

## **Another Look at Delaware's Energy Future**

### **A Review of "Delaware's Energy Future" & "Ensuring Delaware Energy Future" and a Proposed Framework for Developing Delaware's Next Energy Plan**

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The first step in determining a path forward for developing Delaware's next energy plan is to look back at previous energy planning efforts. This paper reviews the challenges and goals set forth in the previous efforts as well as the legislation and major programs have been put into place as a result of the "Delaware's Energy Future" and "Ensuring Delaware's Energy Future" efforts and reports. The information is used to develop a proposed framework for Delaware's current energy planning process.

#### **Delaware's Energy Future**

"Delaware's Energy Future," Delaware's first energy planning process in over 20 years, was completed in 2003. "Delaware's Energy Future" was a comprehensive review of the status of energy usage, electricity generation, transmission and distribution, and fuels in Delaware. Undertaken at a time of major flux in the nation's energy system, a number of challenges were identified as facing Delaware in 2003:

- Increased Energy Demand

*Rapid population growth, particularly in the southern portion of the state, that is higher than national averages, resulting in increased demand for energy services, which in turn will increase the pressure on the energy infrastructure and environment.*

- Increased Energy Cost

*Geographic, infrastructure and market issues were anticipated to cause the cost of delivering energy to Delaware and the Delmarva Peninsula to increase, especially with the upcoming removal of residential electricity price caps in 2005 and 2006. There was also continuing uncertainty due to on-going utility deregulation and the transformation of the electricity industry on a national level.*

- Environmental Issues

*Energy generation and use was the single largest contributor to pollution, smog and greenhouse gases. Pressures to meet rising energy demands, if not handled properly, would have an adverse affect on our environment and public health.*

- Utility Deregulation

*Delaware, passed legislation in 1999 to open wholesale and retail electricity markets; the shift to open electricity markets was not complete. Electric utilities and merchant generators were faced with rapid changes in markets, business practices and regulations, foreseeable and continuing well into the future. As a result, uncertainty would be a feature of the transition toward open markets.*

- Electricity Prices and Removal of Electricity Rate Caps

The temporary electric rate reductions and rate caps that were put in place for Conectiv Power Delivery and Delaware Electric Cooperative customers as part of Delaware's restructuring legislation were to expire for the Delaware Electric Cooperative in April 2005 and for Conectiv Power Delivery in May 2006.

The Governor's Energy Task Force, created by Governor Ruth Ann Minner to undertake the 2003 energy planning process, was assigned the following goals to be addressed in the plan:

- The expansion of the diversity of fuels used to meet Delaware's current and future energy needs
- The development of conservation programs to reduce the need to build more electricity generation facilities
- Ensuring that the energy infrastructure will meet Delaware's future needs for efficiently transporting energy resources
- Encouraging producers of clean energy technologies and producers of energy efficient products to locate their business operations in Delaware

The Task Force then established a set of guiding principles to be used in its evaluations and development of recommendations:

- Increasing end-use efficiency and conservation
- Expanding resource diversity
- Enhancing economic competitiveness
- Promoting environmental stewardship
- Maintaining and improving reliability and security

The energy plan, "Delaware's Energy Future," included a laundry list of specific actions (approximately 80 of them) to be taken by government to achieve the goals of reducing the quantity and environmental impacts of energy usage. As of 2005, action was being taken on approximately 75 percent of the recommendations in the report, although significant funding for conservation and efficiency programs was still a 'future' item. The legislation enacted as the result of the recommendations is identified as "Energy Plan Bill) in the "Legislation" section below.

## **Ensuring Delaware's Energy Future**

The "Ensuring Delaware's Energy Future" report, issued in 2006, was developed via Executive Order 82, in response to the rate increases following the removal of the electricity rate caps. The report included recommendations for specific actions, both for consumer costs and energy efficiency, to address the impacts of the rate increases on customers. The major recommendations from the report have been implemented, legislation enacted in response to the recommendations is identified as "EDEF" below. Several of the key recommendations implemented the conservation and efficiency recommendations in "Delaware's Energy Future" that had heretofore not been funded.

### **Energy Legislation Enacted in Delaware since Issuance of "Delaware's Energy Future" (2003)**

#### Enacted in 2004

1. HB434: Energy Advisory Council (Energy Plan Bill)

*Created Governor's Energy Advisory Council and Cabinet Committee on Energy*

2. SB435: Energy Star Purchasing (Energy Plan Bill)

*Requires state agencies to purchase Energy Star products when feasible*

3. SB306: Building Code (Energy Plan Bill)

*Updated Building Code for energy efficiency to IECC 2000 and ASHRAE/ESNA Standard 90.1-1999*

4. SB 307: Life Cycle Costing (Energy Plan Bill)

*Requires contracting agencies to use life cycle costing analysis to determine the lowest responsible and responsive bidder or offeror in the award of contracts for goods and services, professional services and public works contracts*

#### Enacted in 2005

5. SB74: Renewable Portfolio Standards (idea supported in energy plan, though not directly a result of the Energy Plan)

*Established RPS note: Law revised in 2007*

6. SB 73: Energy Performance Contracting Act (Energy Plan bill)

*Gives State Agencies the authority to enter into performance contracts to finance energy efficiency upgrades based on the projected savings those upgrades will generate*

7. SB44: Green Energy Fund

*Biodiesel manufacturing facilities added to green energy fund regarding eligibility for demonstration project funding*

8. SB127: Outdoor Lighting

*Good outdoor lighting practices consistent with energy conservation, safety needs and preservation of the natural night environment. Only regulates lighting when state funds are involved*

9. HB78: Public Utilities Assessment

*Increased the assessment public utilities regulated by the Public Service Commission pay for the cost of regulation*

Enacted in 2006

10. HJR22: Ensuring Delaware's Energy Future Summit (EDEF bill)

*Hold a business summit on energy to assist Delaware businesses facing substantial increases in electricity rates*

11. SB281: Energy Efficiency Financial Incentives Act (EDEF bill)

*Appropriated \$8 million for Energy Efficiency Programs (DNREC) note: became the Energy Answers program*

12. HB6: Oversight of Public Utilities that Distributed and Supply Electricity to Retail Customers

*Amended Electric Restructuring Act of 1999 to include provisions designed to stabilize pricing. Requires Integrated Resource Planning and programs designed to reduce or shift electric consumption by customers. Required an RFP for building cost-effective merchant generation in the State to serve some of the DP&L load requirement. Deferred some of the rate increases*

13. SB280: Delaware Energy Assistance Program (DHSS) (EDEF bill)

*Appropriated \$2 million for Delaware Energy Assistance Program*

14. HB5: State Electricity Procurement (EDEF bill)

*Enables State procurement of electricity in the retail or wholesale market*

15. SB242: \$5 Million to Create Energy Fund (DOE)

*Funding for energy cost increases*

## 16. SS1 For SJR3: Independent Consultant to Study Utility Re-Regulation

*Required hiring of independent consultant to study re-regulation of electric power note: resulted in Brockway Report*

Enacted in 2007

## 17. SS1 for SB8: Increase in Net Metering

*Amended net energy metering standards to increase the net-metering capacity limit for non-residential facilities to 2 megawatts per DP&L meter, 500 kilowatts per DEC meter, and 500 kilowatts per municipal electric meter. Also allows all net-metering customers to carry over excess energy credits from month to month during a 12 month period to account for seasonal variance in generation and energy consumption.*

## 18. SS1 for SB18: Delaware Sustainable Energy Utility

*Created the Delaware Sustainable Energy Utility (SEU). The SEU will use competitive markets and leveraged private-financing to deliver cost-effective end-use energy services that allow Delawareans to save 30% of their annual energy usage. The SEU will coordinate services that target residential, commercial, industrial, and transportation energy end-users in all energy markets, including electricity, heating fuels, green buildings, clean vehicles, customer-sited renewable energy, and affordable energy. The SEU will use competitively selected Implementation Contractors to deliver services utilizing performance based contracts.*

## 19. SB19: New Renewable Portfolio Standards

*Amended existing law by increasing the required minimum percentage of electrical energy sales to Delaware end-use customers from renewable energy resources through the year 2019. Requires that, between 2009 and 2019, the minimum percentage of sales from solar photovoltaics increase from 0.03% to 2%. Sets a solar annual compliance payment and allows it to be adjusted by the Delaware Energy Office at an amount higher than, but not more than 20% higher than, the estimated competitive market cost for purchasing renewable energy credits (RECs)*

## 20. SB35: Doubling the Green Energy Fund

*Increased the system benefit charge for the Green Energy Fund by adding 18 cents per month to the average residential customer's electricity bill.*

**Delaware's Next Energy Plan**

Several issues were not fully addressed in neither "Delaware's Energy Future" nor "Ensuring Delaware's Energy Future." One specifically identified in the RFP is energy use associated with transportation, including sprawl and the energy use, costs, and emissions associated with

sprawl development. In "Delaware's Energy Future", this deficiency was recognized and a recommendation was included that transportation be included in future energy planning.<sup>1</sup>

Also not included in previous energy planning was the role of the state in climate change issues. This includes both the role of reducing the State's energy footprint and the projected impact of State or federal Climate Change and/or CO<sub>2</sub> regulations on energy costs and services in Delaware, including the Regional Greenhouse Gas Initiative.

There were other issues identified in the RFP that require evaluation and consideration during the planning process:

- Natural gas: assessing the transmission system and overall availability in Delaware.
- Electricity: assessing the role transmission should play in meeting long term electricity energy requirements
- Economic Development: assessing the potential benefits and opportunities for economic development in the areas of renewable energy and energy efficiency technologies.
- New and Emerging Energy Technologies: assessing the roles and opportunities for using new technologies to achieve the State's energy goals.<sup>2</sup>
- Energy Efficiency: assessing the role of energy efficiency in meeting long term demand, including the impact on emissions and cost savings.
- Governance Structure: assessing Delaware's governance structure relating to energy policy and planning including, in particular, the roles of the Public Service Commission, the Governor's Energy Advisory Council, the Delaware Energy Office, PJM, SEU and energy providers in the State.

The energy challenges facing Delaware are similar to those posed in 2003:

- Increasing Energy Demand  
*Although slower than in 2003, Delaware is still facing a higher-than-national-average population growth, resulting in increased demand for energy services. Although many new homes are being built more energy efficiently, average house size has increased, and the number of electricity-based products in homes is increasing.*<sup>3</sup>
- Increased Energy Cost  
*Removal of the electricity price caps, \$100/barrel oil, and rising natural gas prices have significantly increased average home and business energy costs in Delaware since the initial energy plan in 2003. This challenge is more significant now than during development of "Delaware's Energy Future."*<sup>4</sup>
- Environmental Issues & Climate Change  
*Energy generation and use is the single largest contributor to pollution, smog and greenhouse gases. Public awareness of the link between energy generation and consumption and climate change has grown considerably over the past 5 years.*

<sup>1</sup> Strategy 9 Recommendation AvI

<sup>2</sup> Recent/new/evolving technologies such as kinetic hydro and tidal technologies, wind generation, advanced metering infrastructure, advances in the efficiencies of photovoltaics.

<sup>3</sup> National Association of Home Builders. [http://www.nahb.org/fileUpload\\_details.aspx?contentID=80051](http://www.nahb.org/fileUpload_details.aspx?contentID=80051)

<sup>4</sup> This challenge incorporates three of the challenges identified in "Delaware's Energy Future": Increased Energy Cost, Utility Deregulation, and Electricity Prices and Removal of Electricity Rate Caps.

**Proposed Framework for Developing Delaware's Next Energy Plan**

Given the energy challenges facing Delaware and the new tools developed and implemented over the past five years (including such things as Renewable Portfolio Standards, the Sustainable Energy Utility, Net Metering improvements, etc.), it is appropriate to take a different approach as we develop the next energy plan.

The approach can be organized into five policy areas:

1. Reducing Delaware's Energy Usage
2. Reducing Environmental Footprint of the Energy Delawareans Use
3. Having Effective and Efficient Energy Transmission and Distribution Systems (for any type of energy or fuel)
4. Reducing the Energy Impact of Transportation in Delaware
5. Maximizing Delaware's Clean Energy Economic Development Opportunities

The energy planning process should focus on a 50,000 ft view to review the current policies, set solid goals and policy directions for achieving them. The Council should begin the process by setting goals and guiding principles under which the planning process will proceed.

Workgroups would coincide with each of the five policy areas. The workgroups should discuss the key energy issues and happenings that are anticipated in the next 5-10 years in their policy area, review current programs and policies underway, recommending any major directional or functional changes in order to address the issues and achieve the goals set by the Council. Two of the workgroups may require a more detailed review in addition to the high level review – Transportation and Energy Business Community were not addressed in the earlier plan. The depth of the review and recommendation development for these can be determined as the process moves forward.

## ATTACHMENT

### Examples of Potential Assignment of Issues to Work Groups<sup>5</sup>

#### Reducing Delaware's Energy Usage

##### *Energy Efficiency*

Energy efficiency includes using energy efficient appliances, lighting, heating and cooling systems, and building design in homes and commercial buildings

##### *Residential Energy Costs*

Impact on residents of the cost of electricity, heating fuels, transportation fuels

##### *Industrial Energy Use*

Impacts of energy costs on costs of goods produced, industrial energy efficiency, etc.

##### *Energy Education*

Educating students, residents and businesses about energy issues and response options

#### Reducing Environmental Footprint of the Energy Delawareans Use

##### *Climate Change*

Evaluating and preparing for impacts on Delaware and Delawareans of changing temperatures, weather and sea level rise.

##### *Greenhouse Gas Emissions*

Reducing releases of greenhouse gases, such as carbon dioxide and methane, from people, transportation, and businesses

##### *Electricity Generation*

Capacity to meet future electricity needs in Delaware

##### *Environmental Impact of Electricity Generation*

Types of fuels used to generate electricity (coal, natural gas, oil, wind, biomass, solar)

##### *Localized Home Heating and Electricity Generation (i.e. Distributed Generation)*

Solar electricity generation, solar hot water, fuel cells, geothermal, small wind, etc

#### Having Effective and Efficient Energy Transmission and Distribution Systems (for any type of energy or fuel)

##### *Electricity Transmission and Distribution*

New/expanded transmission through Delaware, system capacity to serve all areas of the State

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<sup>5</sup> Based on draft issues currently under review by the Energy Advisory Council

*Natural Gas Availability*

Increasing areas of the state where natural gas is available for residential, commercial and industrial use

Reducing the Energy Impact of Transportation in Delaware

*Land Use Issues*

The impacts of sprawl on energy use through increased driving and on the energy infrastructure; i.e. the ability to get the electricity and heating fuels out to the homes

*Transportation-Related Energy Use*

Mass transit (buses, light rail), vehicle fuel efficiency

*Transportation Fuels*

Availability and cost of fuels, production of bio-based fuels, alternative fuel vehicles

Maximizing Delaware's Clean Energy Economic Development Opportunities

*Agricultural Energy Use*

Impact of cost of fuel and energy on food prices, crops for food or fuel, impact of fuel corn on poultry industry

*Energy Technology-Based Economic Development*

Encouraging the location and growth of businesses researching, developing, and producing advanced and alternative energy technologies