

**BEFORE THE
ARKANSAS PUBLIC SERVICE COMMISSION**

**IN THE MATTER OF AMENDMENTS TO THE)
ARKANSAS PUBLIC SERVICE COMMISSION'S) DOCKET NO. 12-060-R
RULES CONCERNING METER AGGREGATION)
AND COMBINED BILLING FOR)
NET-METERING CUSTOMERS)**

**ARKANSAS ADVANCED ENERGY ASSOCIATION'S COMMENTS
REGARDING STRAWMAN LANGUAGE AND ECONOMIC
IMPACT OF AGGREGATE NET METERING ON RATES**

The Strawman is Appropriate With One Revision

The portion of the proposed Strawman in question reads as follows:

- (1) For customers participating in net-metering, the following provisions apply:
 - I. For the purpose of measuring electricity usage under the Net Metering Rules, an electric utility must, upon request from a net-metering customer, aggregate for billing purposes a meter to which the net metering facility is physically attached ('designated meter') with one or more meters ('additional meter') in the manner set out in this subsection. This rule applies only when:
 - a. *The additional meter is located on the customer's non-separate premises; and* (Emphasis added).
 - b. The additional meter is used to measure only electricity used for the customer's requirements.

The AAEA supports this provision, subject to one revision. Specifically, (1)i.a. should be struck from the amendment. Limiting ANM to only those properties that are adjacent, as the language in question seems to do, is too restrictive. AAEA does not support a provision in the General Service Rules that prevents an owner from aggregating a meter or meters located on non-contiguous properties to a net metering facility. Removing the restrictions of (1)i.a. as proposed by the AAEA revision to GSR.5.20 Strawman Rule Language would allow a net

metering facility to be sited at the best location for a windmill, or array of solar panels, or for other net metering facilities, regardless of where load recording meter(s) are located.

AAEA is aware of at least one situation in Arkansas that illustrates the restrictive effect of the language in (1)i.a. The Rockmoore Public Water Authority (PWA) near Sulphur Rock, Arkansas has 11 separate, non-contiguous properties. Each property's facility is metered whether it is a pump station, a treatment plant, a well, or a night light. Rockmoore PWA has explored the possibility of installing a net metering facility but under current net metering restrictions, it would not be economical to do so unless the load recorded at the 11 meters can be aggregated and offset by the power generated at the net metering facility.

The Rockmoore PWA is likely a common situation in Arkansas and elsewhere. Several states have implemented expanded net-metering policies that allow groups of customers or single customers with multiple meters to use a single net metering facility to offset load on multiple meters at dispersed locations. These expansions allow a broader range of customers to invest in renewable distributed generation systems, including those who have less than ideal sites for an on-site installation.

In Rhode Island, a system generally must be owned by the customer of record and sited on the customer's premises (in the same geographic location). However, facilities (1) owned by municipalities or multi-municipal collaboratives or (2) owned and operated by a developer on behalf of a municipality or multi-municipal collaborative through a "municipal net metering financing arrangement" are also eligible. Meter aggregation is generally allowed, and special

provisions exist to accommodate meter aggregation for farm-based systems that serve facilities in close proximity to each other.¹

Pennsylvania's rules allow meter aggregation on properties owned or leased and operated by a customer. This primarily benefits farms that are commonly owned and operated. Aggregation is limited to meters (in a single utility's service territory) that are located on properties within two miles of the boundaries of the customer's property. The utility must provide the necessary equipment for physical meter aggregation, but the customer must pay the costs. In addition, "virtual meter aggregation" is allowed for properties owned or leased and operated by a customer and located within two miles of the boundaries of the customer's property and within a single utility's service territory. For virtual meter aggregation, the customer is responsible only for any incremental expense involved in processing the account on a virtual meter aggregation basis.²

In short, aggregating meters on a single property or non-contiguous properties is not an untried experiment in net metering practices. Common sense and careful planning are required by the owner(s) and utilities involved. There may be reasons to restrict the range of the properties and meters as done in Pennsylvania, but AAEA would want to hear a valid reason for doing so. Farm properties and rural water districts such as the Rockmoore PWA can be of considerable size and exceed a two-mile range. AAEA believes that the Arkansas Public Service

¹Database of State Incentives for Renewables and Efficiency (Rhode Island) www.dsireusa.org.

²Database of State Incentives for Renewable and efficiency (Pennsylvania) www.dsireusa.org.

Commission should authorize ANM but not restrict aggregated meters and a net metering facility to contiguous property. In the view of AAEA, it does make sense to restrict ANM to a utility's territory.

Economic Impact of ANM on Rates

The following comments are an attempt to offer insight concerning the current impact of net metering on electricity rates and its potential impact should the Arkansas Public Service Commission authorized ANM. It is safe to say that to date the current level of net metering in Arkansas has had a negligible impact on Arkansas's ratepayers. As reported by the utilities in docket 06-105-U for 2011, 214 net metering installations are operating in Arkansas, and those NMFs have a capacity of only 1.3 MWs of electrical power producing probably less than 2,000,000 kws annually. According to the Energy Information Agency, Arkansas's net summer capacity is 15,981 MWs producing 61,000,185 mwhs. Thus, if there is a rate impact it is only on those owners that have installed NMFs and that impact has been economically positive.

To speculate on what ANM's impact on rates and ratepayers would be if authorized is more difficult as it is uncertain to what degree Arkansans will participate in net metering programs. For an individual who owns a NMF, we can determine that the economic value will increase as that owner aggregates meters. To illustrate this point, AAEA offers a model in the example of Rockmoore Public Water Authority (PWA) near Sulphur Rock, Arkansas. Rockmoore PWA has meters that measure load at a treatment plant, pumping stations, nightlights, and other facilities. The model analysis is expressed in the attached spreadsheet.

The model reflects assumed quantities and estimated costs of electrical energy consumed behind 3 meters owned by Rockmoore, and compares the simple investment performance of an on-site renewable energy generating facility if located behind each of the meters and if the meters are aggregated (for comparison purposes, the base case scenario reflects current conditions, i.e., without any renewable energy generating facility). The results of these simple analyses indicate that aggregated net metering would turn an unattractive investment into a potentially attractive investment—i.e., the net savings resulting from location any of the three meters would be nominal to negative, whereas the net savings if the meters are aggregated is attractive.

- The model assumes a small-scale wind-driven generating system (150 kW capacity), operating at a 35% capacity factor with a service life of 20 years.
- The model assumes a capital cost factor of \$3,000 per installed kW and an operating cost of 1.5 cents per kWh.
- The model assumes an energy cost to the customer of 8.0 cents/kWh and assumes that electricity sent back into the grid would be valued at the same rate (i.e., the model does not take into consideration any fixed costs such as a monthly customer charge per meter, nor does it consider taxes and other non-energy-related charges).
- For illustrative purposes, the model shows significantly different levels of electricity consumption behind each of the three meters.
- All assumed values are shown in blue font color / yellow highlighting.
- The figures in this model are illustrative but reflect, in general, actual electricity consumption and costs data for the Rockmoore PWA.

This simple analysis of the cost of on-site generation accounts for amortization of the estimated capital cost but does not consider financing costs or returns to equity.

In Arkansas, there are more than 200 similar water authorities. Should ANM be authorized, it is likely Arkansas will experience an increase in net metering facilities and the generation of renewable energy -- an outcome desired by the state and its legislature. But none can say for sure to what extent and to what rate impact we will see until Arkansas has more experience with ANM. A prudent action by the Arkansas Public Service Commission could be a periodic review of net metering by the utilities and that information is included in the utilities Integrated Resource Plans.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on September 10, 2012 I electronically filed the foregoing with the Clerk of the Commission using the ECF system and a copy was served on all parties via email or first class mail.

/s/ Nate Coulter

Nate Coulter