

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PPL Electric Utilities Corporation :
for Approval of Its Smart Meter Technology : **M-2014-2430781**
Procurement and Installation Plan :

**Main Brief of the Coalition for Affordable Utility Services
and Energy Efficiency in Pennsylvania**



The Pennsylvania Utility Law Project

*On Behalf of the Coalition for Affordable
Utility Services and Energy Efficiency in
Pennsylvania (CAUSE-PA)*

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I. INTRODUCTION

The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA), through its counsel at the Pennsylvania Utility Law Project, files this brief in support of its positions in this proceeding.

The evidence produced by PPL Electric Utilities Corporation (PPL or the Company) in the captioned proceeding is insufficient to prove that its Smart Meter Plan (SMP) is both reasonable and prudent.

First, PPL’s assessment of the associated costs necessary to bring its meters into compliance with the direct access requirement in Act 129 is incomplete. Without additional information about the additional cost to consumers to adopt the technology necessary to directly access the meter, and the quantifiable benefits that will inure to the ratepayers as a result, the Commission cannot make a sound determination about the reasonableness and prudence of PPL’s Smart Meter Plan (SMP).

Additionally, more is needed regarding PPL’s plan for data privacy – as well as its policies for the Supplier Portal – to ensure that sensitive smart meter data is protected from inadvertent and/or unauthorized dissemination. As proposed, PPL’s data privacy plans fail to meet the standards it sets out for itself, including the standards set forth by the National Institute of Standards and Technology. Therefore, at a minimum, PPL must be required to revise its proposed data privacy plan to comply with the standards it sets forth, which requires the adoption of a separate, stand-alone privacy policy for smart meter data.

Finally, to ensure that the health and safety of vulnerable Pennsylvanians is protected, the Commission must reject PPL’s Plan to the extent that it fails to specify whether it plans to seek Commission approval prior to implementing remote involuntary terminations, service limiting, and prepay metering programs. The Commission has previously held that these programs raise

significant policy implications and would require waiver of significant regulation and policy prior to implementation.

In all, CAUSE-PA urges the Commission to reject PPL's SMP as a result of these significant shortcomings and to order PPL to provide additional information and make significant revisions to address the current programmatic flaws. Such action is necessary and proper, and will fulfill the Commission's unwavering duty to uphold the public good by ensuring that all Pennsylvanians have access to utility service at a just, reasonable, and prudent rate.

II. PROCEDURAL HISTORY

On June 30, 2014, PPL Electric Utilities Corporation (PPL or Company) filed its Petition for approval of its smart meter technology procurement and installation plan. Accompanying the petition is a Smart Meter Technology Procurement and Installation Plan (SMP) and the direct testimony of six witnesses, PPL Electric Statements 1 through 6.

Notice of the filing was published in the *Pennsylvania Bulletin* on July 19, 2014, with an August 11, 2014 deadline set for intervention or protests, and notice of a prehearing conference on August 11, 2014. On July 8, 2014, the Honorable Susan D. Colwell, Administrative Law Judge, issued a prehearing order, which directed those entities wishing to participate to follow Commission regulations regarding protests and interventions, and directed the filing of prehearing memorandum on or before August 11, 2014.

On August 8, 2014, the Coalition for Affordable Utility Service and Energy Efficiency in Pennsylvania (CAUSE-PA). The Office of Consumer Advocate (OCA), the Office of Small Business Advocate (OSBA), the International Brotherhood of Electrical Workers, Local 1600 (IBEW) and the PP&L Industrial Customer Alliance (PPLICA) also petitioned to intervene and/or filed a protest in accordance with the Commission's earlier directives.

CAUSE-PA's Petition to Intervene – as well as the petitions of other parties – was granted at the prehearing conference on August 11, 2014, and a litigation schedule was subsequently ordered by Judge Colwell. An evidentiary hearing was held before Judge Colwell, as scheduled, on December 16, 2014. Testimony was admitted into the record and cross examination was held. CAUSE-PA did not submit testimony at the hearing; however, it admitted CAUSE-PA Exhibit 1 into the record, which consisted of the answers and attachments to interrogatories exchanged between OCA and PPL as well as CAUSE-PA and PPL. This Exhibit was properly authenticated and admitted to the record by Judge Colwell without objection of the parties.

III. STATEMENT OF THE QUESTIONS INVOLVED

Whether the Commission should reject PPL's proposed Smart Meter Plan and require PPL to submit a revised Smart Meter Plan to include the following information, assessments, commitments, and/or design components:

1. An assessment of the added cost to the customer to adopt HAN technology, as well as the likelihood of such adoption, to allow for a full assessment of the cost versus the likelihood that the technology will enhance direct access to the meter information beyond existing technology.
2. A Plan for how PPL universal service participants in CAP and LIURP will receive the financial support necessary to enable those customers to receive the purported benefits of the HAN.
3. An assessment and accounting of quantified benefits and savings expected to inure to both the ratepayer and the Company as well as the added costs to the consumer to make use of the enhanced technology.
4. A stand-alone data privacy policy, developed in coordination with stakeholders, to ensure an appropriate level of protection for smart meter data that is consummate with the inherent risk.
5. A revised plan for its Supplier Portal that enables customers to protect their information from inclusion on the Supplier Portal and to require verification of EGS certifications.
6. A clear statement that PPL will seek Commission review and approval, subject to an administrative proceeding, before proceeding with plans to implement an programs that include remote disconnection for involuntary terminations, service limiting, or prepaid metering.

Suggested Answer: Yes.

It is necessary for PPL to present this additional information to the Commission to enable it to make a proper and just determination about the prudence and reasonableness of PPL's proposed SMP.

IV. BURDEN OF PROOF

PPL has the burden of proof in this case, as it is the proponent of a Commission order granting its Petition and approving its Plan. 66 Pa.C.S.A. § 332(a). In its January 21, 2010 Initial Order in the prior PPL Smart Meter Plan proceeding, the Honorable Wayne L. Weismandel, Administrative Law Judge, provided a detailed description of the standards PPL must meet to fulfill its burden of proof in this case:

To establish a sufficient case and satisfy the burden of proof, PPL must bear its burden by a preponderance of the evidence. *Samuel J. Lansberry, Inc. v. Pa. Public Utility Comm'n*, 134 Pa.Cmwlth. 218; 221-222, 578 A.2d 600; 602 (1990), app. denied, 529 Pa. 654, 602 A.2d 863 (1992). That is, by presenting evidence more convincing, by even the smallest amount, than that presented by the other party. *Selling Hosiery v. Margulies*, 364 Pa. 45, 70 A.2d 854 (1950). PPL must initially produce sufficient credible evidence to establish a prima facie case in order that it not lose summarily. *Morrissey v. Dep't of Highways*, 424 Pa. 87, 225 A.2d 895 (1967). If PPL does so, the burden of going forward with evidence shifts to the parties opposing its Petition to produce credible evidence of at least co-equal weight. This burden of going forward with evidence may shift back and forth between the parties, but the ultimate burden of persuasion remains with PPL. *Milkie v. Pa. Public Utility Comm'n*, 768 A.2d 1217 (Pa.Cmwlth. 2001).

Additionally, any finding of fact necessary to support the Commission's adjudication must be based upon substantial evidence. *Mill v. Pa. Public Utility Comm'n*, 67 Pa.Cmwlth. 597, 447 A.2d 1100 (1982), *Edan Transportation Corp. v. Pa. Public Utility Comm'n*, 154 Pa.Cmwlth. 21, 623 A.2d 6 (1993), 2 Pa.C.S. § 704. Substantial evidence has been defined as such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. *Bethenergy Mines, Inc. v. Workmen's Compensation Appeal Bd. (Skirpan)*, 531 Pa. 287, 612 A.2d 434 (1992). More is required than a mere trace of evidence or a suspicion of the existence of a fact sought to be established. *Norfolk and Western Ry. v. Pa. Public Utility Comm'n*, 489 Pa. 109, 413 A.2d 1037 (1980); *Erie Resistor Corp. v. Unemployment Compensation Bd. of Review*, 194 Pa.Super. 278, 166 A.2d 96 (1960); *Murphy v. Dep't of Public Welfare*, 85 Pa.Cmwlth. 23, 480 A.2d 382 (1984).¹

In short, PPL has the burden of submitting substantial evidence to prove, by a preponderance of evidence, that its Petition should be granted.

¹ *Petition of PPL Electric Utilities Corporation for Approval of a Smart Meter Technology Procurement and Installation Plan*, Initial Decision, Docket No. M-2009-2123945, at 19-20 (Jan. 28, 2010).

V. SUMMARY OF ARGUMENT

PPL's Smart Meter Plan (SMP) lacks critical information necessary for the Commission to make a just and sound determination about the reasonableness and prudence of its proposed investment in wholly new technology, which it seeks to implement on an expedited basis.

First, PPL's SMP lacks a full assessment of the costs associated with full meter upgrade, including the added costs to the customer to access the enhanced meter benefits, and fails to set forth sufficient quantifiable benefits to prove that its plan is a reasonable and prudent investment for ratepayers. Indeed, it is unclear whether the new technology PPL proposed to bring it into compliance with Act 129 will, in fact, enhance the ability for PPL customers to "directly access" their usage and pricing information as required by Act 129. Without information about whether customers can afford and are interested in purchasing the additional equipment necessary to utilize the Home Automated Network (HAN) capability, the Commission cannot reach a conclusion on whether the investment is prudent.

PPL's SMP also lacks a detailed, stand-alone data privacy plan, which is a critical component necessary to ensure that the sensitive data collected by its new meters will not be unnecessarily exposed to unauthorized disclosure. The record clearly demonstrates that PPL's existing policies are inadequate to address the privacy risks associated with smart meter technology, and raises substantial question about the efficacy of PPL's plans to rely on these policies as a baseline for smart meter data privacy policies. Moreover, its current Supplier Portal program provides an inappropriately broad disclosure of customer information, without offering customers the option of protecting their information. This unverified, open-door approach to disseminating customer data is inconsistent with existing privacy laws and policy, and must be addressed to ensure that the Supplier Portal does not undermine attempts to protect data through strong front-end cyber-security and data privacy plans.

Finally, PPL's plans to implement remote disconnection for involuntary terminations, service limiting, and prepaid metering are unclear and raise substantial question as to whether PPL plans to adopt these programs without first seeking Commission review and approval. Given the significant concerns that these programs raise with respect to the health and safety of vulnerable populations, it is critical for the Commission to specifically order that PPL seek Commission review and approval – subject to a full evidentiary hearing – prior to moving forward with plans for such programs.

In all, PPL's SMP lacks critical information and design features to enable the Commission to make a just determination as to whether the proposed investment is reasonable and prudent. In light of these substantial concerns, CAUSE-PA urges the Commission to reject PPL's SMP and to instruct PPL to make significant revisions to address the issues raised herein.

VI. ARGUMENT

A. Compliance with Act 129 and the Implementation Order

In its 2010 Implementation Order, the Commission found that PPL’s current meters do not comply with all Act 129 requirements; particularly, the requirement that smart meter technology provide customers with “direct access to and use of pricing and consumption information” as well as the ability to have “automatic control” over their consumption.²

The Commission charged PPL with the task of testing potential solutions that would bring it into compliance with these remaining Act 129 requirements.³ After conducting a range of pilots, PPL now seeks permission to conduct a company-wide roll-out of a new, RF-based meter which will “enable communications to a HAN [Home Area Network] device.”⁴ The Company is clear in explaining that “[c]ustomers are responsible for purchasing and installing their own HAN devices as well as establishing the network connection.”⁵ PPL expert David Glenwright explained in testimony that PPL believes this new meter offers the only viable option to fulfill the remaining

² *Petition of PPL Electric Utilities Corporation for Approval of Smart Meter Technology Procurement and Installation Plan*, Rewrite Opinion and Order, Docket No. M-2009-2123945, at 22 (July 15, 2010) [hereinafter 2010 Implementation Order].

³ 2010 Implementation Order at 22-23; *see also* PPL St. 2, Glenwright, at 5; PPL St. 2-R, Glenwright, at 2-3. In its 2010 Implementation Order, the Commission explained:

DEP argues that the plan is not in compliance with Act 129 regarding direct access to use of price and consumption information, and that the Plan fails to effectively support the automatic control of the customer’s electricity consumption. PPL’s Plan, if its HAN pilot is successful would comply with Act 129. However, *to the extent PPL’s plan simply provides validated access to hourly data contained on its website generally within 48 hours, this falls short of the goal of providing direct access to customer usage data.*

2010 Implementation Order at 22-23 (emphasis added). In other words, the level of access a customer has with PPL’s current meters – which allows customers to see hourly usage data within 48 hours on PPL’s website – does not meet the Act 129 direct access and automatic control requirements. The entire reason for exploring new technology was to comply with the *2010 Implementation Order*, which required PPL Electric “to identify, test, develop and implement cost effective ways to provide metered usage data directly to customers. . . . [and to] use its grace period pilot programs to develop a plan to be filed with the Commission to fully comply with Act 129.” PPL SMP Petition at 2.

⁴ 2010 Implementation Order at 23.

⁵ Pet. at 13, ¶ 31.

Act 129 requirement by “facilitating” the ability for customers to have “direct access to and use of price and consumption information.”⁶

But “facilitating” direct access to usage and pricing information is not the language used in Act 129. Rather, the Act is explicit: “the technology *shall* provide customers with direct access to and use of price and consumption information.”⁷ After a close review of the information available on the record, CAUSE-PA urges the Commission to reject PPL’s proposal and require PPL to modify its plan to include a thorough accounting and assessment of the costs *to the customer* associated with adoption of HAN technology. This additional information is critical to the Commission’s determination of the reasonableness and prudence of PPL’s SMP, as it reveals whether the incremental benefits to customers of purchasing new meters justifies the overall expenditure.

To explain, the current meters provide usage and pricing information through PPL’s Energy Analyzer within approximately 48 hours. The Commission found that this level of access to usage data was insufficient to meet the requirements of Act 129, and suggested that a HAN

⁶ PPL St. 2-R, Glenwright, at 2.
The Petition further explained:

The Company’s understanding of the Act 129 statutory requirement of directly providing customer’s access to and use of price and consumption information is that *the use and price information needs to be provided near real time to the customer*. The technology solution to meet this requirement that is being adopted in the industry and commercially available in AMI RF Mesh systems as proposed by the Company, is through a Zigbee communication chip integrated in the meter which then communicates price and usage information through the Home Automation Network [HAN] to the customer.

PPL SMP at 20. The origin of this definition of “direct access” seems to be the Commission’s 2012 Implementation Order, which cites to comments – *but does not adopt* – the following recommendation of the Demand Response and Smart Grid Coalition (DRSG), a trade association with a significant financial stake in the selection of smart meter technology.

DRSG comments that “direct access” should mean access by a device in a home or business to information directly from the meter through short-range wireless, power line carrier, or other local communications link.

Smart Meter Procurement and Installation, Final Order, Docket No. M-2009-2092655 at 22 (Dec. 5, 2012).

An even closer look at the origin of this definition reveals that the comments were offered a full month after the deadline for comment had passed. *Id.* at 5, n.9.

⁷ 66 Pa. C.S. § 2807(g).

solution might fulfill the requirements of the Act, pending review of its pilot. PPL conducted the requisite pilots and analyzed the overall cost of replacing the meters (nearly \$450 million) compared to the cost and relative risk of upgrading the existing meters.⁸

Missing from this assessment, however, is an assessment of the cost to consumers to adopt HAN technology and an evaluation of whether consumers will, indeed, adopt the technology.⁹ Customers who adopt HAN technology must have both an internet connection and a HAN device.¹⁰ Additional costs, such as maintenance and support, might also be required to adequately access the technology.¹¹ For the current meter, however, customers only need an internet connection to connect to the PPL customer web portal.¹²

While the record lacks any information to show that HAN technology is affordable, or whether customers have a sufficient interest in the technology, it does indicate that HAN technology is wholly unaffordable for vulnerable Pennsylvanians, who struggle to maintain basic utility service and are unlikely to have financial capital sufficient to invest in a HAN device.¹³ Nancy Brockway, expert witness on behalf of the Office of Consumer Advocate, explained the vulnerability of low income households in direct testimony:

⁸ PPL St. 2-R, Glenwright, at 3-4 (HIGHLY CONFIDENTIAL VERSION); *see also* OCA St. 1-S, Mudd, at 2-3.

⁹ CAUSE-PA Exhibit 1 at CAUSE-PA to PPL I-2. When asked to “identify the average market and installation cost of [a HAN] device or interface technology,” PPL responded that it “has not conducted any studies on the cost of [HAN] devices.” *Id.*

¹⁰ Pet. at 13, ¶ 31; CAUSE-PA Exhibit 1 at CAUSE-PA to PPL I-2.

¹¹ *Id.*; *see also* PPL St. 2-R, Glenwright, at 2-3, and 4.

PPL did not attempt to quantify and compare faster data presentment as an option to fulfill the Act 129 direct access requirement. PPL explained that the Commission previously found that “to the extent PPL’s plan simply provides validated access to hourly data contained on its website, **generally within 48 hours**, this falls short of the goal of providing direct access to customer usage data.” *Id.* (emphasis added). As a result of this statement, PPL concluded:

“[B]ased on our understanding of the requirement [to provide direct access, PPL Electric does not have a viable solution to meet [the direct access] requirement with the current AMI PLC system.

...

Even if the company could provide data faster to the customer via a web portal, this would not meet the statutory requirement of providing direct access.

Id.

¹² PPL St. 2-R, Glenwright, at 4.

¹³ OCA St. 3, Brockway, at 16.

The results of the 2011 National Energy Assistance Survey, conducted by the National Energy Assistance Directors Association (NEADA) showed that nearly 90 percent of LIHEAP recipient households have at least one vulnerable member – defined as someone age 60 or older, age 18 or younger, or disabled. *The survey paints a picture of households at risk [of termination]:*

- 40 percent have someone age 60 or older
- 72 percent have a family member with a serious medical condition
- 26 percent use medical equipment that requires electricity
- 19 percent became sick because the home was too cold
- 85 percent of people with a medical condition are seniors¹⁴

But despite the clear lack of accessibility to HAN technology, PPL has not made any attempt to determine how to ensure that this vulnerable population receives the benefit of their investment – approximately \$320 per customer¹⁵ before the costs associated with HAN purchase and internet connection – and offers no solution for how to ensure that low income households will be able to have “direct access” to usage and pricing information.¹⁶

PPL customers who do not purchase a HAN device, either because of lack of financial means or interest, will continue to only receive information about their usage data through PPL’s website.¹⁷ These customers will not gain any enhancement to the level of “direct access” that they receive and, thus, will not bring PPL closer to compliance with Act 129. Without information about the cost to customers – and their relative interest in and financial ability to adopt the technology – the Commission cannot determine whether it is prudent to invest approximately \$450 million in new technology.

¹⁴ OCA St. 3, Brockway, at 16.

¹⁵ OCA St. 1, Mudd, at 4.

¹⁶ CAUSE-PA Exhibit 1, at CAUSE-PA to OCA Q.2. When asked whether OnTrack customers would receive real time pricing information that is based on the actual OnTrack rates for that customer, PPL responded that it was unable to answer the question because “the detailed business process design work for the HAN functionality including real time pricing information has not been designed.” *Id.*

¹⁷ CAUSE-PA Exhibit 1 at CAUSE-PA to PPL Q.2.

PPL's has failed to identify or detail the manner in which its universal service program low-income participants will be able to access the benefits of its Smart Meters. As noted, the Act requires that the technology enable customers to obtain direct access to and use of price and consumption information."¹⁸ PPL's plan will require HAN devices to obtain direct access to and use of hourly price and consumption information; and PPL's "customers are responsible for purchasing and installing their own HAN devices as well as establishing the network connection."¹⁹ Yet, PPL fails to identify how it will provide the means to enable its low-income OnTrack CAP or LIURP participant customers to purchase and install the HAN device as well as establish and maintain the network connection. The failure of the company to develop and state such a plan will effectively exclude its CAP and LIURP program participants from obtaining access to the specific customer benefit intended to be provided by the HAN and the proposed meters. Without the ability to access hourly price and consumption information, customers unable to afford the additional costs associated with HAN purchase and use would be unable to access information necessary to be an informed and knowledgeable consumer in the competitive generation market.

The development of a Plan detailing the manner in which universal service participants will be able to obtain access to HAN devices and their benefits is not just a matter of preference or better planning, it is an essential element of compliance with the requirements of the Electric Competition Act and the Public Utility Code. The Electricity Generation Customer Choice and Competition Act (Electric Competition Act or Competition Act), became effective on January 1, 1997.²⁰ The primary purpose of the Competition Act was to introduce competition into the

¹⁸ 66 Pa. C.S. § 2807(g).

¹⁹ Pet. at 13, ¶ 31.

²⁰ 66 Pa. C.S. §§ 2801-2812

electric generation supply markets. While opening the market to competition, the Competition Act also mandates the creation of universal service and energy conservation programs intended to make electricity affordable for low-income households and to ensure that utility service remains available to all customers in the Commonwealth at reasonable rates and conditions.²¹

Among other requirements, the Competition Act requires that:

- a. Electric service, which is essential to the health and well-being of residents, to public safety and orderly economic development, should be available to all customers on reasonable terms and conditions;²²
- b. That PPL's CAP is cost-effective and that the rates supporting the program are just and reasonable.²³

PPL's Smart Meter Plan fails to detail how the necessary access of HAN devices, needed to enable CAP customers and LIURP program participants to be informed shoppers will be financed. Will the costs of obtaining HANs and their required network connections be provided by PPL through its universal service programs at an additional cost to other ratepayers? If so, at what cost? If not, how will PPL fulfill its universal service responsibilities under the Competition Act? CAUSE-PA respectfully submits that until these questions are addressed and resolved, PPL's Smart Meter Plan should be rejected.

In sum, a thorough review of the evidence does not support a finding that the addition of HAN capability justifies a complete replacement of existing meters. To ensure that PPL's investment in technology upgrades is both prudent and reasonable, as well as accessible for all ratepayers - including low-income and OnTrack customers, CAUSE-PA urges the Commission to

²¹ See 66 Pa. C.S. § 2802(9).

²² 66 Pa. C.S. § 2802 (9); 66 Pa C.S. § 1301;

²³ 66 Pa. C.S. § 2804(8)-(9); 66 Pa. C.S. § 1301(a).

require PPL to revise its Plan to include a full assessment of the affordability of HAN technology, including an assessment of the range of customers that HAN technology will reach. This additional information will enable PPL and the Commission to more appropriately balance the cost and relative incremental benefit of replacing the current smart meters.²⁴

B. Technology Issues – RF Mesh Versus PLC

CAUSE-PA has taken no position on this issue.

C. Meter Failures

CAUSE-PA has taken no position on this issue.

D. Implementation Timeline

CAUSE-PA has taken no position on this issue.

E. Cost Savings/Quantification of Benefits

The record is insufficient in this proceeding to allow the Commission to conclude whether the cost of its proposed plan is justified (meaning, prudent and reasonable) based on the level of reciprocal, quantifiable benefits for the ratepayer.

Mr. Glenwright made it abundantly clear in cross examination that the Company has not taken the time to determine the quantifiable cost of its proposal in comparison to the quantifiable savings. When asked “What incremental and quantifiable benefits will customers receive through the accelerated deployment of Smart Meters,” Mr. Glenwright provided only that “PPL was able to quantify benefits associated with the use of remote connect and disconnect switches. Those benefits were approximately 2.5 million per year starting after full deployment in 2020.”²⁵ When asked a follow-up question regarding the incremental and quantifiable benefits to PPL through

²⁴ It bears repeating here that the General Assembly was explicit that the basic objective of Act 129 is to make “adequate, reliable, affordable, efficient and environmentally sustainable electric service at the least cost...to all citizens of the Commonwealth.” Act 129, HB 2202, PN 4526, at 1 (1.20-23) – 2 (1.1-5) (2008).

²⁵ Tr. at 39.

accelerated deployment, Mr. Glenwright stated only that “[i]t would be the same quantifiable benefits. *They are the only quantifiable benefits we have identified.*”²⁶

Essentially, PPL is asking the Commission to approve a ratepayer financed investment of nearly \$450 million, or approximately \$320 per customer and, in exchange can only identify a quantifiable benefit of just a fraction of that cost: \$2.5 million per year after 5 years.²⁷ And this assessment of the cost to benefit ratio does not take into account the additional cost to consumers of purchasing HAN technology out-of-pocket.²⁸ It is fundamentally imprudent and unreasonable to ask for approval of a design with such little accounting of the potential for the technology to achieve savings.²⁹ As Ms. Mudd concludes, “PPL failed to develop a reasonable projection of savings associated with the SMP.”³⁰ This result is in stark contradiction to the General Assembly’s stated objective for Act 129: To protect the “health, safety and prosperity of all citizens of this Commonwealth,” which it found to be “inherently dependent upon the availability of adequate, reliable, affordable, efficient and environmentally sustainable electric service *at the least cost.*”³¹

CAUSE-PA urges the Commission to adopt the recommendation of Ms. Mudd with respect to further quantification of potential savings and reiterates its prior recommendation that the Commission require PPL to account for the full potential costs associated with its SMP – including the cost of HAN technology to the customer.³² Such an inquiry will enable the Commission to make an appropriately informed decision about the relative benefits and costs associated with its Plan. Ms. Mudd stated:

I recommend that the Commission require the Company to retain an independent consultant with experience in identifying savings from deployment of the RF Mesh

²⁶ Tr. at 39-40 (emphasis added).

²⁷ OCA St. 1, Mudd, at 4.

²⁸ See *supra* subsection A.

²⁹ OCA St. 1, Mudd, at 12.

³⁰ *Id.*

³¹ Act 129, HB 2202, PN 4526, at 1 (1.20-23) – 2 (1.1-5) (2008).

³² See *supra* subsection A.

System to prepare a written, fully documented report assessing the potential for the Company to achieve additional savings from the implementation of the SMP... I further recommend that the Commission require the Company to present the findings of the report to the stakeholders and the parties to this proceeding and provide stakeholders and interested parties an opportunity to review and comment on the report.³³

Without a more appropriate accounting of quantifiable benefits, it is impossible for the Commission to engage in the type of inquiry necessary to approve a tremendous ratepayer financed expenditure. And it is further impossible for the Commission to then account for the associated costs which may be appropriately passed on to the ratepayer. Thus, CAUSE-PA urges the Commission to deny PPL's Petition and order PPL to conduct a more complete accounting of the relative costs and estimated savings and resubmit its findings to allow the Commission to conduct a more fully informed review. Requiring additional information and allowing time for additional review in this proceeding is necessary to allow the Commission to make an appropriately balanced decision and a full accounting of the associated costs.

F. Smart Meter Charge Issues

CAUSE-PA has taken no position on this issue beyond its assertion in subsections A and E that any charge placed on the ratepayer must be justified based on the *quantifiable* benefits that will inure to that ratepayer as a result of the meter's enhancements.

G. Communications Strategy

CAUSE-PA has taken no position on this issue.

H. Cybersecurity Issues

CAUSE-PA has taken no position on this issue, except to the extent that cybersecurity issues pertain to data privacy. To the extent that the issues overlap, CAUSE-PA presents its position below, in subsection I.

³³ OCA St. 1, Mudd, at 12.

I. Data Privacy Issues

General Data Privacy Issues

PPL’s Petition, as well as the record put forth in support thereof, includes very little detail regarding its plans for safeguarding the privacy of customer data transmitted or collected by the new meter technology, and inappropriately relies on *existing* policies to govern smart meter data.³⁴

PPL states that the company will deal with data privacy issues by maintaining an internal workgroup and by utilizing third-party experts.³⁵ And, in its SMP, provides further that its internal working group, IAG, “will also follow ‘Guidelines for Smart Grid Cybersecurity: Vol. 2, Privacy and the Smart Grid’ recommendation and [sic] conduct a privacy impact assessment (PIA) before any deployment...[which] will help the project team with the following: identifying and managing privacy risks, ... [a]voiding unnecessary costs, ... and [m]eeting legal requirements.”³⁶ But, rather than develop a specific policy and procedure for smart meter data privacy for the Commission to approve, PPL argues that it is sufficient for it to comply with its existing policies and procedures, and that its privacy policy should only be expanded on an as-needed basis:³⁷

PPL Electric *does not agree that a revision is necessary to the privacy components of its smart meter plan.* PPL Electric’s current standards and procedures as outlined in its privacy policy are evident, and aligned to its

³⁴ Pet. at 19, ¶ 56-57.

³⁵ Pet. at 19, ¶ 56.

³⁶ PPL SMP at 41.

³⁷ PPL St. 5-R, Simendinger, at 3. In Rejoinder Testimony, Mr. Simendinger did attempt to backtrack a bit from his earlier testimony position that a new policy was unnecessary, and explained:

The existing Privacy Policy is aimed at the use of the website, but my rebuttal testimony ... was intended to convey how such a policy can and will be extrapolated and enhanced to address data privacy and cybersecurity protections beyond just the website, such as for use of smart meters. Such an enhancement, or potentially new separate policy must await fundamental decisions on the ultimate smart meter technology and design, to determine what customers data can ... and will be collected beyond that already described in the website Privacy Policy, and how such data will be handled and protected via cybersecurity and business process data privacy measures given the nature of the technology and supporting business processes.

Id. While this concession offers some measure of certainty with respect to PPL’s plans, it does not instill confidence that a separate policy will be developed. As explained above in further depth throughout this section, the existing regulations on confidentiality are easily circumvented with a simple disclaimer. Strong policies and procedures with respect to data privacy are necessary to prevent unauthorized disclosure of information before a breach occurs, not after.

overall cybersecurity protections, which protect customer data and its privacy in its collection, storage, transit and access by customers, third parties such as those who support the provision of self-service energy analytics to PPL Electric customers, and PPL Electric staff.³⁸

In all, PPL’s existing privacy policy is overly broad and presents a wholly insufficient policy to address the enormity of the risk associated with smart meter data privacy.³⁹ PPL’s current Privacy Notice, which is available to customers on its website, reserves the right for PPL to use “the *energy*, technical and reference information it collects (in aggregate or *individual form*) for, among other things, the following purposes:

- Sending requested messaging
- Processing requests
- Service provisioning
- Account creation and maintenance
- Billing
- Promotion
- Advertising
- Customer support
- Site customization
- Statistical analysis
- Background checks, reporting and collecting debts
- Product development
- Marketing
- Announcements
- Content improvement
- Technical support
- Security or law enforcement investigations
- Cooperation with legal requirements
- Protecting our rights and property, and that of other Users⁴⁰

The Privacy Notice also leaves open the possibility that PPL may “rent, license, or sell Personal Information, defined as “including the customer’s name, address, password, home service, domain and email address, transaction, billing and payment history, and usage, among other things”,⁴¹ to

³⁸ PPL St. 5-R, Simendinger, at 4.

³⁹ See OCA St. 3, Brockway, at 22-30.

⁴⁰ PPL Exhibit KTS-1-R, at 2 (emphasis added); see also OCA St. 3, Brockway, at 24-25.

⁴¹ OCA St. 3, Brockway, at 24-25.

third parties.⁴² The long list of possible uses for customer’s *energy information* (defined as including account number, rate class, electricity kWh usage and electricity supplier) is impossibly broad, and opens sensitive data to broad disclosure.

So, the question then becomes whether a customer who accesses PPL’s website to pay their bill online or to access their pricing and consumption data through PPL’s Energy Analyzer website exposes their smart meter data to broad disclosure under the company’s existing Privacy Notice. Without a specific, stand-alone policy to address data privacy issues for smart meter data, the answer to that question will be “yes” – the information accessed online would be subject to broad disclosure at the option of PPL. As indicated by the National Institute of Standards and Technology in its *Guidelines for Smart Grid Cybersecurity: Vol. 2, Privacy and Smart Grid*, which PPL pledges in its Petition to follow,⁴³ “New Smart Grid technologies, and particularly smart meters, ... create new privacy risks and concerns that may not be addressed adequately by the existing business policies and practices of utilities and third-party Smart Grid providers.”⁴⁴

Given that data privacy is intrinsically linked to customer safety, it is particularly important for public utilities to be diligent to the ever-increasing threats associated with data privacy.⁴⁵ But PPL’s proposal with respect to data privacy lacks prudent foresight. CAUSE-PA therefore urges the Commission to require PPL to revise its SMP to include a specific and detailed data privacy

⁴² OCA St. 3, Brockway, at 25; see also PPL Exhibit KTS-1-R. In relevant part, PPL’s Privacy Notice states: PPL may share the Personal Information we collect on the Site with others for a variety of reasons. PPL does not *currently* rent, license, or sell Personal Information to third parties. In addition to the kinds of information you might expect, such as sharing with third parties who need your information in order to provide services to us or on our behalf and subject to confidentiality agreements.

Id. (emphasis added).

⁴³ PPL SMP at 41 (citing Nat’l Inst. of Std. and Tech, US Dep’t of Commerce, *Guidelines for Smart Grid Cyber Security: Vol. 2, Privacy and the Smart Grid* (Aug. 2010), *available at* http://csrc.nist.gov/publications/nistir/ir7628/nistir-7628_vol2.pdf (“For the Smart Meter Project, IAG will also follow ‘Guidelines for Smart Grid Cybersecurity; Vol. 2, Privacy and the Smart Grid’ recommendation and [sic] conduct a privacy impact assessment (PIA) before any deployment.”) [hereinafter NIST Guidelines].

⁴⁴ NIST Guidelines at 2; *see also* PPL SMP at 41; CAUSE-PA Exhibit 1, at CAUSE-PA to PPL II-1.

⁴⁵ NIST guidance asserts that a detailed privacy policy should be developed before deployment of smart meter technology.

plan, in consultation with interested stakeholders. Doing so would ensure that PPL is fully prepared for the added risk to personal data privacy posed by implementation of new, more advanced smart meter technology.

Supplier Portal

It is imperative that the Commission order PPL to revise its policy and procedure regarding access to the Supplier Portal to enable customers to protect their information from inclusion on the Supplier Portal and to require verification of EGS certifications. Act 129 provides that “[e]lectric distribution companies shall, *with customer consent*, make available direct meter access and electronic access to customer meter data to third parties, including electric generation suppliers and providers of conservation and load management services.”⁴⁶

In accordance with guidance and direction from the Commission, PPL adopted a Supplier Portal to make information available to suppliers.⁴⁷ However, the Supplier Portal goes far beyond providing access to customer information, and allows electric generation suppliers nearly unfettered access to extremely sensitive personally identifying information, including the customer’s Social Security number and detailed usage data, without obtaining verification of customer consent.⁴⁸ As PPL explained, “[t]o search for an account number, the EGS or 3rd party must know the name of the customer as it appears on the customer’s PPL electric bill at a minimum.”⁴⁹ And, once the customer’s name is supplied (or, if the name is not known, the phone number, Social Security Number, e-mail address, meter number, or premises address), an EGS or 3rd party can access a plethora of personal information, including the customer’s Social Security

⁴⁶ 66 Pa. C.S. § 2807(f)(3).

⁴⁷ CAUSE-PA Exhibit 1, at OCA III-Q6, Attachment 1, page 141 of 68 (citing 2010 Implementation Order at 22).

⁴⁸ CAUSE-PA Exhibit 1, at OCA III-Q6, Attachment 1, page 141 of 68.

⁴⁹ CAUSE-PA Exhibit 1, at OCA III-Q6, Attachment 1, page 143 of 68; see also CAUSE PA Exhibit 1, at CAUSE-PA to PPL I-7 (“If the customer does not have their PPL Electric account number readily available at the time of an in-person enrollment, the EGS or 2nd party can search the account number based on inputted data.”).

Number.⁵⁰ After providing the customer's name, the EGS or third party must self-certify that they have the customer's authorization and that they have verified the customer's identification.⁵¹ But, to put those added self-certification requirements in context, the sole protection that these self-certifications rest alone on is the "integrity" of the EGS or the 3rd party, without any verification by PPL to ensure that their customer's information is protected.⁵²

At the final hearing, it was further revealed that "the customer's designation of their data as confidential or nonconfidential does not affect the EGS or third party's ability to access customer data through the supplier portal."⁵³ So, not only is the information easy to access, it is also impossible to protect from dissemination. And, once information is disseminated, the harm is difficult for a customer to remedy or ameliorate. While PPL maintains an event log, wherein each attempt to lookup an account is recorded and traceable, the procedure for a customer to access that information is uncertain, and PPL has not provided any assurances that it could provide a requester with an event log within 10 business days.⁵⁴ And in any event, the customer would need to know that the breach was a result of the Supplier Portal, which may be wholly unrelated to the ultimate harm they suffer as a result of a breach.

Essentially, the Supplier Portal undermines and effectively thwarts any attempt by PPL to address personal data privacy through the creation of a robust policy and detailed protocols and procedures because it creates a shortcut for an unknown number of individuals to access highly sensitive data, leaving the system vulnerable to widespread and irremediable abuse.

⁵⁰ CAUSE-PA Exhibit 1, at OCA III-Q6, Attachment 1, page 143 of 68 (depicting the Account Number Lookup function in the Supplier Portal, which shows the available data that can be inputted to pull up a customer account without a name or account number.).

⁵¹ Tr. at 60.

⁵² Tr. at 60; *see also* CAUSE-PA Exhibit 1, at CAUSE-PA to PPL I-7 (D).

⁵³ Tr. at 60.

⁵⁴ *Id.*; CAUSE-PA Exhibit 1, at OCA III-Q6, Attachment 1, page 143 of 68.

J. Remote Disconnect, Service Limiting and Pre-Pay Metering Issues

CAUSE-PA urges the Commission to reiterate its prior findings⁵⁵ and require PPL to submit a revised plan to the Commission – subject to a full evidentiary hearing – prior to adopting credit-related remote disconnection, service limiting, or pre-pay metering programs.

PPL is actively contemplating introduction of remote disconnect for involuntary terminations, as well as service limiting and pre-pay metering programs, and has asserted that remote disconnect for involuntary, credit related terminations may commence as early as this year.⁵⁶ Moreover, PPL has explained that it will only seek Commission approval before implementation “if any of these programs require changes to or waiver of the Commission’s regulations.”⁵⁷ But as Ms. Brockway points out, “Reasonable people may differ about the application of consumer protection laws and regulations to any of these programs.”⁵⁸ Remote involuntary termination, service limiting, and prepay programs can have a severe impact on economically vulnerable populations, which are at the greatest risk of losing service under these types of programs.⁵⁹

Indeed, the Commission has declared that prepay metering and servicing limiting programs “raise significant concerns for the health and safety of the residents of the Commonwealth” and “removed support for service-limiting and prepaid service as a minimum capability requirement.”⁶⁰

⁵⁵ Smart Meter Procurement and Installation, Implementation Order, Docket No. M-2009-2092655, at 18 (June 18, 2009) [hereinafter 2009 Implementation Order].

⁵⁶ OCA St. 3, Brockway, at 17 (“The Company plans to evaluate whether to expand remote disconnect functionality to involuntary disconnections after completing a feasibility study in 2014. ... The Company speculated that it could implement the use of the functionality for involuntary disconnections ‘as early as the fourth quarter of 2015.’”).

⁵⁷ PPL St. 2-R, Glenwright, at 23; OCA St. 3, Brockway, at 16-17.

⁵⁸ OCA St. 3-S, Brockway, at 4.

⁵⁹ OCA St. 3, Brockway, at 16-17.

⁶⁰ 2009 Implementation Order at 18.

As for remote disconnect programs for involuntary terminations, sending a technician to a residence – as opposed to using a remote disconnect switch – facilitates public health and safety and avoids inadvertent termination of a customer or household member with a medical condition which requires electricity.⁶¹ While at the home, the technician can observe the situation, determine the existence of any obvious red flags and can avoid causing further harm or injury to vulnerable household members.⁶² Nancy Brockway explains the dangerous conditions that can result to a household – and the neighborhood – when a household loses electric service:

Households without power cannot keep warm or cool. Households without power cannot store food safely. Households without power do not have lighting for children’s homework, paying bills, or many other obligations. Households whose power is cut, particularly renters, are more likely to have to move than other households. Such forced mobility can disrupt the children’s education, displace long-term residents, and undermine a community’s cohesion.

...

Loss of electric service has caused dangerous conditions in low-income households and neighborhoods. In October 2013, for example, three children died in a fire, started by the candle the household was using for light after the utility cut off the power for non-payment. The building suffered heavy smoke damage and other occupants had to leave their apartments. *The parents of the children who perished were in the process of making payments towards the bill, but the utility disconnected the service with tragic consequences.*⁶³

There are statutory, regulatory, and policy safeguards in place which are intended to avoid these negative consequences resulting from a loss of electric service and which require direct contact.⁶⁴

For example, section 56.65 of the Pennsylvania Code provides:

During the months of December through March, unless personal contact has been made with the customer or responsible adult by personally visiting the customer’s residence, a

⁶¹ OCA St. 3, Brockway, at 16-17.

⁶² According to PPL policy, technicians sent to perform a manual termination for credit-related disconnections will, indeed, stop a termination if the household has an obvious medical condition. CAUSE-PA Exhibit 1, at CAUSE-PA to PPL I-9.

⁶³ OCA St. 3, Brockway, at 15-16.

⁶⁴ 66 Pa. C.S. §§ 1401-1418; 52 Pa. Code. §§ 56.1 *et seq.*

public utility shall, 48 hours prior to the scheduled date of termination, post a notice of the proposed termination at the service location.⁶⁵

But if PPL intends to comply with this regulation, and plans to continue posting the requisite 48 hour notice on the property, it would also have to adjust its expected savings from the use of the remote disconnect switch to perform the termination.⁶⁶

With respect to prepaid metering, the regulations are even more stringent, and *prohibit* utilities from implementing a prepay meter program for low-income customers and require utilities seeking to implement a prepaid meter program to “develop a written plan for a prepayment meter program, ... and submit the plan to the Commission at least 30 days in advance of the effective date of the program.”⁶⁷ The utility is then required to closely monitor the program for the first two years and produce “an analysis of the costs and benefits of traditional collections or alternative collections versus the costs and benefits of handling nonlow income positive ability to pay customers through prepayment metering.”⁶⁸

The intent of PPL to file for Commission approval of remote disconnect for involuntary termination or a service limiting or prepay meter program is unclear, and warrants further direction from the Commission to ensure that these types of programs are not implemented without due consideration of the potential risks and benefits, as well as an accounting of the potential unintended consequences. Given the high risk associated with these programs to the personal safety and wellbeing of vulnerable Pennsylvanians, CAUSE-PA urges the Commission

⁶⁵ 52 Pa. Code § 56.65 (deferred termination when no prior contact).

⁶⁶ OCA St. 1, Mudd, at 6. As explained by Ms. Mudd, “The quantifiable benefits associated with the investment in the proposed AMI are at this time extremely limited to an estimated \$2.5 million per year attributed to the remote connect/disconnect functionality.” In fact, “many of the savings typically achieved with the deployment of AMI, including, but not limited to, the reduction in meter reading, meter services, and back office costs, have already been achieved by PPL due to the installation of the PLC AMI system between 2002-2004.” *Id.* at 12.

⁶⁷ 52 Pa. Code § 56.17 (advance payments)

⁶⁸ *Id.*

to require PPL to file for Commission approval – subject to full evidentiary hearing – before implementing a prepay, service limiting, or credit-related remote disconnection program.

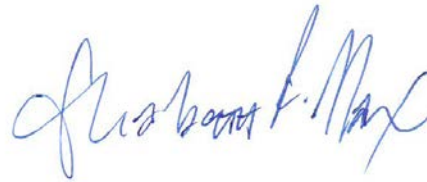
K. Miscellaneous Issues

CAUSE-PA has taken no position on this issue.

VII. CONCLUSION

PPL has not set forth sufficient evidence to show that its SMP is a reasonable and prudent approach to achieve compliance with Act 129's requirements and, therefore, its SMP should be rejected. Before allowing PPL to engage in such a costly and unnecessary endeavor, at the expense of ratepayers, CAUSE-PA urges the Commission to require PPL to make significant changes to its SMP to ensure that all Pennsylvanians are protected from imprudent costs – as well as the unreasonable privacy and safety risks explained above.

Respectfully Submitted,



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APPENDIX A**Proposed Findings of Fact**

1. The cost to customers for purchasing a HAN device is a quantifiable cost that is relevant to the determination of whether PPL's proposed technology provides "direct access" to meter data. 66 Pa. C.S. § 2708(g).
2. Economically vulnerable populations are not able to afford the additional technology necessary to provide customers with "direct access" to meter data required by Act 129. PPL St. 2-R, Glenwright, at 4; OCA St. 3, Brockway, at 16.
3. There are insufficient quantified benefits on the record in the proceeding to support a finding that PPL's proposed procurement and installation plan constitutes a prudent and reasonable ratepayer investment. Tr. at 39-40.
4. PPL failed to develop a reasonable projection of the costs and savings associated with its Smart Meter Plan. OCA St. 1, Mudd, at 12.
5. PPL's current privacy policy is insufficient to address the risk associated with the unauthorized or inadvertent disclosure of smart meter data. OCA St. 3, Brockway, at 22-30; PPL SMP at 41 (*citing* Nat'l Inst. of Std. and Tech, US Dep't of Commerce, Guidelines for Smart Grid Cyber Security: Vol. 2, Privacy and the Smart Grid (Aug. 2010), *available at* http://csrc.nist.gov/publications/nistir/ir7628/nistir-7628_vol2.pdf).
6. PPL's Supplier Portal does not allow customers the ability to protect their data from disclosure. Tr. at 60; *see also* CAUSE-PA Exhibit 1, at CAUSE-PA to PPL I-7 (D).
7. Remote involuntary disconnection, service limiting, and prepay programs raise significant concerns for the health and safety of the residents of the Commonwealth. *Smart Meter Procurement and Installation*, Implementation Order, Docket No. M-2009-2092655, at 18 (June 18, 2009).
8. PPL's Plan does not address how its universal service program low-income participants will be able to access the benefits of its Smart Meters.
9. PPL's plan will require HAN devices to obtain direct access to and use of hourly price and consumption information. (Pet. at 13, ¶ 31).
10. PPL's customers are responsible for purchasing and installing their own HAN devices as well as establishing the network connection. (Pet. at 13, ¶ 31).

Proposed Conclusions of Law

1. PPL Electric Corp. (PPL) has the burden of proof in this proceeding. 66 Pa. C.S. § 332(a).
2. PPL must prove by a preponderance of the evidence that its Smart Meter Plan (SMP) is reasonable and prudent based on the assessment of quantifiable costs and benefits to ratepayers.
3. Act 129 requires PPL to provide *all* customers with direct access to and use of price and consumption information. 66 Pa. C.S. § 2807 (g); Act 129, HB 2202, PN 4526, at 1 (1.20-23) – 2 (1.1-5) (2008).
4. The Act 129 direct access provision requires that utilities provide both the functionality and the technology necessary to obtain access to and control their usage and pricing information. 66 Pa. C.S. § 2807(g).
5. PPL’s data privacy policy does not comply with the standards from the National Institute of Standards and Technology (NIST). PPL SMP at 41; (*citing* Nat’l Inst. of Std. and Tech, US Dep’t of Commerce, Guidelines for Smart Grid Cyber Security: Vol. 2, Privacy and the Smart Grid (Aug. 2010), *available at* http://csrc.nist.gov/publications/nistir/ir7628/nistir-7628_vol2.pdf).
6. PPL’s Supplier Portal fails to meet the requirements of Act 129. 66 Pa. C.S. § 2807(f)(3).
7. Remote involuntary termination, service limiting, and prepay metering programs are not compliant with existing law and policy. 66 Pa. C.S. §§ 1401-1418; 52 Pa. Code. §§ 56.1 *et seq.*
8. Public utilities are required to seek Commission review and approval prior to implementing a remote involuntary disconnection, service limiting, or prepay metering program. *Smart Meter Procurement and Installation*, Implementation Order, Docket No. M-2009-2092655, at 18 (June 18, 2009).
9. The Electricity Generation Customer Choice and Competition Act requires universal service and energy conservation programs intended to make electricity affordable for low-income households and to ensure that utility service remains available to all customers in the Commonwealth at reasonable rates and conditions. 66 Pa. C.S. § 2802(9).
10. The Electricity Generation Customer Choice and Competition Act requires that PPL’s CAP is cost-effective and that the rates supporting the program are just and reasonable. 66 Pa. C.S. § 2804(8)-(9); 66 Pa. C.S. § 1301(a).

Proposed Ordering Paragraphs

IT IS ORDERED:

1. That the Petition of PPL Electric Utilities Corporation for Approval of its Smart Meter Procurement and Installation Plan is hereby DENIED.
2. That PPL is instructed to revise its Smart Meter Plan to include the following information, assessments, commitments, and/or design components:
 - A. An assessment of the added cost to the customer to adopt HAN technology, as well as the likelihood of such adoption.
 - B. An assessment and accounting of quantified benefits and savings expected to inure to both the ratepayer and the Company which factors in the added costs to the consumer to make use of the enhanced technology.
 - C. A plan as to how PPL universal service participants in CAP and LIURP will receive the financial support necessary to enable those customers to receive the purported benefits of the HAN.
 - D. A stand-alone data privacy policy, developed in coordination with stakeholders.
 - E. A revised plan for its Supplier Portal that enables customers to protect their information from inclusion on the Supplier Portal and that verifies the certifications made by EGSs and 3rd parties who access the Supplier Portal.
 - F. A clear statement that PPL will seek Commission review and approval, subject to an administrative proceeding, before proceeding with plans to implement an programs that include remote disconnection for involuntary terminations, service limiting, or prepaid metering.