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INDEPENDENT REGULATORY
REVIEW COMMISSION

Paul E. Russell
Associate General Counsel

PPL
Two North Ninth Street
Allentown, PA 18101-1179
Tel. 610.774.4254 Fax 610.774.6726
perussell@pplweb.com



FEDERAL EXPRESS

April 5, 2006

James J. McNulty, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, Pennsylvania 17120

**Re: Implementation of the Alternative
Energy Portfolio Standards Act of 2004:
Net Metering - Notice of Proposed Rulemaking
Docket No. M-00051865**

Dear Mr. McNulty:

Enclosed for filing are an original and fifteen (15) copies of the comments of PPL Electric Utilities Corporation ("PPL Electric") in the above-captioned proceeding.

Pursuant to 52 Pa. Code § 1.11, the enclosed document is to be deemed filed on April 5, 2006, which is the date it was deposited with an overnight express delivery service as shown on the delivery receipt attached to the mailing envelope.

In addition, please date and time-stamp the enclosed extra copy of this letter and return it to me in the envelope provided.

If you have any questions regarding the enclosed comments, please call.

Very truly yours,

Paul E. Russell/gpr
Paul E. Russell

Enclosures

cc: H. Kirk House, Esquire
Mr. Calvin Birge

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Implementation of the Alternative	:	
Energy Portfolio Standards Act of 2004:	:	Docket No. M-00051865
Net Metering – Notice of Proposed	:	
Rulemaking	:	

Comments of PPL Electric Utilities Corporation

TO THE PENNSYLVANIA PUBLIC UTILITY COMMISSION:

I. Introduction

At its Public Meeting on November 10, 2005, the Public Utility Commission ("PUC" or the "Commission") adopted a proposed rulemaking order on net metering as mandated by the Alternative Energy Portfolio Standards Act ("Act") at 73 P.S. Section 1648.5. The proposed rulemaking order was published in the Pennsylvania Bulletin on February 4, 2006 with comments due 60 days after publication, or on April 5, 2006.

PPL Electric Utilities Corporation ("PPL Electric" or the "Company") is an Electric Distribution Company ("EDC") serving 1.3 million customers in central eastern Pennsylvania. PPL Electric has been an active participant in the stakeholder process that the Commission has established to address issues relevant to the implementation of the Act. PPL Electric previously filed comments on matters related to net metering on June 17, 2005 in response to the Issues List set forth by the Commission on June 2, 2005 and on August 26, 2005 in response to the Commis-

sion's final draft proposal for net metering regulations issued on August 3, 2005. The Company also addressed issues related to net metering in its comments at the Commission's January 19, 2005 Technical Conference and in its Reply Comments filed on February 9, 2005.

In its earlier comments, PPL Electric proposed a two-meter protocol to address the net metering requirements of the Act. The Company's earlier comments describe, at length, why the Company believes the two-meter approach is superior to other proposed approaches. PPL Electric acknowledges that, in this proposed rule-making, the Commission has incorporated a number of enhancements suggested by the Company; however, the rulemaking outlines what is fundamentally a single-meter approach. Although the Company continues to advocate the two-meter approach, it does not wish to lose the opportunity to offer comments that it believes will improve the proposed single-meter approach. Accordingly, PPL Electric offers the comments below on implementation of a single-meter approach, but continues to believe that a two-meter protocol is the preferred approach. PPL Electric appreciates the opportunity to provide comments on the above-captioned draft regulation and looks forward to continuing to work with the Commission and all other stakeholders to address issues associated with net metering.

II. Comments

For the sake of efficiency, PPL Electric's comments follow the headings and numbering of the proposed rulemaking.

Section 75.12 Definitions.

- **Avoided cost of wholesale power**

PPL Electric believes that, as described in more detail in its comments at Section 75.13(c), customer-generators should be compensated for any surplus generation at the end of each billing cycle. Accordingly, the definition should be changed to read: "The average locational marginal price of energy, or its successor, over the billing period in the applicable EDC's transmission zone." (Recommended addition underlined.)

- **Equipment package**

PPL Electric believes that it would helpful to clarify that the equipment package is owned by the customer-generator. Accordingly, the Company recommends that the definition should be changed to read: "A group of components, owned by the customer-generator, connecting an electric generator with an electric delivery system..." (Recommended addition underlined.)

- **Meter Aggregation**

PPL Electric believes that, as described in more detail in its comments at Section 75.14(e), virtual meter aggregation should not be permitted. Accordingly, the definition should be changed to read: "The aggregation of all meters on contiguous and adjacent properties whose electric service accounts identify the customer-generator as the ratepayer. Meter aggregation may be completed by physically rewiring the meters on such accounts in order to provide a single point of contact."

- **Net Metering**

As described in the Company's comments regarding fair and non-discriminatory treatment (see PPL Electric's comments at Section 75.13(j)) and the change from annual to monthly payment for surplus generation (see PPL Electric's comments at Section 75.13(c)), parts (i) and (ii) of the definition should read as follows:

"(i) The EDC credits a customer-generator for each kilowatt-hour produced by a Tier I or Tier II resource installed on the customer-generator's side of the electric revenue meter, up to the total amount of electricity used by that customer during a billing cycle. The customer-generator's bill is calculated based on the resultant net kilowatt-hours (which may be zero, but will not be a negative amount) in accordance with the provisions of Sections 75.11 through 75.15.

(ii) The EDC compensates the customer-generator at the end of the billing cycle for any remaining credits, at a rate equal to the supplier/provider's avoided cost of wholesale power."

- **Virtual Meter Aggregation**

PPL Electric believes that, as described in more detail in its comments at Section 75.14(e), virtual meter aggregation should not be permitted. Accordingly, this definition should be deleted.

Section 75.13. General provisions.

(b) EGSs offering net metering

Although PPL Electric believes that Electric Generation Suppliers ("EGSs") should be permitted to net the purchases and generation of customer-

generators relative to unbundled competitive retail generation service that they may provide, the provision of the draft regulations that permits EGSs to offer net metering service raises a number of practical concerns. These include:

- The impact of EGS net metering on EDCs' distribution charges. The Company believes that EGS net metering programs should have no impact on the collection of distribution service charges. To do otherwise would be to permit EGSs to offer programs that are funded by the regulated rates charged to non-participants for a service that is separate and distinct from the service being offered by the EGS. The Company also believes that the stranded cost provisions of Section 75.15 of the proposed regulation apply to net metering programs offered by EGSs. Specific language is provided in Section 75.15 of these comments regarding this point.
- Coordination with competitive metering rules. PPL Electric believes that any net metering programs offered by EGSs must be consistent with the competitive metering rules of the EDC in whose service territory the program will be offered. The Company also believes that EDCs must have the opportunity to revise their competitive metering rules to accommodate net metering.
- Billing issues. PPL Electric believes that it would be inefficient for EDCs to be required to modify their billing systems for an unknown variety of net metering programs that EGSs may offer. Accordingly, the Company believes that, although bill-ready EDC billing may be used, only the two-bill

option under rate-ready billing should be available to customers electing an EGS net metering program.

To address the above concerns, the Company recommends the addition of the following language at the end of Section 75.13(b):

“EGS offered net metering will apply only to the generation and transmission services provided by the EGS, and to stranded costs as described in Section 75.15. EGS offered net metering will be limited to either bill-ready billing or to the two-bill rate-ready option and will conform to the tariffed competitive metering provisions of the EDC in whose service territory the program is offered. The EGS will serve a copy of the information it provides to the Commission on all EDCs in whose service territory the program is offered.”

(c), (d), (e), (g) Monthly payment for surplus generation

Sections 75.13(c), (d), (e), and (g) of the proposed regulations describe kilowatt-hour crediting activities that carry over from one billing month to the next, and which are reconciled over a year. PPL Electric recommends that reconciliation be accomplished on a monthly rather than an annual basis. As described in the Company's earlier comments supporting the two-meter protocol for net metering, single-meter net metering inappropriately, in PPL Electric's opinion, compensates customer-generators for generation at a retail delivery rate that reflects components, such as distribution, that are not pertinent to generation and, typically, reflects an average rate for generation that is not consistent with the time-varying value of generation. The use of a retail delivery rate will actually harm customer-generators economically during times when loads are high, generation is scarce, and, consequently, the price of generation is high. Pricing information and metering technology

exist so that this situation can be avoided. The pricing information is, in fact, necessary for the calculation of an avoided cost as required by the proposed regulation. Therefore, the only rationale for not pursuing an approach, such as the two-meter protocol, that is more consistent with market structures is the desire to avoid the cost of metering. That desire can be met with a monthly reconciliation and, thereby, limit the amount of distortion introduced to a single month at a time.

Accordingly, the Company recommends that sub-sections (d) and (g) be eliminated and that the following language be substituted in sub-sections (c) and (e):

“(c) If a customer-generator is a generation customer of an EDC and supplies more electricity to the electric distribution system than the EDC delivers to the customer-generator in a given billing month, the EDC shall credit the customer-generator for the excess on a kilowatt-hour for kilowatt-hour basis. (e) At the end of each monthly billing period, the EDC shall compensate the customer-generator for any excess kilowatt hours generated at the EDC’s avoided cost of wholesale power.

(i) Customer-generator ownership of Credits

PPL Electric believes that the net metering protocols that are established in the proposed regulation result in customer-generators being subsidized by regulated rates. Accordingly, the Company believes that ownership of Credits created through an EDC net metering program should reside with the EDC on behalf of its regulated generation service ratepayers. To permit the customer-generator to retain ownership would result in ratepayers having to pay a second time to acquire the Credit for compliance purposes. Furthermore, permitting the

customer-generator to retain ownership of the Credit bars the EDC from using the automatic energy adjustment clause established by the Act to recover costs associated with net metering and interconnection because, under this approach, the EDC would own no Credit with which the costs can be associated. Accordingly, the Company recommends that Section 75.13(i) be revised to read as follows:

“Alternative Energy Credits associated with electricity generated by a customer-generator pursuant to a Commission-approved EDC net metering tariff are owned by the EDC and will be used or sold for the benefit of its regulated generation service customers.”

(j), (k) Non-discriminatory treatment

Sub-sections (j) and (k) of the proposed regulations specify that customer-generators subject to net metering will be charged rates and fees that are identical to those charged to other customers that are not customer-generators. PPL Electric concurs with the intent of the proposed provisions that all customers be treated on a fair and non-discriminatory basis. Literal application of the language of the proposed regulation means that customer-generators will continue to be subject to the same monthly charges, minimum billing demands, and applicable fees to which any other customer taking service under the same rate schedule is subject. The result is that the net metering customer-generator who exactly offsets his usage, kilowatt-hour for kilowatt-hour, will still pay minimum charges which may amount to about 20% of his current bill. Furthermore, in treating a customer-generator using Tier I or Tier II resources the same as any other customer, the proposed regulations would relieve that customer-generator of back-up charges, thereby, discriminating

against customer-generators who use natural gas, diesel, or other fuels not qualified under the Act.

The desire to avoid these results is among the reasons that PPL Electric developed its proposed two-meter protocol. By establishing, through the separate metering of generation, a separate means for compensating the customer-generator for his generation, Credits, and other attributes, the Company's proposal, consistent with the intent of the proposed regulation, treats all customers taking delivery service and all customer-generators on a fair and non-discriminatory basis. The Company believes that, by its very nature, it is not possible to develop an approach to net metering using a single meter that will assure fair and non-discriminatory treatment of all customers, while providing the level of economic incentive that proponents of renewable resources have stated are necessary to assure sources of financing for alternative energy projects.

The following is an example that PPL Electric believes illustrates the billing that will result from the proposed regulations. The example assumes an account typical of a dairy farm with 500 to 600 dairy cows with a monthly demand of 100 kW and a monthly usage of 50,000 kWh. Such an account would be served under a rate schedule for large commercial customers. In the case of PPL Electric, the customer would be served under Rate Schedule GS-3. The monthly bill for such an account would be about \$3,900 per month. If the customer were to install a generator that exactly offset its usage, kilowatt-hour for kilowatt-hour, the generator would then have a peak load capability of 100 kW and would generate 50,000 kWh per month. There would be no net usage, however, under the proposed regulations,

PPL Electric believes the customer would be charged a bill of about \$800 per month.

The components of that bill would be as follows:

1. **Stranded costs.** Consistent with Section 75.15, the customer-generator would be responsible for stranded costs. As described later in these comments, this provision is consistent with the Electric Generation Customer Choice and Competition Act and is supported by PPL Electric. For this account, charges for stranded costs amount to about \$535 per month.
2. **Minimum bill.** It is a matter of general practice among utilities that larger customers are charged a minimum bill consistent with the fact that, if they are connected to the electric system, the distribution system must be sized and maintained to serve their load, and generating capability also must be available to serve that load. Consistent with Section 75.13(j), PPL Electric would charge the minimum charge for customers on this rate schedule which is about \$225 per month.

Using PPL Electric's two-meter approach during the month of March, 2006, the illustrative customer would have been billed \$3,900 for 50,000 kWh of delivered energy and would have been paid about \$2,950 for 50,000 kWh of generation (based on the average actual Locational Marginal Price for the PPL Zone for March of 59 cents/kWh), as well as additional amounts for the 50 alternative energy credits associated with that generation. PPL Electric previously has proposed, in the absence of a robust credit market with reliable price signals and as an incentive to

early installations, a price of \$45/Credit. This would provide additional revenue of \$2,000/month to the customer-generator, resulting in net income of about \$1,000 under the two-meter proposal instead of a bill of \$800 under the single-meter protocol set forth in the proposed regulations.

The Order issuing the proposed rulemaking requests that commenters address whether the meter aggregation opportunities described in the proposed regulations offset the economic consequences associated with requiring non-discriminatory treatment. PPL Electric opposes virtual aggregation for the reasons that are described below. However, PPL Electric notes that, to the extent that the above example is typical of agricultural applications, the other accounts associated with the farm are likely to be residential and small commercial and, therefore, under the proposed rules, they could not be aggregated with a large commercial account. Therefore, in such applications, there would be no benefit as a result of virtual meter aggregation.

Section 75.14. Meters and metering.

(a) Single-meter net metering

PPL Electric continues to recommend that the Commission adopt net metering rules that conform to the two-meter net metering protocol proposed by the Company in its comments filed previously at this docket. The proposed regulations instead follow a single-meter protocol. The key distinction between these two approaches is not how many meters there are, but how the customer-generator is billed for delivery service and compensated for generation he produces. In the Company's two-meter approach, the customer is billed for delivery service in the

same way that any other customer taking service on the same rate schedule is billed. The customer-generator is compensated for generation, Credits, and any other attributes separately in a manner that is consistent with the structure of the wholesale generation market and of markets for the trading of Credits. The single-meter approach described in the proposed regulations involves the netting of kilowatt-hours delivered to the customer and kilowatt-hours generated by the customer to produce a single bill calculated using delivery rates. If this net bill is calculated in the same manner as that of any other customer taking service on the same rate schedule is billed, the result, as described in the comments on Section 75.13(j) and (k), is less beneficial than can be achieved using the two-meter protocol and discriminates against certain customers. Accordingly, the Company recommends that the language of Section 75.14(a) be revised to read:

“A customer-generator facility used for net metering shall be equipped with metering capable of separately recording energy delivered to the facility and energy generated by the facility.”

(b), (c), (d) Recovery of EDC costs

Both Sections 75.14(b) and 75.14(d) discuss the installation of metering equipment “at the EDC’s expense”. PPL Electric believes that such costs are recoverable expenses under the Act. Accordingly, the Company recommends that this language be revised to read “at the EDC’s expense and recoverable by the EDC through the automatic energy adjustment clause established by the Act.”

Also, in Section 75.14(c), the proposed regulations refer to “the cost of additional net metering equipment required to qualify the alternative energy credits in

accordance with the act.” However, the circumstance being addressed is the one wherein a customer-generator must install a meter to record generation in order to qualify alternative energy credits in accordance with the Act. PPL Electric believes that the use of the word “net” may lead to confusion because it is, in fact, the netting that leads to the need for direct metering of the generation. Accordingly, the Company recommends the deletion of the word net so that the statement in Section 75.14(c) instead reads “the cost of additional metering equipment required to qualify the alternative energy credits in accordance with the act.”

(e) Meter aggregation

PPL Electric believes that there is no basis within the language of the Act for the aggregation of electric accounts or the conjunctive billing of those accounts beyond what is permitted under the current rules for electric service. Under those rules, customers can accomplish the aggregation of accounts (consistent with rate schedule eligibility requirements) and achieve the benefits of a single bill by re-wiring their premises so that there is a single point of service rather than multiple points of service. This is the “Physical Meter Aggregation” referenced in the proposed regulations. However, cost collection, cost allocation, and rate design are all affected by the number and cost of services, and the number of accounts within a rate schedule. Therefore, changes that are beneficial to a single customer or group of customers will have the affect of shifting costs to other customers. Such changes, therefore, necessarily raise questions of fairness and discrimination.

The proposed regulations require that customer-generators be treated on a fair and non-discriminatory basis (see comments at Section 75.13(i) and

75.13(j)). Under PPL Electric's Commission-approved retail tariff, there are no customers or groups of customers who are permitted to take advantage of conjunctive billing. Therefore, to permit customer-generators served on the same rate schedules to be billed conjunctively would be inconsistent with Sections 75.13(i) and 75.13(j) as proposed. Accordingly, PPL Electric recommends the last two sentences of Section 75.14(e) should be deleted. These sentences, as proposed, read as follows:

"If the customer-generator requests virtual meter aggregation, it shall be provided by the EDC at the customer-generator's expense. The customer-generator shall be responsible only for any incremental expense entailed in processing his account on a virtual meter aggregation basis."

Section 75.15. Treatment of Stranded Costs.

PPL Electric concurs with the intent of the provisions in the proposed regulation regarding the treatment of stranded costs. The Company recommends that the following language be added at the end of Section 75.15, as it currently is proposed, to make clear that the stranded cost treatment applies regardless of whether the customer-generator is participating in an EDC or EGS net metering program:

"These provisions apply whether the customer-generator is participating in an EDC or EGS net metering program."

III. Conclusion

PPL Electric Utilities Corporation continues to recommend that the Pennsylvania Public Utility Commission adopt net metering rules that conform to the two-meter net metering protocol proposed by the Company in its comments filed previously at this docket. The proposed regulations, however, currently follow a single-meter protocol. The key distinction between these two approaches is not how many meters there are, but how the customer-generator is billed for delivery service and compensated for generation he produces. As demonstrated in the comments above, the proposed single-meter approach produces an economic result that is less beneficial for the customer-generator than can be achieved from using a two-meter protocol and discriminates against certain customers.

Nevertheless, the Company has provided recommendations and specific language that it believes can improve the single-meter approach and looks forward to working with the Commission and other stakeholders to finalize and implement net metering rules that will move the objectives of the Act forward.

Respectfully submitted,

Paul E. Russell /mc

Paul E. Russell
Associate General Counsel
PPL Electric Utilities Corporation
Two North Ninth Street
Allentown, PA 18101
(610) 774-4254

Dated: April 5, 2006
at Allentown, Pennsylvania