

The Mayor and Council of Middletown

Municipal Electric Department

Rules and Regulations

Including the

Electric Tariff

For

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# Town of Middletown, Delaware

Town of Middletown, Delaware  
Electric Department  
Rules and Regulations

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# Town of Middletown, Delaware

Definitions
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a) Applicant

The word “Applicant” as used in these Rules and Regulations means any person, firm association, partnership, corporation, institution, public body, or any agency of the Federal, State, or Local government requesting electric service from the Town of Middletown. The term also refers to current Customers who apply for modification of existing service or facilities and developers during the planning and construction stages of new facilities.

b) Customer

The word “Customer” shall mean any person, firm, association, partnership, corporation, institution, public body or any agency of the Federal, State, or Local government being supplied with electric service by the Town of Middletown. The term also refers to developers and builders during the planning and construction stages of new facilities and the period prior to the sale or rent of the facility.

c) Point of Attachment

In aerial services, the point of Attachment is the physical attachment point on the Customer’s facility where the Town’s service drop messenger cable attaches via Customer-owned insulator and associated hardware.

d) Point of Delivery

That point where the Customer takes electric service from the Town and terminates his wiring and facilities for connection to the supply lines of the Town. The Town will own and maintain all facilities up to the Point of Delivery. For a typical aerial service at secondary voltages, the Point of Delivery is defined as the connection between the Customer-owned service entrance cable and the Town-owned service drop conductors and connectors. For a typical underground service at secondary voltages, the Point of Delivery is defined as the connection between the Customer-owned underground

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service entrance cable and the Town-owned connectors used to attach the cable to the secondary terminals of the Town-owned pad mounted transformer.

e) Residence (EDU – Equivalent Dwelling Unit)

A bona fide, occupied dwelling unit suitable for year-round permanent human residence, permanently installed on a foundation or anchored in the case of mobile homes, and connected to working water and sewer systems and an active electrical supply.

f) Rules and Regulations

The comprehensive document which provides the Rules and Regulations and the Tariff of the Middletown Electric Utility.

g) Secondary Service

The provision of electricity at a transformed voltage which is less than the utility's distribution voltage. Secondary Service as used in these Rules and Regulations typically refers to 600 volts or less. See also "Service" below.

h) Service

(1) Any electricity which the Town of Middletown Electric Department may supply or make provision to supply, or any work or material furnished or any obligation performed by the Utility hereunder or under any rate schedule of the Utility.

(2) Overhead and underground conductors and associated materials between the last aerial structure (typically a pole) or underground terminal (typically a pad-mounted transformer) of the Town's electric distribution system and point of connection with the Applicant's facility (typically a building eave or wall). Service as used in these Rules and Regulations typically refers to the provision of electricity at 600 volts or less.

i) Service Call

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Work performed by Town of Middletown employees at the Customer's facility upon request by a Customer. Service calls may involve investigation, troubleshooting, or repair of components of the Customer's facility.

j) Service Installation

The connection between the distribution system of the Town and the Customer's point of delivery. (See also Point of Attachment)

k) Tariff

Part of the Rules and Regulations which lists the Service Classifications and electric rates for those classifications.

l) Utility

The Town of Middletown, DE Municipal Electric Department.

# Town of Middletown, Delaware

## 1. General Information

### a) Filing and Posting of Rules and Regulations

These electric service Rules and Regulations, shall be on display in the Middletown Town Office during normal office hours

### b) Revisions

These Rules and Regulations may be revised, amended, supplemented, or otherwise changed from time-to-time.

### c) Statements by Agents

No representative of the Town has authority to modify any rule or provision of these Rules or Regulations or to bind the Town to any promise or statement contrary to these Rules and Regulations or to the Tariff contained herein, unless the same shall be incorporated in a contract approved by the Mayor and Council and signed by an authorized representative of the Town.

### d) Rules and Regulations

The Rules and Regulations are a part of every contract for service and govern all classes of service unless otherwise specifically stated by a service classification or modified by a rider.

### e) No Prejudice of Rights

The failure of the Town to enforce any provisions of these Rules and Regulations shall not be deemed a waiver of its right to do so.

### f) Gratuities to Employees

The Town's employees are strictly forbidden to demand or accept any personal compensation or gifts for services rendered by them while working for the Town.

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### g) Disputes

In the event of a dispute between the Town's Electric Department and Customer or Applicant, either party may submit the particulars of the complaint to the Town Manager for review and further action if necessary.



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### 2. Application for Service

#### a) Contract for Service

Application for the supply of electricity must be made to the Middletown Town Office in person. A written application is required for service and the acceptance of electric service from the Town electrical supply constitutes a contract between the Town and the Customer, subject to the terms of the applicable service classification under which the Customer is served and these Rules and Regulations. Receipt of electric service is based on an accepted signed application, verbal or written agreement, contract, or otherwise. Applicants must be 18 years of age or older. Charges for service shall begin at the time service is made available to the Customer.

Written application for residential non-owners must also include a valid photo id and signed lease to obtain service. Commercial non-owners must complete written application and provide their certificate of occupancy to obtain service.

#### b) Right of Rejection

The Town reserves the right to reject any request for electrical service if the Applicant does not meet all the requirements of these Rules and Regulations. Upon request, the Applicant shall be given the reason or reasons for rejection of the request for service in writing. Reasons for rejection could include, but are not limited to:

- (1) When requested service may affect the supply of service to other Customers.
- (2) When service is not available under the standard tariff.
- (3) When delivery at a location involves excessive supply cost.
- (4) Failure to pay deposit if required.
- (5) Outstanding balance owed on a previous account for anyone who will reside at the residence. If after this service is provided by the Town, it is found that such

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past due/delinquent bill(s) exist, current service may be disconnected, without liability to the Town, until payment of the prior bill(s) is made in full.

### c) One Point of Delivery

For each billing account, there shall normally be only one Point of Delivery. The point of delivery will be that point where the Customer takes service from the Town. The Town will own and maintain all facilities up to the point of delivery. The Town will also own and maintain the meter even when it is on the Customer's side of the point of delivery.

The Customer shall own and be responsible for the meter socket when it is the point of delivery or is on the Customer's side of the point of delivery. Any distribution, receiving, or transforming facilities on the Customer's side of the single point of delivery are:

- (1) Furnished, installed, and maintained by the Customer.
- (2) Operated by the Customer.
- (3) Owned or leased by the Customer.

The Customer should refer to the Line Extension Policy for further specifics on ownership of facilities. (Section 11.) The Customer's facilities at the point of delivery and the service entrance will be in accordance with the current edition of the *National Electrical Code*<sup>1</sup> and the Town's standards for such facilities.

At each point of delivery, the Town will supply only one type of service classification.

On existing installations where more than one meter is installed for a single class of service, the demand, consumption, Customer charge, and minimum charge shall be considered separately for each meter in calculating the amount of the bill.

The Town reserves the right to deliver service to more than one point of delivery where the Customer's service or load requirements necessitate and will be facilitated by such a delivery. If the Customer desires an extra supply circuit which is not necessitated by service or load requirements, the Customer shall pay for the entire cost of the additional facility.

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National Electric Code is a registered trademark of the National Fire Association.

### d) Service at New Locations

Service at new locations will be rendered only:

(1) Where bills for service to the Customer at any other location for the same class of service in the Town's system have been paid.

(2) When all conditions of the Town's electric Rules and Regulations have been satisfied.

### e) Non-Transferability of Service

The contract for service is not transferable. When the application is made jointly by co-signers, upon the death of either such co-signer, the application or contract shall be deemed to be held solely by the survivor (s), subject to and upon the tariff rate schedule provided for in the contract.

### f) Permanent Service Contracts

Standard contracts shall be for terms as specified in the applicable service classification. Where large or special investment is necessary for the supply of service or where service is to be used for temporary, seasonal, or unusual purposes, contracts for terms other than specified in the service classification or with special guarantees of revenue or both may be required. Refer to Section 11, Distribution Line Extensions, for further detail. The Town does not offer to supply energy with nonstandard characteristics.

### g) Not used

### h) Temporary Service

Temporary service is not recurrent in nature and is required for temporary structures or during construction of permanent structures. Examples of this class of service are trailers not in an established park and carnivals. Temporary service will be provided

## Town of Middletown, Delaware

when and where the Town determines that such service is feasible. The Town shall charge the Customer in advance for all costs incurred for installing and removing the

temporary service. The Town shall also charge a deposit in advance to cover energy consumed through the service. There will be a connection charge (See Fee Schedule) in addition to all other charges. Temporary service must be removed no later than 12 months after date of connection except when a written request granting a waiver of the 12 month limit is submitted to and approved by the Mayor and Council.

Any temporary extension of the distribution system necessary to provide the temporary service connection shall be paid for by the Customer, subject to credit for materials returned in a first-class condition. Refer to Section 11 for further detail.

### i) Selection of Rate Schedule

When there are optional schedules in effect for any class of service, the Town will call the Applicant's attention to them and will furnish such information as may be requested for use in the selection of the most desirable schedule from the standpoint of the Applicant. In the rendering such assistance, it is expressly agreed by the Applicant that no liability is assumed by the Town if the schedule selected by the Applicant is not, in fact, the most desirable one.

### j) Special Contracts

Standard contracts are for the terms as specified in the Rules and Regulations and respective rate tariffs. Where large or special investment is necessary for the supply of service, special guarantees of revenue may be required as outlined in the Distribution Line Extension Policy, Section 11.

### k) Required Property Information

The Applicant shall furnish as required by the Town, at no charge to the Town, property plats, utility plans, site plans, grading plans, roadway profiles, property line stakes, grade stakes, and other items showing details of proposed construction. This information is required in reasonable time to allow the Town to design and construct its facilities in a

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safe and efficient manner to meet service requirements and to comply with applicable laws, codes, and the electric Rules and Regulations.

### l) Construction Areas

The construction area as designated by the Town shall be graded to within six (6) inches of final grade before the Town will commence construction.

If subsequent to construction start-up the Town is required to relocate or adjust any of its installed facilities due to change in grade, adjustments of property lines or change in lines or change in plans, the cost of such relocation shall be borne by the Applicant, his successors or assignees.

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### 3. Rights-of-Way

#### a) General

The Applicant requesting service shall furnish at a nominal cost (See Fee Schedule) to the Town suitable rights-of-way, permits, or easements on forms provided by the Town (See Easement Agreement – Exhibit 10) for the installation of facilities on, over, under, and across the premises of the Applicant (that is land other than public space or land dedicated for utility use) for the purpose of providing electric utility service to the Applicant and to the premises and other users in the vicinity.

#### b) Tree Trimming

These rights-of-way shall grant the Town the right to trim and/or clear trees and other obstructions as it deems necessary.

These rights-of-way shall grant the Town permission to utilize locations and equipment enclosures which are suitable (in the Town's opinion) for the installation of Town facilities.

#### c) Obtaining Rights-of-Way

If it is necessary to acquire such rights from others, such as abutting property owners, lessors, railroads, etc. in order for the Town to serve the Applicant, then the Applicant shall be responsible for obtaining such rights as the Town deems necessary. The Town will not in any way be subject to any claims from the Customer deriving from delays in obtaining rights-of-way.

#### d) Construction Area Requirements

Where, due to the nature of the property to be served, the Town finds that the exact boundaries are of critical importance, the Applicant shall locate and mark such boundaries to the reasonable satisfaction of the Town.

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The Applicant shall be responsible for clearing all trees, tree stumps, and other obstructions from the construction area as designated by the Town, said clearing to be completed in reasonable time to meet service requirements. Shrubbery shall not be planted within six feet of transformers.

The Town shall be responsible for any additional tree trimming that may be required for the clearance and safety of its facilities.

e) Primary Voltage Distribution Line Rights-of-Way.

The Town shall construct, own, operate, and maintain underground or overhead primary distribution lines only along public streets, roads, and highways which the Town has the legal right to occupy. The Town also shall construct said lines on public lands and private property across which rights-of-way and easements satisfactory to the Town have been obtained within a reasonable time period and without cost or condemnation by the Town.



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## 4. Advance Payment Policy

### a) General

A cash advance payment may be required from non-property owner Applicants as security for the payment of final bills and in compliance with the Town's Rules and Regulations. The advance payment shall be as shown in the Fee Schedule. The advance payment will be due and payable on all new applicable electric accounts and on all delinquent electric accounts before reinstallation of electric service where service has been disconnected for non-payment and any previous deposit or advance payment has been applied toward the delinquent account. The advance payment shall be waived for accounts registered in the name of the property owner as long as the owner is in compliance with the terms and conditions of these Rules and Regulations.

At the time of new service, at least 50% of the advance payment must be paid to establish an account. The remaining 50% will be billed and must be paid in full within 3 billing cycles.

When the Town holds more than one deposit for separate accounts for the same Customer, the Town shall administer each deposit individually. Service may be denied or terminated for failure to pay a deposit when requested.

### b) The following shall apply to the Customer's advance payments:

#### (1) Residential Property Owners

An advance payment for property owners is not required.

#### (2) Non-owners (Real Estate agents contracted to sell a property, renters and/or mobile home owners on rented land)

The advance payment will be retained by the Town until the Customer discontinues the service and all bills are finalized.

#### (3) General Service Customers (Commercial and Industrial)

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An advance payment as set by the Fee Schedule will be required. The advance payment will be retained by the Town until the Customer discontinues the service and all bill are finalized.

### c) Assignment of Unclaimed Customer Advance Payment

In the event that service to any Customer is discontinued for any reason, the Town shall be entitled to apply any advance payment amounts held by the Town toward satisfaction of any balance outstanding on that Customer's electric account. In the event that after full payment of that Customer's electric account there still remains any portion of that Customer's advance payment, the Town shall be authorized to apply such amount toward satisfaction and payment of any other amounts owed to the Town by that Customer for water and sewer service, municipal taxes or municipal assessments or charges of any nature, including all interest, penalties and costs thereon, in compliance with the following procedures:

- (1) The Town shall send written notice, certified mail, return receipt requested, to the last address provided to the Town by such Customer, indicating:
  - i. The amount of the Customer's advance payment being held by the Town at the time of discontinuance of service.
  - ii. The amount, if any, of the advance payment applied toward satisfaction of the Customer's outstanding electric account balance and the amount still remaining in the Town's possession.
  - iii. An itemization of any and all other amounts claimed to be due to the Town from the Customer, including water and sewer service charges, municipal taxes and municipal assessments or charges of any nature, including all interest, penalties and costs thereon.
  - iv. A notice that the Customer may, within ten days of receipt of said notice, request a hearing to contest the validity of any such amounts claimed to be due the Town and the identity (by name or job title), address, and telephone

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number of an individual authorized by the Town to hear and resolve such disputes.

- v. A notice that if a request for such hearing is not made that the Town will apply the Customer's advance payment yet remaining in its possession toward satisfaction of any amounts claimed to be due the Town.
- (2) A notice that if, after satisfaction of all such amounts claimed by the Town, there still remains any portion of the Customer's advance payment in the Town's possession, such balance must be claimed within 120 days of such notice or the Town shall transfer any remaining balance thereof to the State of Delaware, Department of Finance, Division of Revenue, Bureau of Unclaimed Property.
  - (3) In the event the Customer fails to request a hearing to contest any amounts claimed to be due the Town, the Town may immediately apply such part of the Customer's advance payment as is necessary to satisfy such claims.
  - (4) If the Customer has not requested any remaining balance of his advance payment within 120 days from the date of such written notice, the Town shall transfer any remaining balance thereof to the State of Delaware, Department of Finance, Division of Revenue, Bureau of Unclaimed Property.

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## 5. Service Classification

### a) Customer Classes

The following Customer classes are available;

Class	
<u>Designation</u>	<u>Description</u>
E1	Residential
E2	Residential with Hot Water (Grandfathered)
E3	Small General Service
E4	Small General Service with Hot Water (Grandfathered)
E5	Medium General Service
E6	Large General Service Secondary
E7	Primary Service

### b) Voltage Availability

The following voltages are supplied by the Town; however, every voltage listed below is not available at all locations on the Town's system.

240/120 volts (single-ph) 480Y/277 volts (three-phase)

240/120 volts (three-ph) 240/480 volts (three-phase)

208Y/120 volts (three-ph)

7200/12470Y Primary

24,940/14,400Y Primary

The voltage listed are the voltages supplied by the Town as requested by a Customer. If a Customer requests a change in voltage, then the Customer will pay all costs associated with the voltage change.

### c) Choice of Service Classification

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When two or more service classifications are found to be appropriate, the Customer shall select the service classification to be applied to his service.

### d) Town Assistance

The Town, upon request, shall assist the Customer in the selection of the most advantageous service classification. However, the duty and responsibility of making the selection shall remain the Customer's choice.

### e) Changing Service Classifications

When a Customer has selected the service classification for his service, its application shall remain in effect for a minimum of twelve (12) months. If a Customer's consumption characteristics change so that they fall within the parameters of different service classifications, the Town of Middletown reserves the right to change the Customer's service classification at any time.

When the Applicant requests a class of service which is available but different from the existing service classification, the Applicant shall pay for the necessary equipment, labor, and all other costs incurred by the change in service classification.

### f) Load Inspections

When the supply of service is under service classifications which base the billing demand or minimum charge upon the Customer's connected load, the Town's representative shall have access to the premises at reasonable times to inspect and count the connected load.

### g) Billing Charges

When demands are reassessed or redetermined, or power factor recomputed or the Customer is found to be in an improper service classification or remeasured as the result of an investigation made at the Customer's request or by routine inspection, the change of billing to the new demand or power factor shall first apply to the bill for the month during which the investigation is made.

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## 6. Billing Procedures

### a) Billing Periods

Rates are stated on a monthly basis and bills are rendered monthly. Meter readings are scheduled at intervals of approximately 30 days. The Town reserves the right to extend the billing intervals(s). Under abnormal conditions where the meters cannot be read at all, the bills will be estimated.

The amount of energy used is measured in kilowatt-hours (KWH) and the maximum demand is measured in kilowatts (KW). Demand charges will be based on the maximum 15 minute demand established during the monthly interval. Power factor will be the ratio between kilowatts to kilovolt-amperes.

### b) When Bills are Payable

All bills are due and payable upon receipt and shall become delinquent if not paid by the due date reflected on the bill.

### c) Estimated Bills

When the Town's meter reader is unable, at any regular reading date or regular reading time to read the Customer's meter, the Town may render an estimated bill. Other reasons for estimating the bill could include discovery of inoperable or defective meters, or when the reading taken by the meter reader varies significantly from the past electric consumption. Refer to Section 7 for more detail.

### d) Returns of Checks or Preauthorized Payments

Preauthorized payments or checks given in payment for any bills or charges rendered which are returned to the Town unpaid from the Customer's bank shall result in an additional charge as listed in the Fee Schedule. This charge shall be levied against the Customer's account.

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Proper notice of any returned payment and the charge shall be mailed to the Customer by Certified First Class mail. The Customer has five days from receipt of the notice to redeem the returned payment. Redemption of all returned payments, plus returned check charges, late fees and any other amounts due must be paid in cash, certified check, or money order.

e) Late Payment Charge

A \$5.00 late fee is applied to all accounts that have a balance greater than \$25.00 seven days past the bill due date. Failure to receive bills shall not prevent such bills from becoming delinquent nor relieve the Customer of his/her obligations.

f) Budget Billing

Budget billing is available to customers with a twelve month history at their present location and who enroll in Preauthorized Payments (see Exhibit 4 for application).

g) Post-dated Checks

Post-dated checks will not be accepted.

h) Purchased Power Cost Adjustment Clause (PPCAC)

The PPCAC is a provision where the Town of Middletown collects for wholesale power cost fluctuations which are not covered in base rates. The PPCAC is applicable to all service classifications of this Tariff.

The calculation of the PPCAC can be found in the Appendix, Exhibit No. 5.

i) Public Utility Tax

The State of Delaware levies a Public Utility Tax on commercial and industrial accounts. This tax is applied on the total amount of the electric bill including the PPCAC amount. The current State Utility Tax can be found in the Fee Schedule. The state of Delaware Renewable Energy Portfolio Standards) Section 363(4) mandates payments of be made



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for each kwh sold, transmitted, or distributed in the state of Delaware. The current amount can be ~~found~~[found](#) in the fee schedule.

### j) Other Adjustments

The Town will make appropriate credits or refunds in cases of overcharge or may bill for additional amounts in cases of undercharge. Reasons for adjustments could include, but are not limited to: improper connection of metering equipment, stopped meters, clerical errors, incorrect meter readings, or improper application of the rate schedule.

In no case will additional charges to the Customer under the application of the preceding paragraph be collected for a period which is more than three (3) years prior to the month of discovery. If the Customer has been overcharged, the Town shall refund the amount due or credit the customer's account at the Customer's election to the date the error was made, not to exceed three (3) years prior to discovery. In the absence of an election by the Customer for a refund by check, the Town shall credit the Customer's account. In the event additional charges are due the Town, installment payments shall be offered for not more than the number of months the account was billed in error. An installment service payment charge shall not be applied to such installment payments.

### k) Bill Format (Electric)

Bills will be rendered imprinted with the Town's return address and office phone number. The bills will show the present and previous KWH reading, total current usage, and the total amount due. The Customer's name, account number, and billing date will be present on the bill.

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### 7. Adjustment of Charges for Meter Errors

#### a) Adjustment for Over-Registration

Whenever a watt-hour meter in service is found to have over-registered more than 4%, the Town shall credit or refund the Customer an amount equal to the excess paid for the kilowatt-hours incorrectly metered. The credit or refund will not be issued if it is less than \$1.00. The refund shall be for the period that the Customer received service through the meter but not for more than the period established below:

- (1) Known Date of Error – If the date on which the error is first developed or occurred can be established, the bills for service shall be recalculated from that time.
- (2) Unknown Date of Error – If the time at which the error first developed or occurred cannot be established, it shall be assumed that the over-registration existed for a period of a minimum of three months to a period of a maximum of three (3) years or a period equal to one-half (1/2) of the time since the meter was last tested, whichever is less.

#### b) Adjustment for Under-registration

When a meter is found to have under-registered by more than four percent (4%) or in case of a polyphase meter operating with an inactive element, the Town or the Town's consulting engineers shall estimate the proper charge for the under-registered service by reference to the Customer's consumption during similar normal periods or by appropriate mathematical computation.

Except in cases of tampering, theft, inaccessibility to the meter, or unauthorized overload, such an estimate for a slow or stopped meter shall not cover a period of more than three (3) years. In cases of tampering, theft, or inaccessibility to the meter, the Customer is responsible for all consumption either registered or unregistered.

#### c) Demand Meter

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The readings or indications of a demand meter are utilized in computing the charges for service. Whenever a demand meter is found upon test by the Town to be in error in excess of the limits indicated below, the charges to the Customer shall be adjusted in the same manner as prescribed under watt-hour meter above.

<u>Meter Type</u>	<u>Limits of Accuracy</u>
Integrated Demand Meters	±2% of full scale reading
Lagged Demand Meter	±4% of final indication

d) Request for Meter Tests

Upon request by a Customer, the Town shall test the Customer's meter provided such tests need not be made more frequently than once in thirty-six (36) months.

If tests of meters at the Customer's request are performed more frequently than once in thirty-six months, the Town shall charge the Customer a fee (see Fee Schedule) for testing a meter. No charge shall be made for testing meters which upon test are found to exceed the allowable accuracy limits as defined in this section. The Customer or his representative may be present when the Customer's meter is field tested. A written report of the test results shall be mailed to the Customer within ten (10) days after the completion of the test.

e) Meter Testing

Alternating current meters that are in service shall be periodically tested according to the schedule below.

Large General Service (300 KW and over): Meters will be tested annually.

Other General Service (under 300 KW): Meters will be tested once every three years.

Small General Service (Non-Demand): Meters will be tested after eight years of use. A determination will be to recycle, retest, or replace the meter at this time.

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Residential: Meters will be tested after eight years of use. A determination will be to recycle, retest, or replace the meter at this time.

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### 8. Customer Installation Requirements

#### a) Wiring Within Customer's Premises

All wiring and equipment within the Customer's premises shall be furnished, installed, and maintained by the Customer. The Town will not be liable for loss or damage resulting from the Customer's wiring or equipment.

The Town may delay the construction of an extension and/or service until the Applicant(s) has completed the wiring and installation of the equipment necessary to receive and use service.

#### b) Description of Installation Provided to the Town

The Applicant for new service shall present in writing complete specifications of equipment, site and grading plans, location of plants, location of electric vaults, connected electric loads, cable runs, substations, and other data required so that the Town may determine the nature of the service the Town shall furnish, the point at which it shall be connected and metered, and any other requirements associated with the service.

#### c) Electrical Inspection By Approved Agency

All new or changed wiring and equipment shall conform to Town standards, standards of the *National Electrical Code*, and those standards of local public authorities in force at any time.

The Town shall render service only after receipt of a notice of approval issued by a duly recognized electrical inspection agency. In no event shall the Town be under any obligation to inspect the wiring or appliances of the Applicant. The Town may refuse to supply electricity to the Applicant if the Town believes the wiring or appliances do not comply with recognized requirements.

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The Town will render temporary service only after receipt of an executed "Temporary Cut-In Card." Temporary Cut-In Cards expire when the finished structure (residence or commercial building) has been occupied for fifteen days in accordance with 25 Del. C.,

Subsection 1433 as it may from time to time hereafter be amended or in accordance with any subsequent corresponding provision of law. An example of a Cut-In Card can be found in the Appendix, Exhibit No. 3.

d) Temporary Emergency Reconnection

A licensed Electrical Contractor and the Property Owner may request a temporary electrical reconnection while awaiting inspection and approval of the electrical inspection authority, if and only if, said electrician and property owner provide certification to the Town of Middletown that an emergency situation exists that requires immediate electrical reconnection of that property owner's electric service. Certification of the emergency shall be in writing upon the Town of Middletown approved form and shall be submitted to the Town prior to reconnection. (See Exhibit 6 in the Appendix.) In the event a "cut-in card" issued by the authorized inspection agency is not received within ten (10) days from the date of temporary emergency reconnection, the Town of Middletown shall disconnect the property owner's electric service.

e) Reverse Phase Relay

The Customer shall install at his expense a reverse phase relay of approved type on all motors and other equipment where a definite direction of rotation must be maintained. The Town will in no way be liable for any damage to customer equipment.

f) Phase Outage Protection

The Customer shall install, own, and maintain suitable voltage or current type devices which will protect customer equipment from damage in the event of phase outages. The Town will in no way be liable for any damage to customer equipment.

g) Motor Requirements

## Town of Middletown, Delaware

The Customer shall consult with the Town or the Town's engineer (s) with regard to the requirements of the size of motor and starting current limitations, as well as the voltage and phase of service which will be required.

The town reserves the right to refuse service or to require operational modifications to single phase motors rated five (5) horsepower or more and to polyphase motors and installations rated less than five (5) horsepower.

### h) Right to Inspect

The Town reserves the right, but is not obliged, to inspect any installation before electricity is introduced or later. The Town reserves the right to reject any wiring or appliances not in accordance with the Town's standard requirements and will not be held liable or responsible for any loss or damages resulting from defects in the installation, appliances, or wiring which may occur on the Customer's premises.

### i) Surge Protection – Computers

The Customer shall install, own, and maintain suitable surge protection equipment to protect computers and other sensitive electronic devices. When the Customer has important, sensitive electronic data, the Customer shall be responsible for installing uninterruptible power supply (UPS) equipment to protect the data. The Town will in no way be liable for any damage to the Customer's electronic equipment, computer hardware, damages of consequential value, or loss of data associated with the computer hardware and associated equipment.

## Town of Middletown, Delaware

### 9. Meter Installation, Power Factor, and Demand Determination

#### a) Meters

The Town shall normally furnish, install, maintain, and own one (1) meter for measuring the amount of energy (KWH) and demand (KW) supplied under each contract. The meter will be adequate to properly measure the electricity supplied for billing and/or load research as judged by the Town. All bills will be calculated from the reading of these meters.

Current transformers (CT's), test blocks, and other equipment required for the metering installation will be specified and provided by the Town and paid for by the customer.

#### b) Meter Sockets

Meter sockets for new installations will be specified by the Town and provided by the Customer. Meter sockets will be installed by the Customer. If the Applicant should desire to have multiple pan meter sockets, these sockets must be approved by the Town prior to installation of meters and must be purchased, installed, and maintained by the Applicant. The Town reserves the right to disconnect service to an Applicant whose sockets are not maintained in a safe, workmanlike operating manner. The Town does not stock meter sockets and cannot be responsible for the interruption or replacement of the meter socket in the event of future failure. Meter sockets for transformer rated meter installations will be specified and provided by the Town and paid for by the Customer.

#### c) Meter Locations

The Town shall designate the location of meter(s). The Customer shall provide a suitable place for the meter(s) and other equipment. For secondary or primary metered installations, the Customer shall provide a support or other facility as required for mounting of metering equipment. The Customer is responsible for keeping metering areas clean, clear of debris, and accessible to the Town at all times. Also see Section 16-b-1 concerning failure to provide access to the Town's meter. In buildings where multiple meters are required, each meter position shall be clearly and visibly marked in a permanent fashion so that each meter position is identified as to the location to which



## Town of Middletown, Delaware

service is being supplied. Meters shall not be installed by the Town until this has been accomplished.

### d) Right to Service or Remove Town's Equipment

All meters, instrument transformers or other service equipment supplied by the Town shall remain its exclusive property. The Town shall have the right to test, alter, or remove all its property from the premises of the Customer at any time.

Reasons could include:

- (1) Hazardous conditions endangering equipment.
- (2) Evidence of illegal tampering.
- (3) Violation of any of the terms of these Rules and Regulations.
- (4) Failure to pay any billing or fees due the Town.
- (5) Periodic replacement.

### e) Reverse Registration

The Town may, by ratchet or other device, control its meters to prevent reverse registration.

### f) Meter Tests

The Town shall test single phase, self-contained watt-hour meters and all other meters in accordance with the test schedule found in Section 7-e. Meter tests can be performed at the request of the Customer (See Section 7-d).

### g) Remote Reading Devices

## Town of Middletown, Delaware

The Town, at its discretion or upon request from a Customer, may install remote reading devices, subject to available technology. Remote reading devices shall be owned, installed, and maintained by the Town. When requested by the Customer and approved by the Town, such installation shall be made at a cost payable by the Customer. The location of the remote reading device shall be subject to Town approval.

A periodic verification reading must be taken on the meter and on the remote reading device. The Town shall notify the Customer when the verification is required. Service shall be subject to disconnection if the customer fails to make arrangements with the Town for a verification reading within 60 days after such notice is provided by the Town.

In cases of dispute, the Town's meter reading (not the reading of the remote device) shall be used as the final determinant in measuring consumption and in all cases shall take precedence over any readings on remote reading devices.

### h) Automatic Meter Reading Devices

The Town reserves the right, as technology develops, to utilize automatic meter reading.

### i) Capacity of Meters

The meters, instrument transformers, service connections, and equipment supplied by the Town for each Customer have a definite load capacity and no additions to the equipment or connected load will be allowed except by prior written consent by the Town.

### j) Relocation of Meters

#### At Customer's Request

All costs for moving an installed electric meter at the request of the Customer will be borne by the Customer.

#### At Town's Request

Relocation of the electric meter at the Town's request will be done at no cost to the Customer. The Customer will be notified by mail so that arrangements can be made to

## Town of Middletown, Delaware

curtail the electric service for reinstallation. If there is any violation of the terms and conditions of services under these Rules and Regulations that requires a relocation of the electric meter, the cost will be borne by the Customer.

### k) Billing Demand

The billing demand is the greatest 15 minute measured demand registered during the billing period.

### l) Power Factor

The minimum power factor of nonresidential customer's load at the point where the electric service is metered shall be maintained at not less than the greater of 95 percent lagging or the required supplier monthly peak power factor as specified in Schedule 3 to the interconnection agreement between Conectiv and the Town of Middletown, Delaware, 98.5 percent lagging. Currently, the required minimum power factor shall be 98.5 percent lagging.

If the customer fails to maintain the minimum power factor, the billing demand shall be increased by the ratio of the required minimum power factor to the actual metered power factor.

If power factor measurement is not available with the existing installed meter, power factor shall be determined by test made periodically at the discretion of the Town.

Where lighting, welding, motors or other electrical equipment or devices having low power factor characteristics are installed, the Customer shall furnish, install, and maintain at his own expense, corrective apparatus which shall improve the average power factor of the individual units or the entire installation to the required power factor of this section.

### m) Net Metering

Consistent with other provisions of the Town's metering and service requirements, the Town shall offer Customers the option of Net Metering if a Customer generates

## Town of Middletown, Delaware

electricity at the Customer's premises, subject to all of the following requirements: The Customer owns and operates the electric generation facility with a capacity that:

- (1) Will not exceed 25 kW per meter for residential Customers
- (2) Will not exceed 500 kW per meter for non residential Customers
- (3) Is intended primarily to offset all or part of the Customer's own electricity requirements, not to exceed 110% of estimated consumption,
- (4) Uses as its primary source of fuel: solar, wind, hydro, a fuel cell powered by renewable fuels, or gas from the anaerobic digestion of organic material;
- (5) Is located on the customer's premises;
- (6) Is interconnected and operated in parallel with an electric distribution company's transmission and distribution facilities;
- (7) Is not used by the Customer to supply electricity to property other than the Customer's premises.
- (8) Meets all additional town requirements.

Net metering shall be accomplished through a single meter, at the Town's expense, that runs forward and backward in order to measure net energy flow during a billing period.

An additional meter or meters to monitor the flow of electricity in each direction may be installed with the consent of the Customer, at the expense of the Town, and the additional metering shall be used only to provide the information necessary to accurately bill or credit the Customer, or to collect system performance information on the eligible technology for research purposes.

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 the difference between the larger capacity meter investment and the metering investment normally provided under the Customer's service classification. If an additional meter or meters are installed, the net energy metering calculation shall yield a result identical to that of a single meter.

If the existing electrical meter of a Customer is incapable of measuring the flow of electricity in two directions through no fault of the customer, the Town shall be responsible for all expenses involved in purchasing and installing such a meter.

## Town of Middletown, Delaware

If the total generating capacity of all Customer-generation using net metering systems served by the Town exceeds (5%) of the capacity necessary to meet the Town's aggregated Customer monthly peak demand for a particular calendar year, the Town may elect not to provide Net Metering services to additional Customers.

If, during any billing period, a Customer-Generator Facility produces more energy than that consumed by the Customer, the Town will credit the Customer in kWh's, valued at an amount per kWh 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 non residential 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 until all credits are used.

At the end of the Annualized Billing Period, a Customer may request a payment from the Town for any excess kWh credits. The payment shall be calculated by multiplying the excess kWh credits by the Customer's Supply Service Charges based on a weighted average of the first block of the summer and winter supply service charges in effect at the end of the Customer's Annualized Billing Period and the preceding 11 billing periods, excluding non-volumetric charges, such as the transmission capacity charge and/or demand charges. If such payment would be less than \$25.00, the Town may credit the Customer's account through monthly billing.

Any excess kWh credits shall not reduce any fixed monthly Customer charges imposed by the Town.

The Customer shall retain ownership of RECs associated with electric energy produced and consumed by the Customer.

The Town shall provide net-metered Customers electric service at non-discriminatory 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 shall not charge a Net-Metering Customer any stand-by fees or similar charges.

## **Town of Middletown, Delaware**

If a Net Metering Customer terminates its service , the Town shall treat the end of service period as if it were the end of the Annualized Billing Period for any excess kWh credits.

Any requirements necessary to permit interconnected operations between the Customer-Generator Facility and the Town, and the costs associated with such requirements, shall be paid for by the customer in a manner consistent with the Towns Rules and Regulations including the Electric Tariff.

## Town of Middletown, Delaware

### 10. Service Connections and Point of Delivery

#### a) General

Services as used in this section refer to overhead and underground secondary voltage conductors and associated materials between the last aerial structure (typically a pole) or underground terminal (typically a pad mounted transformer, secondary junction box, or pedestal) of the Town's electric distribution system and the point of connection with the Customer's facility (typically a building eave or outside wall). The "Service" is the secondary voltage conductor that delivers electric power from the Town's system to the Customer's facility. The Town's system facility (point of connection to the Service) from which the Service is installed will be on public, or dedicated private, right-of-way. Services shall be installed either overhead or underground (as determined by the Town) and shall be designed and installed consistent with good engineering practices. The type of conductor used for service entrances will be approved by the Town. Underground service connections are sometimes called "service entrances." Aerial services are called "service drops" or "triplex service."

Underground service is the Town's standard for new services or replacement services. However, aerial services may be installed to replace existing aerial services or in place of an underground service when a written request for such service is submitted by the Customer and approved by the Town.

#### b) Aerial Service

When Aerial services are permitted by the Town, the Applicant will pay for but the Town will install, own, and maintain the aerial service to the designated point of connection with the Town's distribution system. The Applicant will pay all costs related to the service.

#### c) Underground Service

The Applicant will install, own, and maintain the underground service to the designated point of connection with the Town's distribution system. The Applicant will pay all costs related to the underground service.

## Town of Middletown, Delaware

### d) Aerial Service Crossing Public Roads and Rights-of-Way

The Town will replace aerial services that exist across public roads and rights-of-way. The Town will bring the aerial replacement service to the Customer's facility. The Town will bill all of its costs for replacement of the aerial service across the road or public rights-of-way to the Customer. The Customer agrees to pay all these costs to the Town.

### e) Underground Service Crossing Public Roads and Rights-of-Way

The Town will replace underground services that exist under public roads and rights-of-way. The Town will bring the underground replacement service to the Customer's property Line. The Customer will then extend the underground service on his own property to his facility. The Town will bill all of its costs for replacement of the underground service under the road or public rights-of-way to the Customer. The Customer agrees to pay all these costs to the Town.

### f) Modifications or Relocations of Existing Services

Any modifications or relocations of existing Customer-owned services shall be made by written mutual agreement of the Town and the Customer. When, in the Town's opinion, such relocations or portion of such relocation is requested by the Town and deemed to benefit the Town and the Customer, the resulting cost may be prorated between the Town and the Customer accordingly.

In the event the Town shall be required by any public authority to place underground or relocate any portion of the Town's electric distribution system, the Customer shall make the necessary changes in the location of his service facilities to accommodate such changes. The cost to change the Customer's service will be borne by the requesting public authority and/or the Customer.

### g) Right to Test and Remove Equipment

All transformers, meters, and other equipment that are supplied by the Town shall remain the Town's property unless otherwise agreed to in writing. The Town shall have



## **Town of Middletown, Delaware**

the right to test, repair, remove, and/or replace any of its property on the Customer's premises.

# Town of Middletown, Delaware

## 11. Distribution Line Extensions

### a) General Policy

It is the intent of the Town of Middletown to provide electric service to customers as reliably and cost effectively as possible. So that existing Customers do not bear the cost of the installations necessary for new customers, certain fees and cost assignments have been developed. Sections 10, 12, and 13 of the Rules and Regulations should also be reviewed in conjunction with this policy.

### b) Responsibilities of the Applicant

This policy will cover a new single residence, the development of multiple single-family residences on a sub-divided parcel, and all commercial facilities.

#### (1) Connection Charges

A connection charge will be instituted for any new accounts. This charge can be found in the Fee Schedule in the Exhibits. This charge is to be paid by the Applicant for each dwelling (billing account) at the time the electric service application is submitted to the Town.

#### (2) Payment, Ownership, and Installation Responsibilities

The Applicant will pay for all distribution line extensions including poles, conductors, connectors, insulators, transformer enclosures, transformer pads, lightning arresters, cutouts, fuses, switches, switchgear, miscellaneous supplies, and all installation costs including labor, vehicles, equipment rentals, etc.

The town will also require the Applicant to pay a material handling surcharge fee which will be based on a percentage of value of the material handled. The percentage rate for the material handling surcharge can be found in the Fee Schedule. After the distribution line extension is constructed by the Town (or the Town's contractors) and has been accepted by the Town, the completed distribution line extension, including the specific items listed above, will then be

## Town of Middletown, Delaware

deeded to the Town by the Applicant at a \$1.00 nominal charge. After the line extension is deeded to the Town, it will then be owned and maintained by the Town.

(3) Design and Layout Responsibilities Inside a Residential or Commercial Development

The Developer shall provide to the Town six complete sets of detailed site plan drawings of the development including, but not limited to, grading, property boundaries, easements, existing utilities, and planned utilities. The Developer will pay for the cost of the design, layout, material selection, and inspection of the line extension in the subdivision. The Town will provide design, layout, material selection and will provide inspections and will charge the Developer for these costs.

(4) Street Lighting

The Developer will pay for and the Town will provide the design, procurement, materials and supplies, and labor associated with the installation of street lighting. All materials and equipment will conform to the Town's approved equipment list. The street lighting will then be deeded to the Town at a \$1.00 nominal charge. The street lighting will then be owned and maintained by the Town. The Town will bear the cost of electricity for Town owned street lights.

(5) Rights-of-Way and Easements

Costs associated with obtaining and recording rights-of-way and easements will be borne by the Applicant. The Town will assist in (but not be responsible for) obtaining easements in areas of public properties or public easements. The Applicant will be solely responsible to obtain and record all rights-of-way and easements on private properties.

(6) Payments for Equipment, Installation, Layout, Street Lighting, Easements of Right-of-Way

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The Town will require 100% payment of the materials, supplies, equipment, cost of design, installation, and cost of rights-of-ways or easements. One hundred percent (100%) of these costs will be paid in advance by the Applicant or Developer prior to the Town incurring the cost and will be paid prior to commencement of construction. Additional payments, if necessary, will be made at construction milestones as determined by the Town. Any final “adjustment” payment (either positive or negative) must be made prior to connection of permanent service.

### (7) Service Entrances and Service Drops

All new aerial services will be paid for by the Customer as stated in Section 10-b. All aerial service drops will be maintained by the Town. All underground service entrances are to be owned and maintained by the Customer. The Town will be the final judge in determining the type (aerial or underground) and location of the service entrance. All service entrances shall be located underground throughout new subdivisions.

### (8) Temporary Service

A non-refundable fee for the purpose of providing power during construction of a facility will apply (see the Fee Schedule in the Appendix). The builder will provide a service head and service entrance cable, meter socket, temporary pole (s), and all service drop cable. The Town will provide a temporary transformer and an electric meter. The Town will approve the location of all temporary poles. The Town will provide only single phase temporary service.

## c) Responsibilities of the Town

### (1) Electric Meter

The Town will own and maintain the electric meter.

### (2) Line Extensions

## Town of Middletown, Delaware

Aerial distribution line extensions, including but not limited to conductors, poles, switchgear, cutouts, fuses, connectors, lightning arresters, etc. will be installed by the Town but paid for by the Applicant. Other costs to be borne by the Applicant include the cost of materials, equipment, supplies, engineering design, installation labor, and special metering. Aerial distribution line extensions will be deeded to the Town. The Town will then own and maintain the aerial distribution line extension.

### (3) Transformer

The Town will own and maintain the transformer (s) for all secondary service customers.

### (4) Street Lighting

After the Developer has borne the cost of layout, purchase, and installation of street lighting as outlined in Section 11-b-4, the Developer will deed the street lighting to the Town. The Town will be responsible for the future maintenance and future relamping of the street lighting and will provide electricity.

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### 12. Town's Rights and Responsibilities in the Provision of Electric Service

#### a) Continuity of Electric Service

The Town does not guarantee continuous uninterrupted electric service and shall not be liable for any loss, cost, damage or expense occasioned by any change in, interruption, loss of phase, or phase reversal of the Town's electric service. During occasions of electrical outages, the Town cannot guarantee the amount of time such outages will last.

#### b) Right to Determine Suitability of Apparatus or Appliances

The Town reserves the right, but shall not be required, to determine the suitability of apparatus or appliances to be connected to its lines and to determine whether the operation of such may be detrimental to the general supply of electricity to the Applicant or existing Customers.

#### c) Right to Refuse or Discontinue Service

The Town reserves the right to refuse to supply or to discontinue the supply of electricity until such time as the Applicant shall conform to the Town's Rules and Regulations.

#### d) Master Metering or Submetering

Master metering or submetering shall not be allowed. In no circumstances will the Customer be allowed to extend electrical facilities across public space to supply electricity to other properties.

#### e) Multiple Occupancy Buildings

New multiple occupancy facilities shall not be master metered.

#### f) Characteristics of Service

## Town of Middletown, Delaware

The service specified and furnished by the Town consists of sixty (60) hertz, single phase or three phase alternating current at one standard secondary voltage. The type of service (number of phases and voltages) available varies with location and load.

### g) Right to Inspect

The Town shall have the right, but shall not be obliged, to inspect any installation before electricity is introduced or at any later time. The Town reserves the right to reject any wiring or appliances not in accordance with the Town's standard requirements. This inspection or failure to inspect or reject shall not render the Town liable or responsible for any loss or damage resulting from defects in the installation, wiring, or appliances; from violation of the Town's Rules and Regulations; or from accidents which may occur upon the premises of the Customer.

### h) Prearranged Interruption of Service

Whenever it is necessary to interrupt service for work on lines or equipment, such work shall be done, as much as possible, at a time that will cause the least inconvenience to the Customer. The Customer(s) to be affected by such interruptions shall be, if possible, notified in advance.

### i) PCB Testing of Town Owned Devices

The Town will respond to a request by a Customer for PCB testing of the insulating oil in Town owned transformers or other devices which are used for the direct service of the Customer or are located in close proximity to the Customer's facilities. The Town will provide either certification based on previous PCB testing or the manufacturer's certification documenting a PCB-free device. If the Town cannot produce appropriate certification, the Town will test the device for PCB's. If, after proper certification is provided and the customer still requires PCB testing and such testing determines that the device contains no PCB's or a safe legal level of PCB's, the Town will charge the Customer for the Testing. If it is found that the device contains PCB's in excess of the limit allowed by law, the Town will remove the device from service and replace it with a certified PCB free device. The Customer will not be charged for the replacement.

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### 13. Customer's Rights and Responsibilities in Accepting Electric Service

#### a) Customer's Responsibility

The electricity furnished is supplied by the Town and purchased by the Customer upon the express condition that after it passes the point of delivery, it then becomes the property of the Customer to be used only as provided in the Rules and Regulations. The Town shall not be liable for loss or damage to any person or property whatsoever, resulting directly or indirectly from the use, misuse, or presence of electricity on the Customer's premises or elsewhere after it passes the point of delivery.

The Town assumes no responsibility for loss or damages resulting from any defect in the wiring, fixtures, or appliances of the Customer. In the event any loss or damage to the property of the Town or any accident or injury to persons or property caused by or resulting from the negligence or wrongful act of the Customer, his agents, or employees, the cost of the necessary repairs or replacement shall be paid by the Customer to the Town and any liability otherwise resulting shall be assumed by the Customer.

#### b) Access to Premises

When a customer accepts service from the Town, it is agreed and service is provided upon condition that the authorized agents or representatives of the Town, having proper identification, shall have access at all reasonable times to the premises of the Customer for the purposes of accessing the Town's equipment. This access will allow for reading Town meters (see Section 16-b), connecting and disconnecting service, operating, testing, inspecting, repairing, removing, and replacing any or all of the Town's apparatus used in connection with the supply of electricity. The access may also be for the purpose of trimming, cutting, or removing tree branches or other vegetation which, in the Town's judgment threatens to interfere with the safe and efficient operation of its facilities.

#### c) Sole Source of Power/Limitation of Use



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The Customer agrees that no electricity other than that supplied by the Town shall be used in the operation of the Customer's equipment without previous written consent of the Town.

An installation for which permission has been granted must be made so that the supply of current from the Customer's generator or other sources cannot feed into the Town's system, unless agreed to by contract between the Town and the Customer. See Section 17 on Cogeneration and On-Site Generation.

### d) Notice of Trouble

The Customer shall notify the Town promptly of any defect in service or of any trouble or irregularity of the electric supply provided by the Town.

### e) Defective Installations

If at any time the wiring, fixtures, or appliances of the Customer are found to be defective or dangerous by the Town's representative, service may be refused or discontinued until the Customer has the condition corrected. The Town's responsibility in this is limited to the protection of the Town's service equipment at the point of delivery.

### f) Fluctuations

Electric service must not be used by the Customer in such a manner as to cause unusual fluctuation, disturbance or harmonics in the Town's supply system. If these fluctuations or disturbances are caused by the Customer, the Town may discontinue service or require the Customer to modify his installation to correct the problem.

### g) Unbalanced Loads

The Customer shall at all times take and use electricity in such manner that the load will be balanced equally between phases. If the unbalancing should exceed ten percent (10%) of the lesser phase, the Town reserves the right to discontinue service until the unbalance is corrected.

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### h) Transient Voltages

Customers are cautioned that certain types of data processing equipment are sensitive to transient voltages which typically occur in commercial power systems in routine operation. The Town shall not be liable for transient voltage related damage or loss. It is the Customer's responsibility to provide the proper Uninterrupted Power Supply (UPS) and/or surge protection necessary to protect the Customer's operation and equipment. Also see Section 8 – i.

### i) Electric Load Growth or Modification

The Customer shall notify and obtain the consent of the Town for increases in the Customer's service capacity.

### j) Power Line Carriers

Customers interested in utilizing the Town's electrical system as a power line carrier must ask permission and receive the written consent of the Town.

### k) PCB Testing

The Customer may request the testing of Polychlorinated Biphenyls (PCB's) in equipment owned by the Town (see Section 12 – i).

## Town of Middletown, Delaware

### 14. Termination and Reconnection of Service

#### a) Termination Without Prior Notice

The Town reserves the right to terminate service to a Customer without prior notice under one or more of the following circumstances:

- (1) Unavoidable shortage or interruptions in the Town's source of supply or other cases of emergency. This includes emergency repairs or alterations.
- (2) Whenever a hazardous electrical or electrically related condition is found to exist on the Customer's premises.
- (3) Diversion of electric service, tampering with the Town's electric meters, or unauthorized use of equipment.
- (4) The Customer's use of equipment is determined by the Town to adversely affect the Town's equipment or the Town service to other Customers.
- (5) An uncollateralized check offered on a delinquent account in an effort to avoid termination.

#### b) Termination With Prior Notice

Termination notices will be mailed to the Customer named at the address in which the account is held and/or to the occupant at the service location. The notice will indicate the reason for termination and instructions on how to avoid termination. The Customer shall be given at least forty-eight (48) hours notice. Reasons for termination may include but are not limited to:

- (1) Failure to remedy conditions having a detrimental effect on the service of others.
- (2) Non-payment of any electric bill due the Town of Middletown. Checks returned for insufficient funds also constitute non-payment of an electric bill.

## Town of Middletown, Delaware

- (3) Violation of or non-compliance with these Rules and Regulations or other written Agreements between the Customer and the Town. The Town may refuse to restore service until the Customer has corrected the conditions constituting such violation or non-compliance.
- (4) Failure to pay a fee.
- (5) Falsification, misrepresentation, or failure to disclose a material fact in an apparent attempt to defraud the Town or to avoid payment of any outstanding bill for service rendered.
- (6) Repeated refusal to grant access during reasonable working hours for maintenance, meter reading or removal of equipment, inspection or replacement of equipment as provided in Section 13 – b of these Rules and Regulations.

### c) Reconnection Charge/Deposit

Electric service disconnected by the Town, for any reason, shall be restored only on payment of previous balance due. Reconnection charges are billed in the next billing cycle (see Fee Schedule).

### d) After-Hours Reconnection Charge

After-hour restoration of electric service will not be performed except in an emergency. If the Customer requests emergency restoration after established business hours (see Fee Schedule), then an additional charge over the normal restoration charges shall be assessed. The restoration charge is listed in the Fee Schedule.

### e) Disconnection During Winter Periods

Disconnects will not be made on days where the outside ambient temperature is 32°F or less at 8:00 a.m.

### f) Load Limiting Devices

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At the Town's option, in lieu of disconnection of Residential Customers for non-payment, the Town may install load limiting devices that restrict the amount of power flow to the Customer.

### g) Termination by Customer

#### (1) Notice of Discontinuance

The Customer must give the Town at least one (1) business day's written notice to discontinue service and shall be liable for service taken until the meter has been disconnected or read. Failure to allow the Town access to premises may result in the inability of the Town to disconnect. When the Town is unable to disconnect, the Customer continues to be responsible for the energy used. Such notice prior to the expiration of a contract term shall not relieve the Customer from any minimum or guaranteed payment under any contract or service classification. Receipt of written notice of termination is when it is received at Town Hall; refer to Exhibit 7 – Service Termination Request. Incomplete requests will not be accepted.

#### (2) Failure to Complete Term of Contract

For any reason, whether through act, neglect, or default by a Customer or his agent the Town's service is suspended or the Town is prevented from supplying service in accordance with the terms of any contract it may have entered into, the minimum charge for the unexpired portion of the contract term shall become due and payable immediately as liquidated damages in lieu of the anticipated revenue from the contract.

#### (3) Final Bill

The final bill for service shall be used on an actual meter reading and is due and payable at the due date.

## Town of Middletown, Delaware

### 15. Tampering With Town Equipment

#### a) Expressly Forbidden

No person except a duly authorized representative of the Town shall make any connection or disconnection, either temporary or permanent between the service load of the Customer and service wires of the Town. No person except a Town representative may set, change, remove, or interfere with or make any connections to the Town's meter or other property or any wiring between the Town meter and the service wires of the Town. The Customer shall agree to respect the integrity of the meter seal.

#### b) Liability for Tampering

Customers found tampering or interfering with the Town's meter will pay the amount which the Town may estimate is due for service used but not registered on the meter. The Customer will also pay for the cost of any repairs, replacements, plus any other changes in the Customer's installation.

#### c) Removing Meter or Meter Sockets

The Town, upon reasonable notice, will remove and reinstall the meter to accommodate construction modification at no charge to the Customer.

# Town of Middletown, Delaware

## 16. Access to Premises

### a) General

The Town shall be granted the right to access the premises of a Customer for purposes of meter reading and to maintain general utility services as outlined in Section 3 – a (Rights-of-Way) and Section 13 – b (Access to Premises)

### b) Customer Responsibility

#### (1) Meter Area

- i. It shall be the Customer's responsibility to keep the meter area clear of debris at all times. The Town will have the right to remove any shrubbery or vines which obscure the meter reader's ability to read the meter. The Customer will pay any cost related to removal of impediments to the meter reader's ability to read the meter.
- ii. When fencing is installed by a Customer, it shall be the Customer's responsibility to provide access to the electric meter if inside the confines of the fence. Unlocked gates within the fenced area shall be considered proper access for the Town meter reader. Areas with no gates or access to meters will not be acceptable.

#### (2) Transformer Area

- i. Shrubby shall not be planted within ten feet of the Town's pad mounted transformer. Failure to follow this procedure could result in the Town trimming or unintentionally damaging shrubbery which impair with the Town's right to service the Town's transformer and associated property. The Town will not be liable for any cost or damage to any plantings within the service area of this ten foot circumference.
- ii. When fencing is installed by a Customer, it shall be the Customer's responsibility to provide access to the transformer area if inside the

## Town of Middletown, Delaware

confines of the fence. Unlocked gates within the fenced area shall be considered proper access for the Town. Areas with no gates or access to transformer areas will not be acceptable. Fencing in proximity to a transformer must be located at least three feet from the side of the transformer, and at least ten feet from the front of the transformer.

### (3) Animals

Access will be considered denied to the Town's meter readers and other representatives when dogs and other animals are in a position to threaten or intimidate the representative. Dogs and other animals shall be secured in accordance with Town ordinances. In the case where a meter is inside a fenced area with a freely roaming animal that the Town representative considers intimidating, access will be considered denied.

### (4) Penalty for Non-Accessibility of Meter

When a Customer fails to provide the Town with access to read the electric meter, then:

First Offense – The Customer will be notified of the accessibility problem in writing and the Customer must take appropriate steps to correct the problem.

Second Offense With 12 Months – The Town will notify the Customer in writing of the Customer's failure to provide access and a fee for inaccessibility will be assessed (see Fee Schedule).

Third Offense With 12 Months – The Town will notify the Customer in writing of the Customer's failure to provide access and an additional fee for inaccessibility will be assessed. The Customer will be given thirty (30) days to rectify the problem or else service will be terminated.

### (5) Metering Pedestals

Not allowed in the Town of Middletown.



## Town of Middletown, Delaware

### 17. Cogeneration and On Site Generation

#### a) General

A cogeneration facility or on site generation on the Town's system must apply for and be approved by the Town in order to operate as a parallel generator. The cogenerator must meet Federal qualifying facilities (Q/F) standards.

#### b) Parallel Operations of Customer's Generation

The Town will require suitable protective devices and will approve their installation before it will permit parallel operation of Customer owned generation with the Town's utility system. The Customer is required to submit detailed plans, equipment lists, and copies of fault current and relay protection calculations to the Town for review and approval prior to connection to the Town for parallel operations. The Town reserves the right to reject projects that the Town deems inadequate or that do not fall within the Town's overall electrical system plans. Upon acceptance of a parallel operation, the Town also reserves the right to perform periodic functional tests on the point of connection protective systems. The costs for periodic tests will be borne by the Customer.

#### c) Payments to the Customer

Payments for cogeneration and on site generation will be made in accordance with the contract or the base purchased power cost in the Purchased Power Cost Adjustment Clause, Factor B, Exhibit 5.

#### d) Metering

The Town shall install, own, and maintain all metering equipment and instruments necessary to deliver kilowatt-hours of electricity to the Town. The customer will bear all initial costs for this metering equipment.

#### e) Capacity Agreements

## **Town of Middletown, Delaware**

Capacity agreements may be entered into as a part of the special written agreement in a contract between the Customer and the Town.

# Town of Middletown, Delaware

## 18. Load Management

### a) Aggregation of Retail Customer Demand Response

#### (1) Authorized Curtailment Service Provider

The Town of Middletown or any entity that applies to be an authorized Curtailment Service Provider and is subsequently approved by the Town Manager or his designee is permitted to bid demand response on behalf of retail customers served by the Town of Middletown directly into any Commission-approved independent system operator's or regional transmission organization's organized electric markets.

#### (2) Retail Customer Participation

Retail customers served by the Town of Middletown wishing to bid their demand response into a Commission-approved independent system operator's or regional transmission organization's organized electric markets may do so by participating in the program established by the Town of Middletown or with a Curtailment Service Provider duly approved in advance by The Town of Middletown.

### b) Ancillary Services Provided by Demand Response Resources

#### (1) Demand Response Bidding Authorization

The Town of Middletown or any entity that applies to be an authorized Curtailment Service Provider and is subsequently approved by the Town Manager or his designee is permitted to bid demand response on behalf of retail customers served by The Town of Middletown directly into any Commission-approved independent system operator's or regional transmission organization's organized markets for energy imbalance, spinning reserves, supplemental reserves, reactive power and voltage control, or regulation and frequency response ancillary services (or its functional equivalent in the Commission-

## Town of Middletown, Delaware

approved independent system operator's or regional transmission organization's tariff).

### (2) Retail Customer Participation

Retail customers served by the Town of Middletown wishing to bid their demand response into a Commission-approved independent system operator's or regional transmission organization's organized markets for energy imbalance, spinning reserves, supplemental reserves, reactive power and voltage control, or regulation and frequency response ancillary services (or its functional equivalent in the Commission-approved independent system operator's or regional transmission organization's tariff) may do so by participating in the program established by the Town of Middletown or with a Curtailment Service Provider duly approved in advance by the Town of Middletown.

**Town of Middletown, Delaware**

19. Special Service Contracts

Reserved for future use.

**Appendix**

# Town of Middletown, Delaware

## Exhibit 1 – Application for Electric Service

### Utility Service Application

**\*\* SIGNED LEASE, VALID PHOTO ID AND DEPOSIT  
REQUIRED \*\***



Town of Middletown  
19 West Green Street  
Middletown DE 19709  
(302) 378-2711  
Fax (302) 378-9172  
www.middletownde.org

Name : \_\_\_\_\_ Date of Birth: \_\_\_\_\_  
Last First Middle

Address you are moving to: \_\_\_\_\_

Phone #: \_\_\_\_\_ Employer: \_\_\_\_\_

Driver's License #: \_\_\_\_\_ State: \_\_\_\_\_ Expiration: \_\_\_\_\_

Have you, your spouse or anyone included on your lease ever had a utility account with the Town of Middletown before? \_\_\_\_\_ Yes  
\_\_\_\_\_ No If yes, please state the name and service address:

\_\_\_\_\_

List all adults (18 or older) who will be residing at this address: \_\_\_\_\_

\_\_\_\_\_

Landlord Name: \_\_\_\_\_ Landlord Phone #: \_\_\_\_\_

Landlord Address: \_\_\_\_\_

If you, your spouse or anyone who will reside at the residence owes the Town of Middletown any past due/delinquent bills, you must pay all of these bills IN FULL before any service will be provided at the above service address. Additionally, if after this service is provided, it is found that such past due/delinquent bills do exist, current service will be disconnected until payment is made in full.

I understand that bills are due monthly. A \$5.00 late fee will be assessed 7 days after the due date on the bill. Failure to receive bills shall not prevent such bills from becoming delinquent nor relieve the customer of his/her obligation. If service is disconnected due to non-payment, a \$35.00 reconnection fee will be assessed and the customer must bring current all charges to restore service.

A payment made with a bad check will be treated the same as non-payment and will be subject to immediate disconnection without notice. If service is disconnected due to a returned check, a \$50.00 fee will be assessed and the customer must pay the returned check amount plus the fee by cash, debit or money order to restore service. Two returned checks within a 12 month period will result in the account becoming cash only for 1 year. Payments will only be accepted by cash, debit or money order.

The customer is responsible for the payment of all utility charges at this address until a service termination request form is received no less than 24 hours before moving and a final meter reading has been made by the Town of Middletown.

Once a service termination request form is received, the deposit will be credited to the final bill. A bill will be issued for the difference if the final charges are more than the deposit. If the final bill is less than the deposit, a refund check will be issued for the difference and mailed to the forwarding address provided by the customer.

I give permission to the Town of Middletown to take the actions needed to locate me if I leave a bill unpaid.

\_\_\_\_\_  
Signature

Date

**By signing above, I agree to make payment for all services rendered by the Mayor and Council of Middletown and understand the policies stated above.**

**Office Use Only:  
Payment**

**Received by:**

**Photo Id Checked**

# Town of Middletown, Delaware

## Exhibit 2 – New Account / Transfer Form

### MAYOR AND COUNCIL OF MIDDLETOWN ELECTRIC and WATER DEPARTMENT

Parcel # \_\_\_\_\_

Account # \_\_\_\_\_

Date \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Electric Serial # \_\_\_\_\_ Ert # \_\_\_\_\_

Water Serial # \_\_\_\_\_ Ert # \_\_\_\_\_

Electric  Turn On

Water  Turn On

Check Existing Meter

Settlement

Read & Leave On

Install New Meter

	Previous Reading	Present Reading
Electric	<input type="checkbox"/> _____	_____
Electric	<input type="checkbox"/> _____	_____
Water	<input type="checkbox"/> _____	_____

Comments \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Employee \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_



# Town of Middletown, Delaware

## Exhibit 3 – Temporary / Final Inspection Form (Cut-In Card)

ELECTRICAL INSPECTIONS				
CUT IN CARD				
Owner _____				
Occupant _____				
Location _____				
No.	Street	Town or City	State	
Installation as itemized on reverse side has been visually inspected pursuant to applicable codes.				
Installed by _____				
Date _____			No. 895701	
Inspector _____				
MIDDLE DEPARTMENT INSPECTION AGENCY, INC.				
Industrial	<input type="checkbox"/>	_____		
Temporary Service	<input type="checkbox"/>	_____		

# Town of Middletown, Delaware

## Exhibit 4 – Preauthorized Payment / Budget Application

To take advantage of the Town of Middletown’s Preauthorized Payment Plan or Budget Billing, fill out the form below and return it to the Town of Middletown. A voided check must be attached to the completed form.

### Preauthorized Payment Plan

<b>Depositor’s Name As Shown On Bank Records (Please Print)</b>	<b>Saving / Checking Account Number (Circle type of Account)</b>
<b>Name of Bank</b>	<b>Bank’s ABA Routing Transit Number</b>
<b>Location of Bank (Street, City and State)</b>	
<b>Check for Budget Billing</b>	<b>Start Month for Preauthorized Payments _____</b>

I hereby authorize you to pay and to charge to my account any Town of Middletown utility bills that are transmitted through the PNC Bank’s Electronic Automated Clearing House channels by the Town of Middletown utilities.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Town of Middletown Utility Account Number

\_\_\_\_\_  
Daytime Phone Number

Attach voided check here

#### For Internal Use Only

Received / Payment included:	Date:
Entered:	Verified:

## Town of Middletown, Delaware

### Exhibit 5 – PURCHASED POWER COST ADJUSTMENT (PPCA)

Each monthly bill may also include a positive or a negative Purchased Power Cost Adjustment (PPCA) Factor to reflect the changes in the Town's actual purchased power cost.

The PPCA shall be applied to each kilowatt-hour (KWH) supplied under all rate schedules. This adjustment determined to the nearest 0.01mill in accordance with the formula set forth below shall be applied to all kilowatt-hours supplied during the billing period.

$$A = (C - B) \times (D / E) + F$$

A = The amount of purchased power adjustment per kilowatt-hour to be applied to all bills.

C = The total current cost per kilowatt hour of energy purchased from the Town's power suppliers determined by dividing the total cost of power by the kilowatt hours purchased during the first preceding calendar month prior to the billing date.

B = Base purchased power cost of 0.08300.

D = Total kilowatt-hours purchased by the town from all power suppliers for the 12 preceding months.

E = Total kilowatt-hours sold by the Town for the 12 proceeding calendar months.

F = Capital improvement adjustment factor of 5.0 mills (\$0.005) per kilowatt-hour.

For months when the purchased power cost is greater than the base purchased power cost, (C-B) is positive, the multiplier, (D/E), shall be set at (D/E).

For months when the purchased power cost is less than the base purchased power cost, (C-B) is negative, the multiplier, (D/E), shall be set at 1.0.

The PPCA shall be computed monthly.



## Town of Middletown, Delaware

Exhibit 6 – Request and Authorization for Reconnection of Electrical Service; Release and Covenant Not to Sue

### TOWN OF MIDDLETOWN ELECTRIC DEPARTMENT

We the undersigned hereby acknowledge that Delaware Statute [24 Del.C. SS.1433 (e) ] Prohibits the Town of Middletown from connecting current or power to any property without first obtaining a permanent or temporary “cut-in card” from inspection authorities having jurisdiction thereof except in case of an emergency when service may be restored by a licensed contractor prior to obtaining such “cut-in cards.”

Fully recognizing that the Town of Middletown will rely upon the certifications made herein, we hereby warrant and certify that electric service to the property described below has been disconnected due to the emergency situation specified below and hereby request the Town of Middletown to reconnect service and reenergize our facilities without prior inspection from inspection authorities having jurisdiction and without having obtained a permanent or temporary “cut-in card” for this reconnection of service. We warrant and certify that such wiring conforms to the requirements of the National Electrical Code, and State and Local Electrical codes.

In consideration of the Town of Middletown’s reconnection of service and re-energizing of our facilities, we the undersigned do hereby release, waive, and forever discharge the Town of Middletown, its officers, agents, and employees from any and all liabilities to the undersigned, his/her spouse, children, guests, legal representatives, heirs or assigns, and from any claim or cause of action, known or unknown, past, present or future for injury or damage to property or person, including death, arising out of or connected with such reconnection of service and reenergizing of facilities at our request without prior inspection and without having obtained a permanent or temporary “cut-in card” from the proper authorities. By execution hereof we do hereby further covenant not to sue nor to aid any other person in bringing suit against the Town of Middletown, its officers, agents, or employees, for any such claim or loss, and we covenant to hold harmless and indemnify the Town of Middletown, its officers, agents, and employees against any and all such claims or damages.

The undersigned hereby assume full responsibility for all risk of bodily injury, death, or property damage arising out of or connected with the reconnection of service and/or re-energizing of our facilities by the Town of Middletown at our specific request without prior inspection by the proper authorities.



# Town of Middletown, Delaware

Exhibit 7 –

## SERVICE TERMINATION REQUEST

Customer Name:

\_\_\_\_\_

Customer Account Number:

\_\_\_\_\_

Customer Service Address:

\_\_\_\_\_

Street Address

\_\_\_\_\_

City

State

Zip

Forwarding Address (New Address):

\_\_\_\_\_

Street Address

\_\_\_\_\_

City

State

Zip

New Phone Number:

(     )

(     )

\_\_\_\_\_

(Home # + area code)

(Cell # + area code)

I hereby request that the Town of Middletown disconnect my electric service at the Customer Service Address reported above on \_\_\_\_\_. Please mail my final bill to the new, forwarding address reported above. I certify that I can be reached via telephone at one or both of the phone numbers reported above for all matters related to my Town of Middletown utility service. **By signing this form, I acknowledge that any unpaid balance will be transferred to an existing Town of Middletown utility account upon becoming past due. If there is no existing Town of Middletown utility account, the final bill is due upon receipt to avoid collections activity, up to and including credit reporting and legal action.**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

# Town of Middletown, Delaware

## Exhibit 8 – Fee Schedule

### Schedule of Fees and Charges

#### Connection Charges<sup>2</sup>

Connection Charge for New Facilities.....	\$500
Connection Charge – New Account (existing facilities).....	N/C
Reconnection Fee (during business hours) <sup>3</sup> .....	\$35
Reconnection Fee (during non-business hours) <sup>2</sup> .....	\$60
Temporary Service Fee (construction service, single phase).....	\$250
Temporary Service Fee (construction service, three phase).....	\$600

#### Meter Test Fee (Customer requested test, see section 7-d)

Residential.....	\$50
Self Contained Meter.....	\$50
Transformer Rated Meter.....	\$150

#### Fee for Meter Inaccessibility

First Occurrence.....	N/C
Second Occurrence.....	\$15
Third Occurrence.....	\$30

Note: If not remedied within thirty days after third occurrence  
service will be terminated.

Delaware State Utility Tax <sup>4</sup> .....	4.25%
Delaware Renewable Energy Portfolio Standard Assessment.....	\$0.000178/KWH
Return Check or Preauthorized Payment Fee.....	\$50

#### Refundable Meter Deposit (Not required in all cases, see Section 4)

Residential Property Owner.....	N/C
Residential Renters <sup>5</sup> (includes mobile homes situated on rented lot).....	\$150
Real Estate professionals.....	\$150
Commercial/Industrial (Renters).....	\$400

---

<sup>2</sup> Connection charges are not refundable.

<sup>3</sup> Normal business hours are 7:00 a.m. to 3:30 p.m. Monday through Friday except Town holidays.

<sup>4</sup> Exception to 4.25% Delaware State Utility Tax if a waiver is granted by the State of Delaware



## Town of Middletown, Delaware

<sup>5</sup> At least 50% of this fee must be paid at time of new service, remaining balance will be billed over The next 3 months, \$50 each month until paid in full. Payments will be process first to remaining Balance of advance payment then to account services.

# Town of Middletown, Delaware

## Exhibit 8 – Fee Schedule (continued)

### Schedule of Fees and Charges (continued)

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#### Right of Way Agreement

Payment by Town to Customer for Right-of-Way.....\$1

#### Material Handling Surcharge

(See section 11-b-2)

0%

# Town of Middletown, Delaware

Exhibit 9 – Distribution Line Extension Summary.....

Page ..... 1 of 3

## SUMMARY OF RESPONSIBILITIES FOR DISTRIBUTION LINE EXTENSIONS AND INTERCONNECTIONS

<u>Item or Task</u>	<u>Paid For By</u>	<u>Acquisition and Installation<sup>1</sup> By</u>	<u>Ultimate Owner</u>
1. Material and labor for extension from current distribution line.	Cust	Town	Town
2. Tap pole with riser.	Cust	Town	Town
3. Underground high voltage distribution cable with connectors.	Cust	Town	Town
4. Trenching for underground high voltage distribution cable.	Cust	Town	Town
5. Transformer pads and enclosures.	Cust	Town	Town
6. Transformer and transformer installation	Town	Town	Town
7. Transformer connectors and other cable connectors.	Town	Town	Town
8. Transformer connections, (primary and secondary).	Town	Town	Town
9. Transformer fuse(s).	Town	Town	Town
10. Underground secondary service entrances, cable and trenching.	Cust	Cust	Cust
11. Electric meter.	Town	Town	Town
12. Meter sockets(s).	Cust	Cust	Cust
13. Switchgear, fuses and/or lightning protection.	Cust	Town	Town
14. Street lighting.	Cust	Town	Town
15. Street lighting maintenance, relamping, and electricity.	Town	Town	Town
16. Connection fee.	Cust	-	-

# Town of Middletown, Delaware

Exhibit 9 – Distribution Line Extension Summary (continued)

Page 2 of 3

	<u>Item or Task</u>	<u>Paid For By</u>	<u>Acquisition and Installation<sup>1</sup> By</u>	<u>Ultimate Owner</u>
1.	Right-of-way obtained when eminent domain is not required.	Cust	Cust	Town
2.	Right-of-way obtained when eminent domain is required.	Cust	Cust <sup>3</sup>	Town
19.	Poles and miscellaneous supplies.	Cust	Town	Town
20.	Engineering design, layout and inspection.	Cust	Town	Town
21.	Administrative costs for procurement of Town supplied materials.	Cust	Town	Town
22.	Aerial service drop cable with connectors (when applicable).	Cust	Town	Town
23.	Town supplied equipment and vehicles.	Cust	Town	Town
24.	Temp. service drops: poles, service entrance cable, meter sockets.	Cust	Cust	Cust
25.	Temporary service drops: service drop conductors, attachment device.	Town	Town	Town
26.	Temporary service drops: miscellaneous materials for aerial installation.	Town	Town	Town
27.	Hardware to attach aerial service to customer's facility. <sup>4</sup>	Cust	Cust	Cust
28.	Transformers and electric meter for temporary service.	Town	Town	Town
29.	Temporary connection fee.	Cust	-	-

1. The term "Acquisition and Installation" means both work performed by the listed entity and by the entity's representative or contractor.

2. Not used.

## Town of Middletown, Delaware

Exhibit 9 – Distribution Line Extension Summary (continued)

Page 3 of 3

3. When it is required to obtain the right to build a distribution extension across third party private property of the line is to be built on public property, the Town will assist the customer to procure the right-of-way, but the customer will pay for the right-of-way.
4. Hardware to attach aerial service drops to the customer's facility is normally an insulator attached using a clevis or a lag screw or a service mast with insulators attached by a clevis attached with a clamp.

# Town of Middletown, Delaware

## Exhibit 10 – Utility Easement Agreement

THIS EASEMENT AGREEMENT, made this \_\_\_\_\_ day of \_\_\_\_\_, 200\_, between \_\_\_\_\_ (“Grantor”) and MAYOR & COUNCIL, TOWN OF MIDDLETOWN, a MUNICIPALITY of the STATE OF DELAWARE.

WITNESSETH:

WHEREAS, GRANTOR is the owner of land located in the STATE OF \_\_\_\_\_, the COUNTY OF \_\_\_\_\_, which land abuts on \_\_\_\_\_ (Street, Highway or County Road), \_\_\_\_\_ (Town, City, Subdivision or Hundred), the land having been granted to GRANTOR BY \_\_\_\_\_ by deed/will dated \_\_\_\_\_, which is recorded in (liber) \_\_\_\_\_ (Folio)\_\_\_\_\_.

For and in consideration of the Town of Middletown Grantor grants to the Town of Middletown a perpetual easement and agrees as follows:

1. Town of Middletown shall have the right to install, operate, maintain, add to, extend, relocate and remove its ELECTRIC [ ], WATER [ ], and SEWER [ ] including the necessary accessories and appurtenances, on, under, over and across Grantor’s land for the purpose of extending Town of Middletown’s utility system and to provide utility services to the premises of Grantor and other residences, users and premises, Town of Middletown shall have the right to apportion the easement rights and privileges granted herein and Grantor shall have no right to participate or share in the use of facilities installed pursuant to this agreement. Town of Middletown shall have the right to trim, remove and/or otherwise maintain all trees and underbrush located 15 feet on each side of the centerline of Town of Middletown’s facilities. Furthermore, Town of Middletown shall have the rights of ingress, egress, and regress to and over Grantor’s land as required for the enjoyment of the rights granted herein.
2. Grantor agrees not to place any improvements, including trees or other foliage, within 10 feet of the opening side of any enclosed equipment installed under the terms of this Agreement and shall not construct any structures or improvements over or under the utility facilities permitted by this Agreement. Grantor shall have the right to use the land covered by this Agreement or any lawful purpose not inconsistent with or in contravention of the rights of the Town of Middletown.

**Town of Middletown, Delaware**

Exhibit 10 – Utility Easement Agreement (continued)

- 3. Grantor covenants that it is seized of and has the right to convey the foregoing easement, rights and privileges; agrees that Town of Middletown shall have quiet and peaceable possession, use and enjoyment of the aforesaid easement, rights and privileges; and agrees that this entire utility easement agreement shall be binding upon and inure to the benefit of Grantor and Town of Middletown and their respective heirs, personal representatives, administrators, successors and assigns.

As agent on behalf of Town of Middletown, I certify that this document was prepared by Town of Middletown.

WITNESS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ATTEST:

\_\_\_\_\_  
TITLE: \_\_\_\_\_

\_\_\_\_\_  
INDIVIDUAL/PARTNERSHIP GRANTOR:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CORPORATE GRANTOR:

\_\_\_\_\_  
BY: \_\_\_\_\_  
TITLE: \_\_\_\_\_

**Town of Middletown, Delaware**

Exhibit 10 – Utility Easement Agreement (continued)

STATE OF DELAWARE ) SS

COUNTY OF \_\_\_\_\_)

BE IT REMEMBERED, That on the \_\_\_\_\_ day of \_\_\_\_\_, 200\_\_\_\_, personally came before me, a notary public, the within named Grantor, \_\_\_\_\_, party(ies) to this indenture and known to me personally to be such, and acknowledged said Agreement to be his/her act and deed or the act and deed of the corporation or partnership for which he/she signed.

WITNESS our hands the day and year aforesaid.

My commission expires: \_\_\_\_\_

Sign Name \_\_\_\_\_

Print Name \_\_\_\_\_

Notary Public



# Town of Middletown, Delaware

## Exhibit 11 – Municipal Green Energy Fund Policy

### 1.0 Purpose

Delaware's Renewable Energy Portfolio Standards encourages and promotes the use of electricity from renewable energy resources, the use of energy efficiency technologies, and renewable energy technologies.

The purpose of this policy is to prescribe procedures relating to the Municipal's Green Energy Fund, which is an independent, self-administered fund separate from the state's Green Energy Fund, pursuant to 26 Del. C. Chapter 1, Subchapter III-A, §363 the Delaware Renewable Energy Portfolio Standards. It is the goal in establishing this policy to provide a streamlined procedure for distributing the municipal's Green Energy Funds.

This policy provides rules of practice and procedure for application and disbursement of Municipal Green Energy Fund grants for renewable energy projects in Delaware.

### 2.0 Definitions

For purposes of this regulation, the following words and phrases shall have the meanings set forth below.

**“Delayed Grant Certificate”** An agreement in which an applicant acknowledges that there is no funding available but they agree to 1) make application for a Grant Reservation pursuant to Section 4.3 of the Municipal Utilities' Green Energy Fund Program Regulations; 2) complete the installation of their system per program requirements and guidelines as certified by the Department and the Municipal; and 3) agree to be placed in a waiting queue until funds become available.

**“DEMEC”** means the Delaware Municipal Electric Corporation, Incorporated.

**“Department”** means the Department of Natural Resources & Environmental Control, the Delaware Energy Office, or such other agents as the department or Secretary may designate.

**DEMEC Members** include the towns and cities of Clayton, Middletown, Smyrna, Newark, New Castle, Seaford, Milford, Dover and Lewes.

**“DEMEC Member Service Territory”** means the service territory of DEMEC members, as such territory is reflected in the electric service territory maps maintained by the Delaware Public Service Commission under the authority of 26 Del. C. § 203B.

**Energy Efficiency** refers to products or systems aimed at using less energy to do the same or better job than conventional products or systems.

**“Freeze Tolerance Limit”** means the temperature below which a Qualifying System for Solar Water Heating might suffer damage attributable to freezing.

**“Fuel Cell”** is an electrochemical energy conversion device which converts the chemical energy from a fuel directly into electricity and heat.

**“Geothermal Heat Pump”** means either an open or closed loop system or direct expansion system that uses the thermal energy of the ground or groundwater as the heat source and heat sink for residential or non-residential space heating and/or cooling. It may provide both space heating and cooling, cooling only or heating only functions. A closed loop system consists of a ground heat exchanger in which the heat transfer

## Town of Middletown, Delaware

fluid is permanently contained in a closed system. An open loop system consists of a ground heat exchanger in which the heat transfer fluid is part of a larger environment. A direct expansion system consists of a geothermal heat pump system in which the refrigerant is circulated in pipes buried in the ground, rather than using a heat transfer fluid, such as water or antifreeze solution in a separate closed loop, and fluid to refrigerant heat exchanger.

**“Green Energy Program Confirmation and Claim Form”** A form issued from the Department having two sections. The first section of the form, *Confirmation of Rebate Reservation*, confirms a rebate reservation or grant reservation. The second section of the form, *Rebate Claim Form*, requires the purchaser and installing contractor to certify participation and completion of installation per program requirements.

**“Green Energy Program Grant Reservation Application”** An application issued by the Department, DEMEC, or DEMEC’s members which eligible applicants can make application for a grant reservation.

**“Grid-connected”, “Grid-tied” or “Interconnected”** means a condition in which a Qualifying System that is an electrical generating system serves and is electrically connected to an electrical load that is also connected to and served by the local utility electrical grid. The delivery or ability to deliver, any portion of the generating capacity into the utility electrical grid is not required, nor must the loads served be only alternating current loads. The Photovoltaic or Wind Turbine systems need only to be capable of serving electrical loads that would otherwise be served by the local utility.

**“Kilowatt”** means 1,000 Watts.

**“Kilowatt-hour”** means the basic unit of electric energy equal to one Kilowatt of power supplied to or taken from an electric circuit steadily for one hour. One-Kilowatt hour equals 1,000 Watt-hours. Electric energy is commonly sold by the Kilowatt-hour.

**“Municipal”** means one of the nine DEMEC members including the towns and cities of Clayton, Middletown, Smyrna, New Castle, Newark, Seaford, Milford, Dover, and Lewes.

**“Municipal Green Energy Fund”** means the fund established by 26 Del. C. 1, Subchapter 3-A § 363 and administered by DEMEC.

**“Nonresidential”** means all classes of customer purchasing electric power for uses other than for individual households. These groups of customers generally purchase electric power for commercial and industrial purposes. When used as an adjective with respect to Qualified Systems or Green Energy Program Grants, such term refers to systems owned by, or leased to, or grants awarded to Nonresidential persons.

**“Participating Contractor”** An appropriately Delaware and local jurisdictional licensed contractor who has submitted to the Department an application designated by the Department with all required attachments and maintains in full force all required insurance and warranties as described in Section 5.6.

**“Passive Solar Design”** A residential or non-residential building design that uses no external mechanical power, such as pumps or blowers, to collect and move solar heat.

**“Photovoltaic”** means a non-mechanical semiconductor device, most commonly made of silicon that produces direct current (dc) electricity from sunlight.

**“Placed in Service”** means installed, operational, and producing output.

**“Professional Engineer”** means "engineer", as defined in Title 24 Del. C., Chapter 28, *Professional Engineers*, namely, a person who by reason of his or her advanced knowledge of mathematics and the physical

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sciences, acquired by professional education and practical experience, is technically and legally qualified to practice Professional Engineering, and who is licensed by the Delaware Association of Professional Engineers.

**“Purchaser”** means the purchaser or lessee of a Qualifying System.

**“Qualifying System”** has the meaning as set forth in Section 4.0.

**“Renewable Energy Technology”** shall have the meaning as prescribed in 29 Del. C. Chapter 80.

**“Renewable Fuel”** means a non-nuclear fuel that can be derived from non-fossil energy sources that are naturally replenishing and virtually inexhaustible.

**“Residential”** means the class or classes of customers purchasing electric power for household uses. When used as an adjective with respect to Qualified Systems or Green Energy Program Grants, such term refers to systems owned by, or leased to, or grants awarded to Residential persons.

**“Retailer”** means the vendor or lesser of a Qualifying System.

**“Secretary”** means the Secretary of the Department of Natural Resources and Environmental Control.

**“Solar Pathfinder™”** is a non-electronic instrument that measures the annual solar potential for a given site.

**“Solar Shade Analysis”** means an on site evaluation using a Solar Pathfinder™ or functionally equivalent device that measures the annual solar potential for the given site.

**“Solar Water Heating”** means the heating of water by use of the sun’s energy rather than electricity or gas or some other means.

**“State”** means the State of Delaware.

**“Ton of Capacity”** means 12,000 British Thermal Units (BTU) per hour of capacity.

**“Watt”** means the basic unit of measure of real electric power, or rate of doing work.

**“Watt-hour”** means the basic unit of measure of electric energy consumption. The total amount of energy used in one hour by a device that requires one Watt of power for continuous operation.

**“Wind Turbine”** means a mechanical/electrical system that converts the kinetic energy of blowing wind into mechanical or electric power.

### 3.0 Municipal Green Energy Fund

The Delaware 143rd General Assembly enacted and Governor Minner signed into law Senate Bill 74, which amended Title 26 of the Delaware Code to include a new subchapter creating Renewable Energy Portfolio Standards. The law includes provisions for municipal electric utilities to establish an independent, self-administered fund to support renewable energy technologies, energy efficiency technologies, or demand side management programs. Programs may receive preference due to system benefits.

The programs described in this regulation include the following:

# Town of Middletown, Delaware

Municipal Green Energy Program  
Energy Efficiency Program  
Voluntary Green Energy Purchase Program

## 4.0 Municipal Green Energy Program

### 4.1 General Provisions

Funding is limited; all grants made under the Municipal Green Energy Program are on a first-come first-serve basis and may be limited to one grant per individual and/or household and/or entity. Individual municipals may assign preference to projects that provide overall system benefits to the community and may exempt such projects from the application process. Under no circumstances will DEMEC or the Department issue grants for land acquisition in association with any project proposed in the Municipal Green Energy Program.

### 4.2 Eligibility

The Municipal Green Energy Program is available to municipals and to their electric customers which are contributing to the Municipal Green Energy Fund. Applicants shall be current with all municipal accounts related to the municipal, such as taxes, electric, etc., prior to grant reservation approval or final grant payment. All eligible equipment and products must be installed in Delaware and used solely for the energy requirements of the municipal or the municipal's utility customers.

### 4.3 Grant Reservation Request

Customers and contractors applying for any grant must provide the following information to the Department prior to installing the system:

- 4.3.1 Completed Green Energy Program Grant Reservation Application signed by both customer and contractor
- 4.3.2 The type of qualifying system
- 4.3.3 Copy of project estimate, purchase order, or letter of intent
- 4.3.4 Copy of the customer's recent municipal electric bill which is contributing to the Municipal Green Energy Fund
- 4.3.5 Building permit(s) as required by governing jurisdictions
- 4.3.6 System schematic or line drawing
- 4.3.7 Plot plan illustrating well, turbine, or module location (wind and geothermal only, photovoltaic when system is ground mounted)
- 4.3.8 Manual J calculation (geothermal only)
- 4.3.9 Detailed system design and a predicted performance calculation verified by a Professional Engineer. (Non-residential solar water heating systems only.)
- 4.3.10 Roof diagram illustrating the following:
  - 4.3.9.1 Roof dimensions (angle, length and width)
  - 4.3.9.2 Location of collectors or modules on roof
  - 4.3.9.3 Location of any roof-mounted or building-mounted equipment
  - 4.3.9.4 Orientation & Tilt of array or collectors
  - 4.3.9.5 Areas of shading (Provide Solar Pathfinder results for all cases where shading occurs between 9:00 a.m. and 3:00 p.m. Results of the solar shade analysis must determine that 70% of the annual solar path's area is shade free to be considered for a grant.)

### 4.4 Evaluation of Grant Reservation Request

Upon receipt of the Green Energy Program Grant Reservation Application and supporting documents, the Department will perform an evaluation to check the proposal package for its compliance with the requirements noted above. If the proposal package is complete, the Department will seek grant reservation approval from

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DEMEC. If DEMEC approves the grant reservation request, the Department will issue a Green Energy Program Confirmation and Claim Form to the applicant and provide a copy to DEMEC. All requirements as outlined in Section 4.3 must be provided to the Department prior to processing the grant reservation.

Once a Green Energy Program Confirmation and Claim Form is issued to an applicant, DEMEC will reserve the funds for the project described in the Green Energy Program Grant Reservation Application for six (6) months from the date of the reservation for residential applicants and twelve (12) months from the date of reservation for non-residential applicants. As all grants are reserved on a first come-first served basis, viable projects that are not completed within the required time will be placed at the end of the queue and issued an extension of six (6) months from the date of the expired reservation for residential applicants and twelve (12) months from the date of expired reservation for non-residential applicants. To be considered for a reservation extension, the Department and DEMEC will require a project status and summary in writing fourteen (14) business days prior to the expiration of the original reservation.

If grant funding is not available, DEMEC may make available an agreement to participate in a Delayed Grant Certificate Program. An applicant may be eligible for a Delayed Grant Certificate if they 1) make application for a Grant Reservation pursuant to Section 4.3 of the Municipal Utilities' Green Energy Fund Program Regulations; 2) complete the installation of their system per program requirements and guidelines as certified by the Department and the Municipal; and 3) agree to be placed in a waiting queue until funds become available. Upon final approved completion of their project, they would be issued a Delayed Grant Certificate and placed in a waiting queue.

If a Delayed Grant Certificate is accepted, the applicant would receive a grant distribution for the project in accordance with the program grant limits and any municipal priorities as and when the funding becomes available.

Approved Delayed Grant Certificate applicants have 6 months and commercial applicants have 1 year from the date of their Delayed Grant Certificate Program Agreement to complete all system installations and to file all documentation with the State Energy Office to be eligible for the Delayed Grant Certificate. Viable projects that are not completed within the required time may be considered for a certificate extension. To be considered for a certificate extension, the Department and DEMEC will require a project status and summary in writing fourteen (14) business days prior to the expiration of the original certificate.

### 4.5 Claim for and Distribution of Green Energy Program Grants

After installation, the customer and contractor must provide the following to the Department:

- 4.5.1 Completed Green Energy Program Confirmation and Claim Form signed by customer and contractor verifying completion of installation
- 4.5.2 Copy of final electrical, plumbing, and/or building inspection/permit
- 4.5.3 Copy of completed and approved Municipality Generator Interconnection Application (photovoltaic, wind, fuel cell)
- 4.5.4 Copy of product specification sheets
- 4.5.5 Copy of final sales invoice (invoice must include actual price paid, itemized list of components, labor, permit fees, method of payment)
- 4.5.6 Copy of warranty agreement

Upon receipt of the completed Green Energy Program Confirmation and Claim Form and all final documentation pertaining to the project as noted in Section 4.5.1-4.5.6, the Department will evaluate the completed project, the Green Energy Program Confirmation and Claim Form and the required accompanying documents for consideration of grant approval and render recommendation of approval to DEMEC. The contractor and customer are fully responsible for insuring that all forms and documentation have been

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supplied and the system meets all program requirements. The Department and/or DEMEC representatives may make an inspection of the systems prior to final grant approval.

Within a reasonable time; usually within 30 days of receipt of the completed Green Energy Program Confirmation and Claim Form and all supporting documentation, the Department will provide DEMEC with a determination that all grant requirements have been met. DEMEC will ordinarily process the payment to the purchaser, however, if the purchaser so requests in writing and documentation reflects the grant value was reduced directly from the purchase price, DEMEC will process the payment to the retailer or installing contractor.

Upon written request to the Department, and subject to DEMEC approval, DEMEC will pay the grant in two installments. Fifty percent 50% of the grant paid after the equipment is delivered to the installation site and all required permits, approvals, certifications from all jurisdictions having authority are secured. The remaining fifty 50% percent is paid when the system is operational and approved by the utility and/or appropriate inspection agent. Both the Department and DEMEC reserve the right to review any installation prior to any partial or final grant payment.

### 4.6 Green Energy Program Participating Contractor Guidelines

#### 4.6.1 Participating Contractor Application

Contractors installing qualifying photovoltaic, solar water heating, geothermal heat pumps, small wind turbines, or fuel cells must complete the Participating Contractor Application prior to installing systems within the Municipal Green Energy Program. The application will consist of the following:

- 4.6.1.1 Name of company and key contact information
- 4.6.1.2 Brief history and organizational structure of company
- 4.6.1.3 Education, experience, and licensure
- 4.6.1.4 General liability and statutory worker's compensation
- 4.6.1.5 Statement of reliability and good standing

#### 4.6.2 Education and Licensure

Participating Contractors shall maintain appropriate education and licenses to insure that only professionally designed systems are installed within the Program. The Participating Contractor must be licensed in the State of Delaware and in local jurisdictions as required.

Where industry certification programs have been promulgated, grant recipients are encouraged to use industry certified contractors.

#### 4.6.3 Insurance Requirements

The Participating Contractor and anyone acting under its direction or control or on its behalf shall at its own expense procure and maintain in full force at all times Commercial General Liability Insurance with a bodily injury and property damage combined single limit of liability of at least ONE MILLION DOLLARS (\$1,000,000) for any occurrence.

#### 4.6.4 Statement of Reliability and Good Standing

Contractor must be reliable and in good standing with a "Satisfactory Record" (or no negative reports) with the Better Business Bureau. The Contractor shall provide a copy of their Better Business Bureau report to the Department upon request. Reports may be obtained at the following address.

BBB of Delaware  
1415 Foulk Road, Suite 202  
Foulkstone Plaza  
Wilmington, DE 19803

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Phone: (302)230-0108  
Fax: (302)230-0116  
Web Site: [www.delaware.bbb.org](http://www.delaware.bbb.org)  
Email: [info@delaware.bbb.org](mailto:info@delaware.bbb.org)

### 4.6.5 Limitation of Funds

The Program funds are limited. It is the responsibility of the Participating Contractor and/or applicant to follow all program guidelines to insure that either a Green Energy Program Confirmation and Claim Form has been issued or that an Agreement to Participate in the Delayed Grant Certificate Program has been executed prior to installing a qualifying system

### 4.6.6 Owner's Manual Minimum Requirements

Contractors are required to provide each Program participant with an owner's manual. At a minimum, the owner's manual shall include the following:

- 4.6.6.1 Name and address of the seller
- 4.6.6.2 System model name or number
- 4.6.6.3 Identification and explanation of system components
- 4.6.6.4 Description of system operation
- 4.6.6.5 Description of system maintenance
- 4.6.6.6 Description of emergency procedures
- 4.6.6.7 Vacation procedures
- 4.6.6.8 Systems warranty

## 4.7 Warranty

All qualifying systems receiving a Green Energy Program grant must have a full 5-year warranty against component failure, malfunction and premature output degradation. The warranty must cover all components for which the program incentive is granted and cover the full cost of repair and replacement of all components of the system. For professionally installed systems, the warranty must cover the labor to remove and replace defective components and systems.

## 4.8 Code Compliance

All qualifying systems must be installed in accordance with the standards and specifications of the manufacturers of the components in the system, in compliance with all applicable local electric and building codes, local ordinances, and these guidelines. Where discrepancies, if any, exist with these guidelines and local codes, local codes shall govern.

All installations shall meet all requirements, including but not limited to safety and performance, of the current edition of the National Electrical Code, applicable Institute of Electrical and Electronic Engineers' (IEEE) standards, Underwriters Laboratories and the Town's specific requirements.

## 5.0 Green Energy Program Renewable Energy Technologies

### 5.1 Photovoltaic Systems

#### **5.1.1 Grant Limits**

Subject to availability of funds, the Municipal Green Energy Program offers grants for grid-connected photovoltaic systems installed by qualified contractors and customers up to 25% of the total installed costs (see attached table for specific municipal percentage contribution). Grants will not exceed \$7,500 (see attached table) per residential dwelling for residential systems and \$15,000 (see attached table)

## Town of Middletown, Delaware

per non-residential facility for non-residential systems. A photovoltaic system may not have eligible qualifying photovoltaic system costs in excess of \$12 per Watt.

### 5.1.2 Accepted Products and Equipment

#### 5.1.2.1 Grid Interconnected

All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of the most recent version of Underwriters Laboratory Standard 1703.

All qualifying grid-connected systems must comply with the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 929 (or latest revision), Recommended Practice for Utility Interface of Photovoltaic (PV) Systems, IEEE 1547 (or latest revision), Standard for Interconnecting Distributed Resources with the Electric Power Systems and the appropriate generation interconnection requirements of the participating municipal member's, Technical Considerations Covering Parallel Operations of Customer Owned Generation.

All inverters must be certified by a nationally recognized testing laboratory for safe operation and be certified as meeting the requirements of Underwriters Laboratory Standards 1741 (or latest revision), Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems. All grid interconnected systems must be designed and installed to comply with the National Electric Code (NEC).

#### 5.1.2.2 Non-Grid Interconnected or Stand-Alone

All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of the most recent version of Underwriters Laboratory Standard 1703.

All non-grid interconnected or stand-alone systems shall be designed and installed to comply with the National Electric Code (NEC)].

### 5.1.3 Array Orientation and Tilt

Optimum array orientation is a 180° true bearing. However, the program accepts solar arrays oriented between South of due East and South of due West or between 80° and 260° magnetic. Systems installed between 260° and 80° magnetic or North of due East and North of due West are not eligible for a Green Energy Program Grant.

Optimum array tilt is equal to the latitude at the installation site. However, the program accepts array tilt parameters as specified by the module manufacturer which may allow for tilts greater than and less than latitude.

### 5.1.4 Array Shading

Photovoltaic arrays shall be installed such that the array has a minimum of six (6) hours of unobstructed sunshine daily inclusive of solar noon. A "solar window" of eight (8) hours of unobstructed sunshine is preferred.

The installing contractor is responsible for insuring that the system is free from shading. The installing contractor shall perform a "Solar Shade Analysis" to ensure the array meets the minimum daily sunshine requirements. Results of the solar shade analysis must determine that 70% of the annual solar path's area is shade free to be considered for a grant.



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### 5.1.5 Aesthetics

Aesthetics must be considered in the design and mounting of the photovoltaic array. The designing contractor must provide a roof schematic complete with roof dimensions, array placement, orientation and areas of shading to the Department prior to installation. The designing contractor must make every attempt to configure the modules in an aesthetically pleasing manner free from shading.

## 5.2 Solar Water Heating

### 5.2.1 Grant Limits

Subject to availability of funds, the Municipal Green Energy Program offers grants for solar water heating systems installed by qualified contractors and customers up to 25% of the total installed cost (see attached table for specific municipal percentage contribution). Grants will not exceed \$2,500 (see attached table) per residential dwelling for residential systems and \$7,500 (see attached table) per non-residential facility for non-residential systems.

Solar water heating systems integrated into a radiant heating application are eligible for a grant up to 25% of the installed cost of the solar energy portion of the system. Grants will not exceed \$2,500 (see attached table) per residential dwelling for residential systems and \$7,500 (see attached table) per non-residential dwelling for non-residential systems.

### 5.2.2 Accepted Products and Equipment

A solar water heating system must be designed to reduce or eliminate the need for electric or gas heated water.

All qualifying residential solar water heating systems must be certified to meet the Solar Rating and Certification Corporation's (SRCC) OG- 300, Operating Guidelines and Minimum Standards for Certifying Solar Water Heating Systems: An Optional Solar Water Heating System Certification and Rating Program and have a Freeze Tolerance Limit of minus 21 degrees Fahrenheit without electrical power.

All qualifying non-residential solar water heating systems and solar energy systems integrated into a radiant heating application must utilize collectors certified to meet the Solar Rating and Certification Corporation's (SRCC) OG-100, Operating Guidelines for Certifying Solar Collectors.

Non-residential solar water heating systems will be required to submit a detailed system design and a predicted performance calculation verified by a Professional Engineer (P.E.)

### 5.2.3 Collector Orientation and Tilt

Optimum collector array orientation is a 180° true bearing. However, the program accepts solar collectors oriented between South of due East and South of due West or between 80° and 260° magnetic. Systems installed between 260° and 80° magnetic or North of due East and North of due West are not eligible for a Green Energy Program Grant.

Optimum collector tilt is equal to the latitude at the installation site. However, the program accepts collector tilt parameters as specified by the collector manufacturer which may allow for tilts greater than and less than latitude.

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### 5.2.4 Collector Shading

All collectors shall be installed such that the collector array has a minimum of six (6) hours of unobstructed sunshine daily inclusive of solar noon. A "solar window" of eight (8) hours of unobstructed sunshine is preferred.

The installing contractor is responsible for insuring that the system is free from shading. The installing contractor shall perform a "Solar Shade Analysis" to ensure the array meets the minimum daily sunshine requirements. Results of the solar shade analysis must determine that 70% of the annual solar path's area is shade free to be considered for a grant.

### 5.2.5 Aesthetics

Aesthetics must be considered in the design and mounting of the solar water heating collectors. The designing contractor must complete a roof schematic complete with roof dimensions, collector placement, orientation and areas of shading to the Department prior to installation. The designing contractor must make every attempt to configure the collectors in an aesthetically pleasing manner.

## 5.3 Small Wind Turbines

### 5.3.1 Grant Limits

Subject to availability of funds, the Municipal Green Energy Program offers incentives up to 25% of the total installed cost for small grid-connected wind turbines installed by a qualified contractor for a qualified customer (see attached table for specific municipal percentage contribution). Small wind turbines shall be at least 500 Watts. Grants will not exceed \$2,500 (see attached table) per residential dwelling for residential systems and \$2,500 (see attached table) per non-residential facility for non-residential systems. A qualifying wind turbine system shall not exceed \$5.00 per Watt installed.

### 5.3.2 Capacity Limits

Qualifying wind turbine systems shall be at least 500 Watts.

The Department may reject applications if the location of the proposed wind turbine system has an inadequate wind resource for reasonable utilization of the equipment as recommended by the turbine manufacturer. Wind resources can vary significantly; therefore, the contractor and customer must take care that the location has adequate wind for the turbine selected. It is strongly recommended that a professional evaluation of your specific site be completed. The Department may require additional evidence of feasibility prior to approving the grant reservation.

### 5.3.3 Accepted Products and Equipment

#### 5.3.3.1 Grid Interconnected

All qualifying grid-connected small wind systems must use Underwriters Laboratory listed equipment and comply with the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 929, Recommended Practice for Utility Interface of Photovoltaic (PV) Systems, IEEE 1547, Standard for Interconnecting Distributed Resources with the Electric Power Systems and the appropriate generation interconnection requirements of the municipal power delivery's, Technical Considerations Covering Parallel Operations of Customer Owned Generation.

All inverters or other systems used in interconnection must be certified by a nationally recognized testing laboratory for safe operation and be certified as meeting the requirements of Underwriters Laboratory Standards 1741, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems.

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All grid interconnected systems must be designed and installed to comply with the National Electric Code (NEC).

### **5.3.3.2 Non-Grid Interconnected or Stand-Alone**

All qualifying non-grid interconnected wind systems must use Underwriters Laboratory certified listed equipment and systems shall be designed and installed to comply with the National Electric Code (NEC).

## 5.4 Geothermal Heat Pump Systems

### **5.4.1 Grant Limits**

Subject to availability of funds, the Municipal's Green Energy Program offers grants for geothermal heat pump systems installed by qualified contractors and customers at the following rates:

Residential:

\$600 per ton not exceeding \$3,000 (see attached table) per residential dwelling for residential systems installed with an Energy Efficiency Ratio (EER) of 18.0 and Coefficient of Performance (COP) of 3.6 or greater or 25% (see attached table) of the installed cost whichever is lower.

Non-residential:

\$600 per ton not exceeding \$10,000 (see attached table) per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 18.0 and Coefficient of Performance (COP) of 3.6 or greater or 25% (see attached table) of the installed cost whichever is lower.

### **5.4.2 Accepted Products and Equipment**

Qualifying geothermal heat pump systems must be sized in accordance with good heating, ventilation and air conditioning design practices for the occupancy, location and structure. Contractor shall provide a Manual J calculation, or other equivalent calculation, to determine proper size of equipment.

All qualifying systems must have a warranty for protection of the integrity and performance of the system for at least five years. All units installed under this program must have a minimum EER of 14.0 and COP of 3.0. Qualifying systems must meet the following:

Closed loop systems shall qualify under rating conditions in accordance with ISO 13256-1.

Open loop systems shall qualify under rating conditions in accordance with ISO 13256-1.

DX systems shall qualify under rating conditions in accordance with ARI 870.

## 5.5 Fuel Cells

### **5.5.1 Grant Limits**

Subject to availability of funds, the Municipal Green Energy Program offers grants for grid-connected fuel cells installed by qualified contractors and customers up to 20% (see attached table) of the total installed cost for fuel cell systems operating on a renewable fuel source. Grants will not exceed \$7,500 (see attached table) for residential systems and \$10,000 (see attached table) for non-residential systems.

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## 5.5.2 Accepted Products and Equipment

### 5.5.2.1 Grid Interconnected

All Qualifying fuel cells systems must utilize a renewable fuel source and meet the National Fire Protection Association (NFPA) 853 for Stationary Fuel Cell Power Plants, the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 519- Recommended Practices and Requirements for Harmonic Control in Electric Power Systems, the most current version of the American National Standards Institute (ANSI) Z21.83 for Fuel Cell Power Plants, and the generation interconnection requirements of the municipal power delivery's, Technical Considerations Covering Parallel Operations of Customer Owned Generation. Input and output protection functions should be in compliance with ANSI C37.2 Device Function Number Specifications.

All grid interconnected systems must be designed and installed to comply with the National Electric Code (NEC).

### 5.5.2.2 Non-Grid Interconnected or Stand-Alone

All non-grid interconnected or stand-alone systems shall be designed and installed to comply with the National Electric Code (NEC).

## 6.0 Efficiency Program

### General Provisions

The Energy Efficiency Program promotes projects aimed at using less energy to do the same or better job than conventional products or systems. Programs will be announced as they are introduced and implemented. Individual municipalities may assign preference to projects that provide overall system benefits to the community.

### 6.2 Eligibility

The Energy Efficiency Program is available to municipals and to their electric customers which are contributing to the Municipal Green Energy Fund. All eligible equipment and products must be installed in Delaware.

## 7.0 Administration of Green Energy Funds

Up to 7.5% of the moneys deposited in the Municipal Green Energy Fund may be used for administration of the fund.

## 8.0 Proprietary Application Information

Applicants are hereby notified that the Department intends to make all applications submitted available to non-State personnel for the sole purpose of assisting in its evaluation of the applications. These individuals will be required to protect the confidentiality of any specifically identified proprietary information obtained as a result of their participation in the evaluation.

Proposals submitted may contain trade secrets and/or privileged or confidential commercial or financial information which the applicant does not want to be used or disclosed for any purpose other than evaluation of the application. The use and disclosure of such data may be restricted, provided the

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applicant follows the Department's "Request for Confidentiality" procedure contained in the Department's "Freedom of Information Act" or "FOIA" regulation. It is important to understand that this FOIA regulation's confidentiality procedure is a necessary part of this regulation in that any information submitted to the Department is subject to public review unless deemed to be confidential by the Secretary in accordance with the criteria and procedures established in the FOIA regulation.

The burden lies with the applicant asserting the claim of confidentiality to meet the criteria established in the FOIA regulation.

### 9.0 Severability

If any section, subsection, paragraph, sentence, phrase or word of these regulations is declared unconstitutional by a court of competent jurisdiction, the remainder of these regulations shall remain unimpaired and shall continue in full force and effect, and proceedings there under shall not be affected.

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## Exhibit 12 - Technical Considerations Covering Parallel Operations of Customer Owned Generation

**Prerequisite** – The customer must be first in compliance with all applicable land use, zoning, planning, electric tariff rules and regulations and the applicable tariff classification and rates. The terms and conditions contained herein are in addition to, but do not modify nor negate, the terms of the tariff.

**I Purpose** – The purpose of this document (relating to interconnection of on-site distributed generation and parallel generation requirements) is to clearly state the terms and conditions that govern the interconnection and parallel operation of on-site distributed generation, in order to:

- A. establish technical requirements which will promote the safe and reliable parallel operation of distributed generation resources;
- B. enhance the reliability of electric service;
- C. facilitate the implementation and use of distributed resources technologies;
- D. enhance economic efficiency in the production and consumption of electricity and other energy; and
- E. promote the use of distributed resources in order to provide electric system benefits during periods of capacity constraint.

**II Applicability** - Unless otherwise provided, these guidelines apply to all customer generation operating below 1 Megawatt which is interconnected at 24.94kV or below and operated in parallel with the Town of Middletown power delivery system. The interconnection and parallel operation of on-site distributed generation operating above 1 Megawatt shall be reviewed on individual case basis.

### III Definitions

- A. **Account** - An account is one metered or un-metered rate or service classification which normally has one electric delivery point of service. Each account shall have only one electric service supplier providing full electric supply requirements for that account. A premises may have more than one account.
- B. **Company** – Town of Middletown
- C. **Customer** – Any adult person, partnership, association, corporation, or other entity: (i) in whose name a service account is listed, (ii) who occupies or is the ratepayer for a premises, building, structure, etc., and (iii) who is primarily responsible for payment of bills. A customer includes anyone taking Delivery Service or combined Electric Supply & Delivery Service from the Town of Middletown under one service classification for one account, premises or site. Multiple premises or sites under the same name are considered multiple Customers.
- D. **Distributed Generation or On-Site Distributed Generation** - an electrical generating unit of less than 1 MW, which may be connected in parallel operation to the Town of Middletown system.
- E. **Generator Owner** - the owner of the generating system that is interconnected to the Town of Middletown.
- F. **Grid** - The interconnected arrangement of lines and transformers that make up the Town of Middletown electric power system.

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- G. **IEEE Standard 929** - IEEE Standard entitled *Recommended Practice for Utility Interface of Photovoltaic (PV) Systems*, P929 Draft 11, dated July, 1999, or subsequent approved revision thereof.
- H. **Interconnection** – the physical connection of distributed generation to the Town of Middletown system in accordance with these guidelines so that parallel operation can occur.
- I. **Interconnection Application** - the standard form of application which must be submitted by the Generation Owner to the Town of Middletown for permission to interconnect with the Town of Middletown system. The approved Interconnection Application sets forth the contractual conditions under which the Town of Middletown and Generator Owner agree that one or more generating units whose aggregate generation at the Point of Common Coupling is less than 1 MW may be interconnected at 24.94 kV or less with the Town of Middletown system.
- J. **Inverter** – A static power converter with control, protection and filtering functions that converts Direct Current input to Alternating Current output. Inverters must be of the non-islanding type.
- K. **Island** - A portion of the utility system which contains both load and distributed generation and is isolated from the remainder of the utility system.
- L. **Parallel Operation** - any electrical connection between the Town of Middletown system and the Generator Owner's generating source.
- M. **Point of Common Coupling** - the point where the electrical conductors of the Town of Middletown system are connected to the Customer's conductors and where any transfer of electric power between the Generator Owner and the Town of Middletown System takes place (such as switchgear near the meter).
- N. **Pre-Approved Equipment** - specific generating and protective equipment system or systems that have been approved by the Town of Middletown as meeting the applicable parts of this document.
- O. **Pre-Interconnection Study** - a study or studies which may be undertaken by the Town of Middletown in response to its receipt of a completed application for parallel operation with the Town of Middletown's system submitted on the Interconnected Application form prescribed by these guidelines. Pre-Interconnection Studies may include, but are not limited to service studies, coordination studies and facilities impact studies.
- P. **Qualifying Facility (QF)** - an electric generation facility which is a qualifying facility under Subpart B, Section 201 of the Federal Energy Regulatory Commission's regulations per the Public Utility Regulatory Policies Act of 1978.
- Q. **Stabilized** - the Town of Middletown's system following a disturbance which returns to the normal range of voltage and frequency for at least 5 minutes or longer as coordinated with the Town of Middletown. The Town of Middletown may require a longer period upon a reasonable showing that the reconnection after 5 minutes will adversely affect the safety and reliability of the electric system.
- R. **Unit** – a distributed generation facility.
- S. **Utility System or Electric Distribution Facility** - Town of Middletown's distribution system operating at 24.94 kilovolts or below to which the generation equipment is interconnected.

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**IV Interconnection Application** - A proposed Generator Owner will make a formal application to the Town of Middletown for the interconnection of a generator to the Town of Middletown system.

As a part of the Interconnection Application, the Applicant shall submit a plan detailing the electrical design, interconnection requirements, size, and operational plans for the Distributed Generation facility (the “DG plan”). Either at the time of submission or at any time during the review process, the Town of Middletown may require additional information or may require the DG plan to be prepared by a Professional Engineer registered in the state of Delaware.

In the case of DG facilities (i) to be operated in parallel with the Town of Middletown’s system, (ii) with no intention to export power to the Town of Middletown and (iii) that are of standard design and intended entirely as emergency or back-up power supply for the facility, the Town of Middletown may, at its sole discretion, waive the application fee.

c) Prior to review of the application and DG plan by the Town of Middletown, the Applicant shall pay an application fee as indicated below. A separate fee must be submitted for each DG facility.

<u>DG Size</u>	<u>Application Fee</u>	<u>Additional Engineering/Analysis Fee</u>
<b>(Connected Load)</b> <b>&lt; 25 kW</b>	<b>\$ 50</b>	<b>None; standard permit and inspection fees apply</b>
<b>25 kW to 250 kW</b>	<b>\$ 100</b>	<b>As Required</b>
<b>250 kW to 500 kW</b>	<b>\$ 250</b>	<b>As Required</b>
<b>&gt; 500 kW</b>	<b>\$ 500</b>	<b>As Required (500 kW limit per customer account)</b>

## Plan Review Process

The Town of Middletown will review the interconnection application and accompanying documents, plans, specifications, and other information provided and will return an interconnection analysis to the Applicant within 90 days of receipt of final plans and specifications.

Technical review will be consistent with guidelines established by the most recent IEEE Standard 1547 Guide for Distributed Generation Interconnection. The Applicant may be required by the Town of Middletown to provide proof that their DG Facilities have been tested and certified by applicable IEEE guidelines.

If corrections or changes to the plans, specifications and other information are to be made by the Applicant, the 90 day period may be reinitialized when such changes or corrections are provided to the Town of Middletown. In addition, any changes to the site or project requiring new analysis by the Town of Middletown may require additional cost and a new DG plan. The cost will be determined by the Town of Middletown and shall be paid by the Applicant.

The Applicant acknowledges and agrees that any review or acceptance of such plans, specifications and other information by the Town of Middletown shall not impose any liability on the Town of Middletown and does not guarantee the adequacy of the Applicant’s equipment or DG facility to perform its intended function. The Town of Middletown disclaims any expertise or special knowledge relating to the design or performance of generating installations and does not warrant the efficiency, cost-effectiveness, safety, durability, or reliability of such DG installations.

In the event it is necessary at the time of initial interconnection or at some future time for the Town of Middletown to modify electric delivery systems in order to serve the Applicant’s DG facilities and/or purchase or continue to purchase the output of the Applicant’s DG facilities, or because the quality of the power provided by the Applicant’s DG adversely affects the Town of Middletown’s delivery system, the Applicant will be



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responsible to pay the Town of Middletown in advance for all costs of modifications required for the safe and reliable interconnection of the Applicant's DG facilities.

### Line Extension and Modifications to Town of Middletown Facilities

As a part of the interconnection analysis performed by the Town of Middletown, the Applicant will be provided with an estimate of any line extension or other cost to be incurred in providing electric delivery service to the Applicant's DG facility.

Notwithstanding the Town of Middletown's line extension policy, the Applicant shall pay in advance the full cost of the construction of any transmission, substation, distribution, transformation, metering, protective, or other facilities or equipment which, at the sole discretion of the Town of Middletown, is required to serve the Applicant's DG facility in a safe and reliable manner. In the event it is necessary at the time of initial interconnection or at some future time for the Town of Middletown to modify electric delivery systems in order to serve the Applicant's DG facilities in a safe and reliable manner and/or purchase or continue to purchase the Applicant's output, or because the quality of the power provided by the Applicant's DG adversely affects the Town of Middletown's delivery system, the Applicant will reimburse the Town of Middletown for all costs of modifications required for the interconnection of the Applicant's DG facilities.

In the event the Town of Middletown at any time in the future changes primary voltage of facilities serving the DG facility such that metering equipment, transformers and/or any other Applicant-owned equipment must be changed to continue receiving service at the new primary voltage level, the full cost of the change will be borne by the Applicant.

In all cases, the Applicant shall pay the full cost of the installation of a visible load break disconnect switch by and to the sole specification of the Town of Middletown. The switch will be readily accessible to Town of Middletown personnel and of a type that can be secured in an open position by a Town of Middletown lock.

**V. Designation of Town of Middletown Contact Persons for Matters Relating to Distributed Generation Interconnection** – The Town of Middletown Electric Department will be the designated point of contact for all matters related to interconnected generation. The Town of Middletown will maintain records concerning applications received for interconnection and parallel operation of distributed generation. Such records will include the date of receipt of each such application, documents generated in the course of processing such applications, correspondence regarding such applications and the final disposition of such application.

**VI. Pre-Interconnection Studies** – The Town of Middletown reserves the right to conduct a service study, coordination study, or facilities impact study prior to interconnection of a distributed generation unit. In instances where such studies are deemed necessary, the scope of such studies shall be based on the characteristics of the particular distributed generation unit to be interconnected and the proposed point of interconnection.

- A) Completion of Pre-interconnection Study** - Upon completion of the interconnection study, the Town of Middletown will notify the Generator Owner that his application has been approved or indicate insufficient detail why the application cannot be approved.
- B) Pre-interconnection Study Fee** - The Town of Middletown will do a pre-interconnection study without charge up to the typical and customary cost that the Town of Middletown would expend for study work of similar type of customer interconnection. If the cost to the Town of Middletown is expected to exceed this typical and customary amount, or if multiple submittals by the

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Generator Owner are necessary, the Town of Middletown will advise the Generator Owner of the expected cost of such study work by the Town of Middletown before such work begins. The Generator Owner will be responsible for payment of all costs above the typical and customary amount.

**VII Interconnection of Distributed Generation** – Where generation is capable of exporting power to the Grid, the interconnection study may result in more stringent interconnection requirements.

**VIII Pre-approval of Generation units, Devices and Systems** - Upon approval by the Town of Middletown that certain generating unit's protective devices and/or system(s) meet the standards set out in these guidelines, 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 of Middletown'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 of Middletown systems at the point of the interconnection.

**IX Connection Approval** – The Generator Owner can connect their generation to the Town of Middletown system only after the Interconnection Application has been approved and the Generation Owner has received approval notification.

**X Interconnected Generation Site Warning Label** – The Generator Owner will install a warning label in a conspicuous place on their electric meter or meter box to notify the Town of Middletown personnel that there is a generator source installed on the load side of the meter. The warning label shall not be placed in a location that would interfere with the ability of Town of Middletown personnel to read the electric meter. The warning label must be placed before the generation can be interconnected.

**XI Disconnection and Reconnection.**

The Town of Middletown may disconnect a distributed generation unit under the following conditions:

- 1) **Application Termination** – Upon termination of the approved Interconnection Application.
- 2) **Non Compliance** – For non-compliance with the technical guidelines specified in this document or other requirement contained in the applicable Customer Tariff, provided that the Town of Middletown has given notice to the Generator Owner and provided the Generator Owner reasonable time (consistent with the condition) to correct such non-compliance. The Town of Middletown will reconnect the unit only upon receipt of certification from the Generator Owner and verification by the Town of Middletown that the unit is in compliance. The Town of Middletown will provide verification within a reasonable time period.
- 3) **In Case of a system emergency outage of the Town of Middletown's primary Electrical Sources** – The Generator Owner's generation equipment must be installed and configured so that parallel operation must automatically cease immediately and automatically during outages or loss of the Town of Middletown's electric source in accordance with these guidelines. The Generation Owner must also cease parallel operation upon notification by the Town of Middletown of a system emergency, abnormal condition or in cases where such operation is

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determined to be unsafe, interferes with the supply of service to other customers or interferes with the Town of Middletown's system maintenance or operation. In addition, the Town of Middletown may disconnect the generator from the system for system emergencies without notice.

- 4) **For Routine Maintenance and Repairs** – The Town of Middletown may disconnect a Customer/Generation Owner for routine maintenance and repairs on the Town of Middletown's system consistent with applicable tariffs and agreements.

The Town of Middletown will reconnect the Customer/Generation Owner as quickly as possible following any such service interruption.

**XII Termination** – The Generation Owner may terminate the approved Interconnection Application at any time upon thirty (30) days of providing written notice to the Town of Middletown. The Town of Middletown may terminate the Interconnection Application for cause after 30 days written notice to the Generator Owner of a material violation of the terms of the approved Interconnection Application and after the Generator Owner has had the 30 day period to remedy the violation. The Generator Owner must give the Town of Middletown notice that it intends to permanently shut down his generation.

**XIII Privileged Communications Concerning Proposed Distributed Generation Projects** – In the course of processing applications for parallel operation and in the conduct of pre-interconnection studies, the Generation Owner shall provide the Town of Middletown with detailed information concerning the proposed distributed generation project.

**XIV Technical Guidelines for Parallel Operation of On-site Distributed Generation Units** – This subsection describes minimum requirements and procedures for safe and effective connection and operation of distributed generation. A Generator Owner may operate 60 Hertz, three phase or single phase generating equipment, whether a QF or non-QF, in parallel with the Town of Middletown's system pursuant to an approved Interconnection Application provided that the equipment and Generator Owner meet or exceed the requirements of these guidelines and that the Town of Middletown has approved the Generator Owner's application to interconnect. This subsection describes typical interconnection requirements. Certain specific interconnection locations and conditions may require the installations of additional protective settings or hardware, especially when exporting power to the system. If the Town of Middletown concludes that an application for parallel operation requires additional protective settings or hardware, the Town of Middletown shall make those requirements known after all pertinent studies are completed.

Approval to connect to the Town of Middletown system indicates only that the minimum requirements for a safe proper interconnection have been satisfied. Such approval does not imply that the Generator Owner's facility meets all land use, zoning, planning or federal, state and local standards or regulations.

### **A) General Interconnection and Protection Requirements.**

- 1) The Generator Owner's generation and interconnection installation must meet all Town of Middletown land use, zoning, planning and applicable national, state, and local construction and safety codes.
- 2) The Generator Owner's generator shall be equipped with protective hardware and software designed to prevent the generator from energizing one of the Town of Middletown's de-energized circuits. The Generator Owner's generator must automatically disconnect from the

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Town of Middletown's system if the Grid source is lost, irrespectively of connect loads or other generators.

- 3) The generator shall be equipped with the necessary protective hardware and software designed to prevent sustained parallel operation of the generating equipment with the Town of Middletown's system unless the system service voltage and frequency are within acceptable magnitudes.
- 4) Pre-approved equipment shall be accepted as part of an interconnection proposal without the need to re-review the equipment itself. However, the application, design and setting of pre-approved units and/or equipment must be reviewed and coordinated according to the unique needs of the specific location of the proposed installation.
- 5) The Generator Owner will be responsible for protecting its own generating and interconnection equipment in such a manner so that Town of Middletown system outages, short circuits, single phasing conditions or other disturbances including zero sequence currents and ferroresonant over-voltages do not damage the Generator Owner's generating equipment. The protective equipment shall also prevent excessive or unnecessary tripping that would adversely affect the Town of Middletown's service reliability to other Generator Owners and Customers.
- 6) The generator and interface protection schemes shall be continuously monitored and functioning and the generator shall immediately disconnect from the Town of Middletown's system for any condition that would make the protection scheme inoperable.
- 7) The operating power required for the protection and control schemes for the generator and the control power used to disconnect the generator from the Town of Middletown must not be dependent on local Town of Middletown grid power.
- 8) Where multiple generators are connected to the system through a single point of common coupling, the sum of the ratings of the generators will be used to determine the applicability of these guidelines. Protection scheme performance with one or more units off line will have to be considered.
- 9) Applicable circuit breakers or other interrupting devices at the Generator Owner's facility must be capable of interrupting the maximum available fault current at the site, including any contribution from the Owner's generator(s).
- 10) The Generator Owner will furnish and install a manual disconnect device which, when opened, will have the effect of isolating the generator from the Town of Middletown's system. The disconnect device shall have a visual break (a disconnect switch, a draw-out breaker, fuse block, etc. as appropriate to the voltage level), and shall be accessible to the Town of Middletown's personnel, and shall be capable of being locked in the open position via a Town of Middletown padlock. The Town of Middletown shall use reasonable efforts to utilize padlocks of a size consistent with typical manufacture's specifications. The Generator Owner shall follow the Town of Middletown's switching, clearance and tagging procedures.
- 11) The design, procurement, installation, and maintenance of the equipment at the Generator Owner's site is the responsibility of the Generator Owner and at the Generator Owner's expense.

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- 12) Any necessary enhancements or improvements needed within the Town of Middletown's system and/or at the Customer sites to accommodate the parallel interconnection of the Generator Owner's generation will be at the Generator Owner's expense.
- 13) The Generator Owner has full responsibility and liability for the safe and proper operation of their equipment and the power originating from their generator. The Generator Owner is also responsible for synchronizing their generator(s) with the Town of Middletown's system and maintaining a synchronous operation.
- 14) The Generator Owner must immediately cease parallel operation upon notification by the Town of Middletown if such operation is determined to be unsafe, interferes with the supply of service to other customers, or interferes with the Town of Middletown's system maintenance or operation.
- 15) The Town of Middletown reserves the right to specify the type of transformer connection (e.g. delta-delta, wye-delta, wye-wye) that will be employed for all multiphase interface transformers consistent, where reasonable, with the Generator Owner's power system.

**B) Prevention of Generator Owner Generation Interference with Town of Middletown System.**  
To eliminate undesirable interference caused by operation of the Generator Owner's generating equipment, the Generator Owner's generator shall meet the following criteria:

- 1) **Voltage** – The generating equipment will be operated in such a manner that the voltage levels on the Town of Middletown's system are in the same range as if the generating equipment were not connected to the Town of Middletown's system. The Generator Owner shall provide an automatic method of initiating a disconnect sequence of his generating equipment from the Town of Middletown system with set points noted in the table below.

Generating Systems with Inverters Up to 25kw	Generating Systems with Inverters Greater than 25kw	Non-Inverter or Rotating Machine Generating Systems
<ul style="list-style-type: none"> <li>• Trip in 0.1 second for <math>V &lt; 50\%</math></li> <li>• Trip in 2 second for <math>50\% \leq V &lt; 88\%</math></li> <li>• Trip in 2 seconds for <math>106\% &lt; V &lt; 137\%</math></li> <li>• Trip in 0.03 second for <math>137\% \leq V</math></li> </ul> <p>(Above times and voltages taken directly from IEEE 929)</p>	<ul style="list-style-type: none"> <li>• Trip in 0.1 Second for <math>V &lt; 50\%</math></li> <li>• Trip within 0.1 to 30 seconds for <math>50\% \leq V &lt; 88\%</math></li> <li>• Trip within 0.1 to 30 seconds for <math>106\% &lt; V &lt; 137\%</math></li> <li>• Trip in 0.03 second for <math>137\% \leq V</math></li> </ul> <p>(Specific voltage and time delay set points will be determined for each installation.)</p>	<ul style="list-style-type: none"> <li>• Trip in 0.1 second for <math>V \geq 115\%</math></li> <li>• Trip within 0.1 to 30 seconds for <math>V &gt; 110\%</math> or <math>V &lt; 90\%</math></li> </ul> <p>(Specific voltage and time delay set points will be determined for each installation.)</p>

Note: Trip time refers to the time between when the abnormal voltage condition occurs and the generator being disconnected from the Town of Middletown system.

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On three phase generator installations, full three phase voltage sensing should be employed. Voltages must be sensed on the high side of any interface transformer if the transformer high voltage winding is ungrounded.

The Generator Owner may reconnect to the grid when the system voltage returns to normal range and is stabilized as defined in Section III, Definitions.

- 2) **Flicker** – The Generator Owner shall not cause excessive voltage flicker on the Town of Middletown’s system. This flicker shall not exceed the “Borderline of Irritation” curve, as defined in IEEE Std 519-1992, *Recommended Practices and Requirements for Harmonic Control in Electric Power Systems*. Lower levels of flicker may be required in areas where equipment such as computers and instrumentation are impacted.

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- 3) **Frequency** – The operating frequency of the generating equipment shall not deviate more than the values noted in the table below.

<b>Generating Systems with Inverters Up to 25kW</b>	<b>Generating Systems with Inverters Greater than 25kw</b>	<b>Non-Inverter or Rotating Machine Generating Systems</b>
<ul style="list-style-type: none"> <li>• Trip in 0.1 second for F&lt;59.3 Hz</li> <li>• Trip in 0.1 second for F&gt;60.5 Hz.</li> </ul> (Set points taken from IEEE 929)	<ul style="list-style-type: none"> <li>• Trip in 0.1 second for F&lt;59.3 Hz</li> <li>• Trip in 0.1 second for F&gt;60.5 Hz.</li> </ul> (Other frequency and time delay set points may be necessary for a specific installation.)	<ul style="list-style-type: none"> <li>• Trip in 0.1 second for F&lt;59.3 Hz</li> <li>• Trip in 0.1 second for F&gt;60.5 Hz.</li> </ul> (Other frequency and time delay set points may be necessary for a specific installation.)

Note: Trip time refers to the time between when the abnormal frequency condition occurs and the generator being disconnected from the utility Town of Middletown.

The Generator Owner may reconnect when the system frequency returns to normal range and is stabilized as defined in Section III, Definitions.

- 4) **Harmonics** – Non-linear circuit elements such as inverter can produce harmonics. Per IEEE std 519, *Recommended Practices and Requirements for Harmonic Control in Electric Power Systems*, Table 11.1, the total harmonic distortion (THD) voltage shall not exceed 5% of the fundamental 60 Hz frequency nor 3% of the fundamental for any individual harmonic as measured at the location where the customer interfaces with the Town of Middletown’s system (Point of Common Coupling). In addition, the level of harmonic current that the customer is allowed to inject into the Town of Middletown’s system shall not exceed that specified in Table 10.3 in IEEE Std 519. Furthermore, any communication notch should be limited as defined by Table 10.2 in IEEE Std 519. The preceding requirements apply to all types of generation systems.

The Generator Owner is responsible for the installation of any necessary controls or hardware to limit the voltage and current harmonics generated by his equipment to defined levels.

- 5) **Power Factor** – The generator must not adversely impact the power factor of the Generator Owner site. Most inverters are designed to operate close to unity power factor. The operating power factor of the generator shall be contained within the limits defined in the table below.

<b>Generating Systems with Inverters Up to 25kW</b>	<b>Generating Systems with Inverters Greater than 25kW</b>	<b>Non-Inverter or Rotating Machine Generating Systems</b>
0.985 Lagging or Leading when output exceeds 10% of inverter rating.	0.985 Lagging or Leading When output exceeds 10% of inverter rating.	0.985 Lagging or Leading

However, to the extent that a Generator Owner’s power factor at the Point of Common Coupling falls below 0.985 lagging, the Generator Owner must obtain, install and maintain, at his

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expense, corrective apparatus that compensates for the drop in power factor caused by the installation of the generator.

- 6) **Current** – In some cases, directional over-current protection may be required to limit fault current flowing onto the Grid in the event of a line fault. DC inverters that are incapable of producing fault current do not require directional over-current protection.

Inverter systems should not inject DC current greater than 0.5% of rated inverter output in the AC interface point under either normal or abnormal conditions.

- 7) **Fault and Line Clearing** – The Generator Owner shall automatically disconnect from the Town of Middletown's system during electrical faults on the Town of Middletown's electrical system and upon loss of the Town of Middletown's electric source. The Generator Owner may reconnect when the system voltage and frequency return to normal range and is stabilized as defined in Section III, Definitions. Detection of the loss of the Town of Middletown's primary electric system, where the Generator Owner is operating in an island with other customer load, becomes increasingly difficult as the level of dispersed generation on a feeder approaches the connected load. For generating units 25kw and below, the over/under voltage and over/under frequency settings described previously along with the anti-islanding provisions of IEEE 929/UL 1746 inverters, should be sufficient to satisfy this provision. For units greater than 25kw the voltage and frequency set-points are to be adjustable, with the actual setting determined by the Town of Middletown based on the electrical characteristics of the generator and the Town of Middletown's electrical system. In addition, additional protection such as power directional or directional overcurrent functions may be required. For units 500kw or larger, a direct tripping scheme to trip the generator upon loss of the Town of Middletown's feeder may be required by the Town of Middletown. This decision will be based on the saturation of distributed generation on a particular feeder circuit and in those cases where under voltage or under frequency sensing may not adequately detect loss of the Town of Middletown source.

- 8) **Automatic Reclosing** – The Generator Owner is responsible for protecting his equipment from the effects of switching or automatic reclosing of the Town of Middletown's feeder circuit.

### C. **Control, Protection and Safety Equipment Requirements Specific to Generators of 25 kW or less.**

All Generator Owners 10 kW or less can be single phase. Customer owned generators greater than 10 kW must be evaluated by the Town of Middletown to determine if it can be single phase. The following table describes necessary control, protection and safety equipment specific to generator of 25 kW or less connected to Secondary or Primary Voltage Systems:



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## Control, Protection and Safety Equipment for Generators of 25 kW<sup>1</sup> or Less Connected to Secondary or Primary System

### Generator Size 25 kW or less

<u>Generator Disconnect Device</u>	X
<u>Over-Current Trip</u>	X
<u>Over-Voltage Trip</u>	X
<u>Under Voltage Trip</u>	X
<u>Over/Under Frequency Trip</u>	X
<u>Synchronizing Check<sup>2</sup></u>	Manual or Automatic

Notes:

1. Exporting to the Town of Middletown system many require additional operational/protection devices.
2. For synchronous and other type of generators with stand-alone capability.

### D) **Control, Protection and Safety Requirement Specific to Three Phase Synchronous Generators, Induction Generators, and Inverter Systems.**

Generators greater than 25 kW must be three phase machines connected to three phase circuits.

- 1) **Three Phase Synchronous Generators.** Generator circuit breakers shall be three phase devices with electronic or electromechanical control. The Generation Owner is solely responsible for properly synchronizing his generator with the Town of Middletown's system. For a synchronous generator, the excitation system response ratio shall not be less than 0.5 (five-tenth). The generator's excitation system(s) shall confirm, as near as reasonably achievable, to the field voltage vs. time criteria specified in American National Standards Institute Standard C50.13-1989 in order to permit adequate field forcing during transient conditions.
- 2) **Three Phase Induction Generators and Inverter Systems.** Induction generation may be connected and brought up to synchronous speed (as an induction motor) if it can be demonstrated that the initial voltage drop measured on the Town of Middletown's side at the point of common coupling is within the visible flicker limits stated in Section XIV.B.2. Otherwise, the Generator Owner may be required to install hardware or other techniques to bring voltage fluctuations to acceptable levels. Line-commutated inverters do not require synchronizing equipment. Self-commutated inverters whether of the utility-interactive type or stand-alone type shall be used in parallel with the Town of Middletown system only with synchronizing equipment.

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## Control, Protection and Safety Equipment<sup>1</sup> Less than 1 MW Three Phase Connected to Primary System

<u>Generator Disconnect Device<sup>2</sup></u>	X	
<u>Over-Voltage Trip</u>	X	
<u>Under Voltage Trip</u>	X	
<u>Over-Current Trip</u>	X	
<u>Over/Under Frequency Trip</u>	X	
<u>Ground Over-Voltage Trip<sup>3</sup></u>		
OR	X	
<u>Ground Over-Current Trip<sup>3</sup></u>		
<u>Synchronizing Check<sup>4</sup></u>		Manual or Automatic
<u>Power Direction<sup>5</sup></u>	X	
<u>Transfer Trip/Reclose Blocking<sup>6</sup></u>	X	

Notes:

1. Exporting to the Town of Middletown's system may require additional operating/protection devices and will require coordination of operations with the Town of Middletown.
2. For installations of 25kW or less, the Generation Owner may elect to have the meter act as the disconnect device. (See XIV.A.10)
3. Selection depends on grounding system, if required, by the Town of Middletown.
4. For synchronous and other types of generators with stand-alone capability.
5. Required only if generator size is greater than Generator Owner's minimum load and thus capable of exporting. The relay will operate if the power flow from the generator into the Grid exceeds a predetermined level. A time delay will have to be incorporated into this relay to prevent it from operating during synchronous swings.
6. May be required as part of any necessary transfer tripping/reclose blocking protection scheme.

### E) Requirements Specific to Generators paralleling for 0.1 second or less (Closed Transition Switching)

The table below shows the protective functions required by this requirement for generators less than 1 MW which parallel with the Town of Middletown's system for 0.1 second or less such as during source or load transfers.

## Control, Protection and Safety Equipment Generators Connected to Secondary or primary System Voltage

### For 0.1 Second or Less (Closed Transition Switching)

#### Generator Size Up to 1 MW

<u>Over-Voltage Trip</u>	X	
<u>Under Voltage Trip</u>	X	
<u>Synchronizing Check<sup>1</sup></u>		Manual or Automatic
<u>Excessive Closed Time Trip<sup>2</sup></u>	X	

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### Notes:

1. For synchronous and other types of generators with stand-alone capability.
2. Scheme will trip generator if closed transition parallel mode remains in effect longer than 0.1 second.

**F) Inverter Type** – DC Generation installations using inverters for interconnection with the Town of Middletown must use non-islanding type inverters as defined in IEEE 929, *IEEE Recommended Practices for Utility Interface of Photovoltaic (PV) Systems* (including Annex B, D, E & G) and UL Subject 1741, May 1999, *Standard for Static Inverters and Charge Controllers for use in Photovoltaic Power Systems*.

**G) Inspection and Start-Up Testing** – the Generator Owner shall provide the Town of Middletown with reasonable prior notice at least 2 weeks before the initial energizing and start-up testing of the Generator Owner's generating equipment and the Town of Middletown, at its discretion, shall witness the testing of any equipment and protective systems associated with the interconnection. The Generator Owner shall revise and re-submit the application information for any proposed modification that may affect the safe and reliable operation of the Town of Middletown's system. The generator may be reconnected to the Town of Middletown system only after the modified application has been reviewed, testing has been confirmed and the Town of Middletown has given approval to reconnect.

**H) Site Testing and Commissioning** - Testing of protection systems shall include procedures to functionally test all protective elements of the installation up to and including tripping of the generator and interconnection point. Testing and testing intervals should be in accordance with manufacturers' and industry recommendations. Testing will verify all protective set points and relay/breaker trip timing. The Town of Middletown may witness the testing of installed switchgear, protection systems, and generator. The Generator Owner is responsible for all maintenance of the generator, control and protective equipment. The Generator Owner will maintain records of such maintenance activities which the Town of Middletown may review at reasonable times. For generation systems greater than 500 kW, a log of generator operations may be required in order to determine its output and run times for system planning purposes.

**I) Metering** - Metering requirements will be reviewed on each specific installation.

**J) Dedicated Transformer** – A dedicated transformer will be required where the generating Generator Owner is served from the same transformer secondary as another Town of Middletown customer and inverter-based technology not meeting IEEE 929-1999 and IEEE 519-1992 specifications is used. In addition, a dedicated transformer or other current-limiting device is needed for any type of generator installation where the increase in available short circuit current could adversely impact other Town of Middletown customers on the same secondary circuit.

### **K) Suggested References**

The following references can supply technical support and insight into the safe, reliable interconnection of distributed generation with the Town of Middletown's systems. These references should be reviewed by those individuals or firms contemplating parallel operation of generation with the Town of Middletown.

IEEE C37.95-1989  
IEEE Std 1001(1988)

*IEEE Guide for Protective Relaying of Utility-Consumer Interconnections*  
*IEEE Guide for Interfacing Dispersed Storage and Generation Facilities with Electric Utility Systems*

IEEE Std 929

*IEEE Recommended Practices for Utility Interface of Photovoltaic (PV) Systems*

## Town of Middletown, Delaware

IEEE Std 1021 (1988)

*IEEE Recommended Practices for Utility Interconnection of Small Wind Energy Conversion Systems*

IEEE Std 519 -1992

*IEEE Recommended Practices and Requirements for Harmonic Control In Electrical Power Systems*

### **L) Applicable Standards**

All installations, and specifically generation installations, shall meet all requirements, including but not limited to safety and performance, of the current edition of the National Electrical Code, applicable Institute of Electrical and Electronic Engineers' (IEEE) standards, Underwriters Laboratories and the Town's specific requirements.

**Town of Middletown, Delaware**

# Town of Middletown, Delaware

## Exhibit 13 – Green Energy Program

Beginning June 1, 2006 as part of a broader state-mandated program, the Town of Middletown will launch a Green Energy Program. The Green Energy Program will provide our residents the option to *voluntarily* purchase blocks of green energy at competitive rates. The green energy blocks are generated from non-carbon based, qualifying renewable resources. By subscribing to this program, you will be helping to improve the environment by reducing pollution and consumption of non-renewable resources.

For this first subscription year (June 1, 2006 through May 31, 2007), we are offering subscriptions in 100-kwh blocks at a premium price of \$0.18 per block each month for a one-year period. Please note this is a voluntary cost in addition to your current energy usage costs. The amount of green energy blocks are limited and will be awarded on a first-come first-serve basis. If subscriptions exceed available green power, those who do not receive green energy blocks this year will be notified and placed on a priority list for next year.

If you would like to subscribe to purchase green energy blocks, please fill out the information below and return this form by mail or in person to the Town of Middletown Green Energy Subscription, 19 W Green St, Middletown, DE 19709. For further information or assistance, please call us at (302) 378-2711.

Date: \_\_\_\_\_

Customer Name \_\_\_\_\_  
Please Print

Service Address: \_\_\_\_\_

Phone # \_\_\_\_\_

Account # \_\_\_\_\_

Yes, I would like to purchase \_\_\_\_\_ 100-kwh blocks of Green Energy per month at a premium price of \$0.18 per block for an additional cost of \$ \_\_\_\_\_ each month beginning \_\_\_\_\_ and ending May 31, 2007. (Monthly quantity is limited to your lowest monthly consumption. For example, if your lowest monthly usage is 1,000 kwh, please limit your request to 10 Blocks)

SERVICE CLASSIFICATIONS

# Town of Middletown, Delaware

Service Classification RS – Residential Service

## Availability

This rate applies throughout the area served by the Town of Middletown and is available to any Customer desiring service for household and other related uses in a single, private dwelling or dwelling unit, farmstead, or estate and pertinent detached buildings.

## Character of Service

The service furnished by the Town is sixty (60) cycle, single phase alternating current at standard secondary voltage.

## Contract Term

Residential contracts are on a month-to-month basis until terminated.

## Monthly Rate

		<u>CLASS 1</u>	<u>CLASS 2</u>
Customer Charge (per month)		\$ 4.32	\$ 0.00
Energy Charge (Summer):	First 150 KWH	\$0.1414	\$0.1414
	Remaining KWH	\$0.1380	\$0.1380
Energy Charge (Winter):	First 150 KWH	\$0.1543	\$0.1543
	Next 550 KWH	\$0.1438	\$0.1438
	Over 700 KWH	\$0.1315	\$0.1315
PPCA (Applies to all KWH)			
Minimum Bill		\$ 4.32	\$ 4.32

Class 1 rates are applicable to Residential Service, Class 2 customers for water heater on a separate circuit. This rate is not available to any new customers.

## Purchased Power Cost Adjustment Clause (PPCA)

All Kilowatt hours billed under this rate may be subject to the Purchased Power Cost Adjustment Clause as described in Exhibit No. 5 of the Rules and Regulations.

## Minimum Bill

The monthly minimum bill will be as indicated in the Monthly Rate above.



# **Town of Middletown, Delaware**

## Temporary Service

Temporary Service, as defined in Section 2-h of the Rules and Regulations, will be supplied under the standard rate table of this classification on a short-term basis.

## Tax Provision

In addition to the rates and charges stated above, there shall be added all applicable taxes imposed upon the Town of Middletown as the seller of the service, subsequent to the effective date of this Ordinance, by any governmental authority by reason of the service rendered under this rate.

## Rules and Regulations

The General Rules and Regulations set forth in this Ordinance shall govern, where applicable, the supply of service under this Service Classification.

# Town of Middletown, Delaware

## Service Classifications SGS – Small General Service, Non-Demand

### Availability

This rate applies throughout the area served by the Town of Middletown and is available to any Customer desiring service, including multiple-family dwelling units, churches, beauty parlors, and all other commercial, industrial and institutional Customers with a monthly usage of less than 3,500 KWH where the Town of Middletown supplies the Customer's entire requirements for light and power through one (1) meter.

### Character of Service

The service furnished is sixty (60) cycle, single – or three-phase alternating current at one standard secondary or primary voltage.

### Contract Term

Standard contracts are for an initial period of one year with month-to-month extensions until terminated. A contract for an initial period of more than one (1) year may be required if special investment by the Town is necessary.

### Monthly Rate

		<u>CLASS 3</u>	<u>CLASS 4</u>
Customer Charge (per month)		\$ 7.74	\$ 0.00
Energy Charge (Summer):	First 200 KWH	\$0.1433	\$0.1433
(June through September)	Remaining KWH	\$0.1532	\$0.1532
Energy Charge (Winter):	First 200 KWH	\$0.1405	\$0.1433
(October through May)	Remaining KWH	\$0.1503	\$0.1532
PPCA (Applies to all KWH)			
Minimum Bill		\$ 7.74	\$ 7.74
Tax		4.25%	4.25%

Class 3 rates are applicable to Small General Service, Class 4 Customers for water heater on a separate circuit.

This rate is not available to any new customers.

## **Town of Middletown, Delaware**

### Purchased Power Cost Adjustment Clause (PPCA)

All Kilowatt hours billed under this rate may be subject to the Purchased Power Cost Adjustment Clause as described in Exhibit No. 5 of the Rules and Regulations.

### Temporary Service

Temporary Service, as defined in Section 2-h of the Rules and Regulations, will be supplied under the standard rate table of this classification on a short-term basis.

### Tax Provision

In addition to the rates and charges stated above, there shall be added all applicable taxes imposed upon the Town of Middletown as the seller of the service, subsequent to the effective date of this Ordinance, by any governmental authority by reason of the service rendered under this rate.

### Rate Classification

Any customer whose KWH usage for any two (2) consecutive billing months is equal to or exceeds 3,500 KWH shall be automatically transferred to SERVICE CLASSIFICATION – MEDIUM GENERAL SERVICE, DEMAND CLASS #5 effective with the next succeeding billing month. Any Customer so transferred shall remain on DEMAND CLASS #5 for at least 12 billing months, even though the Customer's monthly usage in succeeding billing months may be less than 3,500 KWH. After 12 such billing months, at the Customer's option, the Customer may be transferred back to this SERVICE CLASSIFICATION – COMMERCIAL CLASS #3 provided that the Customer has not used more than 3,500 KWH for any 2 consecutive billing months within the most recent 12 billing months.

### Rules and Regulations

The General Rules and Regulations set forth in this Ordinance shall govern, where applicable, the supply of service under this Service Classification.

# Town of Middletown, Delaware

## Service Classification MGS – Medium General Service, Class 5

### Availability

This rate applies throughout the area serviced by the Town of Middletown and is available to any commercial and industrial Customer with monthly usage of more than 3,500 KWH and a summer maximum demand of less than 300 KW, desiring service for commercial, industrial, or institutional purposes where the Town of Middletown supplies the Customer's entire requirements for light and power through one (1) meter.

### Character of Service

The service furnished is sixty (60) cycle, single – or three-phase alternating current at one standard secondary or primary voltage.

### Contract Term

Standard contracts are for an initial period of one year with month-to-month extensions until terminated. A contract for an initial period of more than one (1) year may be required if special investment by the Town is necessary.

### Monthly Rate

		<u>CLASS 5</u>
Customer Charge (per month)		\$ 11.73
Energy Charge (Summer)		
	First 3,500 KWH	\$0.1598
	Remaining KWH	\$0.1052
Energy Charge (Winter)		
	First 3,500 KWH	\$0.1598
	Remaining KWH	\$0.0999
Demand Summer (June through September)		\$ 6.45/KW
Demand Winter (October through May)		\$ 3.55/KW
PPCA (Applies to all KWH)		
	Minimum Bill	\$ 11.73
	Tax	4.25%

### Determination of Billing Demand

The highest demand determined by a 15-minute integrated demand meter occurring during the month, taken to the nearest tenth of a kilowatt, shall be the billing demand for that month.

## **Town of Middletown, Delaware**

### Purchased Power Cost Adjustment Clause

All kilowatt hours billed under this rate may be subject to the Purchased Power Cost Adjustment Clause as described in Exhibit No. 5 of the Rules and Regulations.

### Temporary Service

Temporary Service is not offered under this rate classification.

### Tax Provision

In addition to the rates and charges stated above, there shall be added all applicable taxes imposed upon the Town of Middletown as the seller of the service, subsequent to the effective date of this Ordinance, by any governmental authority by reason of the service rendered under this rate.

### Rules and Regulations

The General Rules and Regulations set forth in this Ordinance shall govern, where applicable, the supply of service under this Service Classification.

# Town of Middletown, Delaware

## Service Classification LGS – Large General Service at Secondary

### Availability

This Service Class is available throughout the area served by the Town of Middletown to any commercial, industrial or institutional customer having a measured demand of 300 KW or greater. Customers receiving service under this classification will remain on this classification until they request to be transferred to another service class and their measured demand has been less than 300 KW for 12 consecutive months just prior to their request of transfer to another service class.

### Character of Service

The service furnished is sixty (60) cycle, single – or three-phase alternating current at one standard secondary or primary voltage.

### Contract Term

Standard contracts are for an initial period of one year with month-to-month extensions until terminated. A contract for an initial period of more than one (1) year may be required if special investment by the Town is necessary or for demand greater than 1,000 kilowatts.

### Monthly Rate

	<u>CLASS 6</u>
Customer Charge (per month)	\$100.00
Energy Charge (Summer and Winter): All KWH	\$.09162 per KWH
Demand Charge, Summer (June through September)	\$13.50 per KWH
Demand Charge, Winter (October through May)	\$9.50 per KW
PPCA (Applies to all KWH)	
Minimum Bill	\$100.00
Tax	4.25%

### Purchased Power Cost Adjustment Clause (PPCA)

All kilowatt hours billed under this rate may be subject to the Purchased Power Cost Adjustment Clause as described in Exhibit No. 5 of the Rules and Regulations.

# Town of Middletown, Delaware

## Determination of Billing Demand

The highest demand determined by a 15-minute integrated demand meter occurring during the month, taken to the nearest tenth of a kilowatt, shall be the billing demand for that month, in no case less than 300 KW.

## Temporary Service

Temporary Service, as defined in Section 2-h of the Rules and Regulations, will be supplied under the standard rate table of this classification on a short-term basis.

## Tax Provision

In addition to the rates and charges stated above, there shall be added all applicable taxes imposed upon the Town of Middletown as the seller of the service, subsequent to the effective date of this Ordinance, by any governmental authority by reason of the service rendered under this rate.

## Rules and Regulations

The General Rules and Regulations set forth in this Ordinance shall govern, where applicable, the supply of service under this Service Classification.

# Town of Middletown, Delaware

## Service Classification – Electric Service Class 7, Primary Service

### Availability

This service is available throughout the area serviced by the Town of Middletown to any commercial, industrial or institutional customer with a minimum measured demand of 300 KW and desiring to own and maintain their own transformer(s), switches and protective equipment. It is not available to residential customers or as standby capacity for customer-owned base load generation.

### Character of Service

The service furnished is sixty (60) cycle, single – or three-phase alternating current at one standard secondary or primary voltage.

### Contract Term

Standard contracts are for an initial period of one year with month-to-month extensions until terminated. A contract for an initial period of more than one (1) year may be required if special investment by the Town is necessary or for demands greater than 1,000 kilowatts.

### Monthly Rate

	<u>CLASS 7</u>
Customer Charge (per month)	\$150.00
Energy Charge (Summer and Winter): All KWH	\$.09000 per KWH
Demand Charge, Summer (June through September)	\$13.00 per KW
Demand Charge, Winter (October through May)	\$9.50 per KW
Minimum Bill	\$150.00
Tax	4.25%

### Purchased Power Cost Adjustment Clause

All kilowatt hours billed under this rate may be subject to the Purchased Power Cost Adjustment Clause as described in Exhibit No. 5 of the Rules and Regulations.

### Determination of Billing Demand

The highest demand determined by a 15-minute integrated demand meter occurring during the month, taken to the nearest tenth of a kilowatt, shall be the billing demand for that month.



# **Town of Middletown, Delaware**

## **Temporary Service**

Temporary Service, as defined in Section 2-h of the Rules and Regulations, will be supplied under the standard rate table of this classification on a short-term basis.

## Tax Provision

In addition to the rates and charges stated above, there shall be added all applicable taxes imposed upon the Town of Middletown as the seller of the service, subsequent to the effective date of this Ordinance, by any governmental authority by reason of the service rendered under this rate.

## Rules and Regulations

The General Rules and Regulations set forth in this Ordinance shall govern, where applicable, the supply of service under this Service Classification.

## **Town of Middletown, Delaware**

### **Service Classification – Economic Development Rates**

At its sole discretion, the Town may give a discount in applicable rates for a limited time period to a customer's total monthly bill for a new customer or for an extension of an existing customer's facility. The Town shall also have sole discretion about the extent of the discount and the time period for which the discount may be given.

# Town of Middletown, Delaware

## Service Classification – Special Contracts Tariff

### Availability

This service is available throughout the area serviced by the Town of Middletown to any new commercial, industrial or institutional customer locating property, plant and/or equipment assets to the territory serviced by the Town desiring to own and maintain its own transformer(s), switches and protective equipment. This Service Classification is not available to residential customers or as standby capacity for customer-owned base load generation. Expected peak load must be equal to or greater than 5,000 kW; expected annual kWh consumption must exceed 27,000,000 kWh; load factor is expected to exceed 65% on a rolling 12-month average basis; power factor must exceed 90% each billing period. Prospective customer shall supply historical energy usage data, energy usage projections, engineering studies, and / or other documentation to support its eligibility pursuant to this Special Contracts Tariff. Eligibility shall be confirmed by the Mayor and Council of Middletown.

### Character of Service

Electric service shall be rendered through a single metering installation under this rate schedule for lighting and/or power requirements of offices, institutions, and professional, commercial, or industrial establishments at primary voltage when the customer has executed an Electric Service Agreement (ESA) with the Town of Middletown for full requirements electric service with a term of at least one year, and the customer owns and maintains the required transforming, switching, and protection equipment.

### Contract Term

ESAs pursuant to this Service Classification shall have an initial term of at least one (1) year with extension periods as specified in the ESA.

### Monthly Rate

All fixed and variable, on-peak and off-peak charges for energy, transmission, capacity, distribution, customer, administrative, and ready-to-serve charges, minimum monthly charges, purchased power cost adjustments and formulas, ancillary charges, and all other charges shall be specified in the ESA or Appendices thereto.

### Determination of Billing Demand

The highest demand determined by a 15-minute integrated demand meter occurring during the month, taken to the nearest tenth of a kilowatt, shall be the billing demand for that month.

### Peak Hours

On-peak hours are 7:00 a.m. to 11:00 p.m. Monday through Friday, excluding NERC holidays falling on weekdays. All other hours are off-peak hours.

### Other State and Federal Regulatory Charges

Any state or federally mandated taxes, surcharges, system benefit charges, or any other state or federal regulatory charges, by any name, imposed on end users shall be the responsibility of the Customer.

**Town of Middletown, Delaware**

Service Classification SL – Security Lighting

Reserved for future use.

# Town of Middletown, Delaware

## DEMAND AND DEMAND CHARGES

Electricity bills to commercial and industrial customers usually reflect three charges: the customer charge, the energy charge, and the demand charge. The customer charge covers costs associated with customer accounting, meter reading, and billing. The energy charge varies with the customer's consumption of electricity (kilowatt hours) and the utility's costs of converting fuel into electricity. The demand charge reflects a customer's maximum power requirements (kilowatts) and the utility's generating, transmission, distribution, and equipment costs associated with meeting a customer's power demand. Since demand charges are often the least understood component of electric power charges, yet represent a substantial portion of a customer's total bill, we will focus on that aspect of billing.

## THE WHY OF DEMAND CHARGES

Most commercial and industrial customers require electricity in amounts that may fluctuate greatly throughout various production or work cycles. A utility must be able to meet each customer's power demand, even at the time the system is experiencing its peak demand imposed by the sum total of its customers. It is like building a six-lane highway to handle rush hour traffic. The normal traffic flow would require fewer lanes; more lanes are built to handle the peaks. It is the same when a utility builds generating plants and constructs transmission and distribution systems so that the maximum power requirements of its customers can be met. The utility must then base the demand charge on the customer's peak demand of electricity since the utility's equipment investment costs remain constant even when the customer's use of electricity does not.

## HOW DEMAND CHARGES ARE DETERMINED

Demand charges can be determined several ways. Most utilities use the Block Interval Method for larger industrial and commercial facilities. In this method, the utility measures use at 30-minute intervals during a billing period (usually one month). From this record, the customer's demand, the average energy used during the 30-minute time interval, can be determined. And, since the demand, the utility can easily get from its recorded measurements the highest 30-minute average rate during a fixed period of time or billing period.

## HOW CAN ELECTRIC USE BE DETERMINED

To shave the excessively high peaks of demand on which your demand charges are based, you might establish an efficient management control system. To do this, look for heavy power loads which periodically can be turned off or down for a few minutes without affecting overall operations. Even though the shutoff time is only a few minutes, it might be enough to reduce a demand peak.

The basic objective of demand control is to vary some controllable portion of a plant load to compensate for load changes elsewhere, in order to achieve a more even total plant demand. Turning loads off or down during periods of peak demand (load-shedding) should be looked at seasonally; in the winter, electric space heaters, electric water heaters; in the summer, air-conditioning, lighting, and air handling units. The time of day equipment is operated (load-scheduling) should also be considered. Shift the startup and the running time of heavy electrical loads whenever possible, being careful not to create new demand peaks. See if your work schedules can be changed or staggered. Just remember that any load shifting that will even the electric load will reduce demand.

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