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JOHN ELIAS BALDACCI
GOVERNOR

JOHN M. KERRY
DIRECTOR
OFFICE OF ENERGY
INDEPENDENCE AND SECURITY

January 19, 2009

Maine Standing Committee on Utilities and Energy
100 Statehouse Station
Augusta, ME 04333

Dear Senator Hobbins and Representative Hinck:

I am writing to report on the "**State of Maine's wind energy goals and realization of tangible benefits**" as required by Public Law 2007, c.661 (LD 2283), the culmination of the Governor's Task Force on Wind Power Development that was in effect in 2007-2008. The Governor's Office of Energy Independence and Security (OEIS) is responsible for reporting to the Standing Committee on Utilities and Energy on the above by January 15th of each year. In addition, by December 2013, the OEIS is responsible, in consultation with other state agencies as appropriate, for conducting a full review of the status of meeting the goals for 2015 and the likelihood of achieving the goals for 2020.

The OEIS has been monitoring the progress and has made an assessment of the State's progress toward meeting the wind energy development goals established in the Maine Revised Statutes, Title 35-A, section 3404, subsection 2 and the realization of the tangible benefits of wind energy developments as well as other pertinent questions included in the law.

According to the statute, the goals for wind energy development in the State are that there be:

A. At least 2,000 megawatts of installed capacity by 2015; and
B. At least 3,000 megawatts of installed capacity by 2020, of which there is a potential to produce 300 megawatts from generation facilities located in coastal waters, as defined by Title 12, section 6001, subsection 6, or in proximate federal waters.

To accomplish the above task, the OEIS has conferred with both Department of Environmental Protection (DEP) and the Land Use Regulatory Commission (LURC), the State's two permitting and regulatory entities responsible for permitting wind projects. The OEIS has also met with and had discussions with wind power developers to gauge process and progress of wind power development in the State.

Assessment of Progress Toward Meeting Wind Power Goals:

Currently, a total of three grid-scale wind power projects are operating in the State of Maine with a total capacity of 103.5 MW. In addition, there are three grid-scale wind power projects in development with a potential total of 272.5 MW of capacity and another four projects in the discussion phase with the total potential capacity of 309.5 MW.

To date, the State of Maine has met **5.17 %** of the wind power goal in installed capacity which will rise to **18%** if all projects in the development phase are completed, and **34%** if all projects in the discussion phase are completed.

At this rate Maine will need to bring online 263 MW of capacity a year starting in 2010 to meet our goals by 2015.

The State of Maine does not have any proposed or operational off-shore wind projects at this time. However, the Governor has instituted an Ocean Energy Task Force that will provide an interim report in April, 2009 and a final report in October, 2009 to develop recommendations to pursue meeting the State's off-shore wind goals.

Current Wind Power Development Projects in the LURC's Jurisdiction:
(See attached table)

<u>Wind energy development granted permit approval by LURC.</u>
[Total operational: 57 MW in LURC jurisdiction]

1. **Kenetech** – Rezoning approved 1995, Development permit never applied for (Kibby, Skinner, Merrill Strip, and Haynestown Twps., Franklin Co.) **No project.**

2. **STETSON I**
   Evergreen Wind V, LLC (First Wind)
   a. T8 R3 NBPP and T8 R4 NBPP, Washington County
   b. *57 MW* Stetson Wind I Project (fully operational the week of January 19, 2009)
   c. The company estimated the facility would produce 164,776 megawatt-hours of energy per year, equivalent to the energy consumed by 27,500 Maine homes.
   d. Thirty-eight (38) 1.5 MW General Electric turbines
   e. Development Permit DP 4788, signed January 3, 2008
   f. Construction completed, project operational, testing underway.

3. **KIBBY**
   TransCanada Maine Wind Development, Inc.
   a. Kibby and Skinner Twps., Franklin County
   b. *132 MW* Kibby Wind Power Project
   c. The company estimated the facility would produce 357 million kilowatt- hours of energy per year, equivalent to the energy consumed by 50,000 Maine homes.
   d. Forty-four (44) 3.0 MW Vestas turbines
   e. Development Permit DP 4794, signed July 9, 2008
   f. **Construction underway; half to be completed and operational by Sept 2009, entire project scheduled to be completed by late in 2010.**

Wind energy development currently under review by LURC. [Total projected 25.5 MW]

STETSON II

1. **First Wind - accepted for processing Nov. 25, 2008 - pending**
   a. *25.5 MW,* Stetson Wind II Project
   b. Seventeen (17) General Electric 1.5 MW turbines
   c. T8 R4 NBPP, Washington County

2. **Evergreen Wind Power V, LLC. (First Wind)**
   a. Amendment B to DP 4788 submitted to allow for connection to Stetson II Wind Project – pending

3. **TransCanada Maine Wind Development**
   a. Amendments A and B to DP 4794 for changes to Kibby Wind Power Project issued in fall of 2008
   b. Amendment C for relocation of three turbines – pending

Possible wind energy development to be located in LURC jurisdiction that may be reviewed by MDEP.

1. Aroostook Wind Energy (Horizon Wind), Phase One (the so-called "Bridgewater" project)
2. Independence Wind
   a. Highland Plantation, Rangeley Plantation, The Forks Plantation
3. Nobel Environmental
   a. Grand Falls Plantation

Source: LURC, December 2008

Current Wind Power Development Projects in the DEP's Jurisdiction

Permitted projects in DEP jurisdiction [Total operational 46.5 MW in DEP jurisdiction]

A. **MARS HILL**

Evergreen Wind Power, LLC. (First Wind)

Permit #L-21635-26-A-N issued June 1, 2004 approved the construction of 35, 1.5 MW wind turbines and associated facilities on Mars Hill Mountain in Mars Hill, Maine. As permitted the Mars Hill wind project would produce *52.5 MW* of electricity. Project operational. **[Note: To date the developer has constructed only 28 of the approved turbines and is currently producing approximately *42 MW* of electricity.]**

B. **FREEDOM**

Beaver Ridge Wind, LLC.

PBR # 44177 issued on March 11, 2008 approved the construction of a storm-water management plan for the proposed Beaver Ridge wind project in Freedom, Maine. In its permit, Beaver Ridge Wind LLC proposed to build 3, 1.5 MW wind turbines and associated facilities producing a total of *4.5 MW* of electricity. Project operational.

[Note: The Beaver Ridge project was approved by the Freedom Planning Board prior to the enactment of the Chapter 661 provisions requiring certification by the department for smaller-scale wind energy developments in organized areas]

2. Pending applications in DEP jurisdiction [Proposed Total 115 MW]

A. **ROLLINS MTN.**

Evergreen Wind Power II, LLC. (First Wind) Application #L-24402-24-A-N was submitted to the department on October 30, 2008 and accepted for processing on November 21, 2008. The application proposes to construct 40, 1.5 MW wind turbines and associated facilities on Rollins Mtn. in the towns of Lee, Winn, Burlington, Lincoln and Matawaumkeag, Maine. The total expected output from the facility will be *60 MW*. The application is currently under review by the department.

B. **RECORD HILL**

Record Hill Wind, LLC. (Independence) Application #L-24441-24-A-N was submitted to the department on December 2, 2008 and accepted for processing on December 22, 2008. The application proposes to construct 22, 1.5 MW wind turbines and associated facilities on Record Hill in the town of Roxbury, Maine. The total expected output from the facility will be *55 MW*. The application is currently under review by the department.

3. Applications currently in the "discussion phase" within DEP jurisdiction [Estimated Total 309.5 MW]

A. **ROXBURY**

Longfellow Wind, LLC. (The proposed development contemplates the construction of approximately 20 wind turbines producing approximately *50 MW* of electricity in the towns of Rumford and Roxbury, Maine. The project will require a permit pursuant to the Site Law.

B. **BRIDGEWATER**

Horizon Wind Energy. (Aroostook Wind) The proposed development (phase 1) contemplates the construction of approximately 130 wind turbines producing approximately *195 MW* of electricity within the town of Bridgewater, Maine and a portion of LURC territory. The project will require a permit pursuant to the Site Law.

C. **OAKFIELD**

Evergreen Wind Power II, LLC. (First Wind) The proposed development contemplates the construction of between 30 and 40, 1.5 MW wind turbines producing approximately *45-60 MW* of electricity in the town of Oakfield, Maine. The project will require a permit pursuant to the Site Law.

B. Fox Island Wind, LLC. The proposed development contemplates the construction of 3, 1.5 MW wind turbines producing at total of *4.5 MW* of electricity in the town of Vinalhaven, Maine. The project will require a certification for a small-scale wind energy development.

C. Berwick: Have made contact with DEP.

D. Thorndike: Proposed project mentioned in local press. No contact with DEP as of yet.

Source: DEP, January, 2009

Summary of Operational, Pending and Potential Wind Projects in Maine:

Total "Operational" Wind Power Projects: 103.5 MW
Total "Pending" Wind Project Developments: 272.5 MW
Total "Potential" Wind Project Developments: 309.5 MW

Tangible Benefits

Grid-scale, commercial wind projects proposed in the State of Maine must provide "significant tangible benefits". In making findings, the primary siting authority (DEP/LURC) shall presume that an expedited wind energy development provides energy and emissions-related benefits and shall make additional findings regarding other tangible benefits provided by the development.

"Tangible benefits" is defined as environmental or economic improvements attributable to the construction, operation and maintenance of an expedited wind energy development, including but not limited to: construction-related employment; local purchase of materials; employment in operations and maintenance; reduced property taxes; reduced electrical rates; natural resource conservation; performance of construction, operations and maintenance activities by trained, qualified and licensed workers in accordance with Title 32, chapter 17 and other applicable laws; or other comparable benefits, with particular attention to assurance of such benefits to the host community to the extent practicable and affected neighboring communities."

The two LURC permits (Transcanada and Stetson I) issued for wind energy development in 2008 (prior to Ch. 661) included a permit condition requiring annual reporting by the permittee after the project becomes operational to report back to the LURC Commission on the benefits realized. Such benefits included, but were not limited to, actual amounts of energy produced by the project. (Reports will be submitted in 2010.)

A tangible benefits policy, defining the principles considered when reviewing project applications and determining if tangible benefits are significant, was developed by an interagency group comprised of DEP, LURC, SPO, BPL, OEIS, PUC, and DoL. There has not yet been adequate opportunity or time to see if the policy is appropriate and useful (see attached). Currently, LURC has this policy attached to the wind power permitting checklist and DEP expects to promulgate a rule in the near future to develop a standard.

In relation to assessing and quantifying "tangible benefits", the only wind power project to date that must meet the tangible benefits requirement included in the new law, is Stetson II which is currently pending before the LURC. An excerpt from First Wind's Stetson II application that discusses tangible benefits is attached. Overall, First Wind reports that $65 million was spent on construction, engineering and development services on the two Stetson Wind projects so far, with about $50 million being spent in the State of Maine by contracting with local companies and businesses. (See attached.) The LURC will meet on February 11, 2009 to consider the Stetson II application.

At this time, the OEIS does not recommend any additional funding for conducting the analysis and reporting of tangible benefits realized from wind energy development. However, this may change in the future depending on the number of future wind power development proposals submitted and determination from the DEP and LURC on the need for hiring sub-contractors and to what degree a quantitative analysis will need to be undertaken to determine tangible benefits.

Examination of Experiences from the Permitting Process:

The OEIS, in conversations with both regulators and developers has found that it is "too early to tell" in regard to major potential successes or failures of the new streamlined, permitting processes. However,

a recent effort to annex an unorganized territory into an organized territory may shed some light on at least some developers' thoughts on the permitting process. The Town of Carrabassett Valley, was approached by Harley Lee to annex part of Redington Township which would make the area of Harley's potential wind power project organized, and as such, under the purpose of permitting wind power. The question has been raised here as to whether Chapter 661 addresses this situation, and according to LURC it does not appear to.

Background:
1. §3451(3) defines "expedited permitting area" to include the entirety of the organized areas above high tide level, but is silent on whether that includes the possibility of adding an area to the organized portion of the state.

2. Section C-6 provides for the addition by LURC's Commission of unorganized areas to the expedited permitting area, but does not say anything about what happens if a portion of the unorganized becomes organized.

The proposal for Carrabassett Valley to annex part of Redington Township was given approval recently, but legislation approving the annexation would need to be approved by the legislature to move forward. After that, the proposal would go back to Carrabassett Valley for a local vote. Finally, Carrabassett Valley would have to consult with LURC and amend its Comprehensive Plan inorder to finalize the process.

The question at hand is whether Chapter 661 was intended to include annexed or re-organized areas as "expedited". It seems likely that this issue should be addressed by the Attorney General or the Legislature.

Overall, the permitting process has been successfully established and streamlined; given the two agencies' differences in overall standards and permitting processes, the process has been relatively consistent and worked well. But both DEP and LURC indicate it is too early to make a final judgment on the success of the the new streamlined permitting process. The major success to date, is the number of both operational and pending wind power projects in Maine; this is the result of the work of the Governor's Task Force on Wind Power and the unanimous passage of the subsequent legislation.

Progress on permitting as related to the LURC:

A. Project review by the U.S. Navy. The Navy contacted LURC expressing concern about the siting of wind energy development. LURC has been working with the contact person to suggest various regulatory or review pathways wherein the Navy's issues about location could be addressed by the developer. The Navy's concerns are for its flight training flyways and for electrical interference, particularly in the case of off-shore development. Possible options for the Navy are to go through the Federal Aviation Administration review, which includes some aspect of review by the Navy; interaction with Independent System Operators of New England; or various types of federal agency reviews that may be required for off-shore sites.

B. LURC is assessing:
   1. If any minor rule changes to Chapter 10 may be needed to further accommodate the expedited permitting process.

   2. Chapter 661 is not clear on how LURC would proceed with permitting of wind energy projects that are smaller than grid-scale, and especially projects smaller than 100 kW in size. Chapter 661 is largely written in the context of the thresholds and processes for permitting and certification conducted by DEP, and does translate to LURC processes to some extent. The level of permitting done at a municipal level, which LURC is also responsible for, is not specified. LURC functions as both the state-level and municipal level regulator for the unorganized areas of the state and, as such, issues permits for all sizes of development.

C. Project tracking. LURC keeps a spreadsheet and map of projects it has become aware of, but does not maintain a database. The list includes meteorological tower locations because, unlike DEP, LURC issues permits for these structures.

D. Application fees. A wind energy development permit being review by LURC must meet the provisions of 12 M.R.S.A., § 685-F for LURC to assess a processing fee in addition to an application fee. Application fees collected by LURC go to the state's General Fund.

   1. The processing fee is kept in a dedicated account and used for expenses incurred during the review of the project. For projects not large enough to meet the provisions of §685-F, only the administrative costs of a public hearing, if one is held, can be paid for by the applicant.
   2. Chapter 661, Sections B-6 and B-9 only address fee and the use of outside reviewers for DEP, not for LURC.
   3. Lacking a processing fee, LURC does not have an adequate budget to hire outside consultants for noise or scenic review (for example); instead depends on other state agencies for review comments.

E. Time period for processing. Not enough time has elapsed to determine if the processing time periods set in Chapter 661 are adequate.

F. Additions of land to the expedited area. LURC has not identified any land areas to be added to the expedited area, at this time.

G. Comprehensive Land Use Plan. Section C-7 of Chapter 661 specified that LURC amend its Comprehensive Land Use Plan by July 1, 2009 to assure consistency with its provisions. LURC is in the process of completing the Plan and has incorporated the appropriate language to assure consistency with Chapter 661. A date of final approval of the Plan by the Governor has not yet been identified.

Progress on Permitting – Implementation of Chapter 661 as related to DEP

The department updated the "Site Location of Development Law Permit Application" to include a submissions section for shadow flicker, public safety, tangible benefits, decommissioning plan and visual quality and scenic character for the generating facility.

A. The department created a new "Application for Siting Certification for Small-scale Wind Energy Developments". In accordance with Chapter 34-A § 3456 (2) the department assigned an application fee of $1000.00 to the new application.

B. DEP staff worked with LURC staff to review permitting requirements for wind power projects to assure consistency across the permitting jurisdictions. As a result of the review, the department amended the submission requirements for a Site Location of Development permit to include additional soils information for projects with a linear component that have the potential to influence ground water. The additional requirement is consistent with information LURC already requires as part of their permit application.

Identified successes, including tangible benefits, in implementing the recommendations contained in the February, 2008 final report of the Governor's Task Force on Wind Power Development in Maine pursuant to the Executive Order issued May 8, 2007.

The successes that OEIS has identified in implementing the recommendations contained in the Governor's Task Force on Wind Power Development in Maine include the following:

- Maine is a leader in wind power development in New England and the nation.
- Maine is protecting Maine's quality of place and natural resources as projects are developed.
- Meaningful benefits are being delivered to the economy, environment, and Maine people.
- Legislation has been successfully adopted with important wind power development goals.
- A consistent permitting process was successfully adopted by DEP/LURC.
- The Community Wind sub-committee is currently working on draft legislation for the current legislative session to promote community wind power.
- A process for quantifying tangible benefits is underway by DEP/LURC and the OEIS.

Projections of wind energy developers' plans and technology trends and their state policy implications.

There has been much interest in developing wind projects in Maine due to the excellent wind resources, potential development of transmission line projects, three operating wind projects and interest in renewable energy generation and reduction of greenhouse gas emissions. However, due to the recent world economic crisis, the difficulty with siting transmission lines, lower petroleum prices and the credit crunch, some developers are scaling back plans for new projects

and focusing on existing projects and/or looking to states where existing transmission lines or lower project costs exists. These facts notwithstanding, energy suppliers, developers, transmission owners and various financial institutions continue to manifest a keen interest in developing wind projects in Maine.

The OEIS did not find any new technology trends being pursued in Maine or would have any impacts or considerations on the existing permitting processes. Typically, the types of grid-scale turbines being used and proposed for use in Maine, are either 1.5 MW turbines or 3 MW Vestas turbines.

The State of Maine and each of the other New England states in making progress toward reducing greenhouse gas emissions.

The DEP tracks and reports to the Natural Resources Committee bi-annually on the progress the State of Maine is making toward reducing greenhouse gas emissions. The following is the Executive Summary from the last report made in January of 2008.

Maine continues to make significant progress toward its goal of reducing greenhouse gas (GHG) emissions by 2020 sufficient to reach the target of 10% below 1990 levels. (Per Maine's Climate Action Plan). During the period 2005-2007, implementation of the eleven most important policy actions (the top 20% of activities, modeled to account for more than half of target GHG reductions) proceeded well in all but two cases.

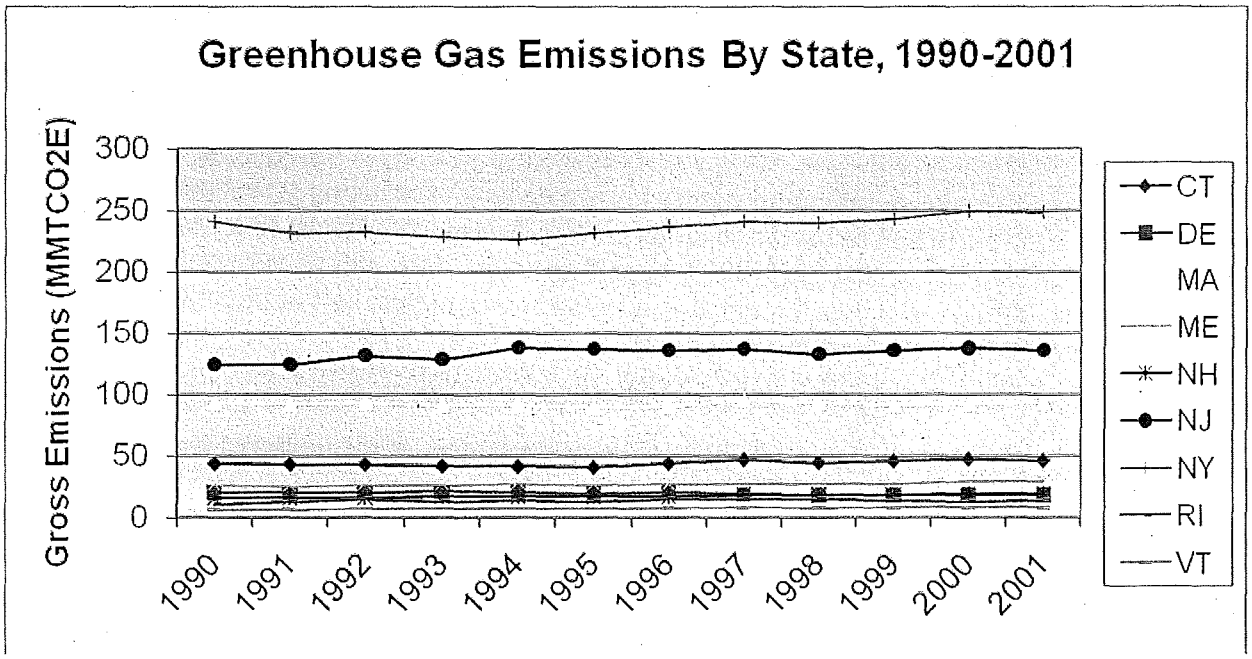
Of particular note:
• Maine continued to lead regional efforts toward establishment of the Regional Greenhouse Gas Initiative (RGGI), becoming the first state to adopt rules to implement the program. In addition to directly reducing GHG emissions in the electrical power sector, the program will generate significant new funds for electrical efficiency investments.
• The Maine Legislature enacted an increase in the Renewable Portfolio Standard for electrical energy production.
• Maine adopted the California Tailpipe Greenhouse Gas Emission Standards to promote the use of cleaner emission vehicles.
• The Legislature passed, and Governor Baldacci signed, a wide range of legislation implementing *Climate Action Plan 2004* proposed actions in the areas of energy conservation, use of solar power, development of alternative fuels, etc.
• State government implemented several "lead by example" initiatives to make state fleets more efficient, use alternative fuels in state buildings, and make efficiency improvements in state-owned buildings.
• Market forces produced positive steps toward greenhouse gas reductions in the areas of landfill gas, bio-mass energy production, and agriculture.
• Voluntary action by Maine businesses, municipalities and institutions participating in "The Governor's Carbon Challenge" program produced measurable GHG savings throughout the state.

Maine is doing even better in meeting our statutory and Governor's greenhouse gas reduction goals judged from a regional perspective: more of the regional electrical generation capacity and generation is shifting into Maine. Maine has permitted two utility-scale wind-power projects with one fully operational in Mars Hill. Maine's five gas-fired combined cycle electrical generators are considerably cleaner and more efficient than the regional power mix, so that

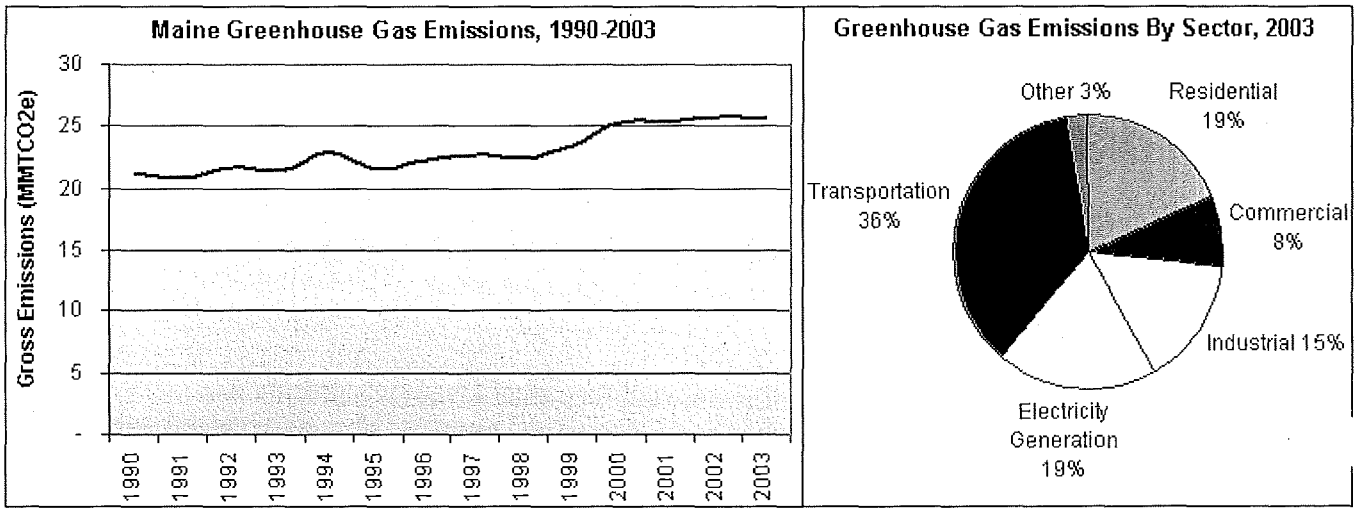
increased use of Maine's natural gas electrical generation capacity will result in substantially lower regional greenhouse gas emissions due to their smaller greenhouse gas footprints. This shift into Maine's cleaner generation mix means cleaner air in Maine and the region, and is very encouraging for combating climate change.

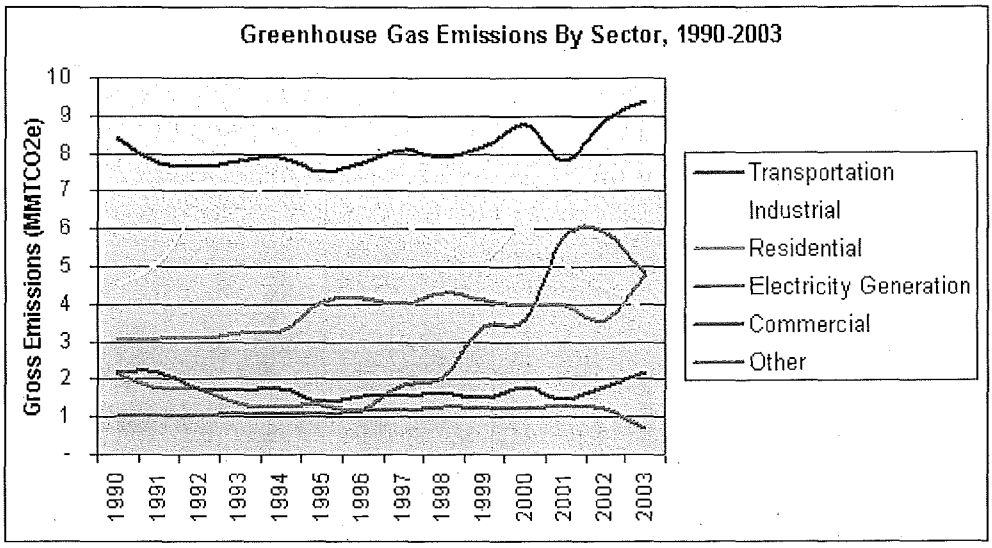
For the full DEP report go to:
http://mainegov images.informe.org/dep/air/greenhouse/Report%20to%20NRC%201-18-08_FINAL.pdf

The latest greenhouse gas emission data available from Maine's and other New England states' was compiled by the Northeast States for Coordinated Air Use Management (NESCAUM) in 2001/2003.



Maine's GHG Emissions 1990-2003





For the full New England States' greenhouse gas emissions data contact NESCAUM.

Recommendations and any changes regarding wind energy development goals, permitting processes, identification of places within the State's unorganized and deorganized areas for inclusion in the expedited permitting area established in the law.

At this time, the OEIS does not have any recommendations or changes regarding wind development goals, permitting processes or identification of places to be included in the expedited permitting areas.

Sincerely,

John M. Kerry

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

Meteorological towers and wind energy development in LURC jurisdiction (updated 12/08/08)

LURC, Meteorological towers and wind energy development	Type	Township and County	Expedited area	Approved/ constructed
Meteorological towers permitted by LURC				
Kenetech (circa 1994)				
	Meteorological tower(s)	Kibby Twp., Franklin County	✓	✓
	Meteorological tower(s)	Haynestown Twp (T5 R6 BKP WKR), Franklin County	no	
	Meteorological tower(s)	Merrill Strip Twp, Franklin County	no	
	Meteorological tower(s)	Skinner Twp, Franklin County	✓	✓
Endless Energy (1994 to 2008)				
Endless Energy/ Seven Islands Land Management	Meteorological tower(s)	Upper Cupsuptic Twp, Oxford County	no	
Endless Energy/Redington Mtn. Windpower	Meteorological towers	Redington Twp, Franklin County	no	
Linekin Bay Energy/Aroostook Wind (2005 to 2008)				
	Meteorological tower	Cyr Plantation, Aroostook County	✓	✓
	Meteorological tower	Town of Hamlin, Aroostook County	✓	✓
	Meteorological tower	Hovey Mtn., T9 R3 WELS, Aroostook County	✓	✓
	Meteorological tower	Saddleback Mtn., T9 R3 WELS, Aroostook County	✓	✓
	Meteorological tower	Mountain 19, E Twp., Aroostook County	✓	✓
	Meteorological tower	Hoover Mtn., TD R2 WELS, Aroostook County	✓	✓
	Meteorological tower	Condon Mtn., T8 R3 WELS, Aroostook County	✓	✓
	Meteorological tower	Burnt Land Ridge, E Twp, Aroostook County	✓	✓
	Meteorological towers (2)	Nighthawk Mtn. & The Pinnacle, T8 R3 WELS, Aroostook County	✓	✓
	Meteorological towers (2)	T11 R7 WELS, Aroostook County	✓	
	Meteorological tower	Horse Mtn., T11 R8 WELS, Aroostook County	✓	

TransCanada Maine Wind Development, LLC (2005 to 2008)				
	Meteorological towers	Skinner Twp, Franklin County	✓	✓
	Meteorological towers	Kibby Twp, Franklin County	✓	✓
Independence Wind (2007 to 2008)				
	Meteorological towers (5)	Highland Plantation, Somerset County	✓	✓
	Meteorological tower	The Forks Plt., Somerset County	✓	✓
	Meteorological tower	Rangeley Plt., Franklin County	✓	✓
Nobel Environmental (2007)	Meteorological tower	Passadumkeag Mtn.; Grand Falls Twp, Penobscot County	✓	✓
Passamaquoddy Tribe (2007 to 2008)				
	Meteorological tower	T19 MD BPP, Washington County	✓	✓
	Meteorological tower	Cedar Mtn; T3 R9 NWP, Penobscot County	✓	✓
	Meteorological tower	Prentiss Twp, Somerset County	✓	✓
First Wind (2006-2008)				
Evergreen Wind Power V, LLC/UPC	Meteorological towers (3)	Stetson Mtn; T8 R3 NBPP, Washington County	✓	✓
Stetson Wind Power II/UPC	Meteorological towers (2)	Owl and Jimmey Mtns; T8 R4 NBPP, Washington County	✓	✓
High Meadow Realty Trust (processed in Ashland office) (2008)	Meteorological tower	Winterville, Aroostook County	✓	✓
Cherryfield Foods (2008)	Meteorological tower	T24 MD BPP, Washington County	✓	✓
Aroostook Timberlands (2008)	Meteorological tower	T 16 R8 WELS, Aroostook County	✓	✓
Wind energy development permitted by LURC				
Kenetech (rezoning only, DP never sought) (1995)		Kibby, Skinner, and Merrill Strip and Haynestown Twps. (T5 R6 BKP WKR), Franklin County	n/a	✓
Maine Mountain Power, LLC (2005 to 2008)	Wind energy development	Black Nubble Mtn. and Redington Pond Range; Redington Twp, Franklin County	No	No
TransCanada Maine Wind Development, LLC (2007 to 2008)	Wind energy development	Kibby Mtn. and Kibby Range; Kibby and Skinner Twps., Franklin County	✓	✓

First Wind (2007 to 2008)				
Evergreen Wind Power V, LLC	Wind energy development	Stetson Mtn; T8 R4 NBPP and T8 R3 NBPP, Washington County	✓	✓
Stetson II Wind, LLC	Wind energy development	Owl and Jimmey Mtns.; T8 R4 NBPP, Washington County	✓	
Alder Stream Twp – Tribal trust land	?		✓	
Monhegan Island or Matinicus Island	?		✓	
DEP permits, in LURC jurisdiction				
Kenetech (utility line only?) (circa 1994-1995)		Kibby, Skinner, Merrill Strip, etc. – see Kenetech project, above	n/a	
Aroostook Wind, Phase One (2009)		Bridgewater project – to be submitted in Dec 2008 or Jan, 2009?	✓	
Independence Wind		Highland Plt., Rangeley Plt., The Forks Plt.; no known submittal date	✓	
Projects located in organized towns – DEP				
First Wind		Mars Hill – operational	✓	Yes
		Freedom	✓	Yes
		Lincoln, Rollins Mtn.	✓	
	?	Roxbury/Byron?	✓	
Independence Wind		Byron (denied by town?)	✓	
Penobscot Nation, Tribal trust land (not yet proposed)	?	Carrabassett Valley, Poplar Mtn. & Little Polar Mtn.	✓	
Fox Island Institute, community wind		Vinalhaven	✓	

Final version
Version: October, 7 2008
Prepared by Andrew Fisk

Policy on implementing the tangible benefits provision of P.L. 2008 Chapter 661

The DEP and LURC are charged with reviewing applications for wind energy projects subject to the provisions of this law.

35-A MRSA § 3451 defines tangible benefits as:

> **10. Tangible benefits.** "Tangible benefits" means environmental or economic improvements attributable to the construction, operation and maintenance of an expedited wind energy development, including but not limited to: construction-related employment; local purchase of materials; employment in operations and maintenance; reduced property taxes; reduced electrical rates; natural resource conservation; performance of construction, operations and maintenance activities by trained, qualified and licensed workers in accordance with Title 32, chapter 17 and other applicable laws; or other comparable benefits, with particular attention to assurance of such benefits to the host community to the extent practicable and affected neighboring communities.

Where the permitting agencies are required to make findings as directed in 35-A MRSA §3454 based on comments provided by the State Planning Office, Department of Labor, and the Public Utilities Commission.

The review standard for tangible benefits at 38 MRSA § 484 (3) (G) for DEP, and 12 MRSA § 685-B (4-B) for LURC, is that they must be found by the permitting agency to be "significant." The agencies therefore shall be looking for projects that demonstrate a particular and earnest commitment to the requirements of this law.

This standard is applicable to "expedited wind energy development" which is statutorily defined to include large-scale, commercial wind energy development projects in the State's organized area that require the department's approval under the Site Location of Development Act as well as comparable projects located in specified areas within the State's unorganized territory managed by the Land Use Regulation Commission. *See* Title 35-A MRS sections 3451(4). Statutory provisions expedite review of these projects principally through streamlined administrative procedures and a wind-power specific standard regarding potential effects on scenic resources and related public uses. In enacting these provisions, designed in part to serve the public interest by reducing controversy associated with siting wind energy facilities, the Legislature recognized wind power's potential for both significant energy-related and economic public benefits and, as a potentially highly visible and new landscape feature, site-specific adverse effects on scenic and other natural resources. Accordingly, the Legislature further found that the State's wind energy resources should be developed with assurance that project-specific benefits accrue to the people of the State while addressing as appropriate site-specific natural resources-related issues. The "significant tangible benefits" provision is a key tool for achievement of these legislative policies in a flexible manner adaptable to the unique issues and opportunities presented by each development proposal.

The agencies will consider the following principles when reviewing project applications and determining "significance."

- Tangible benefits that create reduced electrical rates can be structured as either a long-term contract to sell capacity and/or energy to a utility that serves the project area and state or to a particular industry or facility in the project area or state at rates significantly below projected market rates or rates that are indexed at fixed amount or a percentage below market prices.
- Tangible benefits that offset increases in utility rates that occur as a result of transmission line improvements through long-term contracts at rates significantly below projected market rates or rates that are indexed at fixed amount or a percentage below market prices could be considered.
- Tangible benefits should be permanent, or of significant duration
- Tangible benefits do not mitigate for project impacts, nor should mitigation requirements for impacts to wetlands or habitat, for example, count as tangible benefits
- Tangible benefits that are presented as developed projects are preferred, however it is recognized that payments to the State or third-parties to undertake projects that will provide tangible benefits, such as land conservation, habitat improvement, or recreational access, are acceptable so long as additional to required regulatory compensation.
- Tangible benefits to natural resource conservation can be either designed to provide recreational amenities or ecological services. As such a project that provides improved recreational access but is located on ordinary or non-significant habitat is still a viable benefit project.
- Tangible economic benefits can include projects that create educational opportunities, including scholarships or educational programs, at institutions that support the facility, the wind power industry, the project area, and economic development of the project area and region.
- Tangible benefits are not to be presented as conditional on a tax increment financing proposal being approved by a local or county jurisdiction.

The following chapters are enacted regarding grid-scale wind energy development:

DEP:

Sec. B-12. 38 MRSA §484, sub-§10 is enacted to read:

10. Special provisions; grid-scale wind energy development. In the case of a

grid-scale wind energy development, the proposed generating facilities, as defined in Title 35-A, section

3451, subsection 5:

A. Will be designed and sited to avoid unreasonable adverse shadow flicker effects;

B. Will be constructed with setbacks adequate to protect public safety. In making a finding pursuant

to this paragraph, the department shall consider the recommendation of a professional, licensed

civil engineer as well as any applicable setback recommended by a manufacturer of the generating

facilities; and

C. Will provide significant tangible benefits as determined pursuant to Title 35-A, section 3454, if

the development is an expedited wind energy development.

The Department of Labor, the Executive Department, State Planning Office and the Public Utilities

Commission shall provide review comments if requested by the primary siting authority.

For purposes of this subsection, "grid-scale wind energy development," "primary siting authority,"

"significant tangible benefits" and "expedited wind energy development" have the same meanings as in

Title 35-A, section 3451.

LURC:

Sec. C-4. 12 MRSA §685-B, sub-§4-B is enacted to read:

4-B. Special provisions; wind energy development. In the case of a wind energy

development, as defined in Title 35-A, section 3451, subsection 11, with a generating capacity greater

than 100 kilowatts, the developer must demonstrate, in addition to requirements under subsection 4, that

the proposed generating facilities, as defined in Title 35-A, section 3451, subsection 5:

A. Will meet the requirements of the Board of Environmental Protection's noise control rules

adopted pursuant to Title 38, chapter 3, subchapter 1, article 6;

B. Will be designed and sited to avoid undue adverse shadow flicker effects;

C. Will be constructed with setbacks adequate to protect public safety, as provided in Title

35-A, section 3455. In making findings pursuant to this paragraph, the commission shall consider

the recommendation of a professional, licensed civil engineer as well as any applicable setback

recommended by a manufacturer of the generating facilities; and

D. Will provide significant tangible benefits, as defined in Title 35-A, section 3451, subsection 10,

within the State, as provided in Title 35-A, section 3454, if the development is an expedited wind

energy development, as defined in Title 35-A, section 3451, subsection 4.

Stetson II - First Wind
Excerpts from wind power development application to LURC 12/08

21.0 TANGIBLE BENEFITS

The Stetson II Wind Project will provide significant tangible benefits to surrounding communities, Washington County, and the entire State of Maine.6 On a local level the nearby communities will benefit through employment opportunities and the local purchase of materials and supplies. The unorganized territories will benefit through the taxes paid on the project. On a larger scale, the project will increase energy diversity thereby helping to reduce electric price volatility in Maine. The project will also help Maine meet its commitments under the Regional Greenhouse Gas Initiative, which establishes limits for emissions associated with the generation of electricity.

21.1 Economic Benefits

21.1.1 Local Landowner Benefits

The Stetson II Wind Project provides a direct economic benefit to the local landowner participating in the project through a land lease. The project allows the landowner to realize an additional economic benefit from land that will supplement what the landowner typically makes from logging and other uses of the land. This will help maintain traditional economic and recreational uses while creating a new source of clean energy.

21.1.2 Increased Employment Opportunities

Washington County's estimated 2005 population was 33,448; the land area of the county encompasses 2,568 square miles.7 The local community in this area suffers from chronic high unemployment due to the lack of an established employment base. The average unemployment rate for 2006 in Washington County was 7.6 percent, well above the Maine's average of 4.6 percent.8 Since 1990, the unemployment rate in this area has exceeded the state average.9 Moreover, according to a recent report to LURC, the Rim Region, which includes Washington County, has a disproportionately small share of the State's earnings and employment relative to its population. That is, "the LURC-related economy provides fewer jobs per resident than the economy of the rest of the state and the earnings made in those jobs are less than those made in the rest of the state."10 That report points out that employment and earnings in interior Maine, including Washington County, have been stagnant for over a decade. This has led to a large number of LURC households living below the poverty level. In fact, Washington County has the highest poverty rate in the state, calculated at 20.9 percent in 2000.11 Washington County, according to the last U.S. census, also has the lowest median household income in Maine at $25,869.12 Per capita income is 28 percent below the state average, and median household income is 31 percent below.13 Land Use Regulation Commission Application Stetson II Wind Project, Washington County, ME Page 20 14

In an unorganized territory, the county acts in the place of the municipality in creating and implementing a TIF program. 30-A M.R.S.A. § 5235.

The Stetson II Wind Project would respond directly to area needs and to the people who live and work in the vicinity of T8 R4 NBPP. A significant portion of the estimated $60 million dollar project cost is expected to be spent on development, engineering, and construction-related activities that will directly benefit Maine. The surrounding areas will benefit through construction-related employment opportunities, and the ancillary economic benefits of that construction activity. There will be the opportunity for direct jobs for activities like tree clearing and excavation, and jobs in ancillary businesses that support construction such as lodging, restaurant, fuel, and concrete supply. Following the construction phase, Stetson II anticipates hiring additional employees to maintain and operate the project. Stetson II will hire locally whenever possible, providing construction, operations, and maintenance employment opportunities to community residents.

Although the exact amount of direct and indirect economic benefits of a project cannot be predicted, the actual economic spending associated with the development and construction of Stetson is evidence of the tangible economic benefits that can be expected from the Stetson II Wind Project. Included as Exhibit 21 is a graphic representing the local and statewide economic benefits associated with Stetson. The economic benefits of a wind project are significant and can provide value and stability to the local and regional economy. As indicated in that graphic, of the approximately $65 million spent for construction, engineering, and development services, about $50 million was spent in Maine. This includes contractors throughout the state from Fryeburg to Presque Isle, consultants with offices throughout the state, and local businesses in the Lincoln and Danforth area. These amounts reflect only direct spending by the developer and do not capture the indirect jobs and benefits that may result from that direct spending. For example, the contractors hired by the developer to build the project will spend money on food, lodging, and fuel in the area. Similar benefits during construction are expected for the Stetson II Wind Project.

21.2.3 Property Tax Benefits

Utility-scale wind power projects require significant capital investments that have been estimated from $95 million to $270 million.[1] These large investments in grid-size wind power projects typically result in a dramatic increase in property value, and typically have the corresponding effect of substantially increasing the local property tax base. The Stetson II project, like the Stetson Project, is located solely within the Unorganized Territory of Washington County. Similar to the Stetson project, the applicant expects that it will pay significant annual property taxes on the Stetson II wind power facilities, which would make the Stetson II Project one of the largest taxpayers in the region.

Host communities to large projects with high taxable value, such as a grid-size wind power project, enjoy tangible benefits related to the taxes paid on these projects, and can select the manner in which the community wishes to enjoy those benefits. Some communities choose to use the new property taxes to reduce local property taxes. As an example, the mil rate in Mars Hill decreased significantly (from $25.00 to $20.00) in 2007 as a result of the tax payments associated with the Mars Hill wind power project.

Under the terms of a Tax Increment Financing ("TIF") agreement, Evergreen Wind Power, LLC (an affiliate of this applicant) pays the Town of Mars Hill $500,000 in property taxes annually, and will continue to pay that amount annually through 2026. Thus, TIF agreements such as that between Mars Hill and Evergreen Wind Power, LLC can provide long-term stability, predictability and property tax relief to the municipality arising from the substantial property tax payments associated with commercial wind power facilities.

Other host communities choose to enjoy their tangible tax-related benefits by segregating the new property taxes in a TIF program, and by using the community's share of those new taxes to fund municipal economic development projects that have been approved by the legislative body of the municipality and the State of Maine Department of Economic and Community Development.14 As an example, the Washington County Commissioners entered into a TIF agreement with Evergreen Wind Power V, LLC (an affiliate of this applicant) for the Stetson Wind Power Project (the "Stetson TIF").

The Stetson TIF will provide an average annual payment of approximately $185,000 to Washington County for Land Use Regulation Commission Application Stetson II Wind Project, Washington County, ME Page 21 15 MPUC Review Comments for the Land Use Regulation Commission, Zoning Petition ZP 702 (Maine Mountain Power, LLC), April 14, 2006, page 4. 16 According to PUC staff, the Commission plans to initiate shortly a process intended to use their authority to direct investor-owned utilities to enter into long-term contracts for capacity and energy. the County's use in funding economic development projects within the Unorganized Territories of Washington County during the 20-year life of the TIF.

The Washington County Commissioners have expressed a strong interest in exploring a TIF agreement for this Stetson II project as well. While the terms of any potential TIF program for the Stetson II project have not yet been determined, it is clear that the addition of the significant new property tax value this project will inject into the Unorganized Territory of Washington County will provide a considerable and tangible tax-related benefit within Washington County generally, and within the Unorganized Territory of Washington County in particular.

21.1.4 Reduced Energy Price Volatility

The addition of new power generation facilities in Maine will likely lead to lower and less volatile electricity prices. This is particularly true in the case of the addition of renewable power facilities like wind projects. The price and reliability benefits of new renewable resources have been described by the Maine Public Utilities Commission (MPUC) as follows:

> *The addition of diverse (non-gas) resources in Maine and elsewhere in the region will be beneficial for several reasons. As more non-gas generation is added to the mix, cheaper gas resources and non-gas resources will set the clearing prices in a greater number of hours.* ***This would have the general effect of reducing both the level and volatility of electricity prices***

throughout the region. To the extent new generation is constructed within Maine's borders, the benefit to Maine consumers is more direct in that the result would be lower prices within the Maine zone*. In addition, any overall reduction in the demand for gas that results from the addition of non-gas resources in the region should have the effect of reducing the price of natural gas which translates into lower electricity prices. Finally, a reduction in the region's reliance on natural gas would result in a more secure system that is less vulnerable to gas shortages and thus less susceptible to curtailments and blackouts.*15

Given that the cost of wind power is stable and is not subject to fluctuations in fossil fuel prices, the development of new wind facilities like the project will also create an opportunity to reduce price volatility directly for certain consumers. In addition to opportunities to work directly with consumers, the cost stability of wind energy makes it a strong candidate for long-term contracts under the auspices of the MPUC.16 Additionally, in a number of New England states, including Maine, some type of Renewable Portfolio Standards (RPS) have been adopted to diversify the electricity supply portfolio, stabilize rates, increase energy security, improve environmental quality, invigorate the clean energy industry, and promote economic development. Essentially, RPSs create market demand for clean power, and the Maine Legislature has reaffirmed its support for the Maine RPS, and in fact expanded it, in recent sessions. The combined effect of the RPSs in New England is an increasing regional demand for renewable energy that far outstrips the currently available and qualifying supply of renewable energy. This 25.5-MW project will help meet this growing demand, and thereby take an important step toward achieving the policy objectives of the Maine RPS law.

21.2 Environmental Benefits
The operation of the project is expected to generate approximately 25.5 MW of electricity each year without any air or water pollution and with no greenhouse gas emissions, a leading cause of global warming. Land Use Regulation Commission Application Stetson II Wind Project, Washington County, ME Page 22

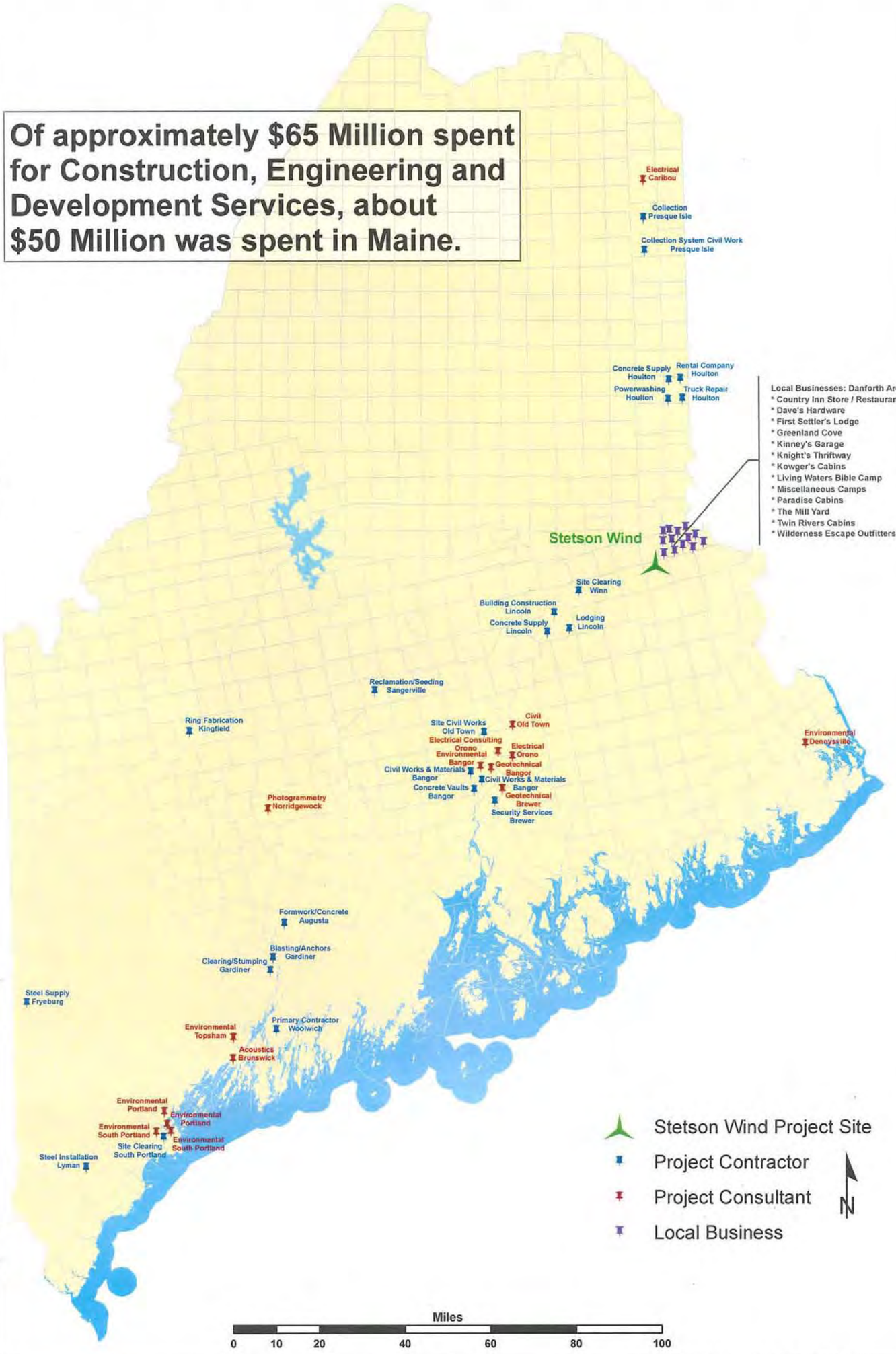
Wind projects create zero air or water pollution. Each local, clean MW produced through wind energy means less produced through costly and polluting fossil fuels. To put this into perspective, the clean energy produced last year at the nearby Mars Hill Wind Project in Mars Hill, Maine, is the equivalent of burning approximately 260,000 barrels of oil or 70,000 tons of coal per year, but without the associated toxicity, health, or cost issues.

Maine and the region have set aggressive greenhouse gas reduction goals. State and regional experts, including the MPUC and ISO-New England, have concluded that Maine and the region cannot meet these greenhouse gas policy goals without significant additions of wind power and other renewable in Maine and elsewhere. The significant environmental benefits associated with wind power, including avoided air pollution benefits, were recently recognized by the Governor's Task Force on Wind

Power Development, and affirmed by the Legislature with enactment of "An Act to Implement the Recommendations of the Governor's task Force on Wind Power Development, Public Law 2008, Chapter 661."17

Maine Businesses Benefitting from Stetson Wind

Of approximately $65 Million spent for Construction, Engineering and Development Services, about $50 Million was spent in Maine.



Prepared by SDH for First Wind on July 16th, 2008 - For display and reference purposes only.

Report on State Progress Toward Meeting Wind Power Goals

(PL 2007, c.661, sec.A-8 / LD 2283)

Wind Power Goals:

- At least 2,000 Megawatts (MW) of installed capacity by 2015;
- At least 3,000 MW of installed capacity by 2020, of which there is a potential to produce 300 MW of offshore wind power.

Assessment of Progress

3 Grid-Scale Wind Projects in Operation:

103.5 MW installed capacity

- Mars Hill, (First Wind) - 42 MW
- Freedom, (Beaver Ridge) – 4.5 MW
- Stetson I, (First Wind) – 57 MW
- Total: 103.5 MW

Assessment of Progress

3 Grid-Scale Projects in Development:

272.5 MW of potential capacity

- Kibby, (Transcanada) – 132 MW
- Stetson II, (First Wind) – 25.5 MW
- Rollins Mtn, (First Wind) – 60 MW
- Record Hill, (Independence) – 55 MW
- Total: 272.5 MW

Assessment of Progress

4 Grid-Scale Projects in Discussion Phase:

309.5 MW potential capacity

- Roxbury, (Longfellow Wind) – 50 MW
- Bridgewater, (Horizon/Aroostook) – 195 MW
- Oakfield, (First Wind) – 45-60 MW
- Fox Island, (Fox Island, LLC) – 4.5 MW
- Total: 309.5 MW

Assessment of Progress

- State of Maine has met 5.17% of wind power goals with 103.5 MW of installed capacity. (Based on 2015 goal.)
- Could rise to 18% if all 272.5 MW of potential capacity are constructed.
- Could rise to 34% if all 309.5 MW in discussion phase are constructed.

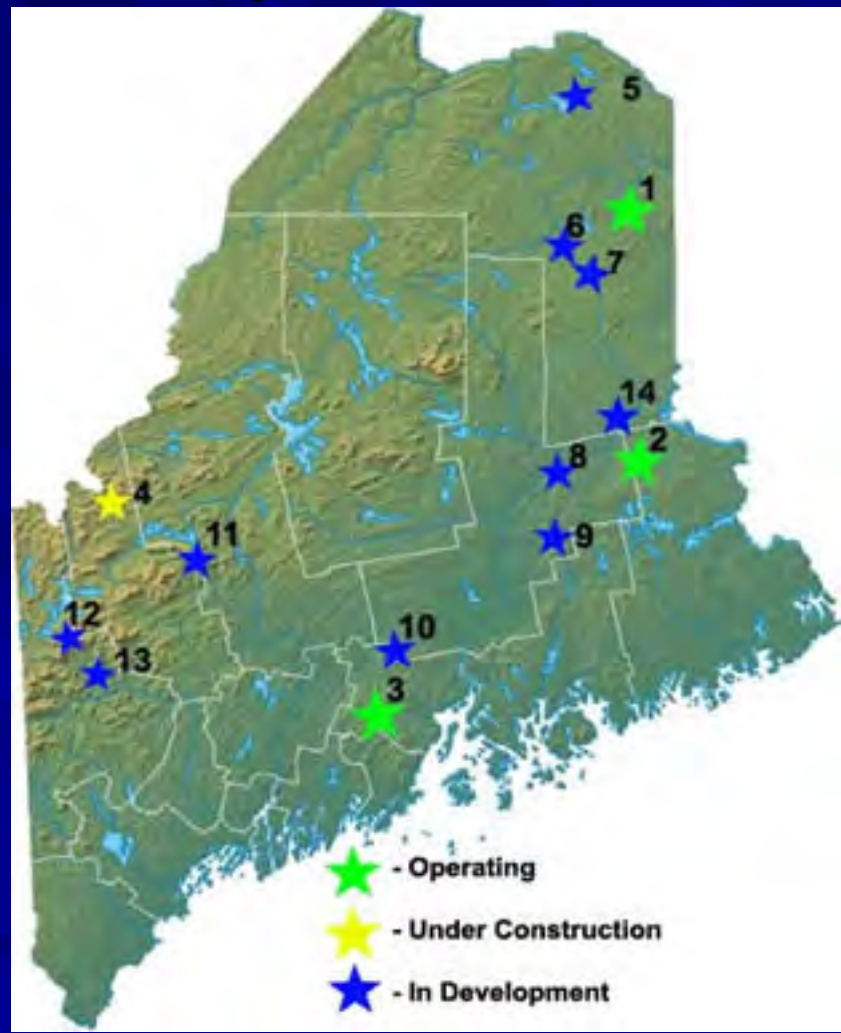
Assessment of Progress

- At the current rate, Maine will need to bring online 263 MW of capacity a year, starting in 2010 to meet the state's wind power development goals by 2015.
- Ambitious goals but OEIS doesn't recommend revising goals at this time.

Maine Wind Power Development Map

1. Mars Hill
2. Stetson I
3. Freedom
4. Kibby
(5. Aroostook County Wind, Future Phases)
6. Bridgewater
7. Oakfield
8. Rollins Mtn.
(9. Passadumkeag Mountain, Grand Falls Twp)
(10. Mount Harris, Dixmont)
(11. Stewart Mountain, Highland Plantation)
12. Record Hill
13. Roxbury
14. Stetson II

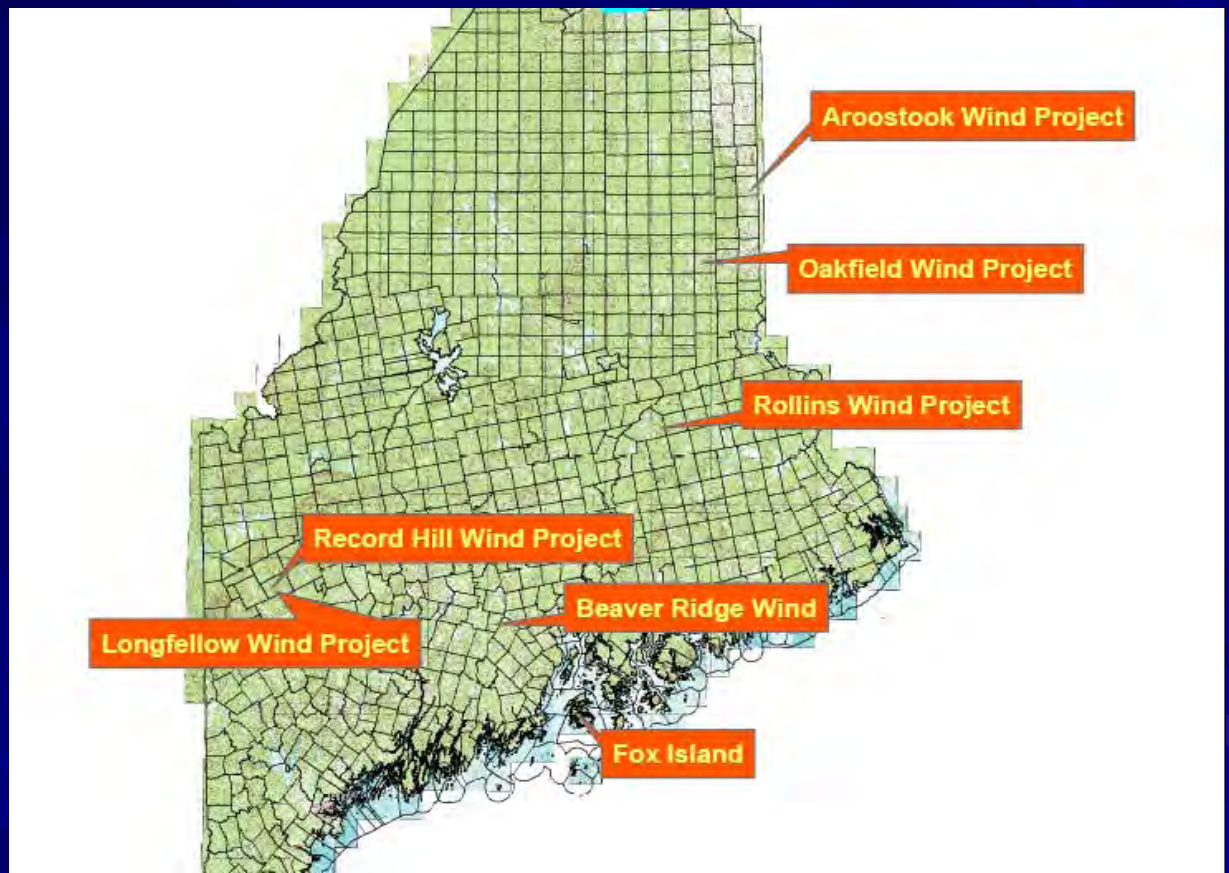
(Projects in parentheses are proposed and not included in OEIS report or projections.)



Credit: Natural Resources Council of Maine

Governor's Office of Energy Independence & Security

DEP Wind Power Development Projects Map



Source: Maine DEP

“Tangible Benefits”

- Grid-scale wind power developments in Maine must provide significant “tangible benefits”.
- OEIS must report on tangible benefits to UTE committee annually including whether resources are needed to carry out analysis (Jan 15, 2009).
- DEP/LURC makes findings and undertakes quantitative analysis of tangible benefits (with other agency comments if requested).

Tangible Benefits

- Tangible benefits are “environmental or economic improvements attributable to the construction, operation and maintenance of an expedited wind energy development.”
- Including: purchase of local materials, construction related employment, reduced property taxes, reduced electrical rates, natural resources conservation, operations/maintenance jobs, and others.

Tangible Benefits

- Tangible Benefits policy guidance to determine “significant” was developed by interagency group.
- Stetson II only project so far to fall under new law. (LURC takes up in Feb, 09.)
- OEIS does not recommend any additional funding mechanism at this time for analysis of tangible benefits, but may in the future.

Tangible Benefits

First Wind's Stetson Development Area:

Examples of tangible benefits

- $50 million of $65 million project costs were spent in Maine.
- Including: local jobs, land lease payments to landowners, reduced property taxes (Mars Hill mil rate dropped from $25 - $20), reduced energy price volatility, and environmental benefits of clean, renewable power.

Permitting Processes

- OEIS conferred with DEP, LURC and wind developers on new streamlined process.
- Consensus is it's "too early to tell" to determine major policy successes or failures.

Identified Successes

- Maine is a leader in wind power development with 103.5 MW of installed capacity.
- DEP and LURC collaborated to develop and adopt a consistent permitting process. (DEP is responsible for organized territories; LURC unorganized territories.)
- Meaningful benefits are being delivered to Maine communities.
- More projects are being planned and developed.

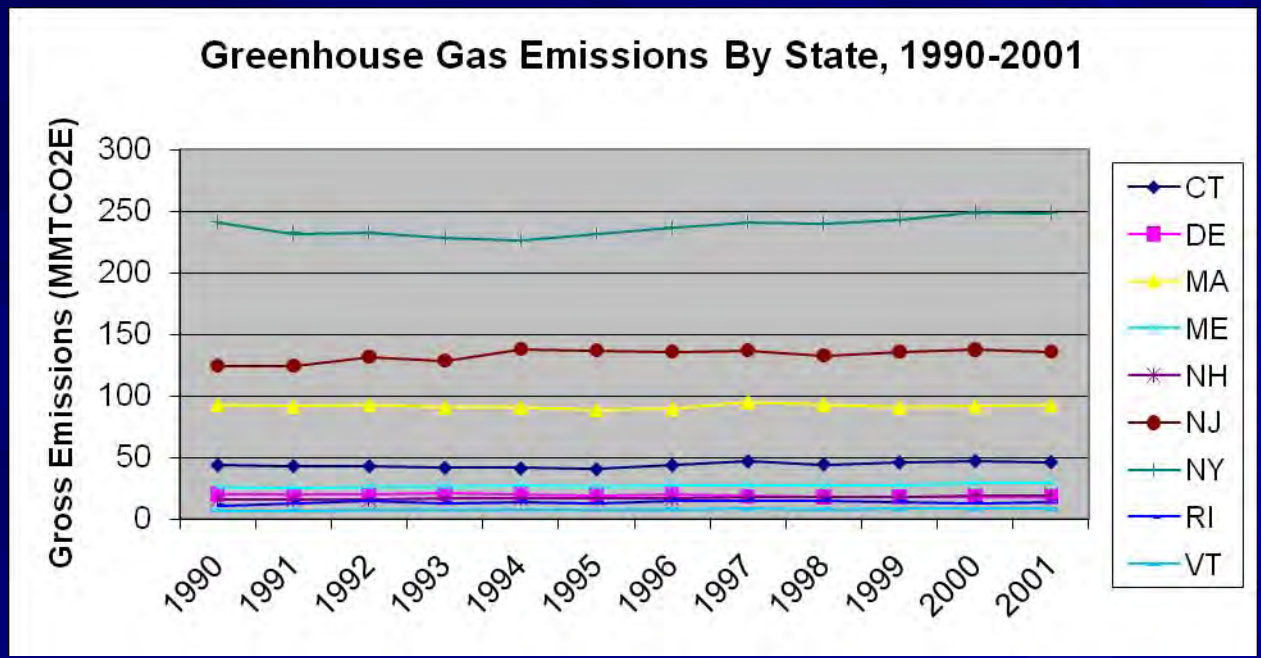
Projections

- High degree of interest in developing wind resources in Maine.
- Numerous additional wind projects are in the discussion phase.
- No new technology trends are on the horizon that would affect Maine's permitting process.
- The economy, credit crunch and the difficulty siting transmission could have a negative impact on wind development in Maine.

Greenhouse Gas Emissions Reductions

- The 2003 law (PL 237) a Climate Action Plan for Maine includes goals to reduce GHG emissions to 1990 levels by 2010, 10% below those levels in 2020, and by a sufficient amount to avert the threat of global warming over the longer term, which could be as much as 75%.
- DEP reported in Jan, 2008 that the 11 most important policy actions modeled to account for more than half of the target GHG reductions in the Climate Action Plan are underway.
- For example: RGGI, RPS, Clean Car rules, energy efficiency and renewable power generation.

Greenhouse Gas Emissions Reductions

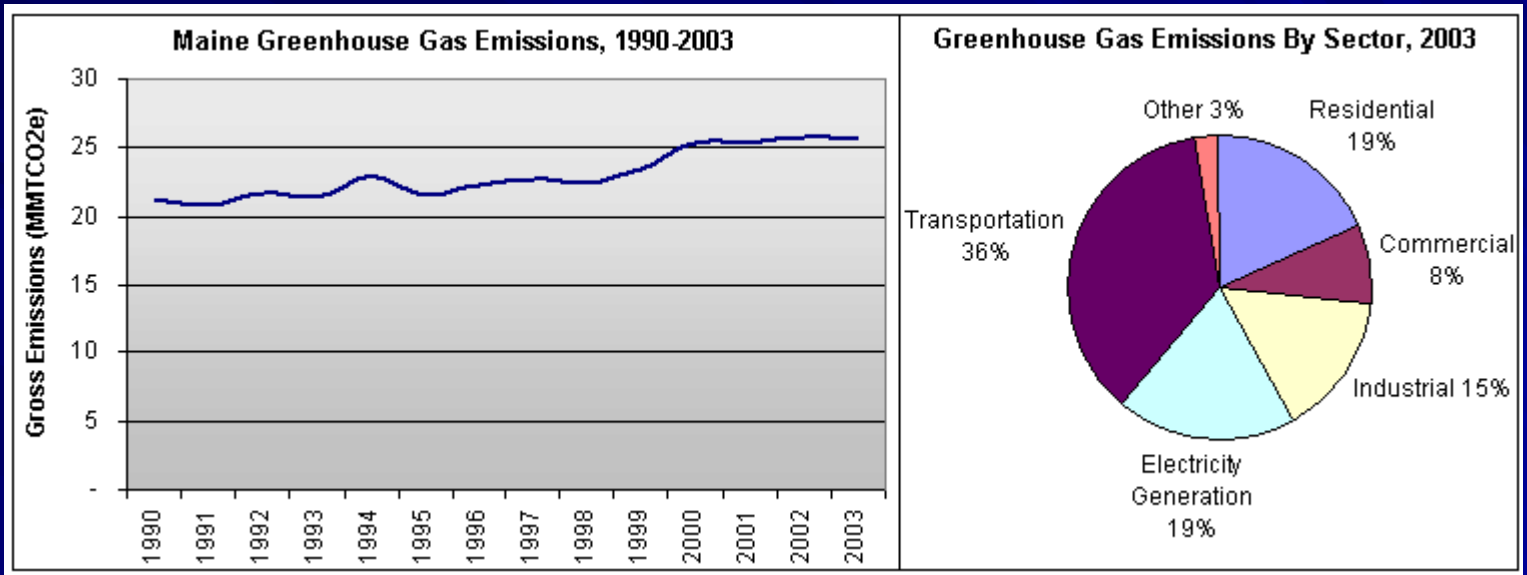


**2006 DATA WILL BE AVAILABLE SHORTLY FROM NESCAUM AND WILL BE FORWARD TO UTE.*

**Maine DEP will report in 2012 on progress compared to baseline data in Climate Action Plan.

Source: NESCAUM

Greenhouse Gas Emissions Reductions

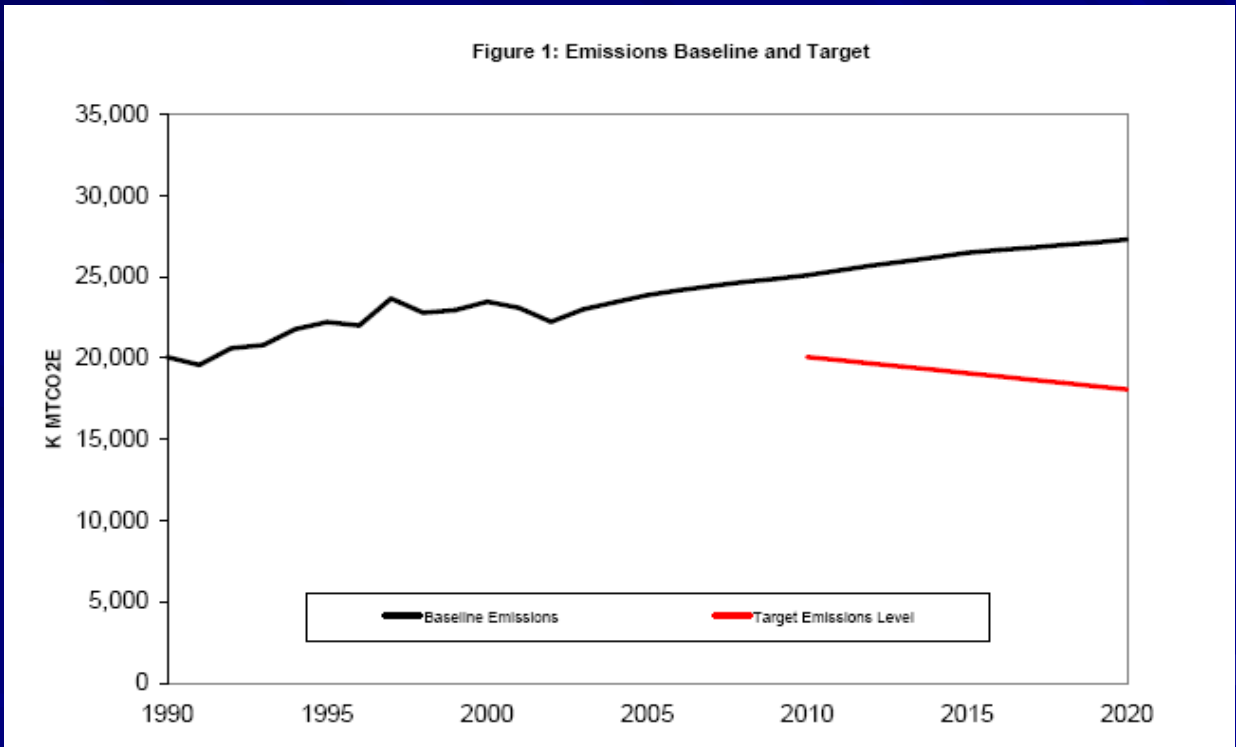


**2006 DATA WILL BE AVAILABLE SHORTLY FROM NESCAUM AND WILL BE FORWARD TO UTE.*

**Maine DEP will report in 2012 on progress compared to baseline data in Climate Action Plan.

Source: NESCAUM

Climate Action Plan
GHG Emissions Baseline



Governor's Office of Energy Independence & Security

Report on State and Municipal Wind Generation Development (PL 2007, c.671 / LD 2266)

- OEIS is required to assist with the development, design and construction of wind and other renewable energy projects at state agencies, municipalities, electric co-operatives, and other similar entities.

OEIS Responsibilities

- Monitor developments in technology and financial opportunities for potential project development.
- Develop information resources to assist with project development.
- Form one or more advisory groups to help carry out responsibilities.

Progress

- OEIS convened Advisory Group of “experts”, holding regular meetings.
- Identified numerous potential funding sources for projects.
- Working to develop a strategic plan (in collaboration with the “small wind working group”) that includes outreach and education to develop and disseminate information to promote project development.