

## **Delaware's Clean Energy Economic Development Opportunities**

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### **Background Information**

Preliminary research by the Delaware Economic Development Office into energy-related businesses in Delaware identified businesses in the following categories:

<b><u>Type</u></b>	<b><u>Number of Businesses</u></b>
Petroleum	
Petroleum Refining	1
Petroleum Products Refining	1
Manufacture Oil or Fuel Additives	2
Petroleum Bulk Stations/Terminals	2
Petroleum Product Wholesalers	2
Natural Gas Distribution	3
Photovoltaics	
Photovoltaic Contractors	9
Photovoltaic Research Center	1
Geothermal Contractors	17
Electric Service	24
Gas Transmission & Distribution	6
Gas Distribution	5

### **Energy Related Economic Development Programs<sup>1</sup>**

#### *The Delaware Clean Energy Partnership Grant Program - DEDO*

The purpose of the Clean Energy Center Partnership is to support the work and research being conducted at the University of Delaware and Delaware State University, and to build a nationally recognized Clean Energy Center based on the strength of these institutions' existing programs. The State is offering matching (1:1) grants for research initiated and paid for by the industry which must be conducted by the University of Delaware and/or Delaware State University. Eligible companies can be from Delaware or surrounding states. However, the research projects must be conducted at the University of Delaware or Delaware State University. Solicitations for proposals are announced in January and June of each year.

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<sup>1</sup> Source: DEDO Website <http://dedo.delaware.gov>

*Delaware Green Energy Technology and Demonstration Program<sup>2</sup>*  
Grant Program - DNREC

The Technology Demonstration Program provides grants to projects that demonstrate the market potential for renewable technologies and accelerate the commercialization of these technologies in Delaware. These grants offer up to 25% of the cost of the eligible equipment for a renewable energy technology project, not to exceed \$200,000 per project. Projects must demonstrate either a novel technology or a novel application of an available technology; research and development projects are not eligible. Projects must include a public education component, such as integration into an educational program or location at a facility that allows public tours of the installed renewable energy technology.

*Delaware Green Energy Research and Development Program<sup>3</sup>*  
Grant Program- DNREC

The Research and Development Program offers incentives for projects that develop or improve renewable energy technology in Delaware. These grants offer up to 35% of the cost of qualifying projects, not to exceed \$250,000 per project. Qualifying projects improve the engineering, adaptation, or development of products or processes that directly relate to renewable energy technology. Subject to the future availability of funds, DNREC will consider multi-year projects in the Research and Development Program.

*Green Industries Program<sup>4</sup>*  
Tax Credit - Finance

The Green Industries Program promotes the use of recycled materials and the reduction of waste generation through source reduction. The Program provides incentives to business and industry to use recycled materials in the manufacturing of new products or to collect and process such materials for use by other industries. There are four program categories: **Source Reduction** provides a 10% increment in waste reduction corporate income tax credits in the amount of \$400 over a five-year period.

**Utilization of Recycled Materials as Inputs** provides maximum allowable tax credits for existing Delaware manufacturers that expand their operations.

**Processing of Materials** provides maximum allowable tax credits for existing Delaware manufacturers that expand their operations.

**Collection and Distribution of Materials** provides maximum allowable tax credits for existing Delaware manufacturers that expand their operations.

Incentives are subject to eligibility requirements.

*Emerging Technology Funds*

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<sup>2</sup> [www.delaware-energy.com/Download/Green%20Energy%20Fund%20Regulation%20Final.pdf](http://www.delaware-energy.com/Download/Green%20Energy%20Fund%20Regulation%20Final.pdf)

<sup>3</sup> Ibid.

<sup>4</sup> [http://dedo.delaware.gov/business/green\\_industries/index.shtml](http://dedo.delaware.gov/business/green_industries/index.shtml)

## DEDO

Key components of the New Economy Initiative are the Emerging Technology Funds: Technology Based Seed Funds (TBSF I and TBSF II) and Pre-Venture Fund. These funds are designed to foster creation of technology-based start-ups in fields such as biotechnology, advanced materials, clean energy, information technology, and new chemical applications. The goal of these funds is to invest in "gazelle-like" entrepreneurial projects positioned for fast-growth and wealth creation. An investment from the fund will be the catalyst for an entrepreneur to start a business and a starting point to raise capital. It will give entrepreneurs a "Stamp of Approval" when entering the fund raising market. Companies must become Delaware-based companies prior to funding.

- **TBSF (I and II)**  
Provides seed equity financing up to \$50,000 (TBSF I) or \$100,000 (TBSF II) for start-up related expenses such as, lab equipment, working capital, office space, and patents, etc. or for a later stage in the life of a start-up company for expenses related to prototype development, prototype testing costs, etc.
- **Pre-Venture**  
Provides debt and equity financing between \$150,000 up to \$1,000,000 to bridge the gap that most start-ups face from point A - acquisition of seed capital to point B - going to the private markets for additional funding.

The investment structure of each deal is not standardized and the fund structures each deal in the most appropriate manner.

### Energy Related Educational and Research Programs

#### University of Delaware Research Centers/Programs<sup>5</sup>

- Energy Institute
- Center for Composite Materials
- Center for Energy & Environmental Policy
- Institute of Energy Conversion
- Center for Catalytic Science & Technology
- Delaware Biotechnology Institute

#### Delaware State University<sup>6</sup>

- Hydrogen Storage Research Center
- Innovative Technologies Breakfast Program
- BP Fuel Cell Project

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<sup>5</sup> Source: University of Delaware Website – <http://www.udel.edu>

<sup>6</sup> Source: Delaware State University website – <http://www.desu.edu>

## **Key Questions for the Work Group**

1. What energy-related businesses are not included in the initial list?  
Examples include GE Solar, WL Gore, DuPont, Air Liquide, etc.
2. What is the potential for new/additional jobs from a focus on solar PV, customer sited renewables and other clean energy-related businesses?
3. What types of energy-related businesses should be encouraged to locate in Delaware?
  - a. How?
  - b. What Incentives?
4. How can we support the growth of the energy-related businesses already in Delaware?
5. Is workforce training necessary?
  - a. What type?