

**Cleveland City Council
Utilities Committee
PURPA Hearings**

**Issues to be Addressed by Utilities Committee PURPA Hearings:
Questionnaire / Request for Comments and Information**

NET METERING STANDARD:

Background:

If the City adopted this Standard as written, a CPP customer with Distributed Generation (“DG customer”) would be connected with CPP’s system and be able to use the energy it generates to offset the energy it purchases from CPP. If the DG customer’s energy production exceeded its use, it could flow the excess to CPP’s system, and receive either a payment or credit for the excess.

Issues for Comment and Information:

Policy Issues:

Issue 1: What goals or public policies should be used as the basis of the City’s decision as to whether to adopt a Net Metering standard? What is the justification for including those goals or policies in making the decision?

Issue 2: If the City adopts the Net Metering Standard, should the City restrict its application only to DG customers using renewable energy sources?

Issue 3: Should participation in a City Net Metering program be restricted to only certain consumer sectors or producer types? If so, what sectors and producers should be permitted or not, and why? Please consider issues related to generation source, potential consumer benefits, City economic development, impacts on CPP’s distribution system, and any specific characteristics that may make net metering more difficult or expensive for a given sector or type.

Technical Issues:

Issue 4: Please comment/provide information on the technical challenges or barriers associated with implementing net metering. (See also the questions under “Interconnection”.)

Rate Issues:

Issue 5: How should CPP calculate the amount due to the DG customer for any excess power? Should it be calculated at the same retail rate that CPP charges the customer for its remaining requirements? (The retail rate would include cost of transmission and all other components of the CPP retail rate). Or, should the DG customer only be credited for CPP’s cost of purchase power?

Issue 6: Should DG customers be credited rather than paid for any excess power they produce? How frequently should such customers' bills be "trued up"?

Issue 7: Does the cost of energy to CPP over a 24-hour period (or any other time period) vary, such that a DG customer on a net metering rate potentially may be under-compensated or over-compensated for the power it contributes? If so, what solutions are available to correct this?

Issue 8: Does net metering lead to a potential negative impact on other CPP customers who do not generate their own power?

Other Issues:

Issue 9: Should there be a limit on the total amount of net generation that should be permitted to be connected to CPP's system? What total amount of KW should be permitted, and why?

Issue 10: Should there be a per-customer limit on the total KW produced at a given site by a DG customer that can be received by CPP's system? If so, what should this limit be, and what is the rationale for the proposed limit?

Issue 11: What are the financial and administrative impacts CPP can expect to experience from implementing net metering?

Issue 12: What are the potential financial and operational benefits of net metering, if any, to CPP?

SMART METERING STANDARD:

Background:

This Standard would require CPP to offer all customers a time-based rate schedule. The rate CPP charges would vary during different time periods, reflecting any variance in CPP's costs to generate or purchase electricity at the wholesale level. It must allow the customer to manage his energy use and costs through advanced metering and communications technology.

The Standard suggests several types of time-based schedules: time-of-use pricing, critical peak pricing, and real-time pricing:

Time-of-use pricing:

- Electricity prices are set for a specific time period on a forward basis, so the consumer knows the price in advance of consumption.
- Prices are based on the utility's cost of generating and/or purchasing the electricity at wholesale, and usually don't change more often than twice a year.
- This information lets the consumer manage energy costs by shifting usage to a lower cost period or reducing energy use.

Critical Peak Pricing:

- Time-of-use prices are in effect, except for peak periods of energy consumption.
- On “peak days”, the consumer’s price of electricity reflects the more expensive costs to the utility to produce or buy it. Consumers get an additional discount for reducing energy consumption during a peak period.

Real-Time Pricing:

- Again, electricity prices are set for a specific time period on a forward basis.
- Again, the prices reflect the utility’s costs of generation or wholesale purchase of power. However, prices may change more frequently – even as often as hourly!

The Standard also includes a provision for credits for large-load customers that reduce their load.

- Customers with large electric demands get a credit from the utility on their electric bill if they agree to reduce their power demand on peak load days.

Issues for Comment and Information:

Issue 1: Please comment/provide information on the technical challenges associated with implementing the various time-based schedules.

Issue 2: Please comment/provide information on what investments of time, attention, and other personal resources may be required of customers who subscribe to a time-based schedule.

Issue 3: Please comment/provide information on the levels of customer satisfaction experienced by users of different types of time-based schedule.

Issue 4: What are the financial and administrative impacts CPP can expect to experience from implementing the various time-based schedules?

Issue 5: Please comment/provide information on issues that should be considered if the City implements a program of credits for large-load customers who reduce demand during peak load days.

INTERCONNECTION:

Background:

The PURPA Interconnection Standard addresses the physical connection required to permit a customer to participate in Net Metering and to receive back-up power from CPP. If adopted as written, CPP would be required to make interconnection available to customers with their own generation (Distributed Generation, or “DG”). Such service must use the standards developed by the Institute of Electrical and Electronics Engineers: IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems.

Issues for Comment and Information:

Issue 1: Please comment/provide information on the technical challenges associated with implementing interconnection.

Issue 2: Please comment/provide information on the safety challenges to be addressed in implementing interconnection.

Issue 3: Should access to Interconnection be restricted to only certain consumer sectors or producer types? If so, which should be permitted or not, and why? Please consider issues related to generation source, potential consumer benefits, City economic development, impacts on CPP's distribution system, safety, power quality, reliability issues, and any specific characteristics that may make interconnection more difficult or expensive for a given sector or type.

Issue 4: IEEE Standard 1547 is designed to “provide the minimum functional technical requirements universally needed to help ensure a technically sound interconnection”. However, additional tests and requirements may be needed under certain local conditions. What additional tests or requirements, if any, should be met for a DG customer to be connected to CPP's system?

Issue 5: Potential benefits to the larger grid are claimed for interconnection, including reduced electric line loss; grid/EPS investment deferment and improved grid/EPS asset utilization; improved reliability; ancillary services such as voltage support or stability, VARs, contingency reserves, and black start capability. If the City adopted the Interconnection Standard, DG customers would connect to CPP's distribution system. Please comment/provide information on whether comparable benefits may be available to CPP's distribution system, or not, and why.

Issue 6: Potential benefits to consumers are claimed for interconnection, including clean energy, lower-cost electricity, reduced price volatility, and greater reliability and power quality. Please comment/provide information on whether such benefits or others may be available to DG customers connected to CPP's system, and why.

Issue 7: If the City adopts the Interconnection Standards, procedures will be needed for CPP to implement them. Several guidelines for implementing IEEE 1547 are available, and offer procedures and agreements to be used when local generators connect to their utility. Among other concerns, they address liability issues, costs allocation, study procedures, dispute resolution, etc. Guidelines include:

- **The National Association of Regulated Utility Commissioners (NARUC) “Model Interconnection Procedures and Agreement for Small Distributed Generation Resources” (available at: <http://files.harc.edu/Sites/GulfCoastCHP/Publications/ModelInterconnectionProcedures.pdf>);**

- The National Rural Electric Cooperative Association's (NRECA) "Distributed Generation Interconnection Toolkit" (available at: <http://nreca.org/PublicPolicy/dgtoolkit.htm>);
- The Federal Energy Regulatory Commission's (FERC) "Small Generator Interconnection Rule" (available at: <http://www.ferc.gov/industries/electric/indus-act/gi/small-gen.asp>).

Please comment on these or other guidelines as to their acceptability for use by CPP and provide suggestions as to the content of any guidelines CPP should use.

Issue 8: What are the financial and administrative impacts CPP can expect to experience from implementing interconnection?

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