

# Behind the Meter Policy for Distributed Generation

June 2019

## General

This Behind the Meter Policy for customer-owned, grid connected electric generating systems sets forth the requirements and conditions for interconnected non-utility owned electric generation where such generation may be connected for parallel operation with the electrical system of the City of Yale and the Yale Water and Sewage Trust Authority, hereinafter referred to as "CITY".

Generating systems will be permitted to interconnect to the City's electric distribution system at the service level voltage only after a determination by the City that such interconnection will not interfere with the operation of the distribution or transmission system and that such interconnection ensures the safety of City employees and customers.

All agreements under the original connection agreement between the Customer and the City shall remain in effect including, but not limited to paying for electricity used and the penalties assessed for payment failure.

# **Interconnection Requirements**

- 1. Customer has elected to operate, at its own expense, a customer-owned, grid-connected generation facility. Systems shall be limited in size to not more than fifty-three (53) kilowatts aggregated at the service interconnection point. The generating system is intended to offset either all or part of the customer's electrical requirements.
- 2. Customer's generation system shall supply alternating current power, 60 Hertz, at a voltage and phase of the City's established secondary or primary distribution system.
- 3. If the Customer's generation system full output capacity is larger than ten percent (10%) of the substation, feeder, or distribution line tap minimum load at the point of interconnection, additional studies and equipment may be required to provide proper line protection and voltage regulation. The Customer is responsible for the cost of any studies and/or upgrades required to allow safe interconnection of the Customer-owned generation.
- 4. Customer-owned generation which produces frequencies that result in interference or generates distorted wave forms into the 60 Hertz City electric system which adversely affects the operation of City's electric system shall be corrected at the expense of the Customer.

- 5. Any costs or expenses incurred by the City due to modifications made to City's existing electrical system as a result of the interconnection of Customer's generating system shall be paid by the Customer.
- 6. Customer shall be the owner of the renewable attributes of the electricity that is generated, to include any and all credits, certificates, benefits, environmental attributes, emission reductions, offsets, and allowances, however entitled, attributable to the generation of electricity from the Customer-owned renewable generation and its displacement of conventional energy generation.
- 7. City may require Customer to interrupt or reduce deliveries when necessary in order to construct, install, maintain, repair, replace, remove, investigate, or inspect any of its equipment or part of its system.
- 8. Customer shall comply with all the latest applicable National Electric Code (NEC) requirements, NESC requirements, State of Oklahoma requirements, building codes, and shall obtain electrical permits for the equipment installation. Installation shall comply with local site permitting requirements.
- 9. The meter and transformer or transformer pole serving the Customer generator shall be labeled to indicate potential electric current back feed, and label shall be maintained by the Customer.
- 10. Customer shall provide space for metering equipment and meter base per City's requirements.
- 11. Customer's over-current device at the service panel shall be marked to indicate the type of back feed power source. Markings shall be maintained by the Customer.
- 12. Customer assumes full responsibility for all maintenance of generators, inverters, and associated equipment including protective equipment. Customer shall keep record of maintenance activities and provide such records to the City upon request.
- 13. Customer's generation control system shall comply with NEC Articles 690 and 705 and applicable and current Institute of Electrical and Electronics Engineers (IEEE) standards including Standard 1547 "Interconnection Distributed Resources with Electric Power Systems" and any future updates or revisions for parallel operation with the City's electric systems, in particular: a) Power output control system shall automatically disconnect from the City's source upon loss of voltage and not reconnect until City's voltage has been restored for at least five (5) minutes continuously, b) Power output control system shall automatically initiate a disconnect from the City's power source with six (6) cycles (0.1 second) if Customer's voltage falls below 50% of nominal on any phase, c) Power output control system shall automatically initiate a disconnect from the City's power source within two (2) seconds if Customer's voltage falls below 88% of nominal or rises above 120% of nominal on any phase.
- 14. Customer shall provide a written description of how the protection devices will achieve compliance with the requirements of this policy as part of the building permit application.
- 15. Customer shall furnish and install on Customer's side of meter a UL-approved safety disconnect switch, or transfer switch, which shall be capable of fully disconnecting the Customer's generating facility from the City's electric system. The disconnect switch shall be located adjacent to the City's meter and shall be of the visible break type in a metal enclosure which can be secured in the "Off" position with a padlock. The switch shall be accessible to City personnel at all times.
- 16. For systems larger than fifty-three (53) kilowatts, Customer shall, at its own expense, maintain in force general liability insurance in the minimum amount of \$250,000 without any exclusion for liabilities related to the interconnection.

17. For purposes of gathering research data, City may at its expense install and operate additional metering and data-gathering devices.

# **Specifications and System Diagram**

- 1. Customer shall supply specifications for the proposed generation system as part of the construction permit process.
- 2. Customer shall supply a system diagram for use of City in determining the safety and functionality of a grid-connected generation system that will be kept in City files.
- 3. Customer shall supply a certificate or completion from a qualified professional engineer or electrician that the generation system meets all the requirements of this Policy.

# **Customer Acknowledgement Behind the Meter Policy for Distributed Generation**

I hereby acknowledge that I have been provided the Behind the Meter Policy for Distributed Generation by the City of Yale.

I further acknowledge that I have read and understand the contents of the Behind the Meter Policy for Distributed Generation and will adhere to the contract during the construction, installation and operation of my electric generation system. I understand that non-compliance or violation of this policy will result in no longer being able to be connected to the City of Yale Electric System.

Customer			
Date			

#### **ORDINANCE NO. 378**

"AN ORDINANCE AMENDING SECTION 25-108 OF CHAPTER 25 OF THE YALE CITY CODE TO PROVIDE FOR DEFINITIONS, AMENDING SECTION 25-114 OF CHAPTER 25 OF THE YALE CITY CODE TO PROVIDE FOR SEPARATE PREMISES AND TO PROHIBIT RESALE, AMENDING SECTION 25-115 OF CHAPTER 25 OF THE YALE CITY CODE TO PROVIDE FOR POWER GENERATION STRUCTURE RULES OF CONSTRUCTION AND DECLARING AN EMERGENCY."

BE IT ORDAINED BY THE BOARD OF COMMISSIONERS OF THE CITY OF YALE, OKLAHOMA:

<u>SECTION 1.</u> That Section 25-108 of Chapter 25 of the Yale City Code be amended to read as follows, to-wit:

#### "Sec. 25-108 Definitions.

- (a) The word "department" wherever used in this article shall be held and construed to mean the utility department of the City of Yale, Oklahoma and any act in this article required to be done by the City of Yale shall be done on its behalf by an authorized employee of the utility department.
- (b) Person shall mean any natural person of either sex, an association, partnership, trust or corporation acting by themselves or by an agent, servant or employee.
- (c) Large Commercial Customer shall mean those commercial customers using and having an excess of 50 K.W. capacity.
- (d) Small Commercial Customer shall mean those commercial customers using and having less than or equal to 50 K.W. capacity.
  - (e) Industrial Customers shall mean those customers using and having in excess of 400 K.W. capacity.
- (f) Power Generation Tower or Structure shall mean any tower or structure constructed, erected or set upon the ground or attached to a structure having a permanent location on the ground, the purpose of which is to generate and supply power, through the assistance of a renewable energy source, to be utilized by an existing residential or nonresidential customer for use on the property on which the tower or structure is located. A power generation structure shall be deemed to include all structural and mechanical components of such structure.
- (g) As used herein, the singular shall be held to include and construed to mean plural and masculine shall be construed to include the feminine. "

SECTION 2. That Section 25-114 of Chapter 25 of the Yale City Code be amended to read as follows, to-wit:

### "Sec 25-114. Premises to be Separate, Resale Prohibited.

- (a) Where electrical service is provided, every separate premises shall have its own service connection and utility meter.
- (b) Where electrical service is provided, such service is for the sole use of the applicant and it shall be prohibited and illegal to sell, share or in any manner allow another premises to use such service."

SECTION 3. That Section 25-115 of Chapter 25 of the Yale City Code be amended to read as follows, to-wit:

## "Sec. 25-115. Power Generation Structures, Rules of Construction.

- (a) No Power Generation Tower or Structure shall be constructed within the City of Yale without first obtaining a construction permit from the City Clerk of the City of Yale. The fee for a power generation structure permit shall be One Hundred and no/100 Dollars (\$100.00) and shall include the following information:
  - (1) A legal description of the property where the tower or structure will be located.
  - (2) A scaled drawing of appropriate dimensions which shows where the tower or structure will be located on the property.
  - (3) A description, to include height, of the tower or structure for which the permit is sought.
  - (4) Name and address of the applicant.
- (b) No Power Generation Tower or Structure shall be constructed so that the height of such structure shall be greater than the distance from the base of the tower or structure to all property lines of the property where such tower or structure is located. For purposes of this section such distance shall be determined by measuring from the base of such tower or structure to its highest point, to include height added by any blade in a vertical position if the power generation tower or structure is wind motivated, so that should said structure fall it shall come to rest wholly within the boundaries of the property upon which it is located. It shall be unlawful to any such power generation structure or tower to be attached or affixed to any residential structure.
- (c) Prior to issuance of a construction permit, the owner and tenant, if not one and the same, of the property upon which any Power Generating Tower or Structure is to be located, shall provide to the City of Yale written permission to all City of Yale employees to enter upon the subject property whenever necessary for the City to inspect the tower or structure, its supports and components for structural stability, provided, that any such authority shall not relieve the property owner of any duties or obligations with regard to the safety and lawfulness of such tower or structure.
- (d) A property owner or tenant of any property may erect solar panels on the roof of any structure within the City of Yale and such property owner or tenant may use the electrical power generated from such solar panels. No person, firm, entity or corporation may erect or place solar panels on any empty or vacant property, nor the front or side yards of any property visible from the public street within the City of Yale.
- (e) No portion of this Section regarding the placement and construction of a power generation tower or structure shall authorize the construction or use of any such tower or structure in violation of any statute, ordinance, building code, electrical code or any applicable state or federal regulations."

#### SECTION 4: EMERGENCY CLAUSE.

it being necessary for the preservation of the public health, peace and safety that an emergency be declared by reason whereof an emergency is declared and this ordinance shall become effective from and after its publication.

PASSED, APPROVED AND ADOPTED this 12th day of March, 2019.



CLARA WELCH, VICE-MAYOR CITY OF YALE, OKLAHOMA

#### **ORDINANCE NO. 379**

"AN ORDINANCE AMENDING SECTION 25-113 OF CHAPTER 25 OF THE YALE CITY CODE TO PROVIDE FOR ELECTRIC ENERGY RATES AND DECLARING AN EMERGENCY."

BE IT ORDAINED BY THE BOARD OF COMMISSIONERS OF THE CITY OF YALE, OKLAHOMA:

<u>SECTION 1.</u> That Section 25-113 of Chapter 25 of the Yale City Code be amended to read as follows, to-wit:

#### "Sec. 25-113. Electric Energy Rates

- (A) The rates for electric energy used within the corporate limits of the City of Yale, and for electric energy used without the corporate limits of the City of Yale shall be as follows:
  - (1) Effective on the 1st day of June, 2019.

For all service, residential, commercial, government and non-profit:

Customer Charge Energy Charge \$ 16.43 per month

\$ 10 cents per KWH

- (2) Effective July 1, 2019, those rates as set in Section (A) (1) above shall be increased annually on the 1<sup>st</sup> day of July each year by an amount equal to the increase in the annual CPI index or by Three percent (3%) whichever amount is less.
- (3) In the event that the City of Yale or the Yale Water and Sewer Trust shall receive an increase in the base rate for electrical energy sold to the City or Trust by its wholesale supplier of electrical energy those rates as set in Section (A) (1) and (A) (2) above shall automatically be increased by the same amount as the increase in the wholesale base rate charged to the City or to the Trust. Such increased rate to the customers of the City of Yale shall become effective on the 1<sup>st</sup> day of the month immediately following notification by the wholesale supplier of such increased rate for electrical energy.
- (B) If a residential energy consumer permanently installs and uses equipment for electric space heating for human comfort of not less than 5 K.W. capacity and so informs the City of Yale in writing, 2,000 KWH in excess of 500 KWH shall be classified as space heating block for winter season for which the consumer shall be charged 4.6 cents per KWH with the remaining excess at the prevailing rate schedule. Application of this provision shall apply to billings rendered in the months of November through April annually which is hereby interpreted as the winter heating season.
- (C) If an energy consumer permanently installs and uses power generation equipment upon the consumer's premises and after having compiled with the provisions of Section 25-115, or any other rule or regulation of the Yale City Code regarding installation of power generation equipment such consumer shall be entitled to a Distributed Generation energy rate. Such Distributed Generation rate shall be as follows:
  - (1) Effective on the 1st day of June, 2019.

For all service, residential, commercial, government and non-profit:

**Customer Charge** 

\$ 60.00 per month

Energy Charge – 1st 1000 KWH

\$ 7.50 cents per KWH

Energy Charge - Over 1000 KWH

\$ 8.75 cents per KWH

(2) Effective July 1, 2019, those rates as set in Section (A) (1) above shall be increased annually

- on the 1<sup>st</sup> day of July each year by an amount equal to the increase in the annual CPI index or by Three percent (3%) whichever amount is less.
- (3) In the event that the City of Yale or the Yale Water and Sewer Trust shall receive an increase in the base rate for electrical energy sold to the City or Trust by its wholesale supplier of electrical energy those rates as set in Section (A) (1) and (A) (2) above shall automatically be increased by the same amount as the increase in the wholesale base rate charged to the City or to the Trust. Such increased rate to the customers of the City of Yale shall become effective on the 1st day of the month immediately following notification by the wholesale supplier of such increased rate for electrical energy.
- (4) In the event that the City of Yale receives electricity from the energy customer who utilizes power generation equipment under the terms of this section, the City of Yale shall credit to the bill a sum equal to \$0.0212 cents per KWH for any and all power so received.
- (D) Purchased power cost adjustment shall be in addition to the amount computed according to the applicable electric rate schedules created herein. The purchased power cost adjustment shall be calculated by the following formula:

B divided by C minus A equals the power cost adjustment.

 $\underline{A}$  is the projected average cost per kilowatt hour of energy, calculated periodically by the Oklahoma Municipal Power Authority.

<u>B</u> is the total amount of the monthly invoices from the Okiahoma Municipal Power Authority and the SouthWest Power Authority.

 $\underline{C}$  is the total reported kilowatt hours used as shown from the invoice of the Oklahoma Municipal Power Authority.

- (E) In order to facilitate the billing procedure, the kilowatt hour consumption to the customer will be rounded to the nearest number divisible by ten (10). As an example, kilowatt hour consumption of 292 kilowatt hours will be rounded to 290 kilowatt hours, a kilowatt hour consumption of 297 kilowatt hours will be rounded to 300 kilowatt hours.
- (F) The City of Yale will provide individual, unmetered electric pole or night lights at the rate of Ten Dollars (\$10.00) per light. A connection fee of Fifteen Dollars (\$15.00) shall be charged for each light installed. For any electrical pole installation there shall be no installation fee for the first pole, should such installation require more than one pole, the fee for the installation of such additional poles shall be equal to the cost incurred by the City of Yale for such pole or poles plus Ten percent (10%). The City shall not be required to install pole or night lights should the City determine that such installation will require the setting of more than two poles."

#### SECTION 2; EMERGENCY CLAUSE.

It being necessary for the preservation of the public health, peace and safety that an emergency be declared by reason whereof an emergency is declared and this ordinance shall become effective from and after its publication.

PASSED, APPROVED AND ADOPTED this 14TH day of May, 2019.