



# MUNICIPAL UTILITIES' Green Energy Fund Program

Effective:

August 10, 2015

These Regulations Supersede  
All Other Regulations



Encouraging and Promoting  
Renewable Energy Technologies & Energy Efficiencies

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Attachment: Exhibit A – Green Energy Program Incentives

## **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 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 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:

- Municipal Green Energy Program
- Energy Efficiency Program
- Public renewable energy installations – **City of Newark Only**

### **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 owned by the electric customer and must be installed and maintained in the Delaware Municipality's electric service territory of the municipality providing the grant 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 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

#### 4.5.7 Front Cover of Owner's manual given to customer

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 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  
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.

### **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 \_\_\_\_\_% of the total installed costs or by installed wattage (see attached table for specific municipal percentage contribution). Grants will not exceed \$\_\_\_\_\_ (see attached table) per residential dwelling for residential systems and \$\_\_\_\_\_ (see attached table) 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.

### **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 \_\_\_\_% of the total installed cost (see attached table for specific municipal percentage contribution). Grants will not exceed \$\_\_\_\_\_(see attached table) per residential dwelling for residential systems and \$\_\_\_\_\_(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 50% of the installed cost of the solar energy portion of the system. Grants will not exceed \$\_\_\_\_\_ (see attached table) per residential dwelling for residential systems and \$\_\_\_\_\_ (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.) except if exempted by the Municipality.

### **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.

### **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 \_\_\_% of the total installed cost or by installed wattage 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 \$\_\_\_\_\_ (see attached table) per residential dwelling for residential systems and \$\_\_\_\_\_ (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.

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 unless otherwise specified:

Residential:

\$600 per ton not exceeding \$\_\_\_\_\_ (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 \_\_\_\_% (see attached table) of the installed cost whichever is lower, or

\$500 per ton not exceeding \$\_\_\_\_\_ (see attached table) per residential dwelling for residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or \_\_\_\_% (see attached table) of the installed cost whichever is lower.

Non-residential:

\$600 per ton not exceeding \$\_\_\_\_\_ (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 \_\_\_\_% (see attached table) of the installed cost whichever is lower, or

\$500 per ton not exceeding \$\_\_\_\_\_ (see attached table) per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or \_\_\_\_% (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 \_\_\_% (see attached table) of the total installed cost for fuel cell systems operating on a renewable fuel source. Grants will not exceed \$\_\_\_\_\_ (see attached table) for residential systems and \$\_\_\_\_\_ (see attached table) for non-residential systems.

### **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**

### **6.1 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 Public Renewable Installations – City of Newark Only**

### **7.1 General Provision**

The City of Newark explicitly states that funds may be set aside for Public Renewable Installations. Funds collected for future public renewable energy projects such as solar parks would be held until such a new project is approved, but could also be used to expand the existing solar park(s) if needed.

### **7.2 Eligibility**

Funding for the Public Renewable Installations will be available to the City of Newark if approved by the City of Newark City Council.

## **8.0 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.

## **9.0 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 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.

#### **10.0 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.

## Exhibit A

### Photovoltaic Systems

	<b>Photovoltaic Systems Grant Funding</b>	<b>Not to Exceed for Residential</b>	<b>Not to Exceed for Non-Residential</b>
Clayton*	(See note at end of tables.)	-	-
Smyrna*	(See note at end of tables.)	-	-
Seaford*	(See note at end of tables.)	-	-
New Castle*	(See note at end of tables.)	-	-
Middletown**	(See note at end of tables.)	-	-
Milford**	(See note at end of tables.)	-	-
Newark	up to 33 1/3% of total installation costs	\$7,500	\$15,000
Lewes**	(See note at end of tables.)	-	-

### Solar Water Heating- Domestic Hot Water ("DSW") Only - Excluding Swimming Pools

	<b>Solar Water Heating Grant Funding</b>	<b>Not to Exceed for Residential</b>	<b>Not to Exceed for Non-Residential</b>
Clayton*	(See note at end of tables.)	-	-
Smyrna*	(See note at end of tables.)	-	-
Seaford*	(See note at end of tables.)	-	-
New Castle*	(See note at end of tables.)	-	-
Middletown**	(See note at end of tables.)	-	-
Milford	up to 50% of total installed costs	\$3,000	\$10,000
Newark	up to 50% of total installation costs	\$3,000	\$10,000
Lewes**	(See note at end of tables.)	-	-

### Solar Water Heating - DSW Integrated into a Radiant Heating Application - Excluding Swimming Pools

	<b>Solar Water Heating w/ Radiant Grant Funding</b>	<b>Not to Exceed for Residential</b>	<b>Not to Exceed for Non-Residential</b>
Clayton*	(See note at end of tables.)	-	-
Smyrna*	(See note at end of tables.)	-	-
Seaford*	(See note at end of tables.)	-	-
New Castle*	(See note at end of tables.)	-	-
Middletown**	(See note at end of tables.)	-	-
Milford	up to 50% of total installed costs	\$5,000	\$10,000
Newark	up to 50% of total installation costs	\$5,000	\$10,000
Lewes**	(See note at end of tables.)	-	-

### Small Wind Turbines

	<b>Small Wind Turbines Grant Funding</b>	<b>Not to Exceed for Residential</b>	<b>Not to Exceed for Non-Residential</b>
Clayton*	(See note at end of tables.)	-	-
Smyrna*	(See note at end of tables.)	-	-
Seaford*	(See note at end of tables.)	-	-
New Castle*	(See note at end of tables.)	-	-
Middletown**	(See note at end of tables.)	-	-
Milford	up to 33 1/3% of total installed costs	\$15,000	\$30,000
Newark	up to 33 1/3% of total installed costs	\$7,500	\$15,000
Lewes**	(See note at end of tables.)	-	-

### Fuel Cells

	<b>Fuel Cells Grant Funding</b>	<b>Not to Exceed for Residential</b>	<b>Not to Exceed for Non-Residential</b>
Clayton*	(See note at end of tables.)	-	-
Smyrna*	(See note at end of tables.)	-	-
Seaford*	(See note at end of tables.)	-	-
New Castle*	(See note at end of tables.)	-	-
Middletown**	(See note at end of tables.)	-	-
Milford	up to 50% of total installed costs	\$15,000	\$30,000
Newark	up to 50% of total installation costs	\$7,500	\$15,000
Lewes**	(See note at end of tables.)	-	-

## Exhibit A

### Geothermal Heat Pumps System -

w/ Energy Efficiency Ratio (EER) of 15.0 and Coefficient of Performance (COP) of 3.4 or greater

	<u>Geothermal Heat Pumps System Grant Funding</u>	<u>Not to Exceed for Residential</u>	<u>Not to Exceed for Non-Residential</u>
<b>Clayton*</b>	(See note at end of tables.)	-	-
<b>Smyrna*</b>	(See note at end of tables.)	-	-
<b>Seaford*</b>	(See note at end of tables.)	-	-
<b>New Castle*</b>	(See note at end of tables.)	-	-
<b>Middletown**</b>	(See note at end of tables.)	-	-
<b>Milford</b>	\$600 per ton or 50% of total installed costs; whichever is lower	\$3,000	\$20,000
<b>Newark</b>	\$500 per ton or 50% of total installed costs; whichever is lower	\$3,000	\$20,000
<b>Lewes**</b>	(See note at end of tables.)	-	-

### Geothermal Heat Pumps System -

w/ Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater

	<u>Geothermal Heat Pumps System Grant Funding</u>	<u>Not to Exceed for Residential</u>	<u>Not to Exceed for Non-Residential</u>
<b>Clayton*</b>	(See note at end of tables.)	-	-
<b>Smyrna*</b>	(See note at end of tables.)	-	-
<b>Seaford*</b>	(See note at end of tables.)	-	-
<b>New Castle*</b>	(See note at end of tables.)	-	-
<b>Middletown**</b>	(See note at end of tables.)	-	-
<b>Milford</b>	\$500 per ton or 50% of total installed costs; whichever is lower	\$2,500	\$20,000
<b>Newark</b>	\$500 per ton or 50% of total installed costs; whichever is lower	\$3,000	\$20,000
<b>Lewes**</b>	(See note at end of tables.)	-	-

**Notes:**

\* The municipality uses green energy funds for community projects only.

\*\* The municipality is not accepting grant applications at this time.

**Exhibit A**

**Dover Green Energy Fund  
Incentives/Grants**

**Photovoltaic Systems**

	Not to Exceed ___% of total installed costs	Residential & Non-Residential			Non-Profit			Maximum Grant		
		Cost (\$/Watt) 0+ to 5kW	Cost (\$/Watt) 5+kW to 10kW	Cost (\$/Watt) 10+kW to 50kW	Cost (\$/Watt) 0+ to 5kW	Cost (\$/Watt) 5+kW to 10kW	Cost (\$/Watt) 10+kW to 50kW	Residential	Non-Residential	Non-Profit
Dover	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

**Solar Water Heater Only**

	Not to Exceed ___% of total installed costs	Residential	Non-Residential	Non-Profit	Maximum Grant		
		(\$/OG300 - kWhr Saved)	(\$/OG300 - or PE Cal. kWhr Saved)	(\$/OG300 - or PE Cal. kWhr Saved)	Residential	Non-Residential	Non-Profit
Dover	N/A	\$ 1.00	\$ 1.00	\$ 1.00	\$2,500	\$7,500	\$7,500

**Solar Water Heating Integrated into a Radiant Heating Application**

	Not to Exceed ___% of total installed costs	Residential	Non-Residential	Non-Profit	Maximum Grant		
		(\$/OG300 - kWhr Saved)	(\$/OG300 - kWhr Saved)	(\$/OG300 - kWhr Saved)	Residential	Non-Residential	Non-Profit
Dover	N/A	\$ 1.00	\$ 1.00	\$ 1.00	\$2,500	\$7,500	\$7,500

**Small Wind Turbines**

	Not to Exceed ___% of total installed costs	Residential & Non-Residential			Non-Profit			Maximum Grant		
		Cost (\$/Watt) 0+ to 5kW	Cost (\$/Watt) 5+kW to 10kW	Cost (\$/Watt) 10+kW to 50kW	Cost (\$/Watt) 0+ to 5kW	Cost (\$/Watt) 5+kW to 10kW	Cost (\$/Watt) 10+kW to 50kW	Residential	Non-Residential	Non-Profit
Dover	N/A	\$ 1.25	\$ 0.75	\$ 0.35	\$ 1.25	\$ 0.75	\$ 0.35	\$2,500	\$2,500	\$2,500

**Fuel Cells**

	Not to Exceed ___% of total installed costs	Maximum Grant		
		Residential	Non-Residential	Non-Profit (35%)
Dover	20%	\$7,500	\$10,000	\$10,000

**Geothermal Heat Pumps System -**

**Energy Efficiency Ratio (EER) ≥ 18 and Coefficient of Performance (COP) of ≥ 3.6**

	Not to Exceed ___% of total installed costs	Residential & Non-Residential		Non-Profit		Maximum Grant		
		First 2 Tons (\$/Ton)	Over 2 Tons (\$/Ton)	First 2 Tons (\$/Ton)	Over 2 Tons (\$/Ton)	Residential	Non-Residential	Non-Profit
		Dover	N/A	\$ 800	\$ 700			

**To further encourage conservation:**

1. It will be a requirement of Dover residential customers to complete a City of Dover Public Utilities Residential Utility Service Audit which may be scheduled by calling 302-736-7070.
2. City of Dover electric customers that live within City of Dover municipal limits must have the City provide the free audit.  
City of Dover electric customers living outside of City of Dover municipal limits may have a third party complete the audit at the customer's expense. Approval of such an audit remains with the City of Dover.
3. All non-residential Dover applicants shall have an energy audit completed by a commercial auditor.  
Commercial audits will be performed by a Professional Engineer (P.E.) or Certified Energy Manager (CEM).  
The expense of this audit will be the sole responsibility of the applicant.