



Net Energy Metering Policy For Parallel Operations of Customer-Owned Generation

**July 2008
Amended August 2009
Amended December 2015**

TOWN OF CLAYTON

NET ENERGY METERING POLICY

I. Background and Purpose

A. Background

There is an interest by some Town of Clayton electric customers in sources of on-site generation of electricity as a means to reduce pollution (environmentally friendly production of electricity such as solar or wind) and/or to reduce the cost of retail electricity.

Recent increases in the cost of wholesale and retail electricity coupled with tax subsidies have provided an increased incentive for customers to further research alternatives to retail electricity supply from their electric utility. Alternatives often sought by consumers include customer-owned renewable resources such as: photovoltaic, wind-power micro-generators or fuel cells powered by renewable fuels. The increase in interest in on-site generation has caused a renewed interest in Net Energy Metering. As a customer-owned electric utility the Town of Clayton is interested in supporting renewable energy and cost reduction for its customer owners. To facilitate the option of customer-owned generation in a safe and reliable fashion, the Town has promulgated an interconnection policy; Technical Consideration Covering Parallel Operations of Customer-Owned Generation of Less than 500 KW and Interconnected with the Clayton Electric System (herein, Technical Considerations). The Net Energy Metering Policy is intended to work in harmony with, and support, the Technical Considerations and to provide the administrative and financial terms of this interconnection.

B. Purpose

This Net Energy Metering Policy is primarily intended for customers using as its primary source of fuel solar or wind located on the customer's premises; is interconnected and operated in parallel with the Town's electric distribution facilities; and is intended primarily to offset all or part of the customer's own electricity requirements. Further it is intended to encourage private investment in renewable energy resources, stimulate the economic growth of the State, encourage energy independence and security, and enhance the continued diversification of Delaware's energy resources.

II. Definitions, Applicability, and Terms of Applicability

A. Definitions

1. **Customer** – Any adult person, partnership, association, corporation, or other entity:
 - a. In whose name an electric service account is listed,
 - b. Who occupies or is the electric ratepayer for a premise, building, structure, etc., and
 - c. Who is primarily responsible for payment of electric bills.

A customer includes anyone taking electric service from the Town under one service classification for one account, premises, or site. Multiple premises or sites under the same name are considered to be multiple customers.

2. **Distributed Generation or On-Site Distributed Generation (for purposes of this Net Energy Metering Policy)** – An electrical generating unit of less than 500 kW which may be connected in parallel operation to the Town’s system.
3. **Generator Owner** – The owner of the generating system that is interconnected to the Town’s Electric Distribution System.
4. **Distribution System** – The interconnected arrangement of lines and transformers that make up the Town’s electric power system.
5. **IEEE Standard 1547** – IEEE Standard entitled *Standard for Interconnecting Distributed Resources with Electric Power Systems, dated March 24, 2014*, or subsequent approved revision thereof.
6. **Interconnection** – The physical connection of Distributed Generation to the Town’s system in accordance with these guidelines so that parallel operation can occur.
7. **Interconnection Application or Application Form** – The standard form of application which must be submitted by the Generation Owner to the Town for permission to interconnect with the Town’s system. The approved Interconnection Application sets forth the contractual conditions under which the Town and Generator Owner agree that one or more generating unit whose aggregate generation at the Point of Common Coupling is less than 500 kW may be interconnected at 25kV or less with the Town’s Distribution System.
8. **Technical Considerations** – Refers to the Town of Clayton policy on interconnection requirements titled; Technical Considerations Covering Parallel Operations of Customer-Owned Generation of Less Than 500 KW and Interconnected with the Clayton Electric System.
9. **Net Energy Metering Policy** – Refers to this document, the Net Energy Metering Policy for Parallel Operations of Customer-Owned Generation.
10. **Parallel Operation** – Any electrical connection between the Town’s Distribution System and the Generator Owner’s generating source.
11. **Point of Common Coupling** – The point where the electrical conductors of the Town’s Distribution System are connected to the customer’s conductors and where any transfer of electric power between the Generator Owner and the Town’s Distribution System takes place (such as switchgear near the meter).
12. **Pre-Approved Equipment** – Specific generating and protective equipment system or systems that have previously been approved by the Town as meeting the applicable parts of this document.

13. **Pre-Interconnection Study** – A study or studies which may be undertaken by the Town in response to its receipt of a completed application for parallel operation with the Town’s system. Pre-Interconnection Studies may include but are not limited to service studies, coordination studies, and facilities impact studies.
14. **Town** – Town of Clayton.

B. Applicability

Unless otherwise provided, this policy applies to all customer generation of 500 kW or less which is interconnected at 25kV or below and operated in parallel with the Town’s power delivery system.

C. Terms of Applicability

1. A proposed Generator Owner will make a formal application to the Town for the interconnection of a generator to the Town system. All applications are to be sent to the Town’s Business Office. The application will be prepared on an Application Form provided by the Town. Two (2) Application Forms are available. Generators 25kW or less will use the shorter Application Form as less technical data is needed for the review of generating units within this size range.
2. Upon approval by the Town that the customer’s generator met the standards set out in the Technical Considerations, such approval shall be made available to the appropriate manufacturer upon written request. For subsequent applications using some or all of the identical generating unit’s protective devices and/or systems, the manufacturer may submit a copy of the approval with the application as proof that its equipment has already been approved for use on the Town’s system. Use of pre-approved equipment will not eliminate any applicable requirement for a pre-interconnection study to determine the suitability of the equipment for each application, given the unique arrangements and characteristics of both the Generator Owner and Town systems at the Point of Common Coupling.
3. The Generator Owner may connect their generation to the Town system only after the Interconnection Application has been approved and the Generation Owner has received written final approval notification. The Town will make every effort to provide notification in a timely manner following the receipt of the Interconnection Application and all required data.
4. The Town will install a warning label in a conspicuous place on their electric meter or meter box (and transformer) to notify the Town personnel that there is a generator source installed on the load side of the meter. Further, this warning label should not be used in lieu of any additional warnings, notices, or safety devices, to be installed by the customer or the customer’s installing electrician, to protect the customer (or customer’s electrician) from dangerous conditions on the customer’s side of the meter due to the customer’s installation of on-site generation. The warning label shall not be placed in a location that would interfere with the ability of Town personnel to read the electric meter. The Town

will provide the warning label. The warning label must be in place before the generation can be interconnected. Applicant will be responsible for placement of appropriate required warning label at the location of the Application provided AC Safety Disconnect Switch.

5. Applicant will provide and install an AC Safety Disconnect Switch (“Disconnect”). Disconnect will be located within line-of-sight of utility meter and will be a “visible break” switch capable of “Lockout” & “Tagout” operations by utility, maintenance and emergency service personnel.
6. Some costs incurred by the Town including engineering review fees to have a net metering system installed may be assessed to the customer if Applicant submits Interconnection Application that requires revisions, is incomplete, or is subsequently revised by Applicant.

III. **General Overview of Net Energy Metering Options**

A. **Residential Customers with Renewable Energy Generation of 25 kW or Less**

Full offset (Netting) of renewable energy kWh produced by the customer’s renewable energy generation will occur at the then current retail rate of the Town of Clayton.

B. **Non-Residential Customers with Renewable Energy Generation of 500 kW or less**

Full offset (Netting) of renewable energy kWh produced by the customer’s renewable energy generation will occur at the then current retail rate of the Town of Clayton.

C. **Non-Residential Customers with Renewable Energy Generation of Over 500 kW**

It is unlikely that the Town will be able to accommodate NEM generation over 500 KW since for large-scale generation of greater than 500 kW, the technical and financial implications for both the customer and the Town are significantly more complex. In the case where a customer desires to install a large-scale generation resource of >500 kW, the parties will separately negotiate and mutually agree on the technical, administrative, and financial terms of this interconnection. The Net Energy Metering Policy, as set forth in this document, does not necessarily include the types of, or sophistication of, the metering and interconnection requirements that may be necessary for customer- owned generation of this magnitude.

IV. **Rules and Regulations**

- A. Excess kWh credits provide for customers to be credited in kilowatt-hours (kWh), valued at an amount per kilowatt-hour equal to the sum of delivery service charges and supply service charges for residential customers and the sum of the volumetric energy (kWh) components of the delivery service charges and supply service charges for nonresidential customers for any excess production of their generating facility that exceeds the customer’s on-site consumption of kWh in a billing period. Excess kWh Credits shall be credited to subsequent billing periods to offset a customer’s consumption in those billing periods. The customer must comply with the size limits (110% of host

consumption) and requirement for NEM Excess kWh Credits to be applicable. For customers in compliance with size limitations at the end of the annualized billing period, a customer may request a payment from the Town of Clayton for any Excess kWh Credits. The payment shall be calculated by multiplying the excess kWh credits by the customer's supply service rate. Such payments if less than \$25 may be credited to the customer's account through monthly billing. Any excess kWh credits shall not reduce any fixed monthly customer charges imposed by the Town of Clayton. The customer-generator retains ownership of all renewable energy credits (REC's) associated with electric energy produced.

- B. The Town of Clayton provides net-metered customers electric service at nondiscriminatory rates that are identical, with respect to rate structure and monthly charges, to the rates that a customer who is not net-metering would be charged. The Town of Clayton shall not charge a net-metering customer any stand-by fees or similar charges, with the exception that the Delaware Energy Office shall promulgate rules that allow the Town of Clayton to request to assess nonresidential net-metering customers a fee or charge if the Town of Clayton's direct costs of interconnection and administration of net-metering for these customer classes outweigh the distribution system, environmental, and public policy benefits of allocating the costs among the Town of Clayton's entire customer base.
- C. The Town of Clayton requires that all generating systems used by eligible customer-generators shall meet all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronic Engineers, and Underwriters Laboratories to ensure that net metering customers meet applicable safety and performance standards and comply with the Town of Clayton's interconnection tariffs and operating guidelines. The Town of Clayton's interconnection rules shall be developed by using as a guide the Interstate Renewable Energy Council's Model Interconnection Rules and best practices identified by the U.S. Department of Energy. The Town of Clayton shall not require eligible net-metering customers who meet all applicable safety and performance standards to install excessive controls, perform or pay for unnecessary tests, or purchase excessive liability insurance.
- D. Net energy metering shall be accomplished using a single meter capable of registering the flow of energy in two directions. An additional meter or meters to monitor the flow of electricity in each direction may be installed with the consent of the net-metering customer, at the expense of the Town of Clayton, and the additional metering shall be used only to provide the information necessary to accurately bill or credit the customer pursuant to paragraph A of this section, or to collect system performance information on the eligible technology for research purposes. If the existing electrical meter of an eligible net-metering customer is incapable of measuring the flow of electricity in two directions through no fault of the customer, the Town of Clayton shall be responsible for all expenses involved in purchasing and installing a meter that is able to measure the flow of electricity in two directions. However, where a larger capacity meter is required to serve the customer, or a larger capacity meter is requested by the customer, the customer shall pay the Town of Clayton the difference between the larger capacity meter investment and the metering investment normally provided under the customer's service classification. If any additional meter or meters are installed, the net energy metering calculation shall yield a result identical to that of a single meter.
- E. If the total generating capacity of all customer-generation using net metering systems served by the Town of Clayton exceeds five (5) percent of the capacity necessary to meet the Town of Clayton's aggregated customer monthly peak

demand for a particular calendar year, the Town of Clayton may elect not to provide net metering services to any additional customer-generators.

V. **Technical Reference**

- A. For technical data and specifications regarding generator information, interconnection specifications, and technical guidelines for parallel operation of on-site distributed generation units, please consult the Town's Policy; Technical Considerations Covering Parallel Operations of Customer-Owned Generation of Less Than 500 KW and Interconnected with the Town of Clayton Delivery System, pages 2-18.
- B. For the Generator Interconnection Application – Short Form and Long Form, see the appropriate application.
- C. For Recommended Practices and Requirements for Harmonic Control in Electric Power Systems, please consult the IEEE St. 549 – 1992, or the previously mentioned Technical Considerations on pages 16-18.

The Town of Clayton Net Energy Metering Policy for renewable energy generation will comply with Title 26 Section 1014(d) of the Delaware Code relating to Net Energy Metering as related to any and all requirements that are applicable to municipal electric utilities.