

**BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

<b>In the Matter of the Commission's</b>	)	
<b>Review of Chapter 4901:1-10, Ohio</b>	)	<b>Case No. 12-2050-EL-ORD</b>
<b>Administrative Code, Regarding</b>	)	
<b>Electric Companies</b>	)	

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**COMMENTS  
BY  
ADVANCED ENERGY ECONOMY OHIO**

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**I. Introduction**

On November 7, 2012 the Public Utilities Commission (“Commission” or “PUCO”) filed Case No. 12-2050-EL-ORD. In the Entry, the Commission requested stakeholder comments on a series of rule proposals and revisions conducted under Section 119.032 of the Revised Code. The set of rules reviewed, and the Staff proposed amendments to those rules, pertain to electric consumer data privacy, disclosure of generation sources to customers, net and advanced metering, and compliance with the federal Public Utility Regulatory Policies Act of 1978, as amended by the Energy Policy Act of 2005.

Advanced Energy Economy - Ohio (AEEO) is a trade association with an expanding membership of companies operating in Ohio and focusing on the growing clean energy development and energy efficiency fields. Many members of AEEO develop distributed generation projects and are directly affected in the course of usual business by the PUCO’s rules on distributed generation, which are the subject of the November 7<sup>th</sup> entry. Additionally, as AEEO members are directly affected by these rules, and any changes, AEEO has unique and

valuable insight into the impact on business of these rules, and the various questions posed by the Common Sense Initiative Business Impact Analysis.

As outlined below, AEEO generally supports the rule amendments proposed by Staff. AEEO recommends a series of changes to the Staff proposal that would rationalize rules on distributed generation to a fuller degree, lowering negative business impacts and encouraging new energy development and economic activity. AEEO also respectfully submits comments on the proposed PURPA implementation provisions.

## **II. Comments on Proposed Modifications to Customer Energy Usage Data Release.**

AEEO recognizes that protection of customer energy information is an important regulatory objective. Conversely, detailed customer usage data is essential to the development of a wide range of energy efficiency and demand response tools developing outside of the investor owned utility business model. For instance, programs currently under development by AEEO members use customer energy usage data to disaggregate energy data into heating, cooling, lighting and appliance, and water heating energy intensities in a particular community, compare that to regional and national building benchmarks, and use that comparison to identify buildings with the most cost-effective energy efficiency savings opportunities. Such a program is a natural fit with electric and gas utilities looking to achieve energy efficiency goals in the most cost effective manner.

There are many other tools under development by third-party developers. Restrictive customer usage data regulations could hamper this essential development of innovative new energy efficiency and energy management products. There is one proposed rule in particular that could be altered in order to ensure the continued development of energy saving third-party products. On page 31 of the Staff's proposed rules, Ohio Administrative Code ("OAC") 4901:1-

10-12 has been amended to include section (F)(3). This section requires a utility to provide information to new customers on customer privacy rights, which must include the following:

(3) A statement that the electric utility is prohibited from disclosing customer energy usage data without the customer's written consent or electronic authorization or without a court or commission order, except for the following purposes:

(a) The electric utility's collection and/or credit reporting.

(b) Participation in the home energy assistance program, the emergency home energy assistance program, and programs funded by the universal service fund, pursuant to section 4928.52 of the Revised Code, such as the percentage of income payment plan programs.

(c) Governmental aggregation.

(d) The operative functions involved in supplying retail electric service.

(e) The reasonable sharing of de-identified energy usage data.

This language could be interpreted as effectively prohibiting the third-party development of energy efficiency or energy management tools that work to profile the most cost-effective energy saving opportunities through building by building energy usage data comparison. It could require the written consent of every utility customer in a given data-set, which would make such a tool as described above impossible to operate as obtaining written consent from all customers in a data set would be cost prohibitive.

To address the above challenge AEEO recommends the follow change; the addition of another exception applicable to the third party efficiency and energy management product development:

(f) The creation of energy effectiveness data for utilities or CRES providers for individual buildings.

This minor change would allow the important and ground breaking work around building energy usage comparison to continue, so that energy efficiency programs can be delivered more rationally and at lower costs.

### **III. Comments on Various Net Metering Provisions.**

Commission Staff proposes an important series of changes to the rules for net metering. Specifically, Staff proposes the following changes to Ohio's net metering rules: A clarification of the definition of customer generation, a clarification of statutory language indicating that net metering is available to customers looking to primarily offset part or all of its energy usage, a definition of a customer's "requirements for electricity", proposed alterations to net meeting tariffs, a refining of the definition of the term "premises" for the purpose of net metering, eligible resources, and opportunities for virtual and aggregate metering in the context of the Ohio Revised Code.

#### **A. Generation Primarily Intended to Offset Customer Usage.**

The draft rules filed by Staff in this proceeding include an important revision to the standards for determining if an on-site generation resource is primarily intended to offset part or all of a customer-generator's requirements for electricity. AEEO agrees with the Staff recommendation to set a percentage of annual usage for this determination. Such a determination is a reasonable recognition that matching distributed resource capacity to customer needs is not an exact science, and that many distributed resources are intermittent in nature and that annual generation needs fluctuate and can be unpredictable. The proposed language reads as follows, at page 71 of the draft rules, under 4901:1-10-28(B):

(6) A customer-generator must intend primarily to offset part or all of the customer-generator's requirements for electricity. A customer-generator that annually generates less than one hundred and twenty percent of its requirements for electricity is presumed to be primarily intending to offset part or all of its requirements for electricity.

The proposed rule allows a customer generator to rationally size distributed supply to ensure that the supply can provide the energy necessary for the customer. This change recommended by Staff will improve Ohio's business climate for distributed energy development, by allowing

developers of projects to size them appropriately, without worry that such installations, in the course of a given year, might produce more energy than the customer consumes on an annual basis.

**B. Proposed Changes to Tariff Structures.**

In the Staff proposed rules, there are numerous changes to tariff structures. AEEO supports most of these amendments to tariff structures, and suggests alterations to improve clarity in others. In particular, 4901:1-10-28(B)(3) will work to ensure that a utility net metering tariff for a customer generator will be identical in structure, charges, and amounts to that of a non-generator; the rule also ensures that utilities will act cooperatively with customers who wish to develop generation resources. This proposed rule requires utilities to clearly post information about net-metering regulations, opportunities, and utility contacts online; and requires utilities to work with customers looking to offset generation needs to avoid becoming excess generators. This proposed rule will eliminate confusion in the marketplace, will result in simplified regulations that will allow customers and businesses to more easily and fluidly navigate the net metering regulatory landscape with utilities.

Proposed rules 4901:1-10-28(B)(11) and (13) also further the goal of simplified regulation and easier, clearer development of distributed resources. Respectively, these rules ensure that electric utilities cannot impose arbitrary charges for feeding power back to a meter, and that renewable energy attributes associated with a project remain the property of the customer generator.

Proposed rule 4901:1-10-28(B)(9), like the above changes, represents a positive step in the right direction. But additional, simple clarification would provide some benefit. Specifically,

4901:1-10-28(B)(9) references the term “credit,” which AEEO feels should be clarified. The proposed rule reads as follows:

- (c) If the customer-generator has excess generation during a monthly billing period, the electric utility shall issue a credit in the amount of the excess generation to the customer-generator for the next monthly billing period. If the full amount of the credit is not used in the next monthly billing period, the remaining credit amount shall be credited to an account for net excess generation in the customer-generator's name. The amount in the net excess generation account shall be credited to a customer-generator in months where the credit from the previous month is insufficient to cover the cost of the customer-generator's requirements for electricity.

In the context of this proposed rule, the term “credit” is not clear. Rather than go through the burdensome task of assigning a monetary credit value on a rolling basis, i.e. monthly, the credit should be recognized for what it is; measureable energy, i.e. kwh credit which can accrue to a customer generator when the customer is producing more energy than the customer is consuming, and can be subtracted from the customer’s account when the customer is consuming more than is produced. This small change simplifies the regulation, which will in turn reduce burdens on customer generators and distributed energy development businesses. Accordingly, AEEO recommends the following section to replace proposed 4901:1-10-28(B)(9)(c): (Recommended changes are in italics and crossed through.)

- (c) If the customer-generator has excess generation during a monthly billing period, the electric utility shall issue a *kwh* credit in the amount of the excess generation to the customer-generator for the next monthly billing period. If the full amount of the *kwh* credit is not used in the next monthly billing period, the remaining *kwh* credit amount shall be credited to an account for net excess generation in the customer-generator's name. The amount in the net excess generation account shall be credited to a customer-generator in months where the *kwh* credit from the previous month is insufficient to cover ~~the cost of~~ the customer-generator's requirements for electricity.

The above recommended clarification has the effect of lowering transaction costs for businesses looking to deploy distributed generation, and the positive effect of creating more certainty for developers.

**C. Net Metering and Customer Premises.**

AEEO supports the Staff's recommended rules clarifying the extent of a customer generator's premises for the purposes of net metering eligibility. In the Staff proposed rules at 4901:1-10-28(B)(5) the recommended rule clarifies what qualifies as a customer generator's premises for the purposes of statute. The definition includes areas "owned, operated, leased, or otherwise controlled by the customer-generator, including contiguous lots or areas that are owned, operated, leased, or otherwise controlled by the customer-generator exclusive of easements, public thoroughfares, transportation rights-of-way, or utility rights-of-way."

This language gives customers and developers a clear understanding of the areas in which an energy investment can be made in order to squarely remain within the customer generator category. Importantly this definition does not preclude the eventual or immediate development of virtual meeting provisions within the Ohio Administrative Code, discussed elsewhere in these comments.

**D. Expanding the Microturbine Definition and the Addition of "Reciprocating Engine."**

As part of the rule package from Staff, an expansion of qualifying resources is recommended, specifically the following new language is proposed in the definition section of the net metering provisions, in 4901:1-10-28(A)(4): "'Microturbine' means a combustion-turbine used by a customer-generator on the customer-generator's premises." AEEO does not object to expanding the definition of the term microturbine, but would add the language as follows: "Microturbine means a combustion-turbine or reciprocating engine used by a customer generator on the customer-generator's premises."

Microturbine technology could be an important resource for customer generators looking for highly consistent energy performance. Gas turbine technology has made significant advances in recent years, and microturbines are beginning to occupy an important place in the market. AEEO supports Staff's intention to recognize the growth of this marketplace and expand net metering opportunities to this technology. Importantly, the Ohio Revised Code explicitly includes microturbine technology as a listed resource eligible for net metering treatment. AEEO supports the expansion of the microturbine definition and recommends including reciprocating engines.

**E. Virtual Net Metering and Meter Aggregation Legal Support and Recommendations.**

In the November 7<sup>th</sup> Entry in this case, the Commission issued finding 11(g), which “seeks comments on whether virtual net metering and aggregate net metering could be implemented in Ohio without violating Section 4928.01 or Section 4928.67 of the Revised Code and whether virtual net metering and aggregate net metering would promote the public policy of the state.” AEEO appreciates the important opportunity this request for comments provides. Specifically, the Ohio Revised Code does not prohibit the development of virtual net metering or aggregate net metering provisions. AEEO also presents recommendations on the development of virtual and aggregate net metering rules within the context of the proposed rules.

**1. Virtual Net Metering and Meter Aggregation are Consistent with ORC 4928.67 and 4928.01.**

Virtual net metering is entirely consistent with the language and purpose of ORC provisions. Virtual net metering and meter aggregation rationalizes net metering; allowing multiple customers or multiple facilities, all with their own individual meters, to share net-metered credits in a single system without a physical linking of that system. A virtual net-



metering or meter aggregation system operates “behind;” i.e. on the customer side of the meter of at least one of the facilities of the credited customer.

Virtual net metering and meter aggregation are common sense ways to improve regulatory flexibility and allow businesses – such as multi-tenant business owners, commercial operations with numerous facilities in a service territory; as well as municipalities – to invest in a more rational generation project that corresponds directly to the needs of the operation.

Currently, separate tenants with a shared generation investment on a shared property, or businesses with multiple buildings within a service territory, have to have expensive wiring to physically connect to the system to receive net metered credit on separate utility meters; this increases costs and complicates logistics. Virtual net metering resolves these barriers and allows one generation resource to virtually serve several facilities.

The Ohio Revised Code does not preclude the development of virtual metering options by rule. Two sections of the ORC govern net metering, key definitions are found at 4928.01, and 4928.67 sets the guidelines for net metering opportunities in Ohio. ORC 4928.01(A) defines the terms “net metering” and “net metering system”:

- (30) “Net metering” means measuring the difference in an applicable billing period between the electricity supplied by an electric service provider and the electricity generated by a customer-generator that is fed back to the electric service provider.
- (31) “Net metering system” means a facility for the production of electrical energy that does all of the following:
  - (a) Uses as its fuel either solar, wind, biomass, landfill gas, or hydropower, or uses a microturbine or a fuel cell;
  - (b) Is located on a customer-generators premises;
  - (c) Operates in parallel with the electric utility’s transmission and distribution facilities;
  - (d) Is intended primarily to offset part or all of the customer-generator’s requirements for electricity.

As discussed above, virtual net metering allows customer generators the opportunity to construct and operate one or more generation resources on that customer generators premises, and utilize

the excess power from those resources to provide electricity credit for customer needs at other facilities in the service territory. Ohio's definition of net metering and a net metering system is entirely consistent with the concept of virtual net metering. Specifically, a virtual net metering system that utilizes as a generation source one of the statutory qualifying resources could be appropriately sized to meet the needs of the customer generator's overall energy requirement at several facilities. A project constructed and developed at such a size would remain "intended primarily to offset part or all of the customer-generator's requirements for electricity." The definition makes no distinction as to whether or not the requirement for electricity is limited to one building, facility, or location.

Additionally, a net metered generation resource that virtually serves a variety of locations in a service territory does not conflict with ORC 4928.01(A)(31)(b), which requires that a generation resource be "located on a customer-generator's premises." As long as the generation resource or resources that the customer generator deploys are constructed and operated at property the customer generator owns or controls, then this portion of the definition is satisfied.

Likewise the provisions of ORC 4928.67 do not prohibit the development of virtual net metering by rule in Ohio. For this section of the code the two most important provisions for the purposes of the development of virtual net metering rules are ORC 4928.67(B)(1) and (B)(3)(b).

ORC 4928.67(B)(1) reads as follows:

- (1) Net metering under this section shall be accomplished using a single meter capable of registering the flow of electricity in each direction. If its existing electrical meter is not capable of measuring the flow of electricity in two directions, the customer-generator shall be responsible for all expenses involved in purchasing and installing a meter that is capable of measuring electricity flow in two directions.

A virtual net metering system, like any other net metering system, will include a single meter for each generating facility for a customer, just as current net metering customer generators are

required to produce. This is entirely consistent with ORC 4928.67(B)(1), physically a virtual net metering set-up is no different than a net metering system existing today; it includes generation and a two way meter. The only difference (and this is not a difference that prohibits virtual net metering in any part of the code) is that the generation component is sized to meet the entirety of the needs of the customer; for buildings physically connected to the generation resource as well as buildings not physically connected. The ORC in no way prohibits such a project; a project that meets the entire need of the customer, even those buildings not physically connected to the generation source, meets the needs of the customer – which is the test set by the ORC for classification of a net metering system.

ORC 4928.67(B)(1) outlines the statutory credit system for a net metering system; specifically allowing overproduction that can be credited to the next billing cycle. A virtual net metering system involves tracking overproduction at one property, and applying credits to another. Such a system is entirely consistent with the plain language of ORC 4928.67(B)(1).

## **2. Ohio Administrative Code Recommendations for Virtual Net Metering.**

As demonstrated above, virtual net metering is not prohibited by the ORC in Ohio. The five year rule review process and comment period is an important opportunity not only for the discussion of virtual net metering as a tool for the growth of distributed generation and more business flexibility, but it is also the prime opportunity to for the development and deployment of new rules under the administrative code allowing and promoting virtual net metering. Accordingly, AEEO recommends changes and additions to the rules proposed by Staff for the deployment of virtual net metering resources. Specifically, we recommend the following additional sections to the proposed rules, OAC 4901:1-10-28(B)(15); as well as the following new definitions of virtual net metering and meter aggregation:

(15) If a customer-generation wishes to develop a virtual net metering or meter aggregation system the following provisions shall apply:

- (a) For the purpose of measuring electricity usage, an electricity utility must, upon request from such a customer, aggregate for billing purposes a meter to which the customer-generator is physically attached with one or more meters in the manner set out in this subsection when the additional meter is located within the electric utility service territory.
- (b) A customer must give at least 30 days notice to the utility to request that additional meters be included in meter aggregation or virtual net metering. The specific meters must be identified at the time of such request. In the event that more than one additional meter is identified, the customer customer-generator must designate the rank order for the additional meters to which credits are applied.
- (c) If in a monthly billing period, the customer-generator supplies more electricity to the utility than the energy usage recorded by the customer-generator's designated meter, the electric utility will apply credits to additional meters in the rank order provided by the customer, and any remaining credits after doing so will be rolled over to the designated meter for use during subsequent months.
- (d) All aggregated meters must be on the same rate schedule once aggregated and must be located on contiguous property or some other arrangement that allows for meter aggregation.

OAC 4901:1-10-28(A)(7) and (8)

- (7) "Virtual net metering" means the aggregation of multiple customer-generator meters offset by customer-generator load.
- (8) "Meter aggregation" means the aggregation of multiple retail electric accounts offset by customer-generator load.

#### **F. Recommendations and Comments on PURPA Implementation in Ohio.**

In its proposed rules, Staff has developed specific language to implement PURPA, the Public Utility Regulatory Policies Act of 1978, as amended by the Energy Policy Act of 2005. AEEO commends Staff and the Commission for taking a positive step forward on the development of these rules; PURPA – if properly implemented, can help encourage the development of distributed resources, lower energy costs, reduce transmission constriction, and improve the business climate for Ohio's largest users of energy.

AEEEO agrees with much of the proposed rule 4901:1-10-34. OAC 4901:1-10-34(C), states that “All qualifying facilities that have a net capacity of 20 megawatts or less shall provide their electrical output to the EDU.” PURPA sets a floor of 100 kilowatt or less capacity for qualification, but individual states have the authority to set qualifying facility levels above 100 KW. Staff wisely recommends, and AEEEO agrees with, a qualifying facility limit of 20 MW. Such a level is consistent with the regulations of California, which also has strong CHP and distributed generation potential. The rest of the accompanying provisions of OAC 4901:1-10-34 are reasonable and workable solutions for PURPA implementation in Ohio; that noted the experiences of other jurisdictions argue in favor to modest changes to proposed section 4901:1-10-34(J), which states as follows: “Energy payments shall, at the option of the qualifying facility, be based on either of the following: (1) The day-ahead energy market as cleared at the applicable locational marginal price at a liquid trading hub. (2) The monthly simple swap price.”

Essentially, 4901:1-10-34(J) sets the “avoided cost” for electricity under PURPA for Ohio. By indexing this price to market power options, Staff is looking to provide a true reflection for avoided costs to Ohio’s electric utilities. That noted, under PURPA a state has wide latitude in setting the avoided cost for utilities, and this can be accomplished through a rulemaking, by a proxy calculation, or even by competitive bidding – as well as through market rates, as the Staff recommends. The goal of any PURPA avoided cost regime should be a balance that truly incents distributed generators to develop and deploy low-cost resources, and protects customers and ensures that these resources lead to lower bills and a better business climate.

Indexing avoided costs to rapidly changing market prices tracks closely with short-term avoided costs for utilities, but it fails to keep pace with longer term avoided costs. Additionally, since day to day prices are inherently unpredictable, they do not provide the kind of certainty for

distributed generators to make the kinds of long-term investments necessary to deploy low-cost distributed resources. It is clear from the proposed Staff rules that there is a strong desire to make market prices the benchmark for avoided costs in Ohio. Accordingly, AEEO recommends the following change to the proposed rule, to add language that would permit a distributed generator to use a market based avoided cost number that provides certainty which will facility development. For long-term capacity costs, AEEO recommends utilizing a market referent price based on a combined cycle gas turbine unit cost, as follows (AEEO proposed language underlined):

- (J) Energy payments shall, at the option of the qualifying facility, be based on either of the following:
  - (1) The day-ahead energy market as cleared at the applicable locational marginal price at a liquid trading hub.
  - (2) The monthly simple swap price.
  - (3) As set by the Commission and subject to a 30 day comment period and annual review; the long-term ownership, operating, and fixed-price fuel costs for a new 500 MW natural gas-fired combined cycle gas turbine.

Finally, one issue not resolved by the rules proposed by Staff is REC (Renewable Energy Credit) retention for customer-generators. AEEO recommends that as in Florida and Iowa, Ohio qualifying facilities should retain RECs. In order to promote the development of more distributed generation resources, REC sales – separate from energy sales, can be an important part of a long-term development and financing plan for a distributed generator. Without this additional revenue stream, project financing can be more challenging. Permitting qualifying generators to retain RECs will encourage the development of more distributed resources. Accordingly, AEEO requests that the Commission include language in the proposed rule package that ensures REC retention by qualifying facilities.

### **III. Conclusion**

For the foregoing reasons, AEEO respectfully request that the Public Utilities Commission of Ohio consider these comments and adopt the recommendations as presented in this proceeding.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that a true and accurate copy of the foregoing *Comments by Advanced Energy Economy – Ohio*, has been served upon the following parties via electronic mail on January 7, 2013.

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Summary: Comments electronically filed by Mr. Christopher J Allwein on behalf of Advanced Energy Economy - Ohio