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Secretary
Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265.

RE: Comments on Docket No. L-2014-2404361

(Implementation of the Alternative Energy Portfolio Standards Act of 2004)

Date: July 23, 2014

COMMENTS – PART A

MAJOR ISSUES REMAIN UNCLEAR

To the Public Utility Commission:

In its opening paragraph, the Proposed Rulemaking Order asserts that "it is necessary... to clarify certain issues of law, administrative procedure and policy." The theme is repeated throughout the Order. Unfortunately, instead of clarifying, the Order serves to obscure, complicate, and confuse them.

I. Physical Net Metering vs Virtual Net Metering

A crucial distinction in the AEPS Act is that between physical net metering and virtual net metering, a crucial distinction that the Order fails to illuminate.

First, the two are defined separately in 75.12:

> *Physical meter aggregation—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.*
>
> *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, rather than through physical rewiring of the customer-generator's property for a physical, single point of contact. Virtual meter aggregation on properties owned or leased and operated by a customer-generator and located within 2 miles of the boundaries of the customer-generator's property and within a single electric distribution company's service territory shall be eligible for net metering.*

Again, they are clearly distinguished in 75.14(e)

> *Physical meter aggregation shall be at the customer-generator's expense. The EDC shall provide the necessary equipment to complete physical aggregation. If the customer-generator requests virtual meter aggregation, it shall be provided by the EDC at the customer-generator's expense*

In short, physical metering and virtual metering are two different types of net metering, and both comport with the definition in the statute:

> *Net metering—The means of measuring the difference between the electricity supplied by an electric utility or EGS and the electricity generated by a customer-generator when any portion of the electricity generated by the alternative energy generating system is used to offset part or all of the customer-generator's requirements for electricity (75.12)*

The two types of net metering employ different methods of "measuring the difference" to produce the "net" result that is reflected in the monthly "bills".

In physical metering, there is <u>one</u> existing, bi-directional meter that records both generation and usage. At the end of each month, that single meter simply tracks the "net" result, which is reported in the customer-generator's bill.

In virtual metering, the "billing process" achieves the same result, but aggregates <u>separate meters</u> to produce the "net". That "net" result is reported on the bill, just as it is in physical metering.

When net metering is involved, furthermore, the customer and the customer-generator are one and the same. Whether he selects physical metering or virtual metering, the person or entity is involved in net metering, both as a "customer" ("one who purchases..."-Order, footnote, p. 8) and as a "customer-generator".

The definition is clear:

> *<u>Customer-generator</u>-A nonutility owner or operator of a <u>net metered</u> distributed generation system... (75.1)*

The Order seeks to limit net metering to "customer-generators that generate electricity on the customer-generator's side of the meter..." (Order, p. 10). This limitation has no basis in the statute. If implemented, the Order would arbitrarily exclude some customer-generators from net metering. The Commission has turned the law on its head and argues the opposite of what the law states:

> *"Virtual meter aggregation on properties owned or leased and operated by a customer-generator shall be allowed for purposes of net metering" 75,14(e)*

Virtual meter aggregation is available to all customer-generators, and "shall be provided" "if the customer requests" it (75.14(e).

By imposing its "first condition" and attempting to limit net metering, the PUC reads into the law a requirement that is not there and reads out of the Law the broad access to virtual metering that the law affords.

The foregoing comments demonstrate that the proposed changes not only fail to clarify the issues, but minimize their importance.

II. The "Requirements for Electricity"

The "requirements for electricity" are an essential part of net metering. Regrettably, the Order neglects to explore the significance of this phrase.

> *Net metering—The means of measuring the difference between the electricity supplied by an electric utility or EGS and the electricity generated by a customer-generator when any portion of the electricity generated by the alternative energy generating system is used to offset part or all of the customer-generator's requirements for electricity (52 PA § 75.12)*

The Proposed Rulemaking Order cites the above definition in passing (Order, p. 11), but fails to unwrap its meaning or importance. It is crucial to understand what the statute means by "requirements for electricity" and to determine which "requirements for electricity" are being "offset".

Net metering is designed to measure two sums: what is used and what is generated. That is the "difference between the electricity supplied by an electric utility and the electricity generated by the customer-generator" (definition, above). The proposed "first condition" (also called "non-generation load"), as presented (Order, pp 11-12) only confuses, and blurs the clear meaning of the AEPS Act.

According to the Proposed Rulemaking Order, "The first condition requires the customer-generator to have load, independent of the alternative energy system, behind the meter and point of interconnection of the alternative energy system."(Order, p. 11). The Order then avers that this stipulation is "implied" in the definition of net metering.

There is simply no evidence for this claim. What is "implied" is that, in net metering, generation and usage will differ from month to month, creating a fluctuation in the amount of "offset".

What are the customer-generator's "requirements for electricity"? These "requirements are a crucial part of the definition, whether for physical net metering and for virtual net metering.

In physical metering, the "requirements", of course, are those at the site of generation, and a single bi-directional meter produces the "net" difference.

In virtual metering, however, the "requirements for electricity" are not those at the generating site, and the statute makes no suggestion that they are or should be. The sole objective for virtual metering is to meet the "requirements for electricity" at a different site, within two miles, where optimal solar exposure does not exist (i.e. where physical net metering is not viable). The "requirements for electricity", therefore, under virtual metering, and the incentive for selecting virtual metering, are to be found, not at the generation site, but at the aggregated site, where the electricity is to be applied.

The Order conflates the "requirements" of physical metering with those of virtual net metering, and the error leads to distraction and confusion. The insistence on [non-generation] "load, independent of the alternative energy system, behind the meter and point of interconnection of the alternative energy system" is without justification.

No part of the Proposed Rulemaking Order undermines the intent of the AEPS Act more aggressively than this "first condition" proposed by the Commission. The stipulation has no basis in the AEPS Act and would exclude thousands of potential customers from the benefits provided in the Act.

The practical implications of this issue are enormous.

The site selection for solar generation depends entirely on optimal solar exposure – a "sunny location". Restricting solar installations to existing meters with independent "load", is quite simply, blocking out the sun. It is solar exposure, not existing "load, independent of the alternative energy system" (Order, p. 11), that is the prior "condition" for any solar installation, whether under physical metering or virtual metering. The "non-generational load" restriction would close a door of opportunity that was opened by the AEPS Act. It would constitute a sweeping act of exclusion, denying opportunity to thousands of residential customers whose homes, garages, and sheds happen to be in the

shade. This first "condition" has no basis in the law and must be deleted from the Proposed Rulemaking Order.

III. Implementation of net metering

While the statute is clear about eligibility, the implementation of net metering remains uneven and inconsistent. The Commission should implement greater uniformity in the procedures for implementation. This commenter believes that the following steps would assure greater uniformity in implementation of the AEPS Act.

1. New Rules should distinguish between virtual metering for non-commercial residential customer-generators and virtual metering for installations in "other locations" (i.e. commercial operations).

2. New rules should specify billing procedures that are uniform for all residential customer-generators who elect virtual metering. In current practice, harsh disparities are evident: a) Some utilities issue one consolidated bill; some utilities issue two separate bills; b) Some utilities impose a single monthly charge for both aggregated meters; some utilities impose a separate charge for each meter base.; c) Some utilities designate the generation meter as residential (RS); some utilities designate the generation meter as commercial (GS-1)

3. The Commission should adhere to the plain language of the statute and rule that residential meter aggregation is to be tracked, processed, and reported through one bill and one account.

   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)

   "... a credit shall be applied first to the meter through which the generating facility supplies electricity to the distribution system, then through the remaining meters for the customer-generator's account equally at each meter's designated rate" 75.13©

   The statute clearly provides for aggregating "meters", not for aggregating "accounts". Nothing in the statute suggests that a generating system requires a separate account, as some utilities require. Establishing a

separate account just for the generating system is punitive for small residential systems and reduces generation credit by 25% or more. (Note: In the recent PJM year, the separate "line charges" on the commenter's system reduced credits by over 30%.) A separate account which imposes a second monthly charge is discriminatory and is a severe disincentive to customers whose only option is virtual meter aggregation.

4. Any "Incremental expenses" for virtual metering should be specified clearly, applied fairly, and must be limited to the actual [billing] cost of "processing [the] account on a virtual metering basis" 75.14(e).

   "The customer-generator shall be responsible only for any incremental expense entailed in processing his account on a virtual meter aggregation basis" (75.14(e)

5. When the generating system is installed to supply residential "requirements for electricity" ("net metering" in 75.12), the monthly "customer charge" for the account should be based on the residential rate, not based on the commercial rate, as some utilities have done.

6. Customer-generators who install a generating system that supplies electricity for a business should be charged the commercial (GS-1) rate for the account.

Thank you for your consideration of these comments.

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COMMENTS – PART B
THE NARRATIVE OF THE PROPOSED RULEMAKING ORDER

To the Public Utility Commission:

A. General Provisions: § 75.1: Definitions

4. Customer generator and utility

The Proposed Rulemaking Order strains (p. 7) to re-classify certain customer-generators as utilities or "merchant generators". The Order is clearly misguided-when it says (p. 8) that "A customer-generator is one who is not in the business of providing electric power to the grid or other electric users". This is in direct conflict with the AEPS Act, since the opening pre-amble describes the statute as.... "Providing for the sale of electric energy generated from renewable and environmentally beneficial sources, ...". The PUC would have us believe that by creating excess energy, a customer-generator is "gaming the system". In fact, under the statute, customer-generators retain the right to the electricity that they generate, and the plain language of the statute shows that the sale of energy is precisely what the PA legislature had in mind.

B. Net Metering:

1. § 75.13(a)

In Section B.1, the Proposed Rulemaking Order makes a case for new "conditions" that would "limit" net metering. Here (p. 10) as elsewhere, The Order usurps the role of legislators and effectively attempts to amend the law. The Order is misleading when it states that "The current

regulation is silent as to which customer-generators can net meter" (Proposed Rulemaking Order, p. 10).

If the regulation is silent, the statute clearly is not. The AEPS Act is unambiguous about who can net meter, as shown above. In the Act's own definition, the two are inseparable. A "customer-generator" is "a nonutility owner or operator of a net metered distributed generation system..." 52 PA § 75.1. (emphasis added).

The Order then proceeds to a series of untenable assertions, each building on, and compounding the previous one. Nothing in the statute suggests that the customer-generator must have load "behind the meter and point of interconnection" (p. 11). Nothing in the statute suggests that "the electric load must have a purpose other than to support the operation" (Ibid.). These conditions are neither stated nor "implied" in the Law. It says only that there must be "requirements for electricity".

Next, the Order begs the question, asserting that "if there is no independent load behind the meter and point of interconnection for the alternative energy system, by definition, the customer-generator has no requirement for electricity to offset". The statute includes no such condition, stated or implied! The "requirements for electricity" are wherever the customer-generator needs electricity!

Finally, the Commission defends this untenable requirement, saying that "this requirement is implied in the current regulations, where it states that EDCs shall offer net metering to customer-generators that generate electricity on the customer-generator's side of the meter". This claim is simply indefensible and contradicts logic. The cited passage has nothing to do with having usage ("electricity to offset") (Order, p. 11). The passage refers to generation, and is completely unrelated to usage or "load".

The statute is clear and needs no emendation. 75.13(a) is explicit:

> *"EDCs shall offer net metering to customer-generators that generate electricity on the customer-generator's side of the meter...".*

Net metering is available to all customer-generators who request it and qualify, and the proposed restriction has no basis.

"Customer-generator" and "net metering" are inseparable. They are two parts of one identity. One does not exist without the other. All customer-generators participate in net metering. It is part of the definition.

> *Customer-generator*—A nonutility owner or operator of a net metered distributed generation system" (75.1)

This unilateral effort to declare some of them ineligible is contrary in the Act.

(NOTE: a lone exception is specifically identified in the definition: "except for customers whose systems are above three megawatts and up to five megawatts who make their systems available to operate in parallel with the electric utility during grid emergencies ..." (52 PA § 75.1)

In choosing to further restrict net metering, the Commission exceeds its authority. The attempt to impose an arbitrary "first condition" on net metering beyond those stipulated in the Law has no justification.

The "first condition" has no basis in the statute and should be deleted from the proposed changes.

75.13(k)

The Proposed Rulemaking Order contends that 75,13(e) "conflicts" with 75.13(k).

The proposed, and re-lettered, subsection k "now allows EDCs to charge a fee that is specifically authorized under this chapter or by order of the Commission" (Order, p. 17)

The revision is unacceptable. It authorizes the Commission to impose any [unspecified] fee at any time and at its own discretion. If there is a "conflict" in the statute, it should be resolved by the legislature, not by unilateral "tinkering" with the statute.

The Commission's analysis also fails to clarify the two types of "fees" inherent in the statute. Section 75.14(e) is clearly distinguishing two different kinds of "fee" or expense.

The first type of expense is tied to installation, and applies to both the physical metering and virtual metering systems. In either case, this is a one-time cost related to "necessary equipment" (75.14(e). (NOTE: this cost will often be greater for virtual metering systems, since the optimal location --for a solar array – will be a sunny spot, often at some distance from the grid. Solar generation must follow the sun, and cannot be restricted to those sites which happen to have electric service! The customer-generator incurs the cost of lines and poles which connect the array to a point of interconnection.)

The second kind of expense should not be confused with the first. This second "incremental expense" is distinctly associated with "billing" and it applies specifically to virtual metering: "The customer-generator shall be responsible only for any incremental expense entailed in processing his account on a virtual meter aggregation basis" (74.14(e). As for regulating that fee, however, the Commission has offered no guidance, either "under this chapter" or "by order of the Commission". Consequently, nothing has been clarified. The public is ill-served by this half-measure.

It is essential that the Commission establish uniform guidelines for "incremental fees" that shall be applied consistently. This "incremental fee" must also correlate directly with the "expense entailed in processing his account".

One solution to the "conflict" which the Order laments is to create two separate classes of customer-generators: those who install physical net metering and those who elect virtual net metering. Any such "incremental expense" (i.e. billing fee) would then be limited to virtual net metering and would be tied to the customer-generator's intended use (residential, small business, etc.)

75.14(e) (Annex-p. 10)

To comport with the AEPS Act, the Order should refer to "meters to be aggregated", not "properties to be aggregated". The statute is clear in specifying "meter aggregation", not parcel aggregation, property aggregation, or account aggregation.

75.72 (Annex-p. 22)

The Reporting Requirements appear to apply to all "non-solar" Tier I Renewable energy systems, including low-impact hydropower. The monthly requirements are onerous for small-scale systems, such as micro-hydro systems, residential wind turbines, and some fuel cells. Accordingly, small-scale generation systems should be exempted.

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COMMENTS - PART C
INTENT OF THE AEPS ACT

To the Public Utility Commission

In its Proposed Rulemaking Order, published on July 5, 2014, the Commission says, "We have revised and clarified several definitions to conform with the amendments to and the intent of the AEPS Act" (Order, p. 5). The comments below will show that the Proposed Rulemaking Order contravenes the clear intent of the AEPS Act.

The Commission, for example, exceeds its mandate for "implementation and enforcement", when it speaks of "our intent to permit a limited amount of virtual meter aggregation" (Proposed Rulemaking Order at 19). In advancing its own intent, the Commission has usurped the role of legislators who define the intent of a law.

Such an "intent" is nowhere evident in the AEPS Act and, furthermore, contradicts the Commission's own previous statements. The PUC itself has repeatedly held that the intent of the Law is to expand sources of renewable energy.

"the principal objective of the Act's net metering provision is to provide incentives to small customer-generators to use alternative energy sources" (Final Rulemaking Order, adopted June 22, 2006, p12)

"...the clear intent of the Act 35 amendment was to facilitate the research, development and deployment of small alternative energy resources by providing monthly credits consistent with the full retail value..." (Final Omitted Rulemaking Order, Implementation of Act 35 of 2007, May 22, 2008, p. 14)

"... it should be the policy of the Commission to support access to alternative systems to as broad an array of consumers as possible.". PUC motion, June 22, 2011

The language in the statute is unambiguous, and confers on virtual net metering the same status as physical net metering. Virtual meter aggregation, in fact, offers the greatest potential for expanding PV solar generation to residential customers. Under virtual net metering, installations of PV solar are not confined to the roof or to the immediate site of electric use.

The proposal to limit virtual metering, and other changes in the Proposed Rulemaking Order, will not promote any expansion of renewable energy! Instead, the proposed changes would put the law on a leash. If adopted as written, the proposed changes will restrain the AEPS Act and undermine the Law's intent to expand access to renewable energy.

In a series of alarming steps, the Proposed Rulemaking Order

1) limits the sources of renewable generation
2) Narrows the definition of "customer-generator"
3) Creates "Merchant Generators", a new sub-set of customer-generators, which are not specified in the statute, only to exclude them from net metering.
4) fetters net metering with seven new "conditions"
5) Places a strangle-hold on virtual meter aggregation , which offers the greatest potential for expanding residential solar

In 2006, the Commission considered the issue of virtual metering and implemented a broad application of the provision, saying that "the definition of "meter aggregation" should be changed to allow aggregation regardless of rate class on properties owned and/or leased and operated by a customer-generator (Final Rulemaking Order adopted June 22, 2006, at 22).

The clear position of the Commission at that time is now being undermined by the restrictive conditions being proposed. The Commission was unequivocal at the time, saying, "The fundamental intent of Act [AEPS Act] is the expansion and increased use of alternative energy systems and energy efficiency practices" (Ibid. p. 21). Certainly the intent of the Act has not changed in the intervening years.

Instead of restricting net metering, or deleting virtual metering completely, as some urged (Ibid p. 20), the Commission expanded the opportunities and supported the inclusion of "other types of projects which could meet the requirements for customer-generator net metering, but would be unable to avail themselves of virtual meter aggregation under the regulations as proposed" (Ibid.).

Many of the changes in the current proposal, including the "first condition" for net metering, are regressive, would reverse previous policy, would severely limit the goal of expanding renewable generation, and defy the clear intent of the AEPS Act.

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