

# Middletown Generator Interconnection Application

## Part I – Single Meter Application

**New Application**  
(No other generator installed)

**Revised Application**  
(Existing interconnection to be modified)

A single customer interconnecting to a single meter at a single premise makes a new / revised application this date \_\_\_\_\_ to the Town of Middletown, to install and operate a generating facility interconnected with the Town of Middletown's electric utility distribution system. **\*CUSTOMERS MUST SUBMIT PART I-SINGLE METER APPLICATION (Sections 1-8 and Appendix A) TO THE TOWN OF MIDDLETOWN POWER DIRECTOR, AND RECEIVE PART I APPROVAL, PRIOR TO SUBMITTING FOR A SOLAR BUILDING PERMIT.**

### Section 1. Ownership Type:

Customer Owned and Operated  Customer Leased and Operated  Third Party Owned and Operated

**Applicant must attach a fully-executed contract between the vendor and the applicant. The Town of Middletown Electric Utility has the right to promulgate rules and regulations relating to net-metering at any time. The Town of Middletown Electric Utility strives to support its customers' desire for net-metering, however, it retains the right to decline any application that does not meet the requirements of this application, the Town of Middletown electric tariff, or technical/reliability considerations.**

### Section 2. Applicant Information:

New Construction   
(New home or business)

Existing Construction   
(Existing home or business)

Name: \_\_\_\_\_ Email: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Installation Location (if different from Mailing Address above): \_\_\_\_\_

Telephone (Daytime): Area Code \_\_\_\_\_ Number \_\_\_\_\_ (Evening) Area Code \_\_\_\_\_ Number \_\_\_\_\_

Home/Business Building Age: \_\_\_\_\_ Utility Account No.: \_\_\_\_\_

### Section 3. Generator Technical Information

Customer Type:  Residential  Non-Residential  Farm

The purpose of interconnection is to Net Energy Meter ("NEM")  Yes  No

*If no, the customer generator will not be NEM eligible and will be subject to different tariff requirements.*

#### **NEM Applicants Only:**

Is Generator under 25 kW for Residential, 500 kW for Non-Residential, 100 kW for Farm: Yes  No

Is Generator on a farm and applicant requests a waiver of the 100 kW limit? Yes  No

Type of NEM Qualifying Energy Source:  Solar  Wind  Hydro  Electric Car \_\_\_\_\_ #

Fuel Cell  Anaerobic digestion of organic material

Any approved interconnections already in service at this location:  Yes  No

*If yes, use 3B to change existing systems (expanding/shrinking) or approved but not yet installed systems.*

**3A. New Generator Installations Only – See 3B for Modifications**

**3A. Generator Equipment and Operation Details** *(If multiple different products are used, please detail each.)*

Generator Manufacturer:	
Generator Model Name:	
Generator Model Number:	
Generator Output (kW):	
Inverter Manufacturer:	
Inverter Model Name:	
Inverter Model Number:	
Inverter Power Rating (AC Watts):	
Number of Inverters:	
Inverter Efficiency %:	
Intended Inverter Location:	
System Rated Output <i>(Total Generator Output * Inverter Efficiency)</i>	
Customer Energy Consumption <i>(2-year average from Appendix A)</i>	
Generator Expected Annual Production (kWh)	

**If Generator is Photovoltaic (Solar) please provide:**

Module Power Rating (DC @ STC): <i>(Should match Generator Output kW)</i>	
Number of Modules:	
Total Solar Output kW: <i>(Modules * Power Rating DC @ STC)</i>	
Total Solar Output kW AC:	
Array Orientation (degrees): <i>Note the size of each array that has different degrees.</i>	
Array Tilt (degrees): <i>Note the size of each array that has different degrees.</i>	

*\*Solar Shading Analysis may be required for new and modified systems (Solar Pathfinder or equivalent accepted). Solar Shading Analysis should include readings at all four (4) points of each continuous array and one in the center. Shading analysis may be used by the utility in consideration of NEM agreement.*

**3B. Interconnection Modification Only – See 3A for New Generators**

**3B. Generator Equipment and Operation Details** *(If multiple different products are used, please detail each.)*

<b>Generator Details:</b>	<b>Existing Approved System</b>	<b>Modification</b> <i>(Must detail new system.)</i>
Generator Manufacturer:		
Generator Model Name:		
Generator Model Number:		
Generator Output (kW):		
Inverter Manufacturer:		
Inverter Model Name:		
Inverter Model Number:		
Inverter Power Rating (AC Watts):		
Number of Inverters:		
Inverter Efficiency %:		
Intended Inverter Location:		
System Rated Output <i>(Total Generator Output * Inverter Efficiency)</i>		
Customer Energy Consumption <i>(2-year average from Appendix A)</i>		
Generator Expected Annual Production (kWh)		

**If Generator is Photovoltaic (Solar) please provide:**

Module Power Rating (DC @ STC): <i>(Should match Generator Output kW)</i>		
Number of Modules:		
Total Solar Output kW <i>(Modules * Power Rating DC @ STC):</i>		
Total Solar Output kW AC:		
Array Orientation (degrees): <i>Note the size of each array that has different degrees.</i>		
Array Tilt (degrees): <i>Note the size of each array that has different degrees.</i>		

Will a generator disconnect device, accessible to the Town of Middletown Electric Utility, be installed?

Yes  No

**If the Generator Owner elects not to install a manual disconnect device accessible to the Town of Middletown Electric Utility, the Generator Owner assumes all risks and consequences when a service meter must be “pulled” to disconnect the generator thereby also interrupting all utility electric service to the Customer site.**

#### **Section 4. Generator/Equipment Certification**

**Generating systems that use inverter technology must be compliant with IEEE 929 and Underwriters Lab. UL 1741. Generating systems must be compliant with the Town of Middletown’s Power Delivery’s Technical Considerations Covering Parallel Operations of Customer Owned Generation.**

**By signing this agreement, the Applicant certifies that the installed generating equipment meets the appropriate preceding requirements and can supply documentation that confirms compliance. The Applicant also agrees that if any details about the generator system as detailed in Section 3 change, it is the Applicant’s sole responsibility to notify the Town of Middletown Electric Utility of those changes by submitting a revised Interconnection Application prior to commencing or completing construction/modification.**

**The Applicant agrees to wait for approval from the Town of Middletown Electric Utility of any revised Interconnection Application before proceeding with construction. Failure to notify the Town of Middletown Electric Utility in advance of system changes prior to submitting “Part II - Final As-Built Details” could cause approval delays/denial of interconnection.**

#### **Section 5. Net Energy Metering**

Net Energy Metering is a service to customers which allows customers to generate electricity for their own electric usage (from an eligible on-site generating facility) on an annual basis. Excess electricity is transferred back onto the Town of Middletown electric distribution system and the customer receives electricity from the Town of Middletown electric distribution system when the customer cannot produce the amount required to sustain their usage.

The customer sited generating system shall be designed to produce no more than 110% of the initial design load as per Delaware Code. The initial design load shall be the average of the two previous twelve-month periods of actual electric usage from the time of installation of electric generating equipment. For new building construction, the initial design load will equate to the electric consumption of units of similar size and characteristics from the time of installation of energy generating equipment as determined by the Town of Middletown Electric Utility.

The following are additional net metering requirements per Delaware Code Title 26:

- The rules and regulations promulgated for net energy metering by the Town of Middletown Electric Utility must consider the reliability, safety, and capacity of the electric distribution system.
- Any farm waivers for systems greater than 100 kW shall be approved by the Town of Middletown Electric Utility.
- Any excess production from a generating facility that exceeds the customer’s on-site consumption of kWh in a billing period is considered an “Excess kWh Credit”.
- Excess kWh Credits shall be credited to subsequent monthly billing periods to offset a customer’s consumption for a twelve-month annualized billing period (to run from the 5<sup>th</sup> billing period of one calendar year to the 4<sup>th</sup> billing period of the following calendar year).
- Excess kWh Credits shall not reduce any fixed monthly customer charges imposed by the Town of Middletown Electric Utility.
- Excess kWh Credits at the end of the annualized billing period shall revert to the Town of Middletown Electric Utility.
- In the event that a net-metering customer abandons the property where the energy generating equipment is located, the equipment may remain connected to the electric distribution system, unless the equipment presents a risk to the safety and reliability of the electric distribution system.
- Non-residential customers shall be responsible for paying the reasonable cost of any new, replacement, or modified meter or meters installed or caused to be installed for net-metering purposes.

- Residential customers shall not be responsible for paying more than \$200 toward the reasonable cost of any new, replacement, or modified meter or meters installed or caused to be installed for net-metering purposes.
- All customers shall not own the meter or meters and shall remain the property of the electric supplier.

**Section 6. Applicant Signature**

**I hereby certify that, to the best of my knowledge, all the information provided in this Part I Interconnection Application is true and correct. I hereby certify that; I fully understand the provisions of Section 5. Net Energy Metering. Further, I acknowledge and consent to allow the Town of Middletown Electric Utility to install and bill for an additional meter(s), as allowed and reasonably necessary, to maintain system safety and/or reliability and monitor the flow of electricity in each direction to provide the information necessary to accurately bill, credit, or to collect system performance information.**

Signed (Applicant): \_\_\_\_\_ Date: \_\_\_\_\_

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

*This Part I Interconnection Application must be reviewed by the Town of Middletown Power Director. Please email Part I to: [klane@middletown.delaware.gov](mailto:klane@middletown.delaware.gov).*

*Make sure to include all application sections (1 – 8) and Appendix A with new/modified submissions.*

**Section 7. Preliminary Generator/Equipment Installment Approval/Rejection**

Town of Middletown Electric:  Approves  Approves w/ conditions  Does NOT Approve

Part I Interconnection Application for a (system type) \_\_\_\_\_ generator as detailed in this application and located at (installation address) \_\_\_\_\_.

Signed (Town of Middletown Electric Utility): \_\_\_\_\_

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

Print Name and Title: \_\_\_\_\_

Approval with Conditions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reason for Not Approving: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Section 8. FOR TOWN OF MIDDLETOWN OFFICE USE ONLY**

**A copy of the approved Application Part I must be sent to the Town of Middletown Permits, Licensing & Inspections Dept.**

**Sent on: \_\_\_\_\_**

**A copy of the approved Application Part I must be sent to the Delaware Municipal Electric Corporation (DEMEC).**

**Sent on: \_\_\_\_\_**

**DEMEC  
P.O. Box 310  
Smyrna, DE 19977**

## Appendix A

### Customer Consumption and Generator Production

**Item 1: Customer Consumption.** Customer is to provide for existing construction the past two 12-month periods' actual electric usage from the time of installation of energy generating equipment. For new construction provide estimated electrical consumption for units of similar size and characteristics from the time of installation of the energy generation equipment.

Month/Year	Year 1 Consumption (kWh)	Month/Year	Year 2 Consumption (kWh)
<b>12 Month Total (kWh)</b>		--	
<b>2 Year Average (kWh)</b>			

The Town of Middletown Electric Utility will verify the above consumption numbers. If the customer provided consumption numbers differ from the utility's numbers, the applicant may need to provide copies of actual electric bills at the request of the utility to support the information provided in Item 1.

**Item 2: Generator Production.** Customer is required to provide estimated annual production totals for the proposed generator and a calculation method in sufficient detail so the utility can recreate the estimated annual production totals. *Calculation totals and method must be attached to Appendix A.*

**Item 3: (check one)**

- I certify that I am applying for net energy metering and that the above Section 3 system is designed to produce no more than 110% of this account's expected electric consumption, as calculated above.
- I certify that I am applying for net energy metering as a new building construction, and that the system is being designed for electrical consumption as estimated at 110% of the consumption of units of similar size and characteristics from the time of installation of the energy generation equipment.

**I hereby certify that, to the best of my knowledge, all the information provided in Appendix A is true and correct.**

Signed (Applicant): \_\_\_\_\_ Date: \_\_\_\_\_

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

# Town of Middletown Generator Interconnection Application

## **Part II - Final As-Built Details**

A single customer interconnecting to a single meter at a single premise provides Final As-Built Details this date \_\_\_\_\_ to the Municipality of the Town of Middletown, to install and operate a generating facility interconnected with the Town of Middletown’s electric utility distribution system. **\*THIS SECTION SHOULD ONLY BE FILLED OUT FOLLOWING THE COMPLETION OF THE APPROVED SOLAR PANEL BUILDING PERMIT, INSTALLATION AND PROJECT INSPECTION. OPERATION OF THE SOLAR PANEL PROJECT WILL BE PERMITTED ONCE A SIGNED AND APPROVED PART II APPLICATION IS RECEIVED BY THE APPLICANT FROM THE TOWN OF MIDDLETOWN POWER DIRECTOR’S OFFICE.**

### **Section 9. Installation Details**

Generating System was installed by:       Owner       State Licensed Electrician

Installing Electrician: \_\_\_\_\_ Firm: \_\_\_\_\_ License No.: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone: Area Code: \_\_\_\_\_ Number: \_\_\_\_\_

Installation Completion Date: \_\_\_\_\_ Interconnection Date: \_\_\_\_\_  
*(System connected but shall not be active/live.  
 System not approved by Utility at this point.)*

Supplied certification that the generating system has been installed and inspected in compliance with the local Building/Electrical Code of the Town of Middletown.

Signed (Inspector): \_\_\_\_\_ Date: \_\_\_\_\_  
*(In lieu of signature of Inspector, a copy of the final inspection certificate may be attached.)*

### **Generator Technical Information**

The applicant certifies that the system described below is the Final As-Built Design and **matches any revised application submitted by the applicant and approved by the Town of Middletown prior to the interconnection date.**

#### **Generator Equipment and Operation Details** *(If multiple different products are used, please detail.)*

Generator Manufacturer:	
Generator Model Name:	
Generator Model Number:	
Generator Output (kW):	
Inverter Manufacturer:	
Inverter Model Name:	



Inverter Model Number:	
Inverter Power Rating (AC Watts):	
Number of Inverters:	
Inverter Efficiency %:	
Intended Inverter Location:	
System Rated Output ( <i>Total Generator Output * Inverter Efficiency</i> )	

**If Generator is Photovoltaic (Solar) please provide:**

Module Power Rating (DC @ STC): ( <i>Should match Generator Output kW</i> )	
Number of Modules:	
Total Solar Output kW: ( <i>Modules * Power Rating DC @ STC</i> )	
Total Solar Output kW AC:	
Array Orientation (degrees): <i>Note size of each array with different degrees.</i>	
Array Tilt (degrees): <i>Note size of each array with different degrees.</i>	

*The Town of Middletown Electric Utility may require completed generator installation pictures to be attached. Pictures must show whole generator, inverters, electric permits, etc.*

**Section 10. Applicant Certifications**

I hereby certify that, to the best of my knowledge, all the information provided in the Final As-Built Details is true and correct. I agree to install a Warning Label provided by the Town of Middletown on or near my service meter location. I also agree to submit a new or revised Interconnection Application and comply with all governing permitting requirements before adding to or subtracting from in any way the current approved electric generating system; including but not limited to expanding, replacing, or removing all or a portion of the current system, adding a new generator type, and/or replacing in anyway the generator system inverter.

I further agree to notify the utility in writing through official certified mail at least 30 days before I sell or transfer ownership of the system to another owner to allow the Town of Middletown Electric Utility to update records and determine if the new owner agrees to the generation and interconnection responsibilities associated with the transfer of ownership. A new property owner of a property that, up until the time of sale, had an approved Interconnection Agreement in place for net-metering with the Town of Middletown Electric Utility has 30 calendar days after taking ownership of the generating system to submit a new Interconnection Agreement to the Town of Middletown for net-metering in their name. If the new owner fails to submit an Interconnection Agreement within 30 calendar days of property transfer, the net-metering agreement may be discontinued.

Failure for non-compliance to these certifications will be considered a violation of the net-metering agreement and may result in the disconnection of the electric generator at the discretion of the Town of Middletown Electric Utility. The sale or transfer of the electric generator shall not compromise law and regulations.

I further certify and understand that Town of Middletown Electric Utility review and approval of this application does not constitute an endorsement of actual equipment performance or advertised/contractual benefits.

Signature of Applicant: \_\_\_\_\_ Date: \_\_\_\_\_

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

*Part II Interconnection Application should be emailed to the Town of Middletown Power Director at: [klane@middletown.delaware.gov](mailto:klane@middletown.delaware.gov)*

*Make sure to include all application sections (9 – 12) with final submission.*

**Section 11. Final Approval or Non-Approval for Interconnection and System Operation**

Town of Middletown Electric: Approves  Approves w/ conditions  Does NOT Approve

The interconnection of a (system type) \_\_\_\_\_ generator as detailed in the Final As-Built Details and located at (installation address) \_\_\_\_\_.

The Town of Middletown Electric Utility has verified the applicant’s average electric consumption in Appendix A.

Yes  No

The Town of Middletown Electric Utility has verified that from the time of installation the installed electric generator is designed to produce no more than 110% of the applicant’s average annual electric consumption as calculated in Appendix A. Yes  No

Signed (Town of Middletown Electric Utility): \_\_\_\_\_

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

Print Name & Title: \_\_\_\_\_

Approval with Conditions: \_\_\_\_\_

\_\_\_\_\_

Reason for Not Approving: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Approval to connect to the Town of Middletown electric distribution system only indicates 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 federal, state, and local standards or regulations.**

**Section 12. FOR OFFICE USE ONLY**

Sent Applicant Warning Label for installing on/ near service meter: Sent on: \_\_\_\_\_

Notified Billing Department of Interconnected Generation: Sent on: \_\_\_\_\_

Notified District Engineering of Interconnected Generation: Sent on: \_\_\_\_\_

Notified System Protection of Interconnected Generation: Sent on: \_\_\_\_\_

Notified Middletown Permits, Licensing & Inspections: Sent on: \_\_\_\_\_

**A copy of the approved Part II Final As-Built Details must be sent to the Delaware Municipal Electric Corporation (“DEMEC”). Sent on: \_\_\_\_\_**

**DEMEC  
P.O. Box 310  
Smyrna, DE 19977**