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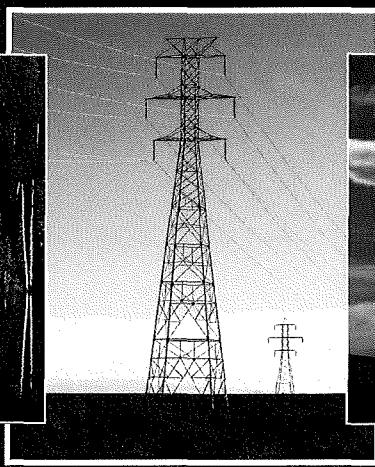
Economic  
Development

Environment

## Governor's Office of Energy Independence and Security

*Facilitating Public and Private Partnerships*

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JOHN ELIAS BALDACCI  
GOVERNOR

JOHN M. KERRY  
DIRECTOR  
OFFICE OF ENERGY  
INDEPENDENCE AND SECURITY

February 18, 2010

Maine State Legislature  
Joint Standing Committee on Utilities and Energy  
State Capitol  
Augusta, ME 04333

Dear Senator Hobbins and Representative Hinck:

**Re: Governor's Office of Energy Independence and Security's 2009 Annual Report**

Pursuant to Public Law 2009 Chapter 372 (LD 1485 An Act Regarding Maine's Energy Future), the Governor's Office of Energy Independence and Security (OEIS) is required as enacted by PL 2007, c. 656, Pt. C, §1:

By February 1st of each year, prepare and submit to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters an annual report that describes the activities of the office during the previous calendar year in carrying out its duties under this subsection and describes the State's progress in implementation of the state energy plan prepared pursuant to paragraph C. After receipt and review of the annual report required under this paragraph, the joint standing committee of the Legislature having jurisdiction over utilities and energy matters may submit legislation relating to energy policy;

I am pleased to submit OEIS' first annual report for your review. I would be happy to appear before the committee to answer any questions you may have about our work or the status of any goals or objectives included in the State Comprehensive Energy Plan.

Thank you. It has been a pleasure for both me and my staff to work with and appear before your committee on important energy policy issues that face the State of Maine.

Respectfully submitted,

*John M. Kerry*

John M. Kerry, Director  
Governor's Office of Energy Independence and Security

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## **Background**

Governor John E. Baldacci created the Governor's Office of Energy Independence and Security (OEIS) in 2003. Recognizing at the time the increasing challenges and opportunities related to energy issues, the Governor created the OEIS to work on state energy policy, serve as a policy advisor to the Governor and other special assignments. In 2007, the OEIS was codified into Maine statute outlining the role of the Director and the duties of the office. In 2009, additional duties were added in statute and the OEIS Director was given the power to request funds from the Efficiency Maine Trust to carry out the duties of the office (since the existing funding mechanism, a request by the Energy Resources Council to the Maine Public Utilities Commission was eliminated).

The vision of the OEIS is to provide leadership in the development of public and private partnerships that aspire to achieve the State of Maine's goals of energy independence and security with clean, reliable, affordable, sustainable, indigenous and renewable resources.

The mission of the OEIS is, in conjunction with other departments of state government, the Legislature, and private and nonprofit sectors, to provide an open and collaborative decision-making environment to create effective public and private partnerships that advance the achievement of energy independence while optimizing Maine's energy security, economic development, and environmental health.

The State Comprehensive Energy Plan developed by the OEIS in 2008-2009 is based on the following six overarching and interconnected strategies in pursuing energy independence and security for Maine:

- 1) Strengthening Energy Efficiency, Conservation and Weatherization**
- 2) Fostering Renewable Energy**
- 3) Improving Transportation and Fuel Efficiencies**
- 4) Upgrading Electricity and Natural Gas Services, Transmission Systems and Transmission Infrastructures**
- 5) State of Maine Leading by Example**
- 6) Energy Emergency Preparedness and Response**

## **Duties and Responsibilities**

The duties and responsibilities of the OEIS are many and increase with each session of the legislature. These duties and responsibilities reflect the ever-growing importance of energy issues and the attention and interest of the Legislature in pursuing effective energy policies in the state.

## **Statutory Responsibilities**

- Developing a State Comprehensive Energy Plan and updating it every two years;
- Collaborating with relevant state agencies, coordinating state energy policy and actively fostering cooperation with the Efficiency Maine Trust;

- Reporting annually on the activities of the office of the previous year and progress made on the implementation of the State Comprehensive Energy Plan;
- Working with transmission and distribution utilities, state agencies and other relevant parties to negotiate agreements on renewable energy generation and transmission infrastructure;
- Reporting and tracking progress of the state's wind energy development goals and tangible benefits of wind development projects;
- Reporting on the comprehensive review of wind power permitting and providing recommendations on improving the state's wind power development policies;
- Reporting on and examining opportunities for combined heat and power projects along with policy recommendations for such projects;
- Reporting on and coordinating a stakeholder group on cogeneration and cogeneneration zones for sawmills to investigate the barriers and potential incentives to implementing cogeneration in the state;
- Developing information resources to assist local governments and electrical co-operatives to develop, design, construct, install and finance wind and other renewable electricity generation projects;
- Seeking funds and partnerships with public and private sources to support the goals of the office;
- Providing technical assistance and information to the Governor and the Legislature regarding the State's short-range and long-range energy needs and the resources to meet those needs;
- Coordinating the dissemination of energy information to the public and media;
- Collecting and analyzing energy data on energy supply, demand and costs;
- Monitoring energy transmission capacity planning and policy affecting the state and the regulatory approval process for the development of energy infrastructure and making recommendations to the Governor and Legislature as necessary to facilitate energy infrastructure planning;
- Chairing the Energy Resources Council (ERC is eliminated in July, 2010);
- Serving on the Board of Directors of the Energy Conservation Board (ECB is eliminated in July, 2010);
- Serving on the Board of Directors of the Efficiency Maine Trust Board; and
- Taking action as necessary to carry out the goals and objectives of the State Comprehensive Energy Plan.

(See: attachment 1 for specific statutory language.)

#### Proposed Statutory Responsibilities in the Second Session of the 124<sup>th</sup> Legislature

##### 1) LD 1786 An Act Regarding Energy Infrastructure Development

**Composition of the interagency review panel.** The review panel would consist of the director of the Governor's Office of Energy Independence and Security and commissioners or their designees from state agencies having responsibility for administrative and financial services, transportation, and economic development and the commissioner of the state agency that owns or controls the state land or asset.

*RECOMMENDED FOR APPROVAL  
BY THE COMMITTEE ON  
ENERGY, NATURAL RESOURCES  
AND FISH AND GAME*

**Interagency review panel process.** The review panel would establish a regular process for soliciting, accepting and evaluating proposals for use of a statutory corridor. As part of this process, the review panel would provide public notice of the availability of the corridor for energy infrastructure development and would provide a description of the type of development anticipated in the corridor and an opportunity for interested persons to submit proposals for use. The review panel would review submitted proposals based on a set of specific criteria to ensure that the project is in the long-term public interest of the State. The review panel would then select one or more proposals and negotiate a long-term occupancy agreement for use of the corridor with the person or persons who submitted the selected proposal. As part of the process, certain proprietary information would be designated as confidential.

## **2) LD 1222 An Act to Promote Geothermal Energy in the State**

**Sec. 1. Policies to promote the use of geothermal energy. Resolved:** That the Executive Department, Governor's Office of Energy Independence and Security, shall examine and develop policy recommendations to promote and provide incentives for the installation of residential geothermal heating and cooling systems, particularly in multi-family residences. The Executive Department, Governor's Office of Energy Independence and Security shall, at a minimum, consult with the Maine State Housing Authority and the Efficiency Maine Trust its examination under this section.

**Sec. 2. Report; legislation. Resolved:** That, by January 15, 2011, the Executive Department, Office of Energy Independence and Security shall submit a report of its findings and recommendations under section 1, together with any necessary implementing legislation, to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters. After its review of the report, the joint standing committee may submit a bill to the First Regular Session of the 125th Legislature relating to the report.

## **3) LD 1720 An Act Related to Qualified Waste to Energy Power**

**Sec. 1. Waste-to-energy power; Examination. Resolved:** That The Executive Department, Governor's Office of Energy Independence and Security, shall examine the issue of qualifying certain waste-to-energy power for renewable energy credits and portfolio requirements. The examination must include, but is not limited to:

1. Relevant legislative proposals and actions in the United States Congress and in other states, with particular attention to other states within New England;
2. Appropriate qualifying criteria and technologies, including but not limited to advanced pyrolytic plant technology;
3. Potential implications of allowing certain waste-to-energy power to qualify for renewable energy credits and renewable resource portfolio requirements, including but not limited to impacts on the market for renewable energy credits and the environment; and

4. Consideration of the renewable resource portfolio requirements specified in the Maine Revised Statutes, Title 35-A, section 3210, and the solid waste management hierarchy specified in the Maine Revised Statutes, Title 38, section 2101.

In carrying out the examination under this section, the Governor's Office of Energy Independence and Security shall, at a minimum, consult with the Passamaquoddy Tribe, the Department of Environmental Protection, the Public Utilities Commission and the Efficiency Maine Trust.

**Sec. 2. Report; legislation.** **Resolved:** That, by February 15, 2011, the Executive Department, Office of Energy Independence and Security shall submit a report of its findings and recommendations under section 1, together with any necessary implementing legislation, to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters. After its review of the report, the joint standing committee may submit a bill to the First Regular Session of the 125th Legislature relating the report.

### Other Duties and Responsibilities

- Advising the Governor on energy policy matters;
- Fundraising and overall oversight of the Keep ME Warm program;
- Assisting with the Governor's legislative agenda;
- Representing the Governor at National Governors Association events and conferences;
- Chairing the ISO-NE's Power Planning Committee (PPC);
- Participating in the ISO-NE Power Advisory Committee (PAC);
- Co-chairing the New England Governors' Conference (NEG) Northeast International Committee on Energy (NICE);
- Coordinating with the Governor's office on New England Governors' Conference and Eastern Canadian Premiers meetings;
- Conducting a seasonal Maine weekly oil price survey and distributing it to the press and public;
- Conducting presentations to the public on the State's Comprehensive Energy Plan and other energy policies;
- Coordinating with the Governor's Office and other state agencies on outreach to Maine businesses to identify potential energy savings through energy conservation, efficiency and renewable energy projects;
- Developing a State Energy Emergency Management Plan;
- Chairing the Governor's Pre-Emergency Energy Task Force;
- Serving as a member of the Governor's Ocean Energy Task Force;
- Participating in the Eastern Interconnection Planning Collaborative;
- Working collaboratively with a host of public officials, private individuals and energy experts to advance the Governor's energy, economic development and environmental agendas; and
- Participating in the Nuclear Waste Strategy Coalition.

## 2009 Activity Highlights

2009 was a busy year for the OEIS. Beginning in January, OEIS presented the state's first-ever State Comprehensive Energy Plan to the Joint Standing Committee on Utilities and Energy and to Governor Baldacci. The OEIS also gave its first statutory report on how Maine is meeting both its wind power development goals and tangible benefits as a result of wind power developments.

The first session of the 124<sup>th</sup> Legislature saw a huge interest on the part of the Legislature and the public in energy issues. The Joint Standing Committee on Utilities and Energy Committee and the Special Committee on Maine's Energy Future debated a great number of energy-related bills with the successful adoption of the An Act Regarding Maine's Energy Future. This groundbreaking law established the Efficiency Maine Trust, an independent state entity to administer and coordinate all-fuels energy efficiency and renewable energy programs for all consumers. The law also established a new heating fuel weatherization and efficiency program and created a fund for energy improvements for multi-family rental and manufactured housing units. It created an Energy Independence Fund for revenues derived from the use of state assets from transmission systems, provided for a study of issues related to energy corridors and the development of significant new energy facilities and required a plan regarding how the State should proceed with these issues. The Act also specified that a green workforce development plan be developed and established an executive task force to examine ways of advancing energy self-sufficiency at state facilities.

### Legislative Work

During the first session of the 124<sup>th</sup> Legislature, OEIS was either the lead agency or worked collaboratively with other state agencies on behalf of the Governor to track and provide testimony on the following proposed bills:

- LD 335 (Hinck) – Legislative Review of Portions of Chapter 2: Administration of Trust, Budgeting, Project Selection Criteria and Procedures, Monitoring and Evaluation Requirements, a Major Substantive Rule of the Energy and Carbon Savings Trust
- LD 355 (Bliss) – An Act to Protect Residential Consumers of Home Heating Oil
- LD 389 (Butterfield) – An Act to Facilitate the State's Existing Commitment to the Production of Liquid Biofuels
- LD 501 (Perry) – An Act to Ensure Maine's Energy Security and Reduce Dependence on Oil
- LD 755 (Fletcher) – An Act to Help the State Achieve Energy Independence and Security

- LD 872 (Stevens) – An Act To Provide a Tax Credit to Certain Heating Fuel Contract Consumers
- LD 886 (Pingree) - An Act to Secure Maine's Energy Future
- LD 935 (Goodall) – An Act to Resolve, Regarding Building Energy Efficiency and Carbon Performance Ratings
- LD 955 (Mitchell) – An Act to Transform the Maine Economy and Create Jobs
- LD 980 (Senator Smith) – An Act To Provide a Tax Credit for Heating and Cooling System Alternatives and Improvements That Benefit the Environment and Address Climate Change
- LD 1181 (Berry) – An Act to Create Jobs Through Investment in Green Energy
- LD 1201 (Martin) – An Act Regarding Energy Independence
- LD 1222 (Diamond) – An Act to Promote Geothermal Energy in the State of Maine
- LD 1485 (Bartlett/Committee bill) – An Act Regarding Maine's Energy Future

#### Additional OEIS Work

- Participated in the kick-off and development of the Maine Wind Working Group;
- Participated in the Governor's Ocean Energy Task Force and its Transmission sub-committee; contributed to final report and legislation establishing ocean energy research and development test sites off the coast of Maine;
- Worked with Efficiency Maine to secure grant funding to hire a consultant to begin work on assisting local governments and electrical co-operatives to develop, design, construct, install and finance wind and other renewable electricity generation projects;
- Participated in the state's first-ever ocean energy conference;
- Participated and provided input with other state agencies on developing the state's American Reinvestment and Recovery Act spending plan;
- Conducted meetings with businesses and Maine's natural gas companies to explore expansion of the state's natural gas infrastructure;
- Re-convened the Pre-Emergency Energy Task Force;
- Participated in the planning of the NEGC/ECP annual meeting held in St. John, New Brunswick;
- Appointed by the Governor as one of two representatives on the Eastern Interconnection Planning Collaborative;

- Worked with the Governor's office, the New England States and ISO-NE in developing the New England Governor's Renewable Energy Blueprint;
- Briefed numerous community and environmental groups, universities, and business groups on the State Comprehensive Energy Plan, renewable energy, and state energy policies the state is pursuing;
- Conducted site visits to various businesses in the state to provide energy information and assistance;
- Provided briefings to the Commission to Study Energy Infrastructure to advance their work;
- Convened and completed a successful co-generation Task Force and final report;
- Participated in the state's first-ever state-wide wind energy conference;
- Worked with the Maine International Trade Center on developing relationships with foreign investors for developing wind and other projects;
- Began work on a proposal to the Department of Energy to create an Energy Independence Fund for energy efficiency and renewable energy projects in the state; and
- Accepted invitation to serve on the NASEO Board of Directors and attended annual meeting.

### **Status Report on the State Comprehensive Energy Plan**

Excellent progress was made on the State Comprehensive Energy Plan in 2009. Please see attached for a detailed progress report on each section of the Plan and its accompanying implementation measures.

## Attachment 1

## **2 §9. GOVERNOR'S OFFICE OF ENERGY INDEPENDENCE AND SECURITY**

1. **Office established.** The Governor's Office of Energy Independence and Security, referred to in this section as "the office," is established in the Executive Department to carry out responsibilities of the State relating to energy resources, planning and development. The office is directly responsible to the Governor. [ 2007, c. 656, Pt. C, §1 (NEW) . ]
  2. **Director.** The office is under the control and supervision of the Director of the Governor's Office of Energy Independence and Security, referred to in this section as "the director." The director is appointed by the Governor and serves at the pleasure of the Governor. [ 2007, c. 656, Pt. C, §1 (NEW) . ]
  - 2-A. **Powers.** The director may request from the Efficiency Maine Trust, established in Title 35-A, chapter 97, and the trust may provide from funds available to it funding sufficient to carry out the duties of the office under section 3 and any other applicable law. [ 2009, c. 372, Pt. H, §1 (NEW) . ]
  3. **Duties.** The director is responsible for the execution of the duties of the office. The director shall:
    - A. Serve as a member of the Efficiency Maine Trust Board, established under Title 5, section 12004-G, subsection 10-C; [ 2009, c. 372, Pt. H, §2 (AMD) . ]
    - B. In collaboration with the relevant state agencies, coordinate state energy policy and actively foster cooperation with the Efficiency Maine Trust, established in Title 35-A, chapter 97; [ 2009, c. 372, Pt. H, §2 (AMD) . ]
    - C. In consultation with the Efficiency Maine Trust Board, established in Title 5, section 12004-G, subsection 10-C, prepare and submit a comprehensive state energy plan to the Governor and the Legislature by January 15, 2009 and every 2 years thereafter; [ 2009, c. 372, Pt. H, §2 (AMD) . ]
    - C-1. By February 1st of each year, prepare and submit to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters an annual report that describes the activities of the office during the previous calendar year in carrying out its duties under this subsection and describes the State's progress in implementation of the state energy plan prepared pursuant to paragraph C. After receipt and review of the annual report required under this paragraph, the joint standing committee of the Legislature having jurisdiction over utilities and energy matters may submit legislation relating to energy policy; [ 2009, c. 372, Pt. H, §2 (NEW) . ]
    - D. In collaboration with other relevant state agencies, private industry and nonprofit organizations, collect and analyze energy data, including, but not limited to, data on energy supply, demand and costs in this State with consideration of all available energy sources; [ 2007, c. 656, Pt. C, §1 (NEW) . ]
- MRS Title 2: EXECUTIVE**  
**Chapter 3: EXECUTIVE COUNCIL**
- 2 §9. Governor's Office of Energy Independence and Security | 13
- E. Coordinate the dissemination of energy information to the public and the media; [ 2007, c. 656, Pt. C, §1 (NEW) . ]
  - F. Provide technical assistance and information to the Governor and the Legislature regarding the State's short-range and long-range energy needs and the resources to meet those needs; [ 2007, c. 656, Pt. C, §1 (NEW) . ]
  - G. Seek funds and partnerships with public and private sources to support the goals of the office, including, but not limited to, promoting energy efficiency, demand-side management and distributed generation; [ 2007, c. 656, Pt. C, §1 (NEW) . ]
  - H. Work with transmission and distribution utilities, state agencies involved in the permitting of energy generation facilities and other relevant entities to negotiate agreements that create value for electricity consumers with developers of renewable generation who are interested in building energy generation facilities or developing or utilizing energy transmission infrastructure in this State. This paragraph does not authorize the director to be a signatory to any such agreement unless that authority is otherwise granted by law. The director shall report on activities undertaken pursuant to this paragraph by February 1, 2009, and annually thereafter, to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters; [ 2007, c. 656, Pt. C, §1 (NEW) . ]
  - I. Monitor energy transmission capacity planning and policy affecting this State and the regulatory approval process for the development of energy infrastructure pursuant to Title 35-A, section 122 and

make recommendations to the Governor and the Legislature as necessary for changes to the relevant laws and rules to facilitate energy infrastructure planning and development; and [2007, c. 656, Pt. C, §1 (NEW) .]

J. Take action as necessary to carry out the goals and objectives of the state energy plan prepared pursuant to paragraph C. [2007, c. 656, Pt. C, §1 (NEW) .]

[ 2009, c. 372, Pt. H, §2 (AMD) .]

SECTION HISTORY

2007, c. 656, Pt. C, §1 (NEW). 2009, c. 372, Pt. H, §§1, 2 (AMD).

**2010 Progress Report on:  
MAINE'S COMPREHENSIVE ENERGY ACTION PLAN:**

**I. STRENGTHENING ENERGY EFFICIENCY, CONSERVATION AND WEATHERIZATION**

In a future that, in all likelihood, will include persistently high energy prices for all forms of energy, the most compelling and important strategy for increasing Maine's energy independence and security will be to implement all cost effective energy efficiency investments. This plan contemplates the forging of a new and sustained public/private partnership to create a sustainable energy culture based on substantial investments in energy efficiency and conservation programs and clean renewable resources and technologies.

Based on the persistent high costs of all forms of energy, it is clear that the status quo is patently unacceptable. These facts notwithstanding, it would be ill-advised to devise an energy plan that charts the course to energy independence and security without providing adequate funding or financial mechanisms to achieve those desirable goals.

Accordingly, the Plan recommends the following goals:

- 1) Achieve all cost-effective energy efficiency in the State of Maine.
- 2) Aggressively provide opportunities for State government, local governments, Maine families, businesses, and industry to invest in energy efficiency, conservation and weatherization through Federal and state programs, grants, loans and other public and private funding mechanisms.
- 3) Support and implement energy audits for businesses and state facilities.
- 4) Create an interdisciplinary energy SWAT team to assist large industries and manufacturers in addressing their critical energy needs.
- 5) Work with state government to adopt an overall energy reduction goal at State facilities.
- 6) Continue to promote increased efficiency standards for all new construction.
- 7) Encourage increased efficiency standards for heating systems and appliances.
- 8) Target weatherizing 100% of all Maine residences and 50% of all Maine businesses in the next 20 years.
- 9) Continue to promote and enhance training opportunities for certified energy auditors and weatherization technicians.
- 10) Reduce peak-load energy consumption in all sectors.

**II. FOSTERING RENEWABLE ENERGY**

While recognizing that the number one priority for Maine is achieving all cost-effective energy efficiency, we must also look to the future and foster renewable, indigenous energy sources like biomass; biofuels; on and offshore wind; solar; tidal power; geothermal and combined cooling heat and power systems.

To this effect, in 2007 and 2008, Governor Baldacci, established the Wind Power Task Force, the Ocean Energy Task Force, the Wood to Energy Task Force, and the Wood Optimization Task Force to assess and identify renewable energy potential and opportunities in Maine's forests, rivers, mountains and ocean. These Task Forces have placed Maine in the forefront of wind and biomass power development in the region. In addition, these initiatives have resulted in a more streamlined state wind power application process, increased interdepartmental communication and collaboration on wind farm applications and increased efforts to balance economic development and environmental issues in both the public and private sectors.

Looking to the future, Maine is poised to develop 2,000 Megawatts of land-based wind by 2015 and nearly 3,000 Megawatts of on and off-shore wind by 2020. More significantly, it has been estimated that Maine's off-shore wind potential may yield well over 100,000 Megawatts of renewable wind resources in a few decades. Since Maine has only the need for 2,000 to 3,000 Megawatts to satisfy its current electricity capacity needs and peak electricity loads, off-shore wind could become one of Maine's most economically productive exports to other states and regions.

The development of renewable biofuels from indigenous renewable resources will be essential to reducing Maine's dependence on foreign petroleum products. While Maine is poised to make a major break-through on second generation biofuels from cellulose, much research and development remains to be done. The University of Maine is developing a process to make cellulosic ethanol from waste wood from the papermaking industry. A variety of entrepreneurs and inventors are engaged in research and development projects to turn restaurant grease, animal fats and other bio-waste products into biogases and other biofuels to heat homes and to supplement the state's vehicular transportation fleets.

The Plan encourages Maine citizens to assess their current energy, financial and environmental profiles and to select, when possible, an indigenous biofuel as an alternative to foreign petroleum products or other costly and environmentally harmful fossil fuels. These facts notwithstanding, the Governor established the Wood Optimization Task Force to ensure that Maine will continue to exercise prudence in the utilization of our wood resources and balance the need for renewable energy products with the continuing economic development concerns and wood resource needs for our forest products industries.

Harvesting the waste heat from electricity generation and reusing it to meet heating and cooling loads can increase energy production and utilization efficiencies by 20 to 40%. This not only saves money, it reduces green-house-gases, increases production efficiencies and saves jobs. While cogeneration has been utilized in the pulp and paper industries for years and the state has promoted cogeneration in public policies for over a decade, utility opposition, technical concerns and the lack of financial incentives has resulted in very few applications of this technology outside of the wood-products industry. This trend may change in the near or intermediate future as natural gas pipeline infrastructures expand and the cost of operating combined cycle natural gas turbines

induces large institutions to invest in co-generation and tri-generation units. Accordingly, this plan calls for a concerted effort to identify, assess and remove technical, regulatory, policy and economic barriers to the use of co-generation and tri-generation units.

Accordingly, the Plan recommends pursuing the following goals to achieve improvements in fostering renewable energy in the State:

- 1) Encourage Maine's businesses and residences to invest in distributed renewable generation of energy.
  - 2) Continue to advance Maine's position as a leader in responsible wind power development and maximize the tangible benefits Maine people receive.
  - 3) Work with State agencies, the Governor's Ocean Energy Task Force, Maine Maritime Academy (MMA) and private developers to promote tidal power in Maine.
  - 4) Seek to develop on-site clean, renewable energy projects at appropriate state facilities.
  - 5) Work with public and private schools across the state to facilitate energy alternative demonstration projects.
  - 6) Support research at the University of Maine to create cellulosic ethanol from paper making waste.
  - 7) Increase the use of bio-fuels and alternative energy in state-occupied buildings.
  - 8) Encourage the development of ethanol-blend fueling stations.
- Increase the development and use of cogeneration and tri-generation in the State of Maine.
- 9) Encourage the strategic location and development of industrial and district heating energy generation clusters.
  - 10) Assist the University of Maine and other colleges with the use of bio-mass/bio-fuel cogeneration and tri-generation energy system
  - 11) Increase the generation of renewable power into the State of Maine's electricity portfolio.

### **III. IMPROVING TRANSPORTATION AND FUEL EFFICIENCIES**

Maine's transportation sector – particularly cars, light trucks, and SUVs – is responsible for more than one-third of the state's greenhouse gas emissions. Between 1985 and 2002, Maine's total annual vehicle-miles traveled increased from 9.4 billion miles to 14.7 billion miles, an increase of 56 % with nearly 80 % of Maine commuters traveling alone.

An added difficulty we face in Maine is the geographically dispersed, rural nature of the state. About 70 % of the growth in Maine during the past 15 years has occurred in rural areas which lengthens long-commute times and increases vehicle miles traveled and pollution.

Studies show that one of the best ways to reduce vehicle travel is to plan and build communities where people can access many different services, including jobs, while driving less. The evidence shows that implementing "smart growth" policies that encourage mixed-use, compact development reduces driving by 20 to 40 % and sometimes more. The Urban Land Institute found that, typically, Americans living in compact urban neighborhoods

offering several transportation options drive a third fewer miles than those in automobile-oriented suburbs. The study concludes that shifting 60 % of new growth to compact patterns would save 85 million tons of CO<sub>2</sub> annually by 2030. The savings over that period equate to a 28 % increase in federal vehicle efficiency standards by 2020 (to 32 mpg).

In addition to reducing vehicle miles traveled, Maine should pursue expanding its alternative transportation networks and policies such as transit, rail, ridesharing, telecommuting, biking and walking to provide more efficient and less energy-intensive transportation options.

Maine has and continues to follow California's lead in adopting "clean car standards" including Global Warming Tailpipe Emission Standards that were adopted by Maine in 2006. Currently, Maine and a host of other states, are waiting on the U.S. Environmental Protection Agency (EPA) to issue a federal waiver to allow the stronger, state initiated global warming pollution standards to go into effect. With the coming change in the federal Administration, we anticipate the issuance of such a waiver to the State of Maine shortly.

Maine is also pursuing a low-carbon fuel standard (LCFS) with other states to further reduce greenhouse gas emissions and lower the carbon-intensity from the transportation sector. A LCFS is a market-based, technologically neutral policy to address the carbon content of fuels by requiring reductions in the average lifecycle GHG emissions per unit of useful energy.

Accordingly, the Plan recommends pursuing the following goals to achieve improvements in transportation and fuel efficiencies in the State:

- 1) Support and enhance state and private sector efforts for education and awareness of alternative transportation options and promotion of a low-carbon fuel standard and fuel efficient vehicles.
- 2) Support state transportation investments and encourage private investment for enhanced passenger and freight transportation systems.
- 3) Encourage greater coordination of land use and transportation policy to reduce vehicle miles traveled and decrease greenhouse gas emissions.
- 4) Support public-private partnerships to develop "explorer" transit systems for tourist destinations.

#### **IV. UPGRADING ELECTRICITY AND NATURAL GAS SERVICES, TRANSMISSION SYSTEMS AND INFRASTRUCTURES**

Albert Einstein once remarked, "Nothing rattles in the Universe, everything is connected". There is no issue more challenging to the development of this comprehensive and integrated energy plan than resolving the financial, regulatory and policy issues relating to energy transmission, especially electricity transmission. As was referenced above, due in substantial part to major policy and regulatory differences between Maine and ISO-New England relating to the cost allocation formulae and financial inequities in the ISO-New England's Tariff and market structures, the MPUC,

the Governor and the Maine Legislature are in the process of assessing the pros and cons of Maine remaining as a member of the ISO-New England consortium. It is anticipated that the MPUC will render its final decision regarding this issue in June, 2009 based on the outcome of negotiations.

Regardless of the outcome of the MPUC decision to direct the Maine utilities to remain in or get out of the ISO-New England system, the electricity transmission structure in Maine is over thirty years old and in need of major upgrades and expansion, especially if Maine consumers wish to take advantage of over 3,000 Megawatts of remote wind and other renewable energy resources in Western, Northern, Eastern and off-shore Maine.

In addition, as natural gas demand increases in Maine and Maine utilities and industries become more dependent on natural gas for the generation of electricity, it is clear that, in the near or intermediate future, natural gas producers, transmission owners and utilities will face increasing pressure to upgrade and expand the current Maritimes Northeast Pipeline that is so essential to the generation of electricity in Maine. This pressure to upgrade transmission lines will only grow if one of the proposed Liquefied Natural Gas (LNG) production and distribution facilities is approved along the eastern Maine coast or the LNG facility at Canaport in St John's, New Brunswick, is commissioned in the spring of 2009.

Accordingly, the Plan recommends pursuing the following goals to achieve improvements in upgrading electricity and natural gas services and transmission systems and infrastructure:

- 1) Support the development of electrical transmission projects in Maine for increased economic security, system reliability, decreased electricity costs for residents, businesses and industries and to accommodate new Maine-based wind power from both land-based and off-shore projects.
- 2) Support the development of electrical transmission projects in Maine to accommodate economically and environmentally sustainable renewable energy from Northern Maine and Canada.
- 3) Promote natural gas as a “transitional fuel” by expanding the natural gas infrastructure to all sectors in Maine.

## V. STATE OF MAINE LEADING BY EXAMPLE

The State of Maine consistently “leads by example” when it comes to energy policy. From initiating the country’s first energy efficiency program and global warming legislation, to purchasing 100% renewable power at state facilities and participating in the nation’s first carbon-dioxide cap and trade program. Maine’s programs and policies are not only models for other states; they are the driving forces in the market for energy efficient products and services in the state of Maine.

However, more work needs to be done. This Plan is the beginning of a long-term effort to achieve energy independence and security for all Maine citizens. The State should

continue to lead by example instituting a performance-based, consistent and integrated system for long-term energy planning. The OEIS is statutorily required to review and revise the State Comprehensive Energy Plan every two years to ensure that it will meet the goals, objectives and implementation measures included herein.

It is assumed that substantial policy changes will need to be enacted at the State and Federal levels for this Plan to be successful within the timeframes contemplated. The State, depending on available resources, should aggressively pursue the important policy changes necessary to realize the substantial benefits that energy independence and security provide.

Accordingly, the Plan recommends pursuing the following goals to achieve improvements in the State Leading by Example initiatives and achieving long-term energy planning and policy change:

- 1) Continue the “Lead by Example” initiatives in Maine by implementing progressive energy policies applicable to State, County and local governments.
- 2) Continue to plan for Maine’s long term energy independence and security by using a 50-year planning horizon.

## **VI. ENERGY EMERGENCY PREPAREDNESS AND RESPONSE**

The Energy Emergency Preparedness and Response Plan outlines the process to be followed by the State of Maine in the event of an actual or impending shortage of petroleum products, natural gas or electricity. An energy emergency process will facilitate:

1. Collection and analysis of information to evaluate the impacts of a situation.
2. Coordination and communication among public agencies and other entities with responsibility to energy emergency preparedness and response.
3. Identification and implementation of response activities appropriate to the circumstances.

Recognizing that energy situations are dynamic, this plan addresses the need for timely information and flexible responses. It is intended only to guide the process of making effective use of available public and private resources in an energy emergency.

For planning purposes, the four phases of an emergency typically include mitigation, preparedness, response and recovery. This plan is focused on the preparedness and response phases of an energy emergency. Energy emergency preparedness depends on knowing who has what authorities, responsibilities and resources and how can those resources be brought to bear upon an emergency situation.

In an energy pre-emergency situation, the OEIS is responsible for coordinating the development of state energy policy, convening the Energy Resources Council to assess potential energy hazards or concerns and directing the development of a Pre-Emergency

Energy Management Plan. (Governor Baldacci adopted the Pre-Emergency Energy Management Plan in September, 2007)

However, once the Governor declares an energy emergency the responsibilities for addressing an energy emergency transitions from planning to response; the responsibility for coordinating these functions is transferred from the OEIS to the Maine Emergency Management Agency (MEMA). In accordance with the State of Maine Energy Emergency Management Plan (2007) MEMA will develop a response plan, convene an Energy Response Team and, contingent on the nature and scope of the energy emergency, convene a special energy task force comprised of public and private sector leaders to take all actions necessary to address the energy emergency.

## **STATE OF MAINE COMPREHENSIVE ENERGY ACTION PLAN 2008-2009**

The following plan outlines the necessary action steps the State of Maine should consider implementing in order to achieve energy independence over the next 50 years. This Maine Comprehensive Energy Action Plan (Plan) consists of six main components:

- 1) Strengthening Energy Efficiency, Conservation and Weatherization;**
- 2) Fostering Renewable Energy;**
- 3) Improving Transportation and Fuel Efficiencies;**
- 4) Upgrading Electricity and Natural Gas Services and Transmission Infrastructure;**
- 5) State of Maine Leading by Example; and**
- 6) Energy Emergency Preparedness and Response**

The goal of the Plan is to chart a clear pathway to guide the State of Maine into a sustainable, reliable, secure, affordable, and environmentally responsible energy future. The OEIS is charged with the responsibility to develop the Plan, coordinate its implementation and revise it every two years.

### **I. STRENGTHENING ENERGY EFFICIENCY, CONSERVATION AND WEATHERIZATION**

#### **Goal:**

**Achieve all cost-effective energy efficiency in the State of Maine.**

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### **Objective:**

Combine the energy efficiency programs of Efficiency Maine, the natural gas utilities, the RGGI and the Energy and Carbon Savings Trust (E&CST) into a single, “energy efficiency entity”.

### **Implementation:**

- ✓ Work with public and private stakeholders to create the best governance and organizational structures for the State’s energy efficiency entity.
- ✓ Include a fuel-neutral efficiency program for all sectors of the economy that leverages existing and future public and private funding.
- ✓ Continue to leverage the RGGI E&CST proceeds to fund fuel neutral efficiency measures. (15% of total RGGI Trust funds available for fossil fuel efficiency.)
- ✓ Use a “one-stop shopping”, fuel-neutral approach to designing the energy efficiency entity in order to administer all energy efficiency programs in the state of Maine based on the principles of:

1. Being consumer oriented such that the process for participation and program design are targeted to serve multiple needs of the Maine energy consumer;
2. Maximizing the effectiveness of programs by building up and centralizing expertise, addressing conflicts of interest, mitigating the influence of politics, promoting flexible, nimble program management, and providing a champion of funding cost-effective energy efficiency;
3. Maximizing the efficiency with which programs are planned, designed, overseen, and delivered; and
4. Providing sufficient checks and balances to ensure that there is accountability for meeting principles 1-3 and so that EE programs in Maine are sustainable for the long term.

***STATUS: On-going.***

*In 2009 the Efficiency Maine Trust (EMT) was established through LD 1485 An Act Regarding Maine’s Energy Future based on the above principles. The newly established EMT Board will take over operations and funding from Efficiency Maine and the Energy & Carbon Savings Trust on July 1, 2010.*

### **Goal:**

**Aggressively provide opportunities for State government, local governments, Maine families, businesses, and industry to invest in energy efficiency, conservation and weatherization through Federal and**

state programs, grants, loans and other public and private funding mechanisms.

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**Objective:**

Continue to identify and document existing energy efficiency programs and funding by maintaining a master database of state, federal and private sector grants, loans and other funding mechanisms.

**Implementation:**

- Research all state, federal and private funding programs for energy projects.
- Create database/spreadsheet defining funding by category, type and funds available.
- Research all tax incentives available from the State and Federal government.
- Create database/spreadsheet defining energy tax incentives and rebates by category, at both the State and Federal levels and make available on state agency websites for use by the public.
- Explore the possibilities for a major bond initiative or other funding mechanism to fund the energy efficiency entity and expand programs.
- Investigate different options to secure energy efficiency funding.

*Status: In-progress.*

*OEIS has received funds from Efficiency Maine through the American Recovery and Reinvestment Act (ARRA) for a “Grants Connector” project to compile and disseminate information on all available energy funding opportunities. OEIS began this work February 1<sup>st</sup>, 2010.*

*The Efficiency Maine Trust Board is currently exploring additional potential funding mechanisms for funding the new Efficiency Maine Trust through the development of its Triennial Plan.*

**Goal:**

**Support and implement energy audits for businesses and state facilities.**

---

**Objective:**

In conjunction with the State’s energy efficiency entity, create a “Smart Energy” energy audit model for Maine businesses not covered by existing programs.

**Implementation:**

- Research available public and private funding sources for energy projects or audits.
- Apply for and obtain Federal “Save Energy NOW Program” (NOW) funding for business conservation/efficiency project

- Review DOE's NOW program and create streamlined template for businesses.
- Create “project criteria” logic diagram for each component of fast-track NOW plan.
- Create a “go-no-go” template for energy project evaluations.
- Integrate any overlaps with Efficiency Maine and other state programs/models.
- Select ten Maine businesses to audit or use as beta sites for fast-track NOW audits.
- Create public / private partners for implementing projects that are a “go”.

**Goal:**

**Develop an interdisciplinary “Energy SMART Team” to assist large industries and manufacturers in addressing their critical energy needs.**

---

**Objective:**

In conjunction with the State’s energy efficiency entity, create an Energy SMART Team for Maine businesses to address critical energy needs.

**Implementation:**

- Create a standardized template/program for a SMART Energy Audit for businesses.
- Create a handbook for SMART Energy Audit that can be used by any resource.
- Select one Maine business as a trial for the SMART Energy Audit program.
- Review process and results of findings and modify program as applicable.
- Automate model as much as possible.

***Status: In-progress.***

***OEIS is undertaking as part of the “Grants Connector” project.***

**Objective:**

In conjunction with the State’s energy efficiency entity create a web-based application that businesses can use for self-auditing.

**Implementation:**

- Take the final program and automate it for web-based application.
- Integrate into OEIS web-site for utilization by Maine businesses.
- Create tracking tool to identify businesses using the on-line resource.

**Goal:**

Work with State Government to adopt an overall energy reduction goal at State facilities.

---

**Objective:**

Work with State agencies to identify potential energy efficiency opportunities at State facilities.

**Implementation:**

- ✓ Quantify energy usage, costs and annual savings at all State facilities, universities and schools and report back to the Legislature annually.
- Develop an energy reduction plan and implement it to decrease overall energy usage at State facilities.
- ✓ Work with State Government to adopt wholesale power purchasing.
- Work with the State energy efficiency entity to create outreach materials for all school districts building new or upgrading facilities.
- Continue to work with the University of Maine and Maine Community College to decrease energy usage.

*Status: On-going.*

*An overall state facilities goal has not been established. LD 1485, An Act Regarding Maine's Energy Future created the state Task Force to Advance Energy Efficiency, Conservation and Independence at State Facilities and a final report was completed in January, 2010. The Task Force's consensus was not to establish a quantitative goal.*

*The Bureau of General Services (BGS) has set a goal of reducing its use of #2 heating fuel by 5% by 2013 compared with 2008.*

*BGS is currently working on developing a database to quantify usage, costs and savings at all state facilities.*

*BGS currently purchases wholesale fuel oil, electricity and natural gas for all state facilities.*

**Goal:**

Continue to promote increased efficiency standards for all new construction.

---

**Objective:**

Support the Department of Public Safety and other relevant state agencies in the implementation of the newly enacted state wide energy and building codes.

**Implementation:**

- ✓ Work with and provide information to the Technical Building Codes and Standards Board in their effort to develop rules to resolve the conflicts between the Maine Uniform Building and Energy Code and the Fire and Life Safety Codes (Public Law 699, 2008.)
- Continue to evaluate and upgrade building codes and standards periodically to keep up with new technology and more efficient building techniques.

***Status: On-going.***

*A Technical Building Codes and Standards Board located within the Department of Public Safety was established to adopt, amend, and maintain the Maine Uniform Building and Energy Code (MUBEC). The MUBEC will take effect June 1, 2010 and will be enforced in municipalities with more than 2,000 residents and an existing building code, on December 1, 2010. For municipalities without an existing building code enforcement will begin on July 1, 2012.*

**Goal:**

Increase the number and availability of energy efficient heating systems and appliances in the State of Maine.

---

**Objective:**

Encourage increased efficiency standards for heating systems and appliances.

**Implementation:**

- Require all state agencies to purchase “Energy Star” appliances and equipment and include in state procurement specifications.
- Adopt through state rulemaking enhanced appliance standards for appliances and heating systems currently not covered by Federal standards.

***Status:***

*Beginning October, 2009 Efficiency Maine began offering an appliance rebate program funded by the ARRA. This program will be in place for two years.*

**Goal:**

Target weatherizing 100% of all Maine residences and 50% of all Maine businesses in the next twenty years.

---

**Objective:**

Promote winterization and weatherization programs through the State's energy efficiency entity for Mainers of all incomes and housing types to weatherize homes and businesses in order to reduce fuel use and reduce heating costs.

**Implementation:**

- ✓ Continue the purchase and distribution of "winterization kits" by State government and non-profit organizations for use by low income households.
- ✓ Work with the Community Action Agencies, volunteers and Maine Cooperative Extension to identify people in need and use existing networks for distribution of kits.
- In conjunction with the State's energy efficiency entity, weatherize 100% of the 476,729 Maine single family residences over the next twenty years by making bonding, system benefit charge funding, grants and loans available to all income groups for energy audits and weatherization upgrades.
- In conjunction with the State's energy efficiency entity, weatherize 100% of the 50,000 Maine multi-family residences over the next twenty years by making bonding, system benefit charge funding, and grants and loans available to owners and tenants of multi-family units.
- In conjunction with the State's energy efficiency entity, weatherize 50% of businesses and industrial facilities in Maine over the next twenty years by making bonding, system benefit charge funding, and grants and loans available to business and industrial facility owners.

***Status: In-progress.***

*Winterization kits containing custom built storm windows and other energy efficiency equipment were distributed in collaboration with the Keep ME Warm effort.*

*As a result of LD 1485 An Act Regarding Maine's Energy Future the above weatherization goals are now in Maine statute. Residential weatherization efforts are underway through the newly expanded Maine Home Performance Program administered by Efficiency Maine and funded for two years through the ARRA.*

**Objective:**

Expand reach of the State's Home Energy Loan Program (HELP).

**Implementation:**

- Identify and eliminate barriers to expanding the HELP program.
- Quantify the need for energy upgrades.

- Explore increasing the funding for HELP to meet the identified need through general fund bond issues or other funding mechanisms.
- Continue to streamline application process.
- Create a program where home improvement contractors can be pre-approved to market the loans at the point of the transaction.

***Status:***

***The HELP program has been discontinued by Maine State Housing Authority (MSHA) in response to the establishment of the newly expanded Maine Home Performance Program administered by Efficiency Maine.***

**Objective:**

Continue and expand the State's "Clean Tune and Evaluate Program" (CTE) in order to repair the oldest and most inefficient furnaces in low income homes.

**Implementation:**

- ✓ Continue to make referrals of eligible low-income households to participating fuel dealers to receive service.
- ✓ Continue to expand the pool of participating fuel dealers through additional outreach.

***Status: On-going.***

***In 2009, 907 homes received heating system improvements from the CTE program. Also in 2009 an additional 1,325 homes received heating system improvements through the Central Heating Improvement Program (CHIP) funded by LIHEAP that reduces fuel consumption by 15%-20%. Other CHIP services include repairs, replacement of oil tanks, and chimney work.***

**Goal:**

Continue to promote and enhance training opportunities for certified energy auditors and weatherization technicians.

---

**Objective:**

Continue to increase the number of training courses for certified energy auditors.

**Implementation:**

- Determine need for additional energy auditors.
- Expand existing State-run energy auditor training programs.
- Combine existing State-run energy auditor training programs.
- Continue to work with the state's energy efficiency entity, Maine's Community College system, the Maine Homebuilders and Remodelers Association and private businesses to increase the number of energy audit training courses.

*Status: On-going.*

*In 2009, MSHA trained 185 energy auditors. The following courses were offered: 29 Energy Auditor classes; Energy Auditor Refresher classes;*

*Work has begun to establish three on-going training sites in Maine – Southern Maine Community College in South Portland; Kennebec Valley Community College in Fairfield; and Washington County Community College in Calais —for future training of energy auditors and weatherization technicians. MSHA is collaborating with Efficiency Maine so that these community colleges will provide a comprehensive training certificate for energy auditors, and one for weatherization technicians, so that those with certificates will be able to perform energy audits or weatherization services on any home, regardless of the source of the funding. The training in these community colleges could start as early as April.*

*MSHA and Efficiency Maine have collaborated and agreed to standardize BPI training for energy auditors.*

**Objective:**

Increase training for energy efficiency and weatherization service technicians.

**Implementation:**

- ✓ Determine need for additional energy efficiency and weatherization service technicians for residential, business and industrial sectors.
- ✓ Continue to conduct outreach to existing contractors to encourage them to undertake energy efficiency and weatherization work.
- ✓ Work with the MSHA, the MPUC, Efficiency Maine, Maine's Community College system, the Maine Homebuilders and Remodelers Association, and private businesses to increase the number of weatherization technician training courses.
- Investigate incentives for contractors to take energy education and curriculum training to switch to energy efficiency and weatherization work.

*Status: On-going.*

*In 2009 MSHA trained and 273 weatherization technicians; 20 Weatherization Technician classes; 3 Weatherization Technician Refresher classes; and 133 Seminars. See above for more information.*

**Goal:** Reduce peak-load energy consumption in all sectors.

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### **Objective:**

Develop a plan to increase energy efficiency, conservation and to reduce peak-load energy consumption in existing and new state government buildings. (Resolve 183, 2008.)

### **Implementation:**

- ✓ Work with BGS and other state agencies to issue a Request for Proposal (RFP) to procure a third-party energy response company to manage the state's demand response capabilities.
- ✓ Work with BGS and other state agencies to issue an RFP to procure a third-party energy response company to purchase wholesale power for State of Maine facilities.
- ✓ Submit a report by December 1, 2009 to the Utilities and Energy Committee that includes findings and recommendations and a plan for purchasing wholesale power and reducing peak consumption in state government buildings, together with any necessary implementing legislation. (Resolve 183, 2008.)
- Encourage the wide-spread use of demand response in government and the private sector through third party managers to decrease energy use and increase revenue streams.
- Expand participation from all sectors in regional demand response programs.
- Include "demand reduction induced price effect" when calculating energy efficiency program cost-effectiveness and the effects on overall pricing.

*Status: On-going.*

*BGS has retained a private company, EnerNoc, to reduce peak-load energy consumption through a demand response program. Currently, 2,405 kW of state capacity have been enrolled and additional sites and capacity will be added in the future.*

*BGS has a contract in place to assist the state in procuring wholesale power for state facilities.*

*Reporting on the above implementation measures is included in the final report of the Task Force to Advance Energy Efficiency, Conservation and Independence at State Facilities presented to the Joint Standing Committee on Utilities and Energy in January, 2010.*

### **Objective:**

Develop a plan to reduce peak-load energy consumption in residential, commercial, and industrial customers.

**Implementation:**

- Work with electric utilities to develop and implement demand response programs such as advanced metering.
- Continue to foster Maine's "ready to respond" capacity.
- Encourage large electricity users to establish "wholesale power purchase accounts".
- Reach out to all commercial, industrial and government customers with a peak demand of 500 kW or greater for participation in peak demand or third party management.
- Develop incentives for large commercial, industrial and government customers.
- Develop incentives for residential customers and customers with a demand of less than 500 kW.
- Determine which rate structures are cost effective to the rate payers.
- Monitor the results of all demand response initiatives through 2012 and implement the most effective mix of action steps in order to achieve a total peak demand goal by 2020.

## **II. FOSTERING RENEWABLE ENERGY (WIND, SOLAR, TIDAL AND GEOTHERMAL, COGENERATION/TRIGENERATION)**

**Goal:**

**Encourage Maine's businesses and residences to invest in distributed renewable generation of energy.**

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**Objective:**

Explore creating a "technology neutral" carbon offset incentive program.

**Implementation:**

- Inventory existing technology incentive programs and index carbon offsets to public grants.
- Create a technology matrix that indexes public grants to the amount of carbon a given technology avoids.

**Objective:**

Increase the amount of energy that can be credited to an individual or businesses' utility account to encourage private investment in distributed renewable energy.

**Implementation:**

- ✓ Work with the Maine Legislature to improve Maine's net metering law to allow for additional energy credits beyond the current twelve months, potential payments and raising the capacity limit to between 2-5 MW.
- ✓ Explore the technical and economic benefits of "feed-in tariff" policies.

*Status: Completed.*

*LD 336 Resolve, Regarding Legislative Review of Chapter 313: Net Energy Billing Rule To Allow Shared Ownership, a Major Substantive Rule of the Public Utilities Commission was signed into law in 2009 increasing the net-metering threshold to 660 kw from 500 kw.*

*LD 1075 An Act to Establish the Community-based Renewable Energy Pilot Program was signed in to law in 2009 that required the MPUC to establish a community-based renewable energy pilot program to encourage the sustainable development of community-based renewable energy in the State by providing one of two incentives applicable to projects, either long-term contracts or a set renewable energy credit multiplier set at 150% of the amount of the electricity.*

**Objective:**

Standardize and streamline grid interconnection standards for distributed renewable energy applications.

**Implementation:**

- ✓ Continue to work with the MPUC as they investigate improving interconnection standards policy and procedures in Maine.
- Work with the Maine Legislature to pass an improved interconnection standard law as a result of MPUC recommended policy options.

*Status: On-going.*

*In 2008 the Legislature passed LD 2149 Resolve, To Encourage Renewable Energy and Energy Conservation in Maine. The Resolve directed the Maine Public Utilities Commission (MPUC) to conduct a review of the advisability of statewide interconnection standards for small renewable generation facilities.*

*The MPUC's report recommended the creation of standardized statewide small generator interconnection standards based on the FERC's Small Generator Interconnection Procedure (SGIP) or a model rule like Interstate Renewable Energy Council's which is closely based on the SGIP. This report is currently under review by the Standing Committee on Utilities and Energy.*

**Objective:**

Increase the development and local ownership of “community energy” in the State.

**Implementation:**

- Adopt a generation goal for installation of new community energy in Maine.
- ✓ Create a plan for devising incentives, financing and education and outreach initiatives to promote community energy in Maine.

- Where applicable and in the public interest, give preference to community energy projects for interconnecting to the grid.

**Status:** *On-going*

*LD 1075 An Act to Establish the Community-based Renewable Energy Pilot Program was signed in to law in 2009 that required the MPUC to establish a community-based renewable energy pilot program to encourage the sustainable development of community-based renewable energy in the State.*

**Objective:**

Re-examine the possibility of implementing utility rate de-coupling to encourage distributed generation.

**Implementation:**

- Work with the Maine Legislature and the utilities to craft policies to conserve power and to create smart power grids.

**Status:** *On-going*

*LD 1535 An Act to Create A Smart Grid Policy in the State is currently pending before the Legislature. The bill proposes to establish a state policy on smart grid infrastructure to improve power reliability, overall efficiency of the power resource and delivery system while reducing energy consumption, greenhouse gas emission and cost to consumers.*

**Goal:**

Continue to advance Maine's position as a leader in responsible wind power development and maximize the tangible benefits Maine people receive.

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**Objective:**

Implement the Governor's Wind Power Task Force recommendations by seeking to host at least 2,000 megawatts (MW) of installed wind power capacity by 2015, at least 3,000 MW by 2020, with at least 300 MW of the 2020 goal achieved with projects built offshore. (Public Law 661, 2007.)

**Implementation:**

- ✓ Track progress toward achievement of state wind energy goals.
- Conduct a full review of the status of meeting the 2015 wind power goals, and the likelihood of achieving the 2020 goals including permitting, technology trends, implementation success, progress toward meeting greenhouse gas emission goals, and identification of expedited permitting areas in LURC territory.

- ✓ Provide on-going recommendations to the Legislature regarding Maine's new wind power law, including any necessary appropriate revisions.
- ✓ Consideration of whether or not creation of an independent siting authority is advisable.
- ✓ Work with other State agencies to clarify the benefits of wind power projects and document each wind power project's economic and other benefits.
- Provide a clearinghouse and outreach capability to provide information to the public on current and developing wind technology, available grants, consultants with special expertise, and lists of wind equipment providers.
- ✓ Aggressively pursue development of Maine's offshore wind potential.
- ✓ Coordinate with other state agencies to track technical advances in the wind energy industry with an eye toward potential regulatory and/or policy implications.

*Status: On-going.*

*OEIS reports annually to the Utilities and Energy Committee on how the state is meeting its wind power development goals and on tangible benefits received as a result of wind power development projects.*

**Objective:**

Continue working to provide financial incentives for the development of wind power in Maine.

**Implementation:**

- ✓ Continue funding the wind power rebate program and wind power pilot project to provide incentives to homeowners and small businesses to develop micro-wind power in Maine.
- Work with the Legislature to provide Business Equipment Tax Rebate (BETR) treatment for wind generating equipment above the appliance size.
- Work with the Maine Revenue Service and the Legislature to provide a sales tax exemption for all small and community wind power equipment.
- ✓ Work with Maine's Congressional delegation to secure extension of the federal wind production credit.

*Status: On-going.*

*The small wind power rebate program administered by Efficiency Maine has been enhanced with \$500,000 in additional funding from the ARRA for the next two years; and half of the funds from the wind power pilot program have been expended.*

*With input from the OEIS to Maine's Congressional delegation, the federal Production Tax Credit has been extended until 2012.*

**Objective:**

Determine opportunities for the development of wind power by the State's agencies, political subdivisions, and rural electric cooperatives. (Public Law 2008, Ch. 671.)

**Implementation:**

- ✓ Monitor developments in technology in state and federal law to determine wind power opportunities for the above jurisdictions.
- ✓ Inform the Energy Resources Council of findings.
- Develop information resources to assist the State's political subdivisions, rural electric cooperatives, and other municipal entities to develop, design, construct, install and finance wind and other renewable electricity generation projects.
- ✓ Form one or more advisory groups to advise OEIS in undertaking the above responsibilities.
- ✓ Report to the Utilities and Energy Committee annually of the OEIS' progress on the above implementation measures and provide a recommendation on potential legislation to continue these efforts.

*Status: on-going.*

*OEIS has convened an advisory committee and begun work on developing informational resources, secured grant funding to hire a consultant to begin work on this project in February, 2010. A status report was issued in January 2009 to the Utilities and Energy Committee on the above implementation measures.*

**Objective:**

Work with the Governor's Ocean Energy Task Force, (OETF) relevant state agencies and private developers to foster education, awareness of and advocacy support for near-shore and off-shore wind power development in Maine.

**Implementation:**

- ✓ Participate in the Governor's OETF with the purpose of exploring opportunities for near-shore and off-shore wind development and making recommendations to streamline the regulatory process.
- ✓ Work with relevant state agencies to promote the June, 2009 Ocean Energy Conference to be held in Maine.
- Partner with the University of Maine, Orono, non-profit organizations and the private sector to foster short-term opportunities for the development of near-shore and off-shore wind power development.

*Status: on-going.*

*The Governor's Ocean Energy Task Force produced its final report in January, 2010 and passed legislation, LD 1465 An Act To Facilitate Testing and Demonstration of Renewable Ocean Energy Technology including a public process to identify three testing and demonstration sites off the coast of Maine. As a result, Governor Baldacci has proposed legislation to develop a process for the permitting of ocean energy development.*

*The Maine Department of Community and Economic Development and other state agencies helped host and promote the successful Ocean Energy Conference that was held in Rockport, Maine in 2009.*

*Informational meetings have been held with several near-shore, off-shore wind developers interested in developing projects off the coast of Maine.*

**Goal:**

Work with State agencies, the Governor's Ocean Energy Task Force, Maine Maritime Academy (MMA) and private developers to promote tidal power in Maine.

---

**Objective:**

Coordinate with the Governor's Ocean Energy Task Force and relevant state agencies to review available research on "tidal technologies" and create a decision chart for applications.

**Implementation:**

- Research and compile data on large-scale tidal technologies.
- Research and compile data on medium-scale tidal technologies.
- Research and compile data on micro-scale tidal technologies.
- Create a suitability-to-application chart for tidal technology in Maine.
- Create permitting process primer.
- Create a listing of public funding opportunities for tidal technology in Maine.

**Objective:**

Coordinate with Maine Maritime Academy on the Tidal Device Evaluation Center's (TEDEC) proposed project in Castine, Maine.

**Implementation:**

- Participate in TEDEC's Working Group.
- Work with tidal power developers to identify appropriate technologies and sites for tidal power projects in Maine.

*Status: On-going.*

*OEIS has been monitoring the work of the TEDEC*

### **Objective:**

Create economic impact overview for tidal power development in Maine.

#### **Implementation:**

- Coordinate with MMA on research and certification program (DOE and private funding).
- Promote manufacturing sector of tidal power technologies.
- Establish Maine as a leader in tidal power technology certifications.
- Establish Maine as a leader in tidal power consulting services and research and development.

### **Objective:**

Create public private partnerships in Maine with national and international tidal power companies.

#### **Implementation:**

- Where feasible, list all companies investing in tidal power in North America.
- Explore the creation of a tidal power manufacturing sector in Maine.
- MMA research and certification program (DOE and private funding).
- Establish Maine as a leader in tidal power technology certifications.
- Establish Maine as a leader in tidal power consulting services and research and development.

*Status: On-going.*

*The Department of Environmental Protection coordinated an MOU with the Federal Department of Energy and the State of Maine to encourage tidal development in Maine.*

### **Goal:**

**Work with State Government to adopt an overall goal of new, renewable power generation at State facilities.**

---

### **Objective:**

Work with Bureau of General Services (BGS), Maine Department of Transportation (MDOT), Maine Department of Education (MDOE), and other relevant State agencies to develop an aggressive plan for investing in the generation of clean renewable power at State facilities.

#### **Implementation:**

- ✓ Create an up-to-date data-base of existing facilities and their energy profiles.
- ✓ Reduce the State Government's dependence on oil by expanding the use of biomass and biofuels at State facilities.
- Develop screening criteria for identifying appropriate projects.

- Continue effort to use biomass and “bio-oil” at certain State facilities.
- Continue efforts to site small wind, solar and geothermal energy systems at State facilities.
- Pursue implementing co-generation plants at State facilities.
- Seek a substantial increase in funding for renewable energy upgrades through a substantial bond issue or other funding mechanism.

*Status: On-going.*

*BGS is working on compiling comprehensive statewide and individual facilities' energy information.*

**Goal:**

Seek to develop on-site clean, renewable energy projects at appropriate state facilities.

---

**Objective:**

Work with BGS, MDOE, MDOT, DOC and other state agencies to develop an aggressive plan for investing in clean renewable power at state facilities.

**Implementation:**

- Create an up-to-date data-base of existing facilities and their energy profiles.
- Develop screening criteria for identifying appropriate projects.
- Seek a dramatic increase in funding for energy upgrades through a substantial bond issue or systems or other funding mechanism.

*Status: In-progress.*

*BGS is working on compiling comprehensive statewide and individual facilities' energy information.*

*A number of renewable projects are being implemented at state facilities. These include: an installed geothermal plant at the Skowhegan State Policy barracks, a biomass plant at Mountain View Youth Development Center to be completed in 2011, a detailed cogeneration study underway at the East Campus and a wind study underway at the Mountain View Youth Development Center.*

**Objective:**

Continue to work with BGS, Department of Corrections and other state agencies to select a site suitable for micro-wind power.

**Implementation:**

- Obtain site plan for and determine best location for micro-wind site.

- Collect technical data for selected site including power interconnection and layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by BGS or other agencies.

*Status: On-going.*

*A wind study is currently underway at the Mountain View Youth Development Center.*

**Objective:**

Work with BGS and other state agencies to select a site suitable for solar thermal application.

**Implementation:**

- Obtain site plan for and determine best location for solar thermal site.
- Collect technical data for selected site including power interconnection and layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by BGS or other agencies.

**Objective:**

Work with BGS and other state agencies to select a site suitable for geothermal energy application.

**Implementation:**

- ✓ Obtain site plan for and determine best location for geothermal site.
- ✓ Collect technical data for selected site including power interconnection and layouts.
- ✓ Perform precursory design to create project scope, budget and potential savings.
- ✓ Create project presentation for approval and funding by BGS or other agencies.

*Status: Completed..*

*A geothermal plant is in operation at the Skowhegan State Police barracks.*

**Objective:**

Coordinate with the Department of Environmental Protection (DEP) and other state agencies to lead a stakeholder group to identify potential areas of concern with regard to

groundwater and surface water resources from potential sources of pollution related to geothermal siting and operations.

### **Implementation:**

- ✓ Include representatives of the geothermal design, installation, and well drilling industries, the Maine Groundwater Association, and other appropriate parties.
  - ✓ Identify areas of concern in the potential siting and operation of geothermal heating systems.
  - ✓ Explore and consider statutory changes to the responsibilities of the Well Drillers' Commission, current DEP rules, and the establishment of standards and guidance for future geothermal development.

*Status: Completed.*

*As a result of the stakeholder group and LD 860 An Act Relating to Geothermal Heat Exchange Wells, geothermal heat exchange wells are now under the responsibility of the Maine Water Well Commission (in order to protect groundwater from contamination). By January 1, 2010, the Maine Water Well Commission was required to provisionally propose initial rules to the Legislature for review by the Joint Standing Committee on Natural Resources establishing rules for a licensing structure for geothermal heat exchange well drillers and geothermal heat exchange well pump installers and other laws applicable to well drillers and pump installers. LD 174 Resolve, Regarding Legislative Review of Portions of Chapter 232: Well Drillers and Pump Installers Rules, a Major Substantive Rule of the Department of Health and Human Services is currently pending before the Natural Resources Committee.*

### **Objective:**

Investigate the integration of carbon sequestration technology at a state facility.

### **Implementation:**

- Select one state facility in Augusta and obtain all process and technical data.
    - Boiler nameplate
    - Fuel: Type and quantity
    - Stack data and physical sight equipment footprints
  - Pre-engineer the chosen site for installation of carbon sequestration technology.
  - Create and issue a project proposal for application including carbon credits.
  - Implement the project and monitor emissions performance.

## Goal:

**Work with public and private schools across the state to facilitate energy alternative demonstration projects.**

**Objective:**

Work with the BGS and Maine School District Superintendents to create a grant program to be housed in the new energy efficiency, conservation and weatherization entity for energy upgrades for public and private schools to upgrade their energy systems.

**Implementation:**

- Create a master database of schools and their energy profiles.
- Create a prioritization matrix for energy upgrades.
- Secure funding for grant program through energy efficiency entity.

**Objective:**

Remove outdated regulations that stand as barriers to alternative energy projects in schools.

**Implementation:**

- Work with BGS staff and school facilities directors to understand regulatory environment.
- Work with the Fire Marshal and the office of financial regulation to understand intent behind regulation.
- Create legislative recommendations to modernize regulator environment.

**Objective:**

Perform research to determine one Maine school suitable for wood chips/wood pellets.

**Implementation:**

- Obtain technical and energy data from school selected.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by BGS or other agencies.

**Objective:**

Perform research to determine one Maine school suitable for geothermal energy.

**Implementation:**

- Obtain technical and energy data from school selected.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by BGS or other agencies.

**Goal:**

**Support research at the University of Maine to create cellulosic ethanol from paper making waste.**

---

**Objective:**

Strengthen the relationship with the University of Maine and their partnership with private companies in the development of ethanol from paper making waste.

**Implementation:**

- Coordinate resources for research endeavors with State and Federal agencies.
- Foster public/private sector partnerships/alliance for ethanol from pulp project.
- Support existing funding resources from Federal, State and private sector that support the Universities' efforts on the ethanol from pulp project.

**Goal:**

**Assist in the development of bio-fuel and bio-mass energy plants using Maine renewable resources.**

---

**Objective:**

Continue working with biomass and bio-oil companies on pilot projects.

**Implementation:**

- Continue working with biomass and bio-oil companies and collaborate on efforts for Maine.
- Create an action plan for biomass and bio-oil “off-take” projects in Maine and coordinate a site visit to biomass and bio-oil refineries with state and business leaders.
- Coordinate with the private sector regarding bio-oil transportation and distribution.
- Create project lists for fuel-oil to biomass or bio-oil conversions at State facilities.
- Prioritize the list.
- Research and coordinate DOE funding for piping retrofits.
- Create detailed project implementation schedule for all approved projects.
- Create and facilitate measurement and verification protocol for savings and emissions.

**Objective:**

Work with the DOC regarding biomass and bio-oil refineries using indigenous Maine fiber.

**Implementation:**

- ✓ Work with DOC regarding a biomass and bio-oil refinery.
- ✓ Obtain all metrics for state owned woodlands considered for refinery fiber.
- Present project model to biomass and bio-oil companies for evaluation of potential State bio-mass and bio-oil refinery.

***Status: On-going.***

*DOC continues to work with OEIS and provide businesses interested in locating bio-oil refineries in Maine with information on the availability and sourcing of sustainable fiber and market history of fuel sources. DOE has gathered information regarding sustainable harvest levels on DOC owned/managed forestland.*

**Objective:**

Select a Maine State facility to switch to 100% biomass or bio-oil for heating.

**Implementation:**

- ✓ Continue working with BGS to select state facilities for migration from fuel-oil to biomass or bio-oil for heating.
- ✓ Obtain existing fuel oil usage data and physical plant data.
- ✓ Perform site audit to obtain site specific technical data and physical layouts.
- ✓ Perform precursory design to create project scope, budget and potential savings.
- ✓ Create project presentation for approval and funding by BGS or other agencies.

***Status: On-going.***

*The Charleston Correctional Facility currently has two biomass boilers that burn approximately 1,200 cords of wood per year.*

*A biomass plant will be installed at Mountain View Youth Development Center in Fiscal Year 2011*

*BGS tested bio-oil in 2008 but it did not prove viable and is not being used at this time.*

**Objective:**

Select a Maine State facility to switch bio-mass tri-generation or cogeneration.

**Implementation:**

- ✓ Work with BGS to select one state facility that is suitable for bio-mass energy projects.
- Perform site audit to obtain site specific technical data and physical layouts.

- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by BGS or other agencies.

*Status: on-going.*

*A study is underway for the East Campus for an appropriate cogeneration or tri-generation facility.*

**Objective:**

Encourage private sector investment in bio-mass tri-generation or cogeneration facilities.

**Implementation:**

- Research and determine one private sector application for bio-mass tri-generation.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by BGS or other agencies.

**Objective:**

Research and create a pilot project for a neighborhood to convert from fuel oil to bio-mass or bio-oil.

**Implementation:**

- Research and identify a Maine neighborhood pilot project for biomass or bio-oil conversion.
- Create action plan for neighborhood bio-oil conversion.
- Facilitate stake-holders roundtable to discuss action plan for conversion to bio-oil.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by stake holders and homeowners.

**Goal:**

**Increase use of bio-fuels and alternative energy in state-occupied buildings.**

---

**Objective:**

Continue working with BGS and other relevant state agencies to monitor one state building's use of and eventual conversion to biomass or bio-oil.

**Implementation:**

- ✓ Continue discussions between biomass or bio-oil vendor and BGS staff.
- Work with BGS and other relevant state agencies to develop detailed scope of work and budget for biomass or bio-oil retrofit project.
- Obtain five years of fuel usage, electric usage, degree days and occupancy data.
- Create monitoring protocol for measurement and verification.
- Create monthly reports on performance.
- Create final report of findings and issue to OEIS and BGS.

*Status: On-going.*

*A biomass plant will be installed at Mountain View Youth Development Center in fiscal year 2011.*

*BGS tested bio-oil in 2008 but it did not prove viable and is not being used at this time.*

**Objective:**

Work with BGS and other relevant state agencies to identify state facility for bio-mass application (*wood pellet or chips*).

**Implementation:**

- Identify one State facility that will switch to bio-mass for heating fuel.
- Create detailed scope of work and budget for bio-mass retrofit project.
- Obtain five years of fuel usage, electric usage, degree days and occupancy data.
- Create monitoring protocol for measurement and verification.
- Create monthly reports on performance.
- Create final report of findings and issue to OEIS and BGS.

**Goal:**

Assist public schools with converting from fossil fuels to bio-fuels.

---

**Objective:**

Research and select one school district for conversion from fuel oil to biomass or bio-oil.

**Implementation:**

- Select one school that is suitable for fuel oil to biomass or bio-oil conversion.
- Perform site audit to obtain site specific technical data and physical layouts.

- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by BGS or other agencies.

**Goal:**

**Encourage the development of ethanol-blend fueling stations.**

---

**Objective:**

Facilitate a roundtable discussion with major transportation fuel companies.

**Implementation:**

- Research ethanol-blend fueling stations and demand for Maine.
- Create roundtable agenda and invite stakeholders.
- Facilitate roundtable discussions on ethanol-blend fueling stations in Maine.
- Document meeting notes and identified concrete action plan items.
- Create a report of findings for OEIS Director with recommendations for improvement.

**Objective:**

Explore the potential for development of E-85 ethanol-blended fuel pumping stations in Maine.

**Implementation:**

- Create a 10-year plan to encourage the development of ethanol pumping stations in Maine.
- Encourage the development of markets for the future production of cellulosic ethanol.

**Goal:**

**Increase the development and use of cogeneration and tri-generation in the State of Maine.**

---

**Objective:** OEIS, in conjunction with the private sector, Executive Department, utilities and the Energy Resources Council, will undertake a project to examine opportunities for, eliminate barriers to, and create incentives for the installation of energy systems that conserve energy through the reuse of waste heat (cogeneration). (Resolve 183, 2008.)

**Implementation:**

- ✓ Identify all barriers and opportunities to private and government sector investment in tri-generation/cogeneration.

- ✓ Identify all current regulations related to the development of cogeneration/tri-generation.
- ✓ Work with private stakeholders and government regulators to identify barriers and develop solutions.
- ✓ Obtain input from key utility leaders in Maine on cogeneration/tri-generation.

*Status: In-progress.*

*OEIS created and led a Combined Heat and Power/Waste Heat Recovery Task Force that addressed the above issues. The final report addressing the above implementation measures and issues will be presented to the Utilities and Energy Committee on March 15, 2010.*

**Objective:**

Identify tax and other financial incentives and potential policies to encourage the development of cogeneration/tri-generation systems.

**Implementation:**

- ✓ Identify all current incentives related to the development of cogeneration/tri-generation.
- ✓ Work with private stakeholders and government regulators to identify incentives, examine technical and policy issues to encourage cogeneration and tri-generation systems.

*Status: The above implementation measures and issues are covered in the work of the Combined Heat and Power/Waste Heat Recovery Task Force and will be included in the final report.*

**Objective:**

Submit a report to the Utilities and Energy Committee by December 1, 2009 that includes findings and recommendations regarding energy conservation through the reuse of waste heat (cogeneration and tri-generation). (Resolve 183, 2008.)

**Implementation:**

- ✓ Establish a working group of private and government stakeholders to establish findings and legislative recommendations to encourage the use of waste heat (cogeneration and tri-generation) in both the government and the private sectors.

*Status: The above implementation measures and issues are covered in the work of the Combined Heat and Power/Waste Heat Recovery Task Force and will be included in the final report.*

**Objective:**

Identify and initiate a cogeneration/tri-generation project at one hospital; one industrial site; and one multi-unit housing site.

**Implementation:**

- Investigate low cost project funding sources with existing public and private sources.
- Explore the creation of new funding through either a bond issue or other funding mechanism.
- Create site selection process and initiate dialogue with industrial, housing and hospital sectors.
- Create partnerships with private enterprise to create “Volunteer Project Teams” to perform preliminary work scope at no cost up front until project is funded. Teams will provide pre-engineering, feasibility studies and detailed scopes and cost estimates.
- Publicize each phase of the project implementation with media and Governor.
- U.S. EPA to provide certificate of emissions reduction; ribbon cutting, education and outreach.

**Objective:**

Educate State and private business leaders about the cogeneration/tri-generation energy model using the U.S. Environmental Protection Agency’s Combined Heat and Power (CHP) “Partnership Educational Outreach Program”.

**Implementation:**

- Work with the U.S. EPA to hold an educational and outreach forum on cogeneration/tri-generation.
- Develop an OEIS “Energy 101” fact sheet on cogeneration/tri-generation and post on website.

**Goal:**

**Encourage the strategic location and development of industrial and district heating energy generation clusters.**

---

**Objective:**

Create State-wide map of industrial facilities and potential district heating energy plants and “bubble” target areas for “Eco-Park” sites like BNAS Redevelopment, Madison’s “Backyard Beauties”, Auburn Industrial Park, City of Brewer, Bangor Air-port Complex, Millinocket, Saco-Island, and others.

**Implementation:**

- Create state-wide map of industrial and potential district heating power plant sites.
- Identify electrical and thermal energy used by each industrial site.

- Identify merchant plant capacity and fuel types.
- Identify potential clusters for existing and future growth areas.
- Create list of areas where a district heating or “Eco-Park” would work for private or public tri-generation facility using biomass or another fuel source.
- Create priority list for three sites to pursue for development of a district heating or Eco-Park.

**Objective:**

Create project team for the pre-development of one district heating or Eco-Park site.

**Implementation:**

- Perform pre-engineering feasibility study for a district heating or Eco-Park location selected.
- Create “Volunteer Project Team” to perform preliminary work scope at no cost up front until project is funded. Team will provide pre-engineering, feasibility studies and detailed scopes and cost estimates.
- Publicize each phase of the project implementation with all media and Governor.

**Goal:**

Assist the University of Maine and other colleges with the use of bio-mass/bio-fuel cogeneration and tri-generation energy systems.

---

**Objective:**

Create an educational forum for Universities and Colleges regarding bio-fuel applications.

**Implementation:**

- Utilize U.S. EPA’s “CHP Training Programs” for forum on tri-generation energy model.

**Objective:**

Select one site for bio-mass tri-generation application.

**Implementation:**

- Research one college that is suitable for bio-mass tri-generation.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding college or other agencies.

**Objective:**

Work with one college in Maine to switch from fuel oil to biomass or bio-oil usage.

**Implementation:**

- Research one college that is suitable for switching from fuel oil to biomass or bio-oil conversion.
- Perform site audit to obtain site specific technical data and physical layouts.
- Perform precursory design to create project scope, budget and potential savings.
- Create project presentation for approval and funding by college or other agencies.

**Goal:**

**Increase the generation of renewable power into the State of Maine's electricity portfolio.**

---

**Objective:** Increase the existing Renewable Portfolio Standard (RPS) requirement in Maine above the existing requirement of 10% of new renewable energy by 2017.

**Implementation:**

- Develop a solar power energy goal and achieve that goal by 2020 as part of the State's RPS.
- Develop a biofuels energy goal and achieve that goal by 2020 as part of the State's 2020 RPS.
- Increase support for "community-owned" energy and include a 1% carve out in the RPS.
- Meet the State's wind power goals by 2020.
- Increase the RPS requirements starting in 2017 to 25% by 2030.

### **III. IMPROVING TRANSPORTATION AND FUEL EFFICIENCIES**

**Goal:**

**Support and enhance state and private sector efforts for education and awareness of alternative transportation options and promotion of a low-carbon fuel standard and fuel efficient vehicles.**

---

**Objective:**

Work with MDOT, GOMAINE, the private and public transportation sectors, and the auto and truck industries to continue outreach campaigns on alternative transportation options and fuel efficient vehicles.

**Implementation:**

- ✓ Continue "Share Your Ride" statewide PSA campaign to promote ridesharing and carpooling.

- ✓ Continue statewide radio campaign for the GO Maine program to promote the state's vanpool program.
- ✓ Work with private employers, transit providers and the media to promote alternative transportation options.
- ✓ Continue to provide fuel-wise and fuel-efficient vehicle tips to the public.
- ✓ Provide information on park-and-ride lots to the public.
- ✓ Increase awareness of transit commuter benefits to employees and employers, and thus transit use, through the "Commuter Choice Pre-Tax" program.
- Work with transit providers and MDOT to continue "Free Fare Fridays".
- Utilize Variable Message Signs (VMS) on highways to reach tens of thousands of commuters and other travelers to generate public awareness of alternative transportation tips and options.

**Status:** *On-going.*

*A new park and ride website has been completed as well as a joint survey with the Maine Turnpike Authority. Free Fare Friday has been discontinued in light of participation in the GO Maine Nation campaign.*

**Objective:**

In collaboration with DEP, monitor and coordinate state policy and programs to encourage adoption of a low-carbon fuel standard and reduction of vehicle miles traveled in the State.

**Implementation:**

- Participate in the State's Climate Action Plan's "VMT group" and report to the Legislature on annual progress made and make recommendations on potential future policies.

**Goal:**

**Support state programs that encourage the use of carpools, vanpools, car-sharing and telecommuting.**

---

**Objective:**

Work with MDOT, GO MAINE, other state agencies and the private sector to expand existing commute options.

**Implementation:**

- ✓ Continue to increase the GO Maine commuter database and expand the GO Maine web-based/real-time "Trip Planner".

- ✓ Continue to add GO Maine commuter vans beyond the current 12 for ride-sharing.
- Actively recruit car-sharing companies to locate and provide services in Maine.
- Expand existing state telecommuting policy beyond the existing pilot program.
- ✓ Encourage state and private employees to take advantage of telecommuting programs.
- Investigate the use of private sector vans and busses for additional vanpool and transit capacity.
- Consider implementing a statewide electronic fare card for use on all transit..
- ✓ Promote the use of preferential parking to reward carpools, vanpools and car-sharing participants.
- Investigate requiring Transportation Demand Management Associations in large population centers to encourage alternative transportation programs for large employers.

*Status: On-going.*

*The GO Maine database has expanded to over 10,000 registered participants and the GO Maine van fleet has tripled in the last year. Portland transit providers are investigating the use of a statewide electronic fare card for use on all transit. A car-share company has located in Portland and several University of Maine campuses without recruiting from the State.*

#### **Goal:**

**Support state transportation investments and encourage private investment for enhanced passenger and freight transportation systems.**

---

#### **Objective:**

Work with MDOT, the Northeast Passenger Rail Authority, other railroads and the private sector to prioritize transportation investments in passenger transit and rail infrastructure.

#### **Implementation:**

- Make transit and rail a higher priority in all State transportation planning and funding requests.
- Increase transit capacity (more buses, more frequency) and upgrade existing fleet.
- Implement a “customized transit” approach in rural areas ensuring flexibility that incorporates an internet-based system to connect riders with transit providers.

- ✓ Work with the Maine Congressional Delegation and the Obama Administration to actively pursue federal funding for transit, rail and other transportation-related program funding.
  - Investigate potential bonding to fund rail and transit expansion projects.
  - Amend state Tax Increment Financing (TIF) rules to include the use of funds for transit operating and development of transit-oriented developments.
  - Streamline the State transit procurement process to ensure timely delivery of new busses.
  - Investigate building and manufacturing transit buses in Maine.
- ✓ Continue to work toward expanding the Downeaster train to Freeport, Brunswick and beyond.
  - Augment the passenger rail network on the Downeaster route with additional stops at strategic locations along the way, using self-propelled cars.
- ✓ Continue working with the Northern New England Passenger Rail Authority to increase routes and capacity on the Downeaster.
  - Pursue rebuilding the Portland-Westbrook section of the Mountain Division railroad to be developed into a commuter rail and freight rail corridor.

**Status:** *On-going.*

***\$35 million in ARRA funds are being awarded to the State of Maine for expansion of the Downeaster train service from Portland to Brunswick for service by 2012.***

**Objective:**

Work with MDOT and freight railroads to prioritize investments in freight transportation.

**Implementation:**

- ✓ Continue the Industrial Rail Access Program that provides immediate relief for businesses in need of connections to railroads.
- Continue the Local Freight Rail Assistance Program that provides loans to owners of property adjacent to rail lines and railroads to improve their access to rail service.
- ✓ Implement the Truck Efficiency Tax Incentives Program that provides incentives for small fleet motor carrier operations to save energy by improving fuel efficiency, reducing emissions, reducing idling, speed controls, advanced tire technology, advanced lubricants, and empty weight reductions.
- ✓ Continue to advocate for a 100,000 lb. federal weight limit for Maine Interstates in order to provide relief to Maine shippers and truckers at no cost to increase payload productivity up to 44% and reduce fuel consumption per loaded ton. .
- ✓ Continue funding rail/truck intermodal facilities that reduce highway congestion and give shippers another cost-effective option to move their products. on-going.

- Work to re-open the Lewiston Lower Road rail line to the Lisbon Industrial Park. Opened the rail line from Brunswick to Topsham.
- Explore implementing new technology for freight trucks' on-board systems for anti-idling through public/private partnerships including but not limited to Maine Motor Transport driver training programs.

**Status:** *On-going.*

*The approved November, 2009 bond measure included \$1 million for the Industrial Rail Access Program, loans for the Local Freight Assistance Program were made available in 2009 and the Lewiston Lower Road rail line was opened and extended from Brunswick to Topsham. The Truck Efficiency Tax Incentives Program is being implemented in private fleets.*

*A 1-year pilot program was passed into Federal law in December, 2009. (A state law is pending to accept the federal changes.) This change will facilitate a fuel savings from large trucks between 14-21% statewide.*

**Objective:**

Work with MDOT, local transit providers and municipalities to prioritize transportation investments in bike and pedestrian infrastructure

**Implementation:**

- Allow bikes on transit buses and trains.
- Stretch federal funding for bike amenities – 50% match for private sector, 20 to 30% match for public sector.
- Fast-track pedestrian improvements that allow better access to transit such as signs and cross-walk striping.
- Require bike racks or bike parking amenities for all new development permits.
- Aggressively pursue funding for additional bike lanes in urban areas.
- Fast-track Safe Routes to School funding to reduce the huge amount of driving and cost for getting kids to school by buses and private cars. Improve the conditions for walking and cycling around urban and suburban schools, including sidewalks and cycling facilities, organize walking school buses and other human powered options.

**Status:** *On-going.*

*Status: Most state owned buses are being purchased with bike racks. The State of Maine continues to work in partnership with federal and local partners to create strategic investments to improve bicycle and pedestrian connections through improved planning and infrastructure improvements. Maine has created a bike parking program to assist local municipalities, businesses, schools, etc. with the purchase of bike racks.*

*The Maine Safe Routes to School program continues to fund infrastructure improvements around schools and assists in helping schools create “walk and bike to school” programs.*

*A study is under development to determine priorities for improving pedestrian connections to transit stops in the Greater Portland Region.*

**Objective:**

Work with MDOT, other relevant state agencies and the private sector to increase the use of alternative transportation fuels, including a low-carbon fuel.

**Implementation:**

- Develop a strategic plan to expand alternative fuel refueling infrastructure throughout the State.
- Continue working with the 10 “RGGI” states to implement a low-carbon fuel standard.
- Work with local utilities and Compressed Natural Gas (CNG) refueling station providers to identify and contact potential users of CNG refueling infrastructure with the goal of developing sufficient demand to support a second publicly accessible fast fill CNG refueling station in Portland.
- Work with State agencies to place additional alternative fuel vehicles in the state fleet.
- Work with school districts and other stakeholders to encourage use of alternative fuel vehicles and alternative fuels as appropriate in school bus fleets.
- Develop greater fuel diversity for public transit, public works, state and private fleets to avoid dependency on one fuel when prices increase.
- Explore the viability of converting sewage treatment gases (biogas) into methane for pipeline use and/or in stationary and vehicle engines. This has the added advantage of reducing harmful green house gases emitted by sewage treatment facilities.
- Work with propane providers and interested fleets, especially in rural areas where propane is the alternative fuel of choice, to build propane fueling infrastructure and purchase the vehicles to support it.
- Expand incentive program to communities to purchase clean fuel vehicles. (MDOT has increased the state match of federally funded projects to 15%, reducing the local share to 5%.)
- Reinstate State tax incentives for the purchase of biodiesel fuel and the purchase of hybrid cars.

***Status: On-going.***

***DEP is working as part of an 11-state regional coalition on the establishment of a low carbon fuel standard for the region.***

*In December 2009, Maine signed an MOU with 11 states (10 RGGI states plus Penn) to continue pursuing the development of a LCFS, agreed to do a comprehensive economic analysis of a potential program element and a timetable to complete the action steps. Policy elements and the development of a model rule is could will be developed next year.*

**Goal:**

Encourage greater coordination of land use and transportation policy to reduce vehicle miles traveled and decrease greenhouse gas emissions.

---

**Objective:**

Work with other state agencies and non-profit organizations to identify and implement key land use planning policies that promote “smart growth” through the development of mixed-use, compact development.

**Implementation:**

- Locate new housing developments near transit and existing services.
- Work with and provide incentives to developers that promote “smart growth”.
- Support “smart growth” policies that discourage sprawl development.
- Support “location efficient” mortgages that provide incentives for living near jobs and services.
- Support “asset based plans” for the six regional economic districts based on identified critical quality of place assets in each district that reduce sprawl and promote local downtowns.
- Develop a model ordinance that encourages mixed-use development and provides alternatives to driving.
- Require large commercial and development projects to locate in “designated growth areas” or close to existing infrastructure.
- Require large residential subdivisions to be located in “designated growth areas”, close to existing infrastructure or be a conservation subdivision.
- Require schools to be located in “designated growth areas” or close to existing infrastructure.

***Status: On-going.***

*State Planning Office continues to promote smart growth through the comprehensive planning process by providing technical assistance and comprehensive planning to local communities. In 2009, the SPO completed a publication, [http://www.maine.gov/spo/landuse/docs/traditional\\_neighborhood\\_handbook.pdf](http://www.maine.gov/spo/landuse/docs/traditional_neighborhood_handbook.pdf) "Creating Traditional, Walkable Neighborhoods: A Handbook for Maine Communities", which promotes smart growth elements of compact neighborhood design, walkability, and community character.*

*SPO and MeDOT are collaborating on regional efforts to link land use and transportation planning. The Gateway 1 Project has evaluated the land use and transportation issues along the Route 1 corridor between Brunswick and Stockton Springs. Currently, the towns along the corridor are working toward adopting and implementing strategies from the Gateway 1 plan. The Gorham East-West study is also looking at the link between land use and transportation issues. It is at a much earlier stage in the study and planning process.*

*Asset-based inventories of the State's economic development districts are being planned and taking place as a part of the 'Mobilize Maine' effort.*

*Discussion is underway to include in Site Law that large residential subdivisions be located in "designated growth areas".*

**Objective:**

Work with other state agencies and non-profit organizations to identify and implement key transportation planning policies that promote "smart growth" through the use of transit-oriented development.

**Implementation:**

- ✓ Encourage "walkable access" in existing transit corridors to be included in State comprehensive plans.
- Do a planning assessment of existing and future transit corridors for their Transit Oriented Development potential.
- Target transportation investments in growth areas to spur efficient patterns of development, encourage infill and redevelopment.
- Develop a model "parking reduction" ordinance that allows for fewer parking spaces at new developments located near transit.
- Develop a model "trip-reduction" ordinance to provide incentives to locating new development on transit routes and/or in walkable downtown districts.
- Require smart growth policies be in place before large transportation investments are made.
- Revise and enforce school siting policies to recognize the qualitative benefits of rehabilitating and modernizing existing neighborhood schools and avoiding greenfield school construction that often increases transportation.
- Allow local or Regional Option Taxes that allow municipalities and/or regions to enact sales tax add-ons to fund local transportation projects and pay operating costs of transit.

*Status: On-going.*

*"Walkable access" is included in Chapter 208, the State's comprehensive planning rule.*

*Title 30-A sections 5223, 5224 and 5225 allow for the development of a Transit Oriented Development TIF District. This statute enables municipalities to use TIF*

*revenue for new or expanded transit functions, including difficult to obtain operational costs.*

***LD 846, Resolve, Directing the Department of Transportation (MaineDOT) to Study Ways to Reduce Energy Use and Promote Efficiency along Major Transportation Corridors, was passed in 2009 and a final report to the Joint Standing Committees on Transportation and Natural Resources was due on January 31, 2009.***

**Objective:**

Research forest products' industry mileage traveled between resource and process.

**Implementation:**

- Survey major stakeholders to determine transportation profiles.
- Compile all data into spreadsheet and analyze.
- Create a report of findings for OEIS Director with recommendations for improvement.

**Goal:**

**Support public-private partnerships to develop “explorer” transit systems for tourist destinations.**

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**Objective:**

Coordinate and facilitate a roundtable discussion with stakeholders for explorer transit.

**Implementation:**

- Create agenda for roundtable and invite stakeholders to attend.
- Use Acadia National Park as the “explorer” model for other tourist-based destinations in the state.
- Facilitate roundtable and document findings and concrete action items.
- Issue report to on roundtable event.

## **IV. UPGRADING ELECTRICITY AND NATURAL GAS SERVICES, TRANSMISSION SYSTEMS AND INFRASTRUCTURES**

**Goal:**

**Support the development of electrical transmission projects in Maine for increased reliability and to accommodate new Maine-based wind power from both on-shore and off-shore projects.**

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**Objective:**

Work with Maine utilities and interested parties to obtain “socialized” and other collaborative means of funding from the ISO-NE for proposed electrical transmission projects.

**Implementation:**

- ✓ Continue working to support policies at the ISO-NE for “socialized” transmission funding in New England.
- ✓ Facilitate discussions with Maine utilities and interested parties to determine action for project support among other New England states.
- ✓ Continue to encourage all parties to explore mutually beneficial, alternative funding mechanisms for transmission funding in New England.

*Status: On-going.*

*The MPUC is involved in a number of ISO-NE Committees where they advocate for “socialized” transmission funding in the region.*

*OEIS communicates frequently with Maine utilities and other interested parties to monitor project support for transmission projects among New England states.*

**Objective:**

Continue working with the ISO-NE, other New England states, the Northeast International Committee on Energy (NICE) and the New England Governors’ Conference (NEGC) to determine an appropriate agreement on “socialized” and other collaborative means of funding transmission costs.

**Implementation:**

- ✓ Continue to represent Maine’s interests in various ISO-NE and NEGC meetings and forums.
- ✓ Continue to pursue an open dialogue with the ISO-NE and NEGC key staff.

*Status: On-going.*

*OEIS and the MPUC participate with and on the committees mentioned above to come to an agreement on transmission financing in the region.*

**Objective:**

Support and encourage Federal funding of an enhanced “smart grid” transmission system in Maine and New England.

**Implementation:**

- ✓ Work with the Maine Congressional delegation to obtain Federal funding for transmission projects in Maine.
- ✓ Work with various state-related organizations, the NICE Committee, the NEGC, the Eastern Canadian Provinces, DOE, U.S. EPA, the National Governors Association and the Obama Administration to obtain Federal funding for transmission projects in Maine.

*Status: on-going.*

*ARRA funding has been made available, with the support of the Governor, to both Central Maine Power and Bangor Hydro for the installation of smart meters.*

**Goal:**

**Support the development of electrical transmission projects in Maine to accommodate economically and environmentally sustainable renewable energy from Northern Maine and Canada.**

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**Objective:**

Continue working with the NEGC and Eastern Canadian Premiers on an agreement on the transmission of clean, renewable power from Canada into New England.

**Implementation:**

- ✓ Continue to lead Governor Baldacci's effort with the New England states to craft a proposed energy policy initiative to the Eastern Canadian Premiers on clean, renewable bilateral power transmission.
- ✓ Continue to work with the MPUC, the Maine Public Advocate and New Brunswick to develop an MOU on clean, renewable, bilateral power transmission.
- ✓ Continue to Chair the NEGC Power Planning Committee and co-chair the NICE to investigate, discuss and recommend potential strategies for clean, renewable, bilateral power transmission between New England and the Eastern Canadian Provinces.

*Status: on-going.*

*Maine has worked with the other New England states to develop a New England Governors' Renewable Energy Blueprint to guide the development of New England's renewable resources while working with the Eastern Canadian Provinces.*

*Efforts to develop an MOU with New Brunswick have terminated due to the potential MOU of Hydro Quebec to acquire New Brunswick Power's generation and transmission assets.*

*OEIS continues to participate in the above mentioned regional and international energy-related committees on behalf of the Governor.*

**Goal:**

Promote natural gas as a “transitional fuel” by expanding the natural gas infrastructure to all sectors in Maine.

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**Objective:**

Convene a year-long, natural gas “dialogue” with all major natural gas players in the state to define the critical challenges regarding the development of traditional natural gas and Liquified Natural Gas (LNG) in Maine and to identify opportunities for the development of traditional natural gas and LNG projects where economically, socially and environmentally feasible.

**Implementation:**

- Establish a host committee of key natural gas industry leaders.
- Organize a “kick-off” reception for key natural gas industry, regulators and other stakeholders to be addressed by Governor.
- Conduct a series of 4-5 policy dialogue meetings over the next year to discuss important issues facing the natural gas industry, potential expansion and potential barriers and solutions.
- Continue to explore the feasibility of the development of a LNG facility in Maine.

*Status: On-going.*

*OEIS has begun planning for the establishment of a natural gas “dialogue”. Current plans are to hold a “kick-off” event in March of 2010.*

**Objective:**

Facilitate opportunities for private industry and residential customers to connect with natural gas companies in Maine to explore potential natural gas expansion projects.

**Implementation:**

- ✓ Continue to facilitate relationships and work with natural gas utilities in Maine to develop specific expansion projects to all sectors.
- ✓ Recruit large potential customers to anchor gas network expansions.

*Status: On-going.*

*OEIS continues to coordinate with private companies and Maine’s natural gas providers to discuss the potential for expanding natural gas infrastructure in all sectors as well as recruiting large anchor customers for increasing the use of natural gas over other fossil fuels.*

## V. STATE OF MAINE LEADING BY EXAMPLE

### Goal:

Continue “lead by example” initiatives in Maine by implementing progressive energy policies applicable to State, County and local governments.

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### Objective:

Continue the State’s “Clean Government Initiative” and expand upon current energy-saving policies.

### Implementation:

- ✓ Continue purchasing 100% of “green electricity” at State facilities.
- ✓ Continue and increase the purchase of biofuels for heating at state facilities and expand to transportation fleet.
- ✓ Continue to incorporate LEED standards for all new and renovated state buildings.
- ✓ Continue to expand the hybrid car fleet from its current 90 hybrid cars.
- ✓ Continue to require state-purchased vehicles to meet 30 miles per gallon fuel economy.
- ✓ Continue to expand the purchase of environmentally friendly commodities and services.
- ✓ Continue to expand the purchase of paper and paper products with 30% post-consumer content.
- ✓ Pursue the purchase of “wholesale power” by all State facilities.

*Status: On-going.*

*The above implementation measures have all continued in 2009. The Renewable Energy Credits purchased to cover the 100% “green electricity” is generated from Maine hydro facilities in Rumford and Auburn.*

### Goal:

Continue to plan for Maine’s long term energy independence and security by using a 50-year planning horizon.

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### Objective:

Monitor progress of the Plan and quantify energy reductions, benefits, and expenditures.

**Implementation:**

- ✓ Report annually to the Governor and the Utilities and Energy Committee on the progress of meeting the goals, objectives and implementation measures included in this Plan and revise as necessary.

*Status: Completed.*

*OEIS has completed its first annual report on the progress achieved on the State Comprehensive Energy Plan has been completed. However, it does not include specific quantified energy reductions, benefits and expenditures.*

**Objective:**

Advocate for the goals included in this Plan at the State and Federal levels.

**Implementation:**

- Work with the Administration and the Utilities and Energy Committee to determine top priorities, implementation measures and how to achieve them.
- Work with the Maine Congressional delegation to establish a baseline knowledge of the state's energy goals and objectives and determine how best to enlist Federal support and funding.

*Status: On-going.*

## VI. EMERGENCY PREPAREDNESS AND RESPONSE

**Goal:**

Continue to plan for an Energy Emergency.

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**Objective:**

Update the 2007 State of Maine Energy Emergency Management Plan.

**Implementation:**

- Clarify the process and procedures of the Pre-Emergency Energy Management Plan.
- Continue to collect critical information regarding the energy sources, sinks and transmission/transportation infrastructure.
- Identify additional energy hazards
- Convene meetings with other state agencies, the Energy Resource Council, private sector stakeholders, the utilities to assist in identifying issues and areas of critical concern.
- Continue to coordinate the collection, analysis and dissemination of critical energy information to the Governor, the legislature, the cabinet and the public.

- Continue to work and communicate with all relevant international, federal, regional, state, county and local officials to maintain the effectiveness of the State's Energy Emergency Management Plan.
- Continue to work with ISO-New England, the natural gas pipelines, the natural gas producers and the natural gas electricity generators to clearly identify the OP-4 Emergency Procedures, especially in the areas of natural gas electricity generation.

*Status: On-going.*