

## ELEMENT 781: RHODE ISLAND ENERGY PLAN

### 01 INTRODUCTION

State Guide Plan Element 781, *Rhode Island Energy Plan 2002*, replaces the previous version of the state's energy plan (March 1997). The planning horizon in the *Energy Plan* now extends to the year 2020.

The State Planning Council adopted the *Energy Plan* on August 8, 2002, identifying Rhode Island's key energy issues and setting forth policies and actions to deal with them. The plan is an outgrowth of the work initiated in 1995 by the former Energy Coordinating Council (ECC), an interdisciplinary group of experts from government, academia, public interest groups and the private sector charged with advising the Governor on energy policy. This work has been updated to reflect changes in the electricity and natural gas markets as a result of deregulation, technological advances such as fuel cells, the ascendancy of distributed generation and renewable energy, and new federal and state mandates. However, as before, the overall objective in the plan is a supply of energy that is reliable, is low-cost, is environmentally benign, is sufficient for economic growth, and safeguards consumers from supply disruptions.

The plan is organized into four parts, with an emphasis on goals, recommendations, and implementation strategies. Appendices offer a synopsis of relevant legislation and a glossary of energy terms.

### 02 GOALS

#### 1. Energy Efficiency and Conservation

*Recognition that energy is a resource too valuable to waste and should be produced and used efficiently to extend the resource, protect public health, and sustain the environment.*

The advocacy of energy efficient technologies and energy conservation will promote other goals and objectives under topics as diverse as maintaining economic competitiveness and protecting the environment. Energy efficiency and conservation will also serve the cause of energy security and provide a bridge to the future where renewable resources are likely to play a larger role.

#### 2. Economic Competitiveness

*A strengthened competitive posture for Rhode Island commerce and industry through access to adequate, affordable and reliable supplies of energy in all sectors of use, including transportation.*

Affordable and reliable energy is essential to maintain the competitiveness of Rhode Island's business and industry in national and global markets, for sound and sustained growth and development.

### **3. Environmental Quality**

*Setting and achieving objectives that preserve or enhance environmental quality while ensuring adequate energy supplies.*

Enhancement and conservation of our natural resources, and reasonable and responsible mitigation of the impact of energy development and use on Rhode Island's land, water and air, must be recognized as basic responsibilities. This includes reducing greenhouse gas emissions and their contribution to climate change by promoting energy efficiency, energy conservation, and alternative energy use. Energy derived from fossil fuels is the major anthropogenic contributor to greenhouse gas emissions.

### **4. Energy Security**

*The attainment of a fuel mix that is reasonably reliable and that satisfies economic need.*

Rhode Island's indigenous energy resources are very limited and we are dependent on outside supplies. This is particularly true for petroleum products, which are subject to the supply disruptions and price shocks that accompany twists and turns in world politics. Petroleum products account for over 50 percent of the state's total primary energy consumption, compared to a figure nationally of 40 percent. We need to provide more of a mix of fuels to power our economy, with a state policy that reflects the supply, deliverability, price and environmental risks of each energy supply system.

### **5. Transportation**

*Energy-efficient and environmentally friendly options for the movement of people and goods.*

State energy policy must strive to diversify modes of transportation as well as fuel mix to reduce air and water pollution. This means increasing the use of alternative fuels, promoting public transit and fuel-less modes of transportation (e.g., walking and bicycling), and encouraging bulk freight handling systems (barge and rail).

### **6. Energy Efficiency and Accessibility for Low-income Households**

*More energy-efficient homes in low-income communities.*

Rhode Island is a recognized leader in energy conservation. Lower-income families have benefited from weatherization programs and energy audits. The state should strive to make homes in low-to-moderate-income neighborhoods more energy efficient by providing access to conservation technology through a partnership of government, energy providers, and consumers.

### **7. Energy Education**

*Energy education available at all levels, beginning in grade school.*

The world of energy is no longer a field only for specialists, but a participatory world in which all citizens have to make informed choices about how energy is supplied and how they choose to use it.

## **8. Renewable Resources**

*The development of permanently sustainable energy resources that are environmentally benign and economically feasible.*

To ensure that future generations are not left a legacy of vanished or depleted resources, Rhode Island must promote and develop permanently sustainable energy resources within the state and the Northeast region, while encouraging efficient use of fossil fuels and conservation.

## **03 POLICIES**

### **1. Economic Competitiveness**

- State policy should encourage cogeneration, disgen including self-generation, and renewable projects that provide significant amounts of thermal energy while producing electricity for commercial, industrial and institutional facilities.
- State policy should encourage incentives to preserve dams providing or with high potential to provide hydroelectricity with minimal environmental conflict.
- State policy should continue to support small and medium sized cogeneration facilities. The following recommendations should be continued and periodically reviewed and improved upon, as energy efficient and environmentally sound:
  - a. The generation facility should be located in close proximity to the customers' (or customer's) facility;
  - b. At least 25 percent of the total annual energy output of a cogeneration facility should be in the form of thermal (heating or cooling) or other useful energy, including mechanical;
  - c. A process should be established to reimburse the state sales tax on cogeneration equipment that meets the aforementioned criteria.
- State policy should encourage the use of more efficient heating, ventilation, air conditioning and lighting technologies to reduce electric consumption.
- State policy should promote the use of more efficient motor drive and fuel cell technologies to reduce electric consumption in the commercial and industrial sector.
- State policy should encourage the formation of partnerships with universities, state agencies and utilities to provide engineering analyses for commercial and industrial establishments to improve energy efficiency.

- The state should examine and, if possible, encourage policies in which utilities become direct partners in community economic development efforts, promoting compact development wherever practical to support cogeneration, self-generation, renewable, and other efficient technologies. The rate that the utilities charge to provide back-up service when on-site generators are “down” should fairly compensate the utilities for this service, but should not be a financial disincentive to developing distributed generation.
- The R.I. Public Utilities Commission (PUC) and other interested parties should determine and mitigate potential adverse effects and/or maximize potential benefits of FERC regulatory and deregulatory actions.
- The New England Governors and their Congressional delegations should join in an effort to promote regional hearings on FERC rate cases. Every effort should be made for regional recommendations to FERC for cases that involve more than one state (those who have multi-state holding companies in common).
- New England states should coordinate FERC intervention through their respective Attorney Generals’ offices, Public Utilities Commissions and energy offices. This is an ideal opportunity for regional cooperation to obtain lower cost and environmentally sound energy.
- The utilities should continue to explore methods of assisting their customers in conservation and load management.
- The State Energy Office should continue to identify and pursue energy savings opportunities in state buildings and place strong emphasis on adhering to operating and maintenance procedures that ensure peak energy system performance. Directives to conserve energy should be fully implemented by tracking and reducing energy use at state facilities.
- The State Energy Office should provide education and technical assistance to municipalities to conduct energy audits and to improve energy efficiency for municipal buildings, including schools.
- The PUC should continually evaluate utility rebate programs to stimulate replacement of old, inefficient lighting and cooling appliances with the most efficient and cost effective commercially available technology.
- The New England Conference of Public Utilities Commissioners (NECPUC) should continue to support the establishment of an independent market monitoring and mitigation unit, fully staffed, and capable of meeting the FERC’s standards for a smoothly functioning wholesale electricity market, free from market power abuses.

## **2. Environmental Quality**

- The state should support energy conservation and efficiency as a means of helping achieve air and water quality goals.

- The Rhode Island Department of Environmental Management (RIDEM) and other state and quasi-public agencies should adopt policies to ensure that, as industrial capacity expands, overall air and water quality do not deteriorate. One opportunity is the *Rhode Island Greenhouse Gas Action Plan* now under development. The recommendations of the stakeholders involved in the *Action Plan* process should be reviewed for the amount of greenhouse gas reduction anticipated and the costs and benefits associated with each strategy.
- Similarly, the RIDEM should adopt policies in keeping with the regulatory philosophy of the federal CAAA to ensure that changes in one end-user sector (transportation) will not impede development in another (industry) due to requirements to maintain or improve overall air and water quality.
- The state should work with other states in the region to assure that all areas that emit pollutants affecting the air quality in Rhode Island will implement similar controls on pollution sources.
- The state should encourage national energy policies (e.g., the National Energy Policy Act, CAAA) that reduce air pollution through strict standards and/or tax relief on less polluting fuels, and support the development, demonstration, and promotion of photovoltaics, alternative-fueled vehicles, advanced generating technologies, wind generation, and other long-range alternatives.
- State policy should encourage the federal government to support research on energy storage, photovoltaics, and other promising technologies that might reduce dependence on fossil fuels.
- State policy should encourage use of renewable energy (particularly wind, landfill gas, and photovoltaics) to the maximum extent technically feasible by assessing their potential in all decisions that affect energy supply price or use.
- Through an Executive Order, the Governor should direct all state agencies to adopt, wherever feasible, energy saving systems such as cogeneration, fuel cells, renewables, microturbines cooling, water conservation, energy conservation, and fuel optimization.
- The RIDEM should require all new power plant owners to absorb the costs of post-license monitoring of all environmental impacts to ensure compliance with permitted levels.
- The State Energy Office and the State Building Code Commission should continue to implement, through the building code, cost-effective solutions for energy conservation and efficiency in residential and commercial buildings in order to reduce the air and water pollution associated with new electric generation or the extraction and processing of fossil fuels.
- The Energy Facility Siting Board and other review agencies should consider local quality of life issues when reviewing proposals for new power plants or other facilities with environmental impacts during construction and operation, including visual impact and noise.

- The RIDEM should investigate the feasibility of creating an air pollution credit “bank” to permit the sale or purchase of credits by smokestack industries when an economic benefit can be demonstrated (e.g., keeping a plant open that would otherwise be forced to close), and the air quality overall is not degraded.
- The Air Quality Transportation Subcommittee of the Technical Committee of the State Planning Council should continue to investigate and support various options for mass transit initiatives and bulk freight handling systems (barge and rail, as an alternative to trucking along highways and secondary roads).
- As infrastructure expands to meet future needs, in particular power transmission lines and gas or petroleum pipelines, safety must be the paramount concern from siting to construction to operation. Breaches or ruptures, whether by natural events such as floods from severe storms or by human error and carelessness, must be avoided by design and practice.

### **3. Energy Security**

- State policy should encourage direct use of gas in end-uses determined to be economically and environmentally appropriate, especially those which help reduce electric demand during summer and winter peak demand periods.
- State policy should support expansion of natural gas pipeline capacity into the region and state for direct end-use applications and electric generation.
- State policy should continue to reduce dependence on oil through conservation and the enhancement of fuel diversity.
- State policy should encourage conversion of gas-fired electric generating units to dual fuel capability (with oil) to enhance system reliability.
- State policy should encourage the development of an electric distribution system including independent cogeneration to provide increased reliability as new capacity is needed.
- State policy should stimulate the introduction of new technologies that include wind, solar and fuel cells to provide new capacity as needed, and methods to decrease resistance in both electrical motors and transmission lines to increase the efficient use of power.
- Fuel use should be supplemented wherever practical with on-site conservation measures and applications of wind or solar energy.

### **4. Transportation**

- State policy should encourage maximum use of mass transit and HOVs, such as car and van pools, through pick-up delivery shuttles, off-peak bus service, fees for private parking, and support of RIPTA.

- State policy should support other means of reducing VMT and gridlock wherever they are cost-effective, including rail, bikeways, congestion management, telecommuting, and land use that discourages “sprawl” (so that people can walk, bike or ride public transit to the places they need to go).
- State policy should encourage optimum maintenance of all vehicles, with the state’s program for its own fleet setting the example.
- The state should support and implement alternative long-term transportation strategies for people and goods that save energy, reduce traffic on highways and improve air quality, such as mass transit and bulk freight handling systems (barge and rail).
- The Statewide Planning Program should continue to promote local land use planning that minimizes energy needs.
- The state should continue to expand or adopt programs to save energy and reduce air pollution in the operation of its own fleet, and other public and privately owned fleets.
- The state and the Rhode Island Congressional delegation should support increased Corporate Average Fuel Economy (CAFE) standards and strategies to reward fuel efficient cars and discourage inefficient ones.
- The state should continue to encourage the siting of additional alternative fuel filling stations for the convenience of AFV fleets and to convince others to make the switch to alternative fuels as fleet vehicles are replaced.
- The state should support the use of hybrid vehicles as a means of increasing overall fuel efficiency in its fleet and within the mandates of EPCACT, and resolve the contradiction in policy presented by the dependence of the state’s transportation budget on the gasoline tax.
- The Rhode Island Congressional delegation should urge increased research and development funding for renewable/sustainable transportation fuels at the federal level.
- The RIDEM should develop innovative ways to make fleets eligible to trade “clean air credits.”

## **5. Energy Efficiency and Affordability for Low-income Households**

- The State Energy Office should establish policies to ensure that only the truly needy receive energy assistance and that energy vendors participating in the program charge the lowest possible price to low income households.
- New policy initiatives must be explored which link energy need to adequate housing for the poor and which focus on lowering those costs to make them affordable.

- The State Energy Office, in cooperation with other appropriate parties, should identify and investigate specific opportunities available to improve energy efficiency in public housing and low-income households and prioritize opportunities according to energy intensity, building type, age and ability to submeter energy use.
- The State Building Commission should encourage new public and low-income housing construction and renovation specifications and equipment procurement requirements to meet or exceed the most recent energy efficient model building energy codes issued by the national code agencies and equipment appliance standards.
- The state should continue to lobby Congress to keep LIHEAP alive and sufficiently funded to be effective.
- The State Energy Office, in conjunction with the Governor's Office, should re-evaluate the adequacy of current program services available to low-income and public housing families. This will help identify opportunities to prioritize funding for specific energy efficiency improvements.
- The State Energy Office should petition the Governor and the General Assembly to supplement WAP with the state budget.
- The State Energy Office should solicit in-kind and/or voluntary contributions from the energy providers industry. These contributions could be in the form of funds, materials, labor or services.
- The General Assembly should implement a tax check-off on Rhode Island income tax forms dedicating those funds to WAP.

## **6. Energy Education**

- It shall be the policy of the State of Rhode Island to lead by example. The Governor should issue an Executive Order directing state agencies to become models of energy efficiency and coordinate energy education efforts among state agencies.
- The state should encourage and support education activities by federal, regional, state and local, public and private organizations to increase the energy literacy of the people of Rhode Island. Efforts should be supported by utilities, consumers and environmental groups to build public understanding of energy and its use in their homes, businesses, industry and transportation.
- Colleges and universities should examine their engineering and architecture programs to ensure that tomorrow's professional graduates are prepared to design buildings and infrastructures that are energy efficient and environmentally sound. Professional standards and mid-career training should include the connections between energy efficiency, environmental, social, and operating costs, and good design and construction.

- Higher education programs should include energy education units in the curriculum, in-service teacher training, and general college and university courses that focus on the ties among energy, the environment, and economics.
- The State Energy Office should promote, through education, public responsibility for the efficient and effective use of energy resources.
- The State Energy Office should coordinate and implement a Statewide Public Information and Education Campaign in order to distribute the *Rhode Island Energy Plan*, summaries of its key elements, and related information on specific steps that people can take to achieve its goals, and to encourage feedback on the recommended actions. The cost of the campaign will be minimized, and its impact maximized, through effective coordination and involvement of all parties who can contribute resources and effort.
- The State Energy Office should maintain a clearinghouse and database of educational materials and information. Comments on the quality of these materials will be sought as a guide for future users. The clearinghouse will also coordinate sharing of new curriculum ideas and other educational activities. The State Energy Office should then work through the clearinghouse and with other parties to disseminate to schools, businesses, civic groups and other interested parties information on existing energy-related educational materials, services, curricula and funding sources.
- The State Energy Office should provide alternative fuel vehicle training through a series of workshops designed to educate users about alternative fuel vehicle requirements, technologies, infrastructure issues and economics. Multiple workshops will be held to permit workshop interaction and to tailor sessions to different types of fleets, their users and vehicle maintenance personnel. The workshops are intended not only to provide an informational base, but to learn more about needs and to open lines of future communication in this rapidly changing field.

## **7. Renewable Resources**

- State policy should encourage continued private sector development of renewable energy applications and support studies to determine the feasibility of establishing a renewable portfolio standard for Rhode Island.
- State buildings and other government facilities should use renewable energy applications wherever practical in new construction and at opportunities for replacement.
- State policy should encourage *all* buildings to use renewable energy applications wherever practical.
- The State Building Code Commission should specify minimum standards using natural heating and cooling to improve energy efficiency. Appropriate designs incorporating both passive and active solar should be encouraged.

- The State Energy Office should render whatever assistance it can (such as grants or technical advice) on a case-by-case basis to individuals, municipal agencies and institutions who wish to utilize solar, wind, or any other renewable resources.

#### **04 IMPLEMENTATION STRATEGY**

The State Energy Office will develop and implement a measurement and evaluation plan independently of this *Energy Plan*. This will consist of an annual energy savings report on its energy programs to track the response of government agencies within Rhode Island to the recommendations of this plan.

The Department of Environmental Management will also be developing a “LEAP2000” model, which is an integrated, end-use-oriented accounting tool for studying energy and environment scenarios. This model will assist in evaluating existing and potential programs as well.

These efforts will show the impacts of strategies recommended and implemented. The *Energy Plan* will be reviewed and updated as warranted.