clear evidence of the neglect PPL has shown toward virtual metering customers.

16. Rather than making monthly credit payments, as required by the Commission (JLM-13), the Company made an annual credit payment in 2009 (JLM-27; JLM-28) and only sporadic “lump sum” payments during 2010 and 2011 (JLM-215 and JLM-231). The lump-sum payments (JLM-215 and JLM-231) included no interest, while the year-end checks issued in April, 2010, (JLM-215 and JLM-231) included only one-time interest, rather than interest calculated on a monthly basis.

**The “one-month lag”, which is part of the Company’s manual billing process, produces erroneous bills and violates the clear provisions of the utility Code.**

The Code clearly specifies that generation credit is to be applied in the current billing cycle. It states, “The EDC shall credit a customer-generator at the full retail rate ... for each kilowatt-hour produced ... up to the total amount of electricity used by that customer during the billing period”.<sup>16</sup> (Emphasis added). The Code further requires that the bill “must state ... the total amount of ... credits made to the account during the current billing period” Section 56.15(7).

For physical meter aggregation, PPL Electric provides “real-time” compensation, as required by the Code (Tr. 171). However, for virtual meter aggregation, the Company imposes a “one-month lag” (Tr. 153) in order to accommodate the associated manual billing process (Tr. 146). This lag is a clear violation of Section 75.13(c) which says that only the “Excess kilowatt hours . . . shall be carried forward”. (Emphasis added). Yet, the Complainant’s generation data and credit payments are subjected, every month, to this lag.

The one-month lag also complicates the bills and record-keeping, for example during the year-end “cash-out”. In 2013, for example, “cash-out” was completed on May 10. On that date, the Complainant’s generation and credit were ostensibly reset to zero. However, a credit of \$40.28, which was generated “before the cashout” (Tr. 194), was withheld on account of the one-month lag. That

---

<sup>16</sup> 52 Pa. Code § 75.13(c)

credit of \$40.28 appears instead on the June bill (JLM-252), which is part of the new, PJM Reporting Year. As a result of the one-month lag, PPL failed to zero-out the credit in 2013, as the Code requires.

The delayed credit in June, 2013 was followed by a series of blunders related to the manual process. In July, 2013, without explanation, no credit appeared at all on the house bill (JLM-253). In August, the Company issued two separate solar bills instead of one, again without explanation (JLM-157; JLM-158). When PPL's witness was asked if the omission in July resulted from the manual system, he replied, "Certainly." (Tr. 186)

In September, again, curiously, no bill was issued. The Complainant could not determine the charges owed and did not forward any payment. In spite of the Company's error, a "late Charge" of \$.80 was added to the October bill (JLM-159).

The unlawful practice of delaying credit by one month, even if applied consistently, would pose still another risk. When the credit is postponed or delayed, the resulting compensation is apt to be incorrect, since the full retail rate is adjusted each quarter and the amount applied may not correspond to the value when generation occurred. This risk of error will occur four times each year.

The "one-month lag", finally, is a distinct disadvantage to virtual metering customers because of the "domino effect" it creates. It produces errors in each subsequent month and distorts the amount of "banked" or "carry-over" credit that is available from month to month.

**The inaccurate and misleading terminology used in PPL's billing process is a symptom of the incoherent manual billing process used for virtual meter aggregation.**

In describing PPL Electric's billing procedures, Mr. Cannon explains that the Company will first "post" credit before the bill is "rendered" (Tr. 153). Neither term is consistent with the Utility Code, and their meanings are obscure.

In another example, PPL Electric refers to the credit applied to the Complainant's account as "Excess credit". The phrase "excess credit" is ambiguous, however, and also does not exist in the Utility Code. More importantly, it conflates two separate pieces of information.

The Code makes a distinction between "offset" credit and "excess kilowatt hours" of credit. "Offset" credit is compensation for the electricity used in the billing cycle<sup>17</sup>, while "Excess kilowatt hours" of credit refers to the electric generation above and beyond what is used in the billing cycle.<sup>18</sup> In posting credit to the Complainant's bills, PPL ignores this important distinction. The phrase "Excess credit" is misleading and should be discontinued in favor of language that is consistent with the Code.

**The bills issued to the Complainant fail the Commission's standards of acceptable conduct by a utility.**

In the case of *Fat Katz Tattooz v. National Fuel Gas Distribution Corporation* (Docket No. C-2013-2359146), Jeffrey A. Watson, Administrative Law Judge wrote:

"It is a basic matter of fair business practice that a consumer should be provided a clear billing statement in order to explain charges and adjustments on a bill and learn the basis for the charge or adjustment in order to determine if they were correctly calculated."<sup>19</sup>

The Honorable Judge Watson's comments are relevant to the conduct of PPL Electric, which has issued bills that do nothing to "explain charges and adjustments" or to help the Complainant "to determine if they were correctly calculated".

In another case, *Laura Maisch v. PECO Energy Company*, the Commission ordered a civil penalty against PECO, concluding that the conduct of PECO Energy "was not conducive to an honest

---

<sup>17</sup> 75.12: "Net Metering"

<sup>18</sup> 75.13(c)

<sup>19</sup> Docket No. C-2013-2359146, Initial Decision at 9

and transparent rendering of a full billing in what was a complex and confusing billing history and was not conducive to resolving the matter outside of the litigation context.”<sup>20</sup>

PPL’s flawed manual billing process affects every virtual metering customer in the Company’s service area. The bills make no reference to meter aggregation; the format of these bills has changed repeatedly; the contents have been altered time after time; pertinent information has been withheld; and fragmented information that is included is unverifiable and indecipherable.

The manual billing process currently employed by PPL is inconsistent, incoherent, inaccurate, and untenable. An overhaul of the system that will correct the flaws outlined above is urgently needed.

**D. THE SEPARATE TABULATION ORDERED BY THE COMMISSION (JLM-35), AND THE OTHER SUPPLEMENTAL DOCUMENTS PRODUCED BY PPL, FAIL TO RESOLVE THE INCONSISTENCIES AND DISARRAY IN THE STANDARD BILLING PROCESS.**

PPL Electric has proposed using supplemental documents to provide the Complainant with essential data that is currently absent from the bills. The Company has even suggested issuing monthly “calculation sheets” electronically to the Complainant (Tr. 219-220). However, a strategy involving spreadsheets, separate tabulations, and supplemental documents is unacceptable for a variety of reasons.

First, supplemental documents are not authorized by either the AEPS Act or the Utility Code as authorized vehicles for providing essential data to a customer. The authorized vehicles for issuing essential data are the bills themselves.<sup>21</sup>

Second, supplemental documents do not elucidate the billing process; they complicate it. The customer’s billing history is not an assortment of scattered data issued on spreadsheets or in emails. Billing history consists of the actual bills sent to the customer each month, which must be accurate, comprehensive, and reliable.

---

<sup>20</sup> C-2009-2118649, Opinion and Order at 11

<sup>21</sup> 56.265 regulates billing procedures for EDC’s and 54.1-54.5 regulates billing for Default Service Providers (DSP’s)

Third, supplemental documents do not resolve the problem of a “one-month lag” (detailed in Section C above), in which kilowatt hours generated during one billing cycle, are not credited to the Complainant until the following billing cycle. Likewise, they do not resolve the “partial cash-out” problem (also described in Section C).

Finally, supplemental documents pose as “corrections” to the bills. However, they fail to correct discrepancies in the bills, and even introduce new ones. One supplemental document in particular, the “tabulation” (JLM-35) ordered by the Commission in January, 2014<sup>22</sup> and completed by PPL Electric in March, 2013, clearly illustrates this point. The separate tabulation is not reliable; it does not achieve the Commission’s laudable objective to obtain “actual data” (Opinion and Order at 16); and it perpetuates or exacerbates numerous inconsistencies and contradictions, such as those listed below.

1. The separate tabulation (JLM-35) does not show meter readings for a specific date that corresponds to the billing date. As Mr. Cannon testified, the reading shown on the tabulation is the “highest reading” for the period, not the actual reading on a specific billing date (Tr. at 154).
2. The “separate tabulation” (JLM-35) purports to be a billing history from March, 2009 to December, 2013. Unfortunately, it is merely a partial record. The tabulation fails to include “any payments made by Mr. Moyer” during this period, despite the Commission’s explicit instruction that it must do so. (Order 6f)
3. The tabulation (JLM-35) shows erroneous meter readings for March, April, and May, 2009 (JLM-101; JLM-102; JLM-103), contradicting the readings in the bills for the same period. Mr. Cannon, in testimony, confirmed a meter change in April, 2009, (Tr. at 167) which is reported on the Complainant’s solar bill for May, 2009 (JLM-103). The tabulation, however, shows continuous readings for that period and offers no evidence of a meter change. This is a very serious discrepancy because it suggests that meter readings were altered retroactively when they were entered manually into the tabulation (JLM-35).
4. The solar meter readings on the tabulation (JLM-35) differ, in every case, from those shown on the solar bills (JLM-101 to JLM-161).
5. “Excess Credit” applied in May, 2010 was delayed credit for generation from January to April, 2010, (Rebuttal at 22). The amount applied, however (\$151.54 - JLM-215), does not correspond to the amount reported on the separate tabulation. The total shown on the tabulation for those same four months is \$205.57.

---

<sup>22</sup> Docket #2011-2273645 (Opinion and Order, January 9, 2014, at 21)

6. “Excess Credit” applied in September, 2011, was delayed credit for generation from January to August, 2011, (JLM-29; Rebuttal at 18). The amount applied, however (\$250.49 - JLM-231), does not correspond to the amount reported on the separate tabulation. The total shown on the tabulation for those same eight months is \$439.57.
7. The “credit applied to satellite” as shown on the tabulation for September, 2011 (\$298.74) does not correspond to the amount shown on the house bill, \$250.49 (JLM-231).
8. The “credit applied to satellite” as shown on the tabulation for August, 2013, is \$61.49, while the house bill shows a credit of \$28.03 (JLM-254).
9. A subsequent tabulation produced by the Company (APC-5) does nothing to correct the discrepancies between the bills and the previous tabulation (JLM-35). The addition of Exhibit APC-5 (Tr. 231-233) only repeats the same omissions and discrepancies. The salient fact is that PPL Electric cannot defend its own bills. Instead, the Company has, ex post facto, issued charts and spreadsheets that divert attention from the actual bills, even as they contradict them. Neither the “separate tabulation” ordered by the Commission (JLM-35) nor the spreadsheet (APC-5) created by PPL Electric have succeeded in resolving the inconsistencies and contradictions in the official billing Record.

**E. AUTOMATION OF THE BILLING SYSTEM FOR VIRTUAL METER AGGREGATION IS REQUIRED**

It is clear from the Record that the opaque “manual” billing process used by PPL for virtual meter aggregation violates the Utility Code in numerous respects. It is also unwieldy and unreliable. An efficient, automated billing process would increase accuracy, improve service, and produce bills that comply with the Utility Code.

Automation offers a solution that is commensurate with the problem. Because of virtual metering’s complexity, the urgency for adding automation is greater than it was for physical meter aggregation, which already uses automation (JLM-9; Rebuttal at 9). While physical metering involves a single, bi-directional meter, virtual meter aggregation involves the “combination of readings and billing” from separate meters with separate interconnections to the grid. The level of complication alone makes automation imperative.

An automated billing system for virtual meter aggregation would streamline the billing process. It would eliminate the tedious and cumbersome manual protocols that are required at present (APC-2).

At the same time, it would consolidate the “readings and billing” from the separate meters as the Code requires.<sup>23</sup> Moreover, it would permit residential customers to participate in virtual metering without being cast as “commercial” entities and forced to maintain two accounts.

Automation would introduce transparency to the billing process. All of the pertinent data would be provided in a single bill, where the customer-generator would be “provided a clear billing statement in order to explain charges and adjustments on a bill and learn the basis for the charge or adjustment in order to determine if they were correctly calculated”<sup>24</sup>

With automation, each monthly bill would provide current and actual data. Credit would be applied in the same billing cycle as when it is generated, in compliance with the Code.<sup>25</sup> This “real-time” data will eliminate the “one-month lag” (Tr. 153), and the chaos that the lag produces (described in Section C). As Mr. Cannon testified, “If we were fully automated in an ideal world, then as the accounts billed it would associate the one to many satellites and do a real-time [aggregation], and count the net [result] accordingly.” (Tr. 153)

An automated billing process that is efficient and coherent would, in turn, further the principal intent of the AEPS Act, which is “to provide incentives to small customer-generators to use alternative energy sources”<sup>26</sup> (JLM-5). Automation would enhance the appeal of virtual meter aggregation and encourage others to take advantage of its benefits. Many who have been dissuaded by reports of unreliable bills and cryptic data would be reassured, and reconsider the option.

The benefits of automation for virtual meter aggregation clearly outweigh the cost. The one-time cost of automation, shared across the customer base, would be less than 25 cents per customer.<sup>27</sup>

---

<sup>23</sup> 52 Pa. Code § 75.12: “virtual meter aggregation”

<sup>24</sup> Docket No. C-2013-2359146, Initial Decision at 9

<sup>25</sup> 52 Pa. Code § 75.13(c)

<sup>26</sup> Final Rulemaking Order, entered June 23, 2006 (L-00050174) at 12

<sup>27</sup> This figure assumes that PPL’s own projection is conservative. With a cost of \$150,000 shared across 1.4 million customers, the Company’s preliminary estimate is a one-time cost of approximately \$.11 (eleven cents) per customer.

(Rebuttal at 32; Rebuttal at 38) This modest cost is well-justified, since the benefits of a coherent and effective billing process for virtual meter aggregation are many and far-reaching. Virtual meter aggregation helps to hasten the transition to renewable energy; puts generation closer to demand; reduces transmission line loss; and furthers the principal intent of the AEPS Act.

If opportunities for virtual meter aggregation are made increasingly available, both in the commercial and the residential sectors, they will serve the interests of the public, the public utilities, and the Commonwealth. Automation of the billing process for virtual meter aggregation is essential to serving those interests.

## **V. CONCLUSION AND REMEDY**

The evidence in this case points to billing irregularities that cannot be attributed merely to inadvertent errors, employee lapses, or occasional bills. The evidence exposes a flawed billing process for virtual meter aggregation. The Company continues to employ a billing process that requires a mind-numbing, ten-page set of manual protocols<sup>28</sup> that must be completed for every VM customer every month.

PPL Electric has shown disregard for specific provisions in the Utility Code that have been established for more than ten years. The Company has not provided the Complainant with the complete, accurate, and transparent bills that the Utility Code requires. Furthermore, the Company has refused to develop and implement an automated process that is available and would resolve the many inconsistencies, discrepancies, omissions, errors in the Complainant's bills. The erratic billing process applied to the Complainant's bills is insupportable.

Furthermore, it undermines the "principal intent" of the AEPS Act. The Commission has said explicitly that The Act's "principal objective" is "to provide incentives to small customer-generators to

---

<sup>28</sup> APC-2

use alternative energy sources (JLM-5).”<sup>29</sup> The inscrutable bills issued to the Complainant are a blatant disincentive to small customer-generators, especially to homeowners like the Complainant. The arbitrary conditions, the cryptic billing methods, the commercial (GS-1) charges, and the indecipherable bills serve only to exclude residential customers and constitute a strong disincentive.

The fragmented, erratic, and opaque manual billing system should be abandoned and replaced by a coherent, lawful billing process that takes advantage of all the benefits of automation.

### **REQUEST FOR RELIEF**

1. The Commission should determine that the purpose of the Complainant’s renewable system is to provide electricity for his residence, and is not intended for any commercial or business purpose.
2. The Commission should order PPL Electric to implement a billing process for virtual meter aggregation that takes full advantage of automation to generate monthly bills and the data in them.
3. The Commission should order PPL Electric to aggregate the Complainant’s two meters “by means of the billing process” and to refrain, in the future, from issuing billing data to the Complainant by means of separate tabulations.
4. The Commission should order PPL Electric to implement virtual meter aggregation by means of a single bill that shows a “combination of readings and billing” from the Complainant’s separate meters.
5. The Commission should order PPL Electric to recognize the Complainant’s PV solar generating facility as a unified and virtually-connected residential system.
6. The Commission should order PPL Electric to provide virtual meter aggregation to the Complainant through one residential (RS) account.
7. The Commission should order PPL Electric to reimburse the Complainant for the customer charges associated with the commercial (GS-1) account that was established and maintained without a legitimate basis. (\$951.51, based on commercial charges from March, 2009 to August, 2014, plus additional charges since that date.)
8. PPL should compensate the Complainant for generation from June to December, 2010, during which time the Company discontinued credit entirely. (\$738.98-Rebuttal at 24)

---

<sup>29</sup> Final Rulemaking Order entered June 23, 2006, page 21

9. Whereas the disarray in the billing history precludes any precise determination of additional compensation that may be due to the Complainant, the Commission should make a reasonable estimate of appropriate compensation (beyond the amounts in #7 and #8, above) and order PPL Electric to pay that additional amount.
10. As an alternative to items 2-6 above, the Commission should order PPL Electric to re-wire the Complainant's renewable energy system at the Company's own expense, converting it to a physical meter aggregation system by means of overhead wires according to a bona fide proposal and using a qualified installer, both of which the Complainant will provide.
11. The Commission should order PPL Electric to refrain from imposing "any other requirement" 75.13(j) that has not been specifically authorized by the Commission.
12. The Commission should impose fines and penalties on PPL Electric Utilities Corporation for its persistent failure to implement a suitable billing process for virtual meter aggregation; for its sustained pattern of issuing incoherent, unlawful bills to the Complainant; for its repeated violations of the utility Code with regard to virtual meter aggregation; and for its clear disregard for the intent of the AEPS Act in policies related to virtual meter aggregation.

As a means of implementing the above Remedy, the Complainant submits these

### **PROPOSED ORDERING PARAGRAPHS**

THEREFORE,

IT IS ORDERED:

1. That the Complaints of Jay Larry Moyer against PPL Electric are sustained consistent with this Opinion and Order.
2. That the Complainant shall be afforded particular status as a residential customer-generator whose renewable energy system will not be subject to separate accounts or to any other conditions that are customarily applied to commercial or small business customers.
3. That PPL Electric shall cease and desist from imposing further commercial (GS-1) charges on the Complainant.
4. That, within 90 days, PPL Electric shall develop, and submit to the Commission for approval, a billing plan for virtual meter aggregation that takes full advantage of automation and will generate a single monthly bill for the Complainant which includes, at a minimum, the following verifiable components:
  - a. A specified billing period, with beginning and ending dates, that is consistent for all aggregated meters
  - b. A specified, common date on which the meter readings for all aggregated meters are taken

- c. Data showing the total kWh of use at each meter for the billing period
  - d. Data showing the total kWh of generation for the current billing period
  - e. Data showing the “full retail” value (in price-per-kWh) on which the generation credit is based
  - f. The total value (in dollars and cents) for the electricity generated
  - g. The total kWh of “offset” generation applied to the use of electricity at each meter during the most recent billing period
  - h. The total value (in dollars and cents) of generation credit, during the most recent billing period, which is being applied to “offset” electric use
  - i. The total kWh of “excess” generation credit, during the most recent billing period, which is being added to the “banked” (carry-over) credit
  - j. The total kWh of the remaining “banked” (carry-over) generation credit which is being carried over to subsequent months
  - k. (At the end of the reporting year) The amount of “cash-out” and the supporting data (price-per-unit; kWh of credit; dollar value; etc.) on which the “cash-out” is based
  - l. A current and accurate account balance on the billing date
5. That, within 90 days from the time the proposal is submitted, the Commission will review the Company’s plan and approve it as submitted, or approve another plan that assures the objective described in “4” above.
  6. That PPL Electric shall offer virtual meter aggregation to the Complainant for his renewable energy system through one residential (RS) account.
  7. That, within 90 days, PPL Electric shall begin issuing the Complainant a single bill each month that shows a “combination of readings and billing” from the Complainant’s separate meters.
  8. That the Commission shall “grandfather” the Complainant’s renewable energy system and recognize it as fully and permanently qualified for virtual meter aggregation or, alternatively, order PPL Electric to complete, within one year and at the Company’s expense, the re-wiring of the Complainant’s renewable energy system for operation as a physical net metering facility.
  9. That PPL Electric shall reimburse the Complainant for all of the commercial (GS-1) charges which the Company has imposed since March, 2009, including the charges totalling \$951.51 as of August 31, 2014, as well as any commercial charges imposed since that date.
  10. That, for the period from June to December, 2010, during which the Company discontinued credit entirely, PPL Electric shall pay to the Complainant the amount offered by PPL Electric in their Rebuttal, page 24 (\$738.98), adjusting that amount (with interest) based on the actual date when payment is made.

11. That, for the remaining months of unverifiable bills (not including June to December, 2010) PPL Electric shall compensate the Complainant with an additional amount that the Honorable Judge Cynthia W. Fordham (or the Commission) shall deem appropriate.
12. That PPL Electric shall be fined in the amount of \$98,000.00 which represents the 98 virtual net metering customers who have been subjected to the same flawed “manual billing process” used for the Complainant.
13. That PPL Electric shall incur a \$1,000 civil penalty pursuant to the Commission’s authority to impose civil penalties under Section 3301 of the Code, 66 Pa. C.S. §3301.

Jay Larry Moyer  
370 W. Johnson Street (C-1)  
Philadelphia, PA 19144  
267-693-2633