

ACTIVITY SHEET				
COMMITTEE: Utilities and Energy Committee				
L.D. #: 1157				
TITLE: An Act To Promote Clean and Efficient Energy				
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HEARING DATE: 4-7-03				
WORK SESSION DATES: 4-14-03, 10-8-03				
REPORTED OUT DATE:12/8/03 ONTP				
COMMITTEE REPORT:Ought Not to Pass unanimous				

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121st MAINE LEGISLATURE

FIRST REGULAR SESSION-2003

Legislative Document

No. 1157

S.P. 377

In Senate, March 4, 2003

An Act To Promote Clean and Efficient Energy

Reference to the Committee on Utilities and Energy suggested and ordered printed.

10 Brian

JOY J. O'BRIEN Secretary of the Senate

Presented by Senator BRENNAN of Cumberland.

Cosponsored by Senators: President DAGGETT of Kennebec, HALL of Lincoln, STRIMLING of Cumberland, TREAT of Kennebec, Representatives: COWGER of Hallowell, DUDLEY of Portland, KANE of Saco, McKEE of Wayne.

	Be it enacted by the People of the State of Maine as follows:
2	
4	CONCEPT DRAFT SUMMARY
6	
	This bill is a concept draft pursuant to Joint Rule 208.
8	This bill proposes to support clean and efficient energy in
10	Maine by:
12	 Increasing funding for energy efficiency by establishing a single, statewide system benefit charge for Maine's electricity
14	efficiency program of .15 cents per kilowatt hour in 2003, .25 cents per kilowatt hour in 2006 and .30 cents per kilowatt hour
16	starting in 2008;
18	2. Establishing new appliance and equipment energy standards for 15 products not currently covered by federal
20	standards;
22	3. Increasing renewable energy production in Maine by amending the State's renewable energy portfolio standard to
24	gradually increase the percentage of electricity products sold in
	Maine that are composed of clean, new renewable energy; and
26	the second s
20	4. Increasing energy efficient building construction by requiring that the so-called "LEED Green Building Standards" be
28	established as the new residential building code in Maine and
30	requiring the State to use this standard for all new state
	buildings and renovations of state buildings. The bill would
32	also increase enforcement of building codes to ensure compliance.

STATE OF MAINE 121ST LEGISLATURE

LEGISLATIVE NOTICES

JOINT STANDING COMMITTEE ON UTILITIES AND ENERGY

Sen. Christopher Hall, Senate Chair Rep. Lawrence Bliss, House Chair

PUBLIC HEARING: Monday, April 7, 2003, 1:00 pm, Cross Building Room 209

- (L.D. 1261) Bill "An Act To Support Clean and Efficient Energy for the Future of Maine's Economy and Environment" (S.P.0407) (Presented by Senator TREAT of Kennebec) (Cosponsored by Senator BRENNAN of Cumberland, Senator BROMLEY of Cumberland, Senator DAMON of Hancock. Senator HALL of Lincoln, Senator STRIMLING of Cumberland, Representative BLISS of South Portland, Representative BERRY, SR. of Belmont, Representative LUNDEEN of Mars Hill)
- (L.D. 1157) Bill "An Act To Promote Clean and Efficient Energy" (S.P.0377) (Presented by Senator BRENNAN of Cumberland) (Cosponsored by PresidentDAGGETT of Kennebec, Senator HALL of Lincoln, Senator STRIMLING of Cumberland, Senator TREAT of Kennebec, Representative COWGER of Hallowell, Representative DUDLEY of Portland, Representative KANE of Saco, Representative MCKEE of Wayne)

CONTACT PERSON:

Kristen Druffner 100 State House Station Augusta, ME 04333-0100 287-4143

WORK SESSION AGENDA

Utilities and Energy Committee

April 14, 2003

1pm Room 209 Cross Building

- (L.D. 1261) Bill "An Act To Support Clean and Efficient Energy for the Future of Maine's Economy and Environment" (S.P. 407) *(Presented by Senator TREAT of Kennebec) (Cosponsored by Representative BLISS of South Portland and Senators: BRENNAN of Cumberland, BROMLEY of Cumberland, DAMON of Hancock, HALL of Lincoln, STRIMLING of Cumberland, Representatives: BERRY of Belmont, LUNDEEN of Mars Hill)
- (L.D. 1157) Bill "An Act To Promote Clean and Efficient Energy" (S.P. 377) *(Presented by Senator BRENNAN of Cumberland) (Cosponsored by Senators: DAGGETT of Kennebec, HALL of Lincoln, STRIMLING of Cumberland, TREAT of Kennebec, Representatives: COWGER of Hallowell, DUDLEY of Portland, KANE of Saco, McKEE of Wayne)
- (L.D. 231) Bill "An Act To Strengthen Delivery of Electricity Conservation Programs" (S.P. 90) *(Presented by Senator HALL of Lincoln)
- (L.D. 233) Bill "An Act To Promote Energy Conservation" (S.P. 92) *(Presented by Senator STRIMLING of Cumberland)
- (L.D. 352) Bill "An Act To Encourage Energy Efficiency and Security" (S.P. 128) *(Presented by Senator HALL of Lincoln) (Cosponsored by Representative BERRY of Belmont and Representatives: BLISS of South Portland, GOODWIN of Pembroke)
- (L.D. 540) Resolve, To Ensure Optimal Energy Efficiency in State-funded Construction (S.P. 180) *(Presented by Senator HALL of Lincoln) (Cosponsored by Representative BLISS of South Portland and Senator BROMLEY of Cumberland, Representatives: ADAMS of Portland, GOODWIN of Pembroke, RICHARDSON of Skowhegan)
- (L.D. 547) Bill "An Act To Increase Bill Reductions for Electricity Customers in Maine" (S.P. 187) *(Presented by Senator HALL of Lincoln) (Cosponsored by Representative: ADAMS of Portland)
- (L.D. 799) Resolve, To Improve Energy Efficiency in New School Buildings (S.P. 278) *(Presented by Senator HALL of Lincoln) (Cosponsored by Representative: McLAUGHLIN of Cape Elizabeth)

- (L.D. 1321) Bill "An Act Regarding Energy Efficiency Standards" (S.P. 975) *(Presented by Representative ADAMS of Portland) (Cosponsored by Senator HALL of Lincoln and Representatives: BERRY of Belmont, BLISS of South Portland, EDER of Portland, LUNDEEN of Mars Hill, RINES of Wiscasset, SHIELDS of Auburn)
- (L.D. 1187) Bill "An Act To Establish Minimum Energy Efficiency Standards for Products Sold in the State" (S.P. 391) *(Presented by Senator HALL of Lincoln) (Cosponsored by Representative O'NEIL of Saco and Representatives: BLISS of South Portland, PELLON of Machias, RICHARDSON of Brunswick, THOMPSON of China)

TESTIMONY SIGN IN SHEET

Joint Standing Committee on Utilities and Energy

LD_1261__& 1157_____

Date:___4-7-03_____

Name	Town/Affiliation	Proponent	Opponent	Neither
· · · · · · · · · · · · · · · · · · ·	District 18/Sponsor	X		
Senator Treat				
Senator Brennan	Co-Sponsor	X		
Tom Welch	PUC Commissioner	X		
David Foley	Northport	X		
Bruce Kohorn	Brunswick			
Naoto Iwouz	Solar/Kennebunkport	X		
Richard Renner	Architect/Portland	X		
Richard Komp	Maine Sun	X		
Steve Ward	Public Advocate	X		
Mike Mayhew	Talmage Solar Engineering	X		
Jeffrey Sosnaud	Maine Small Business Alliance	X		
Rick Smith	Hydrogen Energy Ctr Cape Elizabeth	X		
Michael Stoddard	Environment Northeast	Х		
Donald Bristocalico	Vote US	X		
Robert Galloupe	Brunswick	X		
D. Carrio	York Beach	X		
Sue Jones	Energy Resource Council of ME	X		
Ned Branells	Clean Air/ Cool Planet	X		
Scott Hall	PPL	X		
David Allen	Central Maine Power		X	
Tom Federle	Bangor Hydro		X	

Jim McGregor	Maine Merchants Assoc	X	
Jeffrey Austin	ME Municipal Assoc.	X	
Jim Cohen	ME Public Service Co	X	
Wayne Mitchell	ME Oil Dealers Assoc	X	
Dan Riley	Nelson & Small and	X	
	F.P.L. Energy		
Michelle McLean	NE Cable &	X	
	Telecommunications		
	and MFPC		
Linda Lockhart	Indus. Energy Consumer	X	
	Group		
Steve Rizzario	American Plastics Council		X
Beth Nagusky	Indep. Energy Producers of		X
	ME		



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L.D. 1157, AN ACT TO PROMOTE CLEAN AND EFFICIENT ENERGY

AND

L.D. 1261, AN ACT TO SUPPORT CLEAN AND EFFICIENT ENERGY FOR THE FUTURE OF MAINE'S ECONOMY AND ENVIRONMENT

TESTIMONY OF JAMES I. COHEN ON BEHALF OF MAINE PUBLIC SERVICE COMPANY

April 7, 2003

Chairman Bliss, Chairman Hall, and members of the Utilities & Energy Committee, my name is Jim Cohen of the law firm of Verrill & Dana, LLP, and I am here today on behalf of Maine Public Service Company to speak in respectful opposition to the above-noted bills.

Energy Use in Northern Maine. As we have previously shared with the Committee, 80% of all energy use in Northern Maine comes from petroleum products. Only 17% of usage comes from electricity. What does this mean? It means that any energy strategy focused on electricity alone will have limited impact. I will discuss in greater detail below.

Fees May Incent Shifting to Other Fuel Sources. As a basic premise, as the price of a commodity increases, customers may be less inclined to use the commodity. However, if comparable energy sources remain available at lower costs, customer use may shift to other fuels rather than disappear altogether. For some businesses, if the price of purchasing electricity on grid goes up, the response may be to install self generation. Self generation may very well involve the use of diesel fuel, which in Northern Maine would result in greater pollution than our current electric generation mix of hydro, biomass, and nuclear.

Such shifting may occur notwithstanding any incentives we may create by this legislation for renewable energy generation. The reason is simple. At this point, we do not believe that the price per kWh of renewable energy is low enough, even with possible incentives, to match the already lower costs of diesel generation. Until this economic fact changes, fossil fuel generation is likely to persist.

L.D. 1157 and L.D. 1261, Testimony of Maine Public Service Company April 7, 2002 Page 2

The proposed energy tax under both bills could eventually result in a 0.3 cents per kWh charge on T&D rates. To put this in perspective, MPS anticipates that its overall T&D rates by the end of the decade, excluding stranded costs, will be in the neighborhood of 3.0 cents per kWh. At these rates, conservation charges would total 10% of a customer's T&D charge. This is material and substantial. MPS has worked hard to lower its distribution rates, and coming up with savings to equal 10% of its costs would be an extraordinarily difficult task. It would involve substantial layoffs and reductions in service quality. We mention this fact to illustrate the significance of simply adding 10% to the PUC jurisdictional distribution cost of electricity.

Another Subsidy for Generation. In the 1980s, the policy of the State of Maine was to subsidize the cost of renewable generation through electric rates. This policy, combined with an incentive for long-term contracts and a miscalculation of the price of oil, has resulted in millions upon millions of dollars of stranded costs for customers in the State of Maine. The policies put forward in the two bills this afternoon do not create comparable risks. However, the lessons of the past are instructive. By taxing energy consumption and providing the difference to private generators, we have no guarantee that any cost savings will be flowed through to Maine's electric customers. Generators will charge whatever the market bears, and if the market permits higher prices to be charged, private generators will do so. For this reason, if the Legislature believes it is important to encourage use of renewable resources, we believe such incentives should be provided directly to consumers, not to private generators who are not regulated in Maine.

We Are Already Confronting a Surplus of Generation Outside of Northern Maine. In Northern Maine, most of the energy produced is renewable-hydro or biomass. We are not in a surplus condition at this point, but it is not clear whether the proposed subsidies will be adequate to correct the problem. By contrast, in the rest of the State there is currently a surplus of electric generation. We produce almost twice what we can use, and there are inadequate connections to wheel power outside of the State. If these bills succeed of their purpose, they will encourage the construction of additional generation in Maine, further exacerbating the surplus in Southern Maine. But such surplus will not necessarily make renewable energy more competitive, or guarantee its success in the marketplace. Moreover, Maine is a relatively small player on the New England energy scene, and any increases in generation supply or reduction in consumption in Maine will have a relatively small impact on the overall price of electricity in New England. Maine is too small a player.

Conclusion. In light of the challenges discussed above, we are concerned about adoption of the above-noted bills as drafted. At minimum, we believe it is critical to adopt energy taxes in a broad-based manner, not taxes concentrated on a single form of energy use. Second, we remain concerned about using customer funds to subsidize unregulated generators without any guarantee that such benefits will ultimately be returned to the pockets of our customers. Finally, we are concerned that the size of the energy tax is too great relative to the cost of transmission and

L.D. 1157 and L.D. 1261, Testimony of Maine Public Service Company April 7, 2002 Page 3

distribution in the State. For these reasons, we do not support passage of these bills at this time. Thank you.



60 COMMUNITY DRIVE AUGUSTA, MAINE 04330-9486 (207) 623-8428 www.memun.org

Testimony of the Maine Municipal Association

In Opposition To LD 1157 An Act To Promote Clean and Efficient Energy April 7, 2003

Senator Hall, Representative Bliss and Members of the Utilities and Energy Committee, my name is Jeffrey Austin and I am submitting testimony in opposition to LD 1157 on behalf of the Maine Municipal Association.

The MMA's Legislative Policy Committee strongly opposed this measure at its March meeting. The focus of this objection is Section 4 of the Act. Local officials have long resisted the imposition of a statewide building code and oppose this attempt as well. The preemption of local authority in this area will continue to be resisted whenever it occurs.

Furthermore, there were many anecdotal stories of how the various "green" building codes, incentives and plans end up costing far more money than budgeted and with too few benefits.

There are several other "code" bills that have been offered this session, including: LD 529, LD 540, LD 688, LD 799, LD 1025 and LD 1276. The Committee on Natural Resources has 'held over' LDs 688 and 1025 until the next session in order to enable several interested parties to meet and discuss the issue more comprehensively. At this point, the MMA is not one of those parties.

If the Committee is not willing to oppose this Act, the MMA would request that you table it and advise the sponsors of LD 1157 to coordinate with the group meeting on LD 688 and 1025.

Thank you.



JOHN ELIAS BALDACCI GOVERNOR STATE OF MAINE EXECUTIVE DEPARTMENT PUBLIC ADVOCATE OFFICE 112 STATE HOUSE STATION AUGUSTA, MAINE 04333-0112

STEPHEN G. WARD PUBLIC ADVOCATE

April 4, 2003

Senator Christopher Hall, Senate Chair Representative Lawrence Bliss, House Chair Committee on Utilities and Energy 121st Maine Legislature 2 State House Station Augusta, Maine 04333

> Re: LD 1261, An Act To Support Clean and Efficient Energy for the Future of Maine's Economy and Environment LD 1157, An Act to Promote Clean and Efficient Energy

Dear Senator Hall and Representative Bliss,

As is the case with respect to each set of bills scheduled at the Utilities Committee on specific days this week, I am writing to offer generic comment on the two-above captioned bills with respect to their major themes and proposals. These comments are offered jointly with the State Planning Office and reflect numerous conversations with Governor's Office staff. In this instance therefore, this letter and its comments are presented on behalf of the Baldacci Administration as well as on behalf of the Office of Public Advocate.

Both LD 1261, sponsored by Senator Treat, and LD 1157, a concept draft sponsored by Senator Brennan, represent "omnibus" bills with elements targeted at strengthening Maine's reliance on renewable resources and at increasing efficiency in the state's consumption of energy. Taken together, the two bills offer a number of compelling proposals for improving Maine's energy mix, increasing its reliance on non-fossil resources and improving the efficiency of building designs and consumption patterns. These proposals include:

 Establishing by statute energy efficiency ratings for a number of appliances and energy-consuming products that currently are not covered by any federal efficiency standard. The proposed ratings in LD 1261 are identical to the proposals in LD 1187, to be heard on April 10, and to identical appliance efficiency legislation currently pending before the Legislatures of Maryland, New Jersey, New York and the five other New England states. The measure requires compliance by January 2005, although there may be good reason to extend the compliance deadline to January 2006. We find this proposal otherwise to be



Stephen.G.Ward@maine.gov (e-mail) http://www.maine.gov/meopa

FAX: (207) 287-4317 FAX: (207) 287-4300 highly desirable, in view of the permanent efficiency benefits it will provide to individuals, local governments and the Maine economy.

- 2) Promoting the construction of more efficient buildings for businesses and households in Maine by investigating, under the auspices of the Energy Resources Council, the value of updating Maine's building codes and incorporating the "Leadership in Energy and Environmental Design" (LEED's) standards in a residential construction code. Mandatory energy codes can be an efficient way of ensuring that new construction includes cost-effective energy efficient construction practices. Generally speaking, it is more cost effective to build with energy efficient practices that it is to retrofit buildings after they are built. That said, the idea of more comprehensive residential energy code that applies to all residential housing, rather than just speculatively-built housing has been controversial in the past, as has selection of an appropriate standard. In addition, because energy code enforcement is not currently funded in Maine, compliance is largely on the honor system and relies on knowledge and good faith in the building community. With this in mind, a successful energy code update and potential application to more of the residential market would require cooperation of homebuilders, legislators, Executive agencies and others, and would be best undertaken through a Legislative study commission, in our view.
- 3) Creating a comprehensive set of goals for new renewable resources so that Maine's reliance on renewable power in the State's energy mix will grow over time. We believe this, and the next-succeeding issue to be appropriate for careful consideration by a Legislative Task Force that can report back to the Second Session of the 121st with respect to Renewable Portfolio, "Clean Energy" wires charge and distributed generation issues, in the context of LD 1373, LD 671 and LD 669.
- 4) <u>Putting into place a "wires charge" for ratepayer funding in electric rates for</u> <u>efficiency measures, as approved by the PUC, and renewable energy projects</u> that are under development in Maine, pursuant to PUC rulemakings. The proposed level of an efficiency "wires" charge represents an increase over the current level. The "wires charge" for a Clean Energy Fund would be entirely new. At this time we need more information on the cost-effectiveness of alternatives to the existing renewable portfolio before committing to the creation of any renewable "wires charge."

The details in each of these four particular areas vary slightly as between LD 1261 and LD 1157. Additionally, there are areas covered in LD 1261 which are not present in Senator Brennan's Concept Draft. These include: 1) creation of a Clean Energy Advisory Committee to provide stakeholder input in the PUC's supervision of the Clean Energy Fund; 2) designating PUC rules implementing the Clean Energy Fund Provisions as Major Substantive Rules requiring ratification by the Legislature; 3) designating annual goals in megawatts per year for renewable generation in Maine; and 4) finally, completing a report to the Legislature, due January 2004, by

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the Energy Resources Council on the economic development potential of a "Green Energy Bond" or other way of financing new renewable business development in Maine.

We are particularly supportive of aspects of these proposals that increase consumer awareness and demand for renewable resources since a larger base of consumer sales will inevitably reduce the unit price of renewable power sold in Maine. Certainly, the Governor is very interested in increasing the supply of Green Power in Maine's retail marketplace for electricity given the importance of both new and existing renewable generation projects for Maine's economy. We are particularly intrigued with the charge to the Energy Resources Council (or possibly a legislative-led Task Force) for considering bonding authority for financing, in part, new renewables projects in Maine. We believe, however, that in lieu of taking action now on any "wires charge" proposal for ratepayer contributions to a Clean Energy Fund, this aspect of LD 1261 should be held over and considered in the Second Session of the 121st Legislature in conjunction with the issues identified above. Having a legislative vehicle held over for the next session may well be useful as we consider funding options for renewable resources a year from now.

Both "omnibus" bills direct attention to <u>new</u> renewable resources and apparently leave undisturbed the existing provisions of Maine's Renewable Portfolio law at 35-A Section 3210, as well as definitions there of "efficient resources" and "eligible resources." It should be noted, however, that no cogeneration facility will automatically qualify as a new renewable resource under these bills (or under LD 1312, to be heard on April 9).

Taken as a whole, we commend the principles and proposals underlying LD 1261 and LD 1157 to the Committee for its serious consideration as it takes up renewables, energy efficiency, building standards, appliance ratings and Energy Resources Council issues over the next two weeks. In contrast to the renewables bills to be heard on April 9 and the conservation/efficiency bills to be heard on April 11, these two "omnibus" bills attempt to balance policy initiatives in <u>both</u> areas and simultaneously to put into place regulatory mechanisms regarding renewables and energy efficiency.

We look forward to working with the Committee as it deals with the initiatives presented in these two bills.

Sincerely,

Stephen G. Ward Public Advocate

Sen. Edward M. Youngblood Rep. Donald Berry, Sr., Cosponsor Rep. Albion D. Goodwin

cc: Sen. Lynn Bromley, Cosponsor Rep. Herbert Adams Rep. Philip A. Cressey, Jr.

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Rep. Kenneth C. Fletcher Rep. Stanley A. Moody Rep. Peter L. Rines Sen. Michael F. Brennan, Sponsor Sen. Ethan K. Strimling, Cosponsor Sen. Beverly Daggett, Cosponsor Rep. Benjamine F. Dudley, Cosponsor Rep. Linda Rogers McKee, Cosponsor Andrea Smith, Governor's Office Laurie Lachance, SPO Kristen Druffner, U&E Committee David Allen, CMP Kim Kenway, Curtix Thaxter Jim Cohen, Verrill & Dana Pam Person, CSE Bob Galloupe, ME Council Sen. Cit. Tony Buxton, Preti Flaherty Andy Burt, ME Council of Churches Peter Arnold, Chewonki Foundation Bob Howe, Howe & Co.

Rep. Jacqueline Lundeen, Cosponsor Rep. Maitland E. Richardson Sen. Sharon Treat, Sponsor Sen. Dennis S. Damon, Cosponsor Rep. S. Peter Mills, Cosponsor Rep. Scott W. Cowger, Cosponsor Rep. Thomas J. Kane, Cosponsor Dick Davies, Governor's Office Marjorie McLaughlin, PUC Jon Clark, OPLA Julie Hashem, SPO Tom Federle, BHE LuAnne Williams, BHE Sue Jones, NRCM Joyce Dyttmer, AARP Mike Stoddard, Environment NE Linda Lockhart, Preti Flaherty Beth Nagusky, IEPM Raina Rippel, PSR Sharon Staz, KLPD

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American Plastics Council_®

April 10, 2003

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Senator Christopher Hall Senate Chair Joint Committee on Utilities & Energy 100 State House Station Augusta, ME 04333

Rep. Lawrence Bliss House Chair Joint Committee on Utilities & Energy 100 State House Station Augusta, ME 04333

Dear Senator Hall and Rep. Bliss:

First, let me thank you and the members of the Committee again for the opportunity to address the Committee regarding LD 1261 and 1157.

At the public hearing held on April 7, 2003 two questions and a request for additional information were asked. The first question dealt with the International Energy Conservation Code (IECC), the second with the ASHRAE standards.

First, let me start by stating that, LEED is not required in order to have what is called a high performance building. Achieving such high performance in buildings can be accomplished through other methodologies such as the 2000 International Energy Conservation Code or ASHRAE 90.1-99 standard.

The IECC prescribes, "energy efficiency requirements for residential and commercial buildings, recommends approaches to energy efficient design and specifies building requirements for thermal performance and air leakage." The IECC was developed by the International Code Council, which is comprised of the Building Officials and Code Administrators International (BOCA), the International Conference of Building Officials (ICBO) and the Southern Building Code Congress (SBCCI). Through the use of both prescriptive and performance based provisions, the code establishes minimum design and construction baselines for energy efficient buildings. The code also references ASHRAE 90.1-99 for high-rise residential and commercial buildings. Finally, the IECC is under current consideration by the US Department of Energy as the most cost-effective residential energy efficiency standard available.

ASHRAE 90.1-99 standard, developed by the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), is an energy code for commercial buildings. Standard 90.1-99 deals with exterior and interior lighting, U values (minimum R-values) for components of the building, and heating and cooling systems. As mentioned above, this standard is also referenced in the IECC.

I have attached background information further detailing both the IECC and ASHRAE 90.1. Should the committee need more detailed or technical information I would be more than happy to provide you with those materials.

Thank you again for the opportunity to provide you with additional information.

Sincerely,

Stephen Rosano

Stephen Rosario

Commercial Energy Code

ASHRAE 90.1

The American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) develops standards for energy efficiency in buildings. From these standards, they developed the ASHRAE 90.1 energy code for commercial buildings, which has become the code in many states throughout the country. ASHRAE 90.1 sets energy efficiency requirements for exterior and interior lighting, thermal envelope (insulation levels and maximum window areas), heating and cooling systems, and service water heating. In addition, the standard has guidelines for conducting an energy simulation of your building to show compliance.

The revision of ASHRAE 90.1 is now complete and is in the process of being codified. In addition, an International Energy Conservation Code (IECC) has been developed for adoption. The IECC includes both ASHRAE 90.1 revised and COMCheck as separate chapters.

Typical standards:

Lighting

To meet the lighting requirement, first determine the total wattage of lighting in the facility. Then, find the amount of lighting allowed using the various charts and tables in ASHRAE 90.1. If the amount of lighting does not exceed what is allowed, the building complies.

Exterior Lighting

Each aspect of exterior lighting has an allowance based on the type of lighting and the area or linear feet of surface. For example, customer parking lots receive an allowance of 0.18 watts per square foot. There are a number of exceptions to the exterior lighting requirement, including outdoor athletic facilities, public monuments, signs, retail storefronts, and exterior enclosed display windows.

Interior Lighting

Typical allowances for indoor lighting are as follows:

Entire Buildings:

Offices -- 1.50 to 1.90 watts per square foot depending on the floor area

Retail -- 2.10 to 3.30 watts per square foot depending on the floor area

Schools -- 1.50 to 2.40 watts per square foot depending on the floor area and type of school

The interior lighting section also allows a designer to seek compliance using a spacespecific method. Examples of requirements in watts per square foot are:

Room Location	Watts per S.F.
Corridors	0.8
Fast Food Restaurants	1.3
Leisure Dining	2.5
Librarv Reading Area	1.9

Open Office Areas	1.8 to 2.1
Welding Shop	1.2
Barber Shop	2.0
Jail Cell	0.8
Emergency Room in Hospital	2.3
Retail (jewelry areas)	5.6
Tournament Badminton Facility	0.8
Recreational Ice Skating Rink	0.6

The code also allows credits by which you can increase lighting levels above code for areas that have natural day lighting with control over artificial lighting.

In addition to lighting, the energy code sets minimum numbers of lighting controls in buildings. The number of controls can be decreased if advanced control systems, such as occupancy controls or dimmable switches, are used.

Envelope

ASHRAE 90.1 sets maximum U-values (minimum R-values) for the components of a building between heated and unheated areas. The requirements are climate-specific and use "Alternative Component Package (ACP) Tables" for cities throughout the country. The tables show required insulation levels as well as maximum window areas depending on the building design.

Example

A commercial office building in Lexington, Kentucky with clear, double-paned metal windows with a U-value of 0.72 and no overhang above:

Ceilings -- U-0.056 (about R-19 continuous)

Floor over unheated space -- U-0.060 (about R-19 continuous)

Maximum window percentage -- 16% of total wall area

Framed walls -- U-.104 (about R-13 in steel-framed wall with R-3 continuous sheathing)

Heating and Cooling Systems

ASHRAE 90.1 has a lengthy set of requirements for the efficiency of heating and cooling systems. In general, they deal concern:

System sizing -- all systems must be sized using standard load calculation procedures.

Economizers -- in much of the country, air conditioning systems must be able to pull in outside air when comfortable to reduce use of compressors in the main cooling system.

Fan Power -- limited to 0.8 watts/ cfm for constant volume HVAC systems and 1.25 watts/ cfm for variable air volume systems.

Temperature Reset -- automatically adjust supply temperature in response to outdoor conditions to save energy.

Pumps and Fan Motors -- must adjust energy usage with flow rate.

Duct and Piping Insulation -- requirements based on difference in temperature between fluid and surrounding air.



Accelerating the Implementation of Building Energy Codes

The 2000 International Energy Conservation Code (IECC)

The 2000 International Energy Conservation Code (IECC) was published by the International Code Council and its founding national model code organizations: Building Officials and Code Administrators International (BOCA), International Conference of Building Officials (ICBO), Southern Building Code Congress International (SBCCI). The 2000 IECC will be published as part of the complete family of International Codes, which now include eleven separate codes that complement each other.

The 2000 IECC is a comprehensive energy conservation code that establishes minimum design and construction parameters for energy-efficient buildings through the use of prescriptive and performance based provisions. The 2000 IECC has been refined and simplified in response to the needs of the numerous users of the model energy code. It establishes minimum thermal performance requirements for building envelopes including windows, and sets minimum efficiencies for mechanical systems in buildings. Like the 95 MEC and the 1998 IECC, the 2000 IECC references ASHRAE/IES 90.1-1989 for high rise residential and commercial buildings. Like the 1998 IECC, the 2000 IECC includes a chapter with user-friendly language that directly addresses simple commercial buildings (Chapter 8). The 2000 IECC also includes significant improvements in commercial lighting energy efficiency that are similar to the more stringent requirements of the new ASHRAE 90.1-99 standard.

A new feature of the 2000 IECC is a simplified prescriptive compliance table that is also included in the International Residential Code (IRC). Like the rest of the IRC, its energy chapter is intended to standalone so that builders of most residential buildings need only use this single code document. The result is easier compliance for builders and easier enforcement by code officials, which will lead to reduced energy consumption for consumers and improved air quality for us all.

As required by the Energy Policy and Conservation Act (EPAct), signed into law by President Bush in 1992, the US Department of Energy (DOE) is currently considering certifying that the 2000 IECC as the most cost-effective residential energy-efficiency standard available. An official determination is expected this spring and will be accompanied by new, updated MECcheck compliance and training materials to support implementation of the 2000 IECC. Once the DOE determination is announced, EPAct requires states to determine the appropriateness of revising their residential energy codes to meet or exceed the 2000 IECC. Currently EPAct references the 95 MEC.

The publication of the 2000 IECC, a sophisticated and straightforward energy code, offer states and local jurisdictions an excellent opportunity to take advantage of the impressive monetary and environmental benefits that building energy codes offer. Adoption of these new codes will enable states and their code enforcement agencies to request financial and technical support offered by DOE's Building Standards and Guidelines Program, as well as the support infrastructure already established by the national model code organizations. The new building energy conservation code is here and its benefits are greater than ever.

For more information contact: Building Codes Assistance Project, 1200 18th Street, NW, Suite 900, Washington, DC 20036 Phone: (202) 530-2200 Fax: (202) 331-9588 Email: bcap@ase.org Internet: www.bcap-energy.org

The 2000 International Energy Conservation Code:

For a Cleaner Environment

The International Code Council (ICC) created the 2000 International Energy Conservation Code (IECC) as a comprehensive energy conservation code that prescribes energy efficiency requirements for residential and commercial buildings, recommends approaches to energy-efficient design, and specifies building requirements for thermal performance and air leakage.

The 2000 IECC has been refined and simplified from earlier energy codes in response to the needs of building design, construction, and code enforcement communities. A simplified compliance path provides users with a simple, prescriptive way to meet requirements for their specific climates. Following simple written guidelines makes it easy to build a structure that meets the requirements of the IECC. The energy code manual is user-friendly; basic charts and shortened chapters create a convenient reference guide for builders and code officials.

What are the environmental benefits of the 2000 IECC?

Implementation of the 2000 IECC saves consumers money and energy, makes housing more affordable, and reduces air pollution.

Energy production and use are among the largest contributing factors to greenhouse gas emissions and air pollution. Most of these are emissions introduced by the combustion of fossil fuels, which accounts for nearly 70 percent of the total electricity generated in the United States. Aggregate emissions from electric utilities of all greenhouse gases increased by 11.8 percent from 1990 to 1997, and accounted for just under 30 percent of total U.S. greenhouse emissions during the same period. The majority of these emissions resulted from the combustion of coal in boilers to produce steam that is passed through a turbine to generate electricity. Overall, the generation of electricity results in a larger portion of total U.S. greenhouse gas emissions than any other activity. Use of renewable energy sources and more efficient use of energy in buildings, which accounts for more than onethird of the total energy use in the U.S., would result in tremendous economic and environmental benefits. Important facts to consider:

- Adoption of the 2000 IECC by a large number of states would significantly reduce energy consumption in buildings.
- In 1999, estimated CO₂ emissions in the US resulting from the generation of electric power measured 2,245 million metric tons, an increase of 1.4% from 1998 (2,125 metric tons). The estimated generation of electricity from all sources increased by 2%. (Energy Information Administration)
- Approximately 49% of the energy (7.6 quadrillion Btus) (EIA, 1997) used to meet the needs of US residential and commercial electricity users is lost during

generation, transmission, and distribution of electricity. Thus for every one watthour eliminated in the home through energy efficiency, emissions at the power plant are cut by the equivalent of 2 watt-hours.

- Total US greenhouse gas emissions rose in 1997 to 1,813.6 million metric tons of carbon equivalents, 11.1% above 1990 baseline levels. (EIA, 1999)
- 329 counties in the US do not meet the National Ambient Air Quality Standards for ozone and/or particulate matter. (Environmental Protection Agency, 2000)
- In 1999, US residences consumed 1.14 billion kilowatt hours, or 35% of the nation's total electric utilities. (EIA, 1999).
- Residential energy consumption is projected to increase by more than 22% overall between 1998 and 2020. Most (74%) of the growth in total energy use is related to increased use of electricity (EIA, 1999).
- In 1998, there were an estimated 1.39 million new housing starts in the US. (US Census Bureau).
- Total energy prices in the United States average 8.82 dollars per million Btus, a rise of 7.17 dollars per million Btus (from \$1.65) since 1970. (EIA, 1999).

The combination of large energy savings and high pollution avoidance potential emphasizes the need for the adoption and implementation of the 2000 IECC throughout the U.S. This code is more efficient and flexible than previous energy-efficiency codes, and it will produce substantial international economic and environmental benefits. April 3, 2003

PRESS RELEASE

CONTACT: Michelle M. Reed Marketing Assistant (207) 725-8721 mmr@wright-pierce.com

Wright-Pierce Evaluates Feasibility of Using Waste Restaurant Grease to Produce Biodiesel

TOPSHAM, ME - Supported in part by a Seed Grant provided by the Maine Technology Institute, Wright-Pierce has commenced a project to evaluate the feasibility of a biodiesel production facility in Maine. Such a facility would make use of waste grease generated by many of Maine's restaurants. This waste grease represents a potentially valuable resource for creation of an environmentally superior domestic fuel that can help offset the demand for imported petroleum-based diesel fuel.

Biodiesel is presently produced elsewhere in the United States and is now transported to Maine for retail distribution. The objective of the project is to determine if a production facility could be implemented in Maine on a cost-effective basis. The project will evaluate organization structure, availability of feedstock (raw materials), transportation, processing, distribution, marketing, retailing and funding sources for a hypothetical biodiesel facility.

Several contributors to the project have come forward to assist Wright-Pierce, among them, the Chewonki Foundation of Wiscasset; New England Organics of Falmouth; Frontier Energy of South China; the University of Maine at Orono; and the Center for Environmental Enterprise in South Portland. All contributors are providing time and/or financial support.

Wright-Pierce intends to produce a report on the Project by mid summer 2003.

For more information, contact Norman Gridley, Senior Project Manager at Wright-Pierce. Tel 207-735-8721; Fax 207-729-8414; email <u>ncg@wright-pierce.com</u>



THOMAS L. WELCH CHAIRMAN STATE OF MAINE PUBLIC UTILITIES COMMISSION 242 STATE STREET 18 STATE HOUSE STATION AUGUSTA, MAINE 04333-0018

WILLIAM M. NUGENT STEPHEN L. DIAMOND

COMMISSIONERS

April 7, 2003

Honorable Christopher Hall, Senate Chair Honorable Lawrence Bliss, House Chair Joint Standing Committee on Utilities and Energy 100 State House Station Augusta, ME 04333

Re: All LDs Related to Renewable Energy and Energy Efficiency

Dear Senator Hall and Representative Bliss:

Through the bills it will consider during the week of April 7, the Committee will have the opportunity to re-examine the approach developed at the time of electric restructuring to encourage the use of certain fuels to generate electricity. Currently, 35-A M.R.S.A. §3210 offers an incentive to generate using renewable resources (excluding facilities with capacity greater than 100 MW) and efficient cogeneration by establishing a 30% resource portfolio system (RPS). The bills also allow the Committee to re-examine the Conservation Act enacted one year ago as 35-A M.R.S.A. §3211-A.

Today, before presenting testimony addressing specific issues in each bill, the Commission will submit comments that apply to all of the bills dealing with renewable energy sources or electric energy efficiency. Our comments will discuss overarching goals and implementation issues that we believe are relevant as the Committee considers these bills. Later this week, we will present additional testimony discussing features that are unique to individual bills. As always, we will be present at the work sessions.

The Commission believes that its expertise lies in how to implement the policies set by the Legislature, and in the impact on electricity consumers of the various proposals put before this Committee. We do not have the expertise, or the legislative role, to comment on which of the various public policy goals suggested by these bills should be favored. Thus we will not offer an opinion on whether ratepayer money is better spent supporting biomass as opposed to small hydro-electric generation, or whether it would be better, in the broad context of the resources of consumers in Maine, to spend more or less for energy efficiency than the Commission has found appropriate under current law. We will, however, articulate our views on whether the particular mechanisms proposed in these bills are likely to achieve their stated goals in an efficient way, and the degree to which the various proposals work in concert with, or in opposition to, other objectives the Commission has been asked to achieve.

Briefly stated, the Commission favors approaches that determine in advance the amount of money that ratepayers will be asked to pay for energy efficiency or in support of



renewable generation. Thus, we have a preference for a legislative specification of the amount to be collected for cost-effective energy efficiency (rather than a range within which the Commission can chose), and for a system benefit charge over a portfolio requirement for generation (though a portfolio requirement with a cap on the cost of compliance would have a similarly beneficial cost-predictive effect). We also believe that the Committee should consider, as it views the proposals in aggregate, whether the amount to be collected from ratepayers to fund the proposals is consistent with the objective of the Restructuring Act to bring Maine's electricity rates more in line with those prevailing elsewhere in the country. This is not to say that the Commission believes that the amount currently spent by ratepayers for energy efficiency and renewable generation is too much, or that an increase in the level of funding would necessarily frustrate the goals of restructuring. We merely urge the Committee to be sensitive to the size of the payment by ratepayers both with respect to any particular program and the programs taken together. Finally, the Commission will note some areas in the various proposals where we see either issues of equity or a high risk of unintended consequences.

Against this background, we recommend that any method chosen to advance either renewable generation or efficiency be chosen to satisfy five criteria:

- *Known costs* The cost to consumers should be known ahead of time. This allows policy makers to weigh the benefits of supporting renewable energy or energy efficiency against the additional costs that will diminish gains made through electric restructuring.
- *Demonstrable benefits* The benefits should be direct and demonstrable. There should be an identifiable link between the money spent and an increase in generation from targeted renewables or in increased efficiency.
- *A minimum of free riders* There should be few free riders. Funds should reach the generators that need support or customers who would implement efficiency measures, and should not reach generators who can compete without support or customers who would implement efficiency measures without a subsidy.
- *Consistent "signals"* Incentives work best when they are aligned with the economic interests of those for whom they are intended. Creating conflicting incentives may frustrate the effectiveness of both.
- *Equity* There should be as close a relationship as possible between those who benefit and those who pay for any of these actions. Moreover, legislation should avoid duplicating subsidies that may have been provided in the past.

I have organized the remainder of my general testimony into three categories: issues raised by efforts to support renewable generation; issues raised by proposed changes to the conservation and efficiency programs; and issues raised by the adoption of standards.

<u>Renewable Energy</u>

Establishing Renewables Goals

As it considers renewable energy policy, we suggest that the Committee first establish the goals it seeks to accomplish. There are a variety of possible goals:

- Allow particular *existing renewable generation sources* (small hydro-electric, biomass, either in-state or regional) to remain economically viable
- Encourage *new renewable generation sources* (wind, solar) that would not develop without financial support
- Encourage *environmentally benign generation*. Such generation may be costly and require subsidization to survive (fuel cells, biomass) or it may be inexpensive and need no subsidy to survive (large-scale hydro). It can be renewable (hydro, wind) or from relatively benign technologies (fuel cells). Finally, even renewables fall in varying categories of "green." Wind and solar have no emissions, but may raise aesthetic or other objections; biomass emits CO2 and some particulates, though there is evidence that the net CO2 emissions are modest or even non-existent; and municipal solid waste may burn items that emit pollutants but can relieve pressure on land-fill resources.
- Encourage renewable generation sources at *small, local* sites (distributed generation)
- Maintain a *diverse resource mix* to avoid over-reliance on one fuel
- Stimulate *economic health* in Maine

Currently, Maine statute establishes goals for renewable generation sources as follows:

In order to ensure an adequate and reliable supply of electricity for Maine residents and to encourage the use of renewable, efficient and indigenous resources, it is the policy of this State to encourage the generation of electricity from renewable and efficient sources and to diversify electricity production on which residents of this State rely... 35-A M.R.S.A. 3210(1).

Methods for Accomplishing Renewable Energy Goals

As indicated above, the Commission will not comment on the appropriate renewable energy goals, which we consider to be policy questions appropriate for the Legislature to decide. We will, however, offer our view on the most effective way to accomplish the goals that the Legislature establishes.

Nationally, there are various methods for collecting and disbursing funds to accomplish renewable energy goals. As a general rule, any one of these approaches, or some combination, could be used for any of the goals listed above:

- A resource portfolio requirement (RPS) a percentage of each electricity provider's sales must be supplied by particular resources, as required now in Maine law
- A system benefit charge (SBC) a portion of utility rates are placed in a fund and disbursed to suppliers, generators, or customers who use particular resources
- A tax the tax increases the price of "undesirable" resources and the revenue raised by the tax is disbursed to suppliers, generators, or customers who use "desirable" resources
- Voluntary funds Consumers contribute through their electric bill
- State purchase State government purchases a portion of its electricity from particular fuel sources

Recommendations Regarding Renewable Energy

We have concluded that the current resource portfolio requirement (RPS) has significant disadvantages. First, it is not possible to determine how much an RPS costs consumers. Second, policy makers cannot ensure that the additional price that consumers pay (if any) for generation reaches the generators that the RPS is meant to encourage. We will cite examples that show this problem in the following paragraphs.

If there are significant numbers of competitively priced renewable generating facilities (e.g., hydro facilities) in the region, a competitive provider can fulfill the RPS at no additional cost. The provider might or might not charge a risk premium to hedge against the possibility that eligible sources are unavailable (e.g., if there is a drought). In the first instance, the RPS raises prices by an unknown amount, obtains no additional renewable generation, and competitive providers obtain higher profit. In the second, the RPS costs nothing and obtains no additional renewable generation. Neither of these outcomes is an effective way to support a renewable energy goal.

If there is a shortage of competitively priced renewable generating facilities, an RPS will cause some of the uneconomic generation to be purchased at a price that is higher than the market price of lower-cost alternatives. The RPS will raise prices by an unknown amount, but will attain the goal of encouraging renewables. If resources are sufficiently scarce, prices could be significantly higher than market; in this case, it would be wise to impose a cap on the price created by the RPS.

A tax or assessment on competitive providers has the advantage that the cost is known (although after the fact, not beforehand) and the money raised can be given directly to companies that policy makers wish to support. However, a tax on competitive providers would likely discourage them from remaining in the Maine market, resulting in a less robust market and higher prices.

Voluntary funding has the disadvantage that very little money is raised. Maine's current voluntary renewables fund has attracted only about \$60,000, which is obviously inadequate to fund a comprehensive renewables program.

State purchases have the advantage that they support particular renewable generation at a pre-determined cost. In light of the current budget deficit, the extent of this approach is limited. However, it can supplement a larger statewide approach.

We believe that a system benefit charge (SBC) is the most effective means of funding a renewable energy program because policy makers would know and control the cost to consumers and the benefits obtained. Policy makers would pre-determine the level of funding desired and would then have a pool of dollars that they could disburse in order to obtain the greatest amount of the desired power at the lowest cost. Alternatively, policy makers could determine the particular generators that they wished to support and the level of support necessary to create economic viability for those generators, and disburse precisely that amount. Other disbursal methods are undoubtedly possible. In all cases, however, policy makers would know how much consumers paid and what benefits were purchased.

Despite this preference, we believe that it would be impractical to change from an RPS to an SBC immediately. First, because the standard offer contracts for the residential and small commercial class for both CMP and BHE do not expire until March of 2005, any change made before that date might put those contracts, which are favorable to consumers, in jeopardy. Moreover, we think that a clear goal for the renewable energy program will take some time to develop and should probably be considered by the study group proposed by LDs 669, 1261, and 1373. The study group should also examine the appropriate level of funding and the likely effects of various disbursal methods. We recommend that the study group developed as a result of these bills consider a SBC during the upcoming year, and that next year the Legislature make statutory revisions as a result of the study group's findings and recommendations. We will further discuss our recommendations regarding a statewide study group in our testimony on LDs 1373 and on all renewables bills.

With respect to funding levels, we recommend that the legislature determine the amount, if any, that Maine's ratepayers can afford and that should be allocated to supporting renewables, and then permit the commission to spend less if it determines that the support is not needed, or recommend more if the objectives of the support are not being achieved.

Generation Currently Used to Serve Maine's Customers

To assist the committee in considering the effectiveness of Maine's current renewable energy statute, we have calculated estimates of the existing generation fuel sources used to serve Maine's customers:

- Attachment 1 the fuel sources used to serve customers during 2001, obtained from competitive providers' annual reports to the Commission
- Attachment 2 the percentage of renewable and "eligible" fuel sources generated instate and the percentage generated out of state in 2001; from among the generation that is eligible for Maine's 30% RPS, the percentage that is renewable (i.e., is not produced from fossil fuel)
- Attachment 3 biomass and small hydro-electric plants in Maine and their contract status

<u>Energy Efficiency</u>

Establishing Energy Efficiency Goals

There are a variety of possible goals that the state's energy efficiency program might accomplish:

- *Improve the environment* by lowering the amount of electricity consumed and thus the emissions produced by electricity generation
- *Preserve natural resources* such as woodlands and rivers
- Save money for *participating consumers* by lowering their electrical use or increasing production output from existing electricity use
- Save money for *certain groups of consumers* e.g., low-income families or small businesses
- Save *all consumers* taken as a whole money by lowering the region's electrical use relative to the level of economic output or personal comfort
- Support *economic development* in Maine by improving the competitive position of Maine-based businesses

Currently, Maine statute establishes the following goals for energy efficiency programs:

Increase consumer awareness of cost-effective options for conserving energy;
 Create more favorable market conditions for the increased use of efficient products and services; and

(3) Promote sustainable economic development and reduced environmental damage. 35-A M.R.S.A. § 3211-A(2)(A).

Methods for Accomplishing Energy Efficiency Goals

Established ways to accomplish energy efficiency goals are similar in many respects to those that accomplish renewable energy goals:

- A system benefit charge (SBC) a portion of utility rates are placed in a fund and disbursed to the organization(s) that carries out energy efficiency programs; the organization determines the further disbursal of funds to manufacturers, wholesalers, retailers, implementation contractors, or consumers
- State purchase State government improves the efficiency of its buildings and equipment
- Codes and standards the State sets standards for equipment, appliances, and construction

Attachment 4 shows the methods and funding levels for renewable energy and energy efficiency programs in other states

Recommendations Regarding Energy Efficiency

We also believe that a system benefit charge is the most effective means of funding an energy efficiency program. It is the generally accepted method throughout the country, and provides all the advantages discussed earlier. Thus, we recommend no change to the method established by the Conservation Act to carry out energy efficiency programs in the State.

When compared to Maine's renewable energy program, Maine's energy efficiency program is relatively well-established, with clear goals, a cost-effectiveness test established through Commission rule, and programs that are in operation. We do not believe that a significant level of further study of energy efficiency goals or implementation methods is necessary. Thus, when determining the funding level of the program, the primary consideration should be that all funds be used on cost effective measures. Evidence presented to the Commission indicates that the potential for cost effective efficiency activity in Maine far exceeds the current funding level (by one estimate, \$100 million could be spend on cost effective activity annually, whereas we currently assess utilities approximately \$14 million annually). Thus, we believe the Legislature (not the Commission, as specified in current law) should establish a funding level that strikes a balance between a healthy statewide energy efficiency program and the need to minimize impacts on utility rates (the Committee will consider efficiency funding in LDs 231, 233, 547, 1157, and 1261). Over time, as the Commission reports its efficiency activities to the Legislature, that funding level can be monitored to determine if it attains this balance. Moreover, the Commission has the authority, and has indicated that it will use its authority, to ensure that all efficiency measures funded through the existing program are cost effective; if we find that we cannot identify sufficient cost effective programs to spend all the available funds, we have indicated that we will use the remaining funds to reduce future assessments and may adjust future assessment levels.

<u>Standards</u>

The commission has not had the opportunity to determine whether the particular standards proposed in some of the bills are appropriate or cost effective. We urge, however, that in its review of these proposals the committee consider the following:

First, is the Committee satisfied that the standards, if adopted, will be cost effective? It may be, for example, that a standard requiring 15% improvement over national standards might achieve a great deal of benefit at a modest cost, while one requiring 20% would be prohibitively expensive for relatively little additional benefit.

Second, there can be substantial costs of enforcement. What is the right agency to police the standards, and what will be the resources required to do an adequate job? In this regard, the Commission heard evidence in its proceeding on conservation programs that Maine's current building standards are rarely enforced.

Third, it may make a difference to the effectiveness of Maine's standards whether our neighbors have, or will, adopt similar standards. If cheaper appliances are available in New Hampshire or Massachusetts because those states' standards are more lax, the effect of more rigorous standards in Maine might be to hurt Maine's retail sales without a substantial impact on efficiency. Similarly, a firm choosing a location for a new business is likely to consider the cost of complying with standards, and if Maine's standards are viewed as unreasonably strict (and expensive to meet), Maine ability to attract business may be harmed. This is not to suggest that Maine should "race to the bottom;" merely that "leading by example" may be difficult for a small state and may carry a significant price. The Committee will consider codes and standards in LDs 540, 799, 1157, 1187, 1261, and 1321.

Conclusion

In the interest of policy continuity, the Committee may wish to keep in mind that several years ago, after considerable study, the Legislature effected a major restructuring of Maine's retail electricity market for the express purpose of lowering electricity rates at least with respect to the national average. While greater reliance on renewable fuels may offer the potential of significant long-term benefits, the shorter-term effect is likely to be higher rates. Even cost effective energy efficiency, which will lower costs for those who participate and, we hope, for ratepayers as a whole, will raise them for some consumers. Similarly, some benefits of more renewable power and greater efficiency will inure to those beyond our borders while the costs of Maine-only programs will fall on our citizens. We do not raise these issues in opposition to the objectives behind these bills, as it is the Legislature's responsibility to balance benefits and costs, but only to give the Committee some historical context that it may find relevant to that judgment.

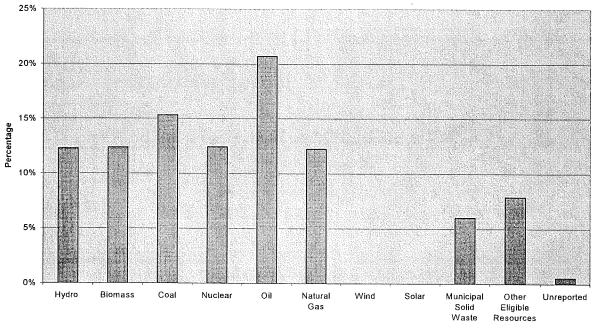
As the Committee considers the 16 bills being heard during the week of April 7, 2003, we recommend that it consider the policy goals that the bills should accomplish, the methods for accomplishing these goals, and the appropriate funding levels. The Commission has not made recommendations on goals or funding levels, as these are policy issues, but has addressed the methods for accomplishing the goals that the Legislature may establish. We look forward to offering any additional background or assessments of the impact of changes to renewables and energy that the Committee may require as it considers these bills. If you have any questions, please call me.

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Thomas L. Welch Commission Chair

Attachment 1

Resources Serving Maine's Customers in 2001



Fuel Type

Attachment 2

Fuels Used to Generate Electricity Sold in Maine in 2001 Presented by the MPUC March 2003

Of total generation sold at retail in Maine in 2001:	Of total generation sold at retail in Maine in 2001:		
<u>MWh %</u>	<u>MWh %</u>		
Generated in Maine:	Generated in Maine (including system power):		
2,766,074 31%	3,288,937 36%		
Generated out-of-state:	Generated out-of-state (including system power):		
968,005 11%	5,673,768 63%		
From system power (approximately 10% comes from ME generators):			
5,228,625 58%			
Unknown:	Unknown:		
74,770 1%	74,770 1%		
(total):	(total):		
9,037,474 100%	9,037,474 100%		

Of total generation sold at retail in Maine in 2001:	Of total generation sold at retail in Maine in 2001:		
Generated from renewables:	Generated from renewables (incl system power):		
2,114,248 23%	2,898,542 32%		
Generated from eligible but not renewable (or unknown):	Generated from eligible but not renewable (or unknown):		
1,094,452 12%	1,094,452 12%		
Generated from non-renewable/non-eligible:	Generated from non-renewable/non-eligible (incl sys pow):		
525,379 6%	4,969,710 55%		
Generated from system power (approx 15% comes from renewables):			
5,228,625 58%			
Unknown:	Unknown:		
74,770 1%	74,770 1%		
(total):	(total):		
9,037,474 100%	9,037,474 100%		

Of the renewable and eligible generation sold in Maine in 2001:					
From renewable fuels and	generated	l in Maine:			
1,564,474	39%				
From eligible (possibly nor	n-renewab	e) fuels and generated in Maine:			
1,094,452	27%				
From renewable fuels, ger	nerated ou	t of state:			
549,774	14%				
Unknown					
64,958	2%				
Generated from system po	Generated from system power:				
784,294	19%				
(total):					
4,057,952	100%				

Attachment 3 Biomass and Hydro-electric Facilities in Maine

Estimate of Renewable and Eligible Generating Plants in Maine Includes "Efficient Cogeneration" and Excludes Facilities of Greater than 100 MW as defined in 35-A MRSA § 3210 Presented by the MPUC April 2003

(Certain contract restructuring may not be reflected)

Facility Name	Contract End Year	Facility Type	Size (MW)
angor Hydro Electric Company			
Utility-owned/divested (Own	ed by PPL)		
Ellsworth	5)	Hydro	8.9
Howland		Hydro	1.9
Medway		Hydro	3.4
Milford		Hydro	6.4
Orono		Hydro	0.0
Stillwater		Hydro	2.0
Veazie		Hydro	8.4
West Enfield	2024	Hydro	13.0
Utility contracts			
Pumpkin Hill	2017	Hydro	0.9
Milo Hydro	2014	Hydro	0.7
Green Lake	2024	Hydro	0.4
Sebec Hydro	2025	Hydro	0.9
PERC	2018	Waste-to-energy	21.9
Other			
Jonesboro (Indeck)		Biomass	24.5
West Enfield (Indeck)		Biomass	24.5
Down East Peat		Peat/(Biomass?)	22.8
AED (status unknown)		Biomass	
Central Maine Power Compo	iny		
Utility-owned/divested (Owned by FPL)	
Harris		Hydro	88.0
Wyman		Hydro	81.0
Williams		Hydro	15.0
Weston		Hydro	13.0
		•	
Shawmut		Hydro	10.0
Lockwood		Hydro	4.0

	Oakland		Hydro	3.0
	Rice Rips		Hydro	2.0
	Union Gas		Hydro	2.0
	Fort Halifax		Hydro	2.0
	Gulf Island		Hydro	23.0
	Deer Rips		Hydro	7.0
	A-3		Hydro	4.0
	Monty		Hydro	28.0
	Brunswick		Hydro	20.0
	Bates Upper		Hydro	3.0
	Hill Mill		Hydro	2.0
	Lower Androscoggin		Hydro	0.0
	Bates Lower		Hydro	0.0
	Continental		Hydro	1.0
	Hiram		Hydro	12.0
	Bonny Eagle		Hydro	10.0
	West Buxton		Hydro	7.0
	Bar Mills		Hydro	4.0
	Skelton		Hydro	20.0
	Cataract		Hydro	8.0
	NKL		Hydro	1.0
	North Gorham		Hydro	2.0
	Upper Kezar Falls		Hydro	0.0
	Lower Kezar Falls		Hydro	1.0
	Ledgemere		Hydro	0.0
Uti	ility contracts			
	City of Lewiston	1998	Hydro	1.7
	Kinney Wind	1998	Wind	0.0
	Olender Wind	1999	Wind	0.0
	Hale, Elmer	1999	Wind	0.0
	I.P. Riley	1999	Hydro	7.8
	I.P. Otis	1999	Hydro	10.0
	Wight Brook Hydro	1999	Hydro	0.0
	Stony Brook Hydro	1999	Hydro	0.0
	Foss Mill	1999	Hydro	0.0
	Marsh Stream	1999	Hydro	0.1
	Lord, William	1999	Solar	0.0
	Whispering Valley	2000	Hydro	0.1
	Abbotts Mills	2000	Hydro	0.1

Leeman, David	2000	Diesel (cogen?)	0.0	
Rocky Gorge	2000	Hydro	0.6	
North New Portland	2000	Hydro	0.1	
Starks Hydro	2000	Hydro	0.1	
Christopher Sheep Farm	2001	Wind	0.0	
Cape Porpoise	2001	Wind	0.0	
Gardner Brook	2002	Hydro	0.1	
Upper Spears Hydro	2002	Hydro	0.1	
West Rockport Wind Pv	2002	Wind	0.0	
Goose River #1	2002	Hydro	0.1	
Goose RIver #3	2002	Hydro	0.1	
Lockwood (Merimil)	2004	Hydro	6.6	
Lavalley Lumber	2004	Biomass, cogen	1.3	
Welliver, Neil	2004	Wind	0.0	
Bothel, Stephen	2004	Wind	0.0	
Heald, Donald	2004	Wind	0.0	
Nomani, Louise	2004	Wind	0.0	
Miller Hydro	2005	Hydro	9.8	
Rumford Cogeneration	2005	Biomass/Coal, c	75.0	
Theriault, Richard	2006	Diesel (cogen?)	0.0	
Greenville Steam	2007	Biomass	13.8	
Barker Mill Upper Hydr	2007	Hydro	1.0	
Seabright Hydro	2007	Hydro	0.1	
Benton Falls Hydro	2007	Hydro	3.2	
Gorbell	2007	Biomass	13.8	
Aziscohos Hydro	2008	Hydro	5.5	
Champion Paper	2008	Biomass, cogen	32.7	
Regional Waste Systems	2008	Waste-to-energy	13.0	
Barker Mill Lower Hydr	2008	Hydro	1.4	
Gardiner Hydro	2008	Hydro	1.2	
Brown's Mills Hydro	2008	Hydro	0.7	
Damariscotta Hydro	2008	Hydro	0.5	
Eustis Hydro	2008	Hydro	0.2	
South Berwick Hydro	2008	Hydro	0.6	
Greenville Hydro	2008	Hydro	0.6	
Pittsfield Hydro	2008	Hydro	1.0	
York Hydro	2008	Hydro	1.0	
Mechanic Falls Hydro	2008	Hydro	1.1	
Norway Hydro	2008	Hydro	0.3	

Pioneer Dam	2008	Hydro	0.2	
United American Energy	2009	Hydro	17.2	
Brassua Hydro	2009	Hydro	3.4	
Stratton Energy Associa	2009	Biomass	39.8	
Sevey Hydro	2011	Hydro	0.0	
Bisco Falls Hydro	2011	Hydro	0.1	
Pejebscot Hydro	2011	Hydro	13.8	
S.D. Warren Somerset	2012	Biomass, cogen	87.0	
Maine Energy (MERC)	2012	Waste-to-energy	19.5	
MMWAC	2013	Waste-to-energy	2.1	
Hacket Mills Hydro	2015	Hydro	0.5	
Northeast Beaver #7	2016	Biomass	34.0	
Northeast Beaver #1	2016	Biomass	31.0	
Kennebago Hydro	2023	Hydro	0.7	
Madison Paper	2000	Hydro	17.4	
Robbins Lumber	2000	Biomass, cogen	1.2	
Waverly Ave Hydro	2008	Hydro	0.4	
Dirigo Dowels	open-ended	Biomass, cogen	0.3	
Forster Mfg.	open-ended	Biomass	1.3	
Goose River #2	open-ended	Hydro	0.2	
IP (Excess/Old)	open-ended	Hydro	20.0	
Kennebec Water Distric	open-ended	Hydro	0.8	
Marsh Power Project	open-ended	Hydro	0.4	
Moosehead Energy	open-ended	Hydro	0.2	
Rumford Falls Hydro	open-ended	Hydro	39.0	
Sparhawk Mill Hydro	open-ended	Hydro	0.3	
Maine Public Service Company				
Utility-owned/divested (Own	ned by WPS-		1 4	
Squa Pan Hydro		Hydro	1.4	
Caribou Hydro		Hydro	0.9	
Tinker Hydro		Hydro	33.5	
Utility contracts				
Wheelabrator-Sherman	2006	Biomass, cogen	18.1	
Beaver Ashland	2000	Biomass	34.0	
Other				
Bridgewater AHO		Wind	0.0	
Caribou Brown		Wind	0.0	
Ft Fairfield Beckwith		Wind	0.0	

Ft Kent Plourde	Wind	0.0	
Loring AFB	Coal, cogen?	4.0	
Oakfield Cyr	Wind	0.0	
Presque Isle Nursing	LGAS, cogen?	0.6	
Sinclair Fournier	Wind	0.0	
AVEC	Biomass	31.0	

Attachment 4 Funding and Implementation Approaches for Renewables and Energy Efficiency Programs in Some Other States (Summary of Other States is Available on Request)

State	Funding for R&D	Funding for Energy Efficiency	Funding for Renewables	Renewables Portfolio Standard Terms (RPS)
Maine		1.5		30% starting 3/00; limited to 100 MW or less. For renewables and "efficient cogen"
California	0.4	1.3	0.8	20% by 2017; limits hydros to 30 MW or less
Connecticut		3	0.75	Two-tier: Tier 1 renewables include solar, wind, new sustainable biomass, landfill gas, and fuel cells; Tier 2 include trash-to-energy facil., biomass not included in Tier 1, and certain approved hydros. Electric. providers must meet the following requirements: <u>Class 1</u> : 2000=.5%, 2001=.75%, 2002=1.0%, 2003=1.5%, 2004=2.0%, 2005=2.5%, 2006=3.0%, 2007=4.0%, 2008=5.0%, 2009=6.0% and <u>Additional Output from Class 1 and 2</u> 2000=5.5%, 2005=6%, 2009=7%. Electricity providers must provide documentation annually of compliance with RPS for the previous 12 months, or penalties will be applied. Providers can meet RPS requirements by participating in the renewable energy-trading program
Massachusetts		2.5	0.7	1% increment by 2003, increasing .5% each year until 4% total by 2009, and 1%/year thereafter. Alternative Compliance Payment is set at \$50 per MW or \$.05 per kWh for 2003
New Hampshire		0.8		None
New York	0.26	0.83	<u></u>	(Recent announcement changing the req't)
Pennsylvania		0.1	0.02	Being addressed in indiv. utilty cases; bidders for "last resort" service need 0.2%
Rhode Island		2.1	0.5	None
Texas		0.33		Requires 2000 MW of new renewables by 2009 (phase-in, 400 MW by 2003)
Vermont		2.5		2000MW of new renewables to be installed by 2009, in addition to the 880MW of existing renewables: 400MW by 1/1/02; 400MW by 1/1/03; 850MW by 1/1/04; 850MW by 1/1/05; 1400MW by 1/1/06; 1400MW by 1/1/07; 2000MW by 1/1/08 and 2000MW by 1/1/09 thru 2019. Qualified renewables include solar, wind, geothermal, hydros, wave or tidal, and biomass or biomass waste, including landfill gas. Qualifying systems are those installed after 9/99.

Funding Expressed as Mils/kWh

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Motion by: Kep. DUSS									
Seconded by: <u>Sen. Youngblacos</u>									
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2. Lynn Bromley									
3. Edward Youngblood	V								
Representatives									
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2. Kenneth C. Fletcher									
3. Jacqueline A. Lundeen									
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SENATE

CHRISTOPHER G. L. HALL, DISTRICT 16, CHAIR LYNN BROMLEY, DISTRICT 30 EDWARD M. YOUNGBLOOD, DISTRICT 6

JON CLARK, LEGISLATIVE ANALYST KRISTEN DRUFFNER, COMMITTEE CLERK



LAWRENCE BLISS, SOUTH PORTLAND, CHAIR HERBERT ADAMS, PORTLAND ALBION D. GOODWIN, PEMBROKE PETER L. RINES, WISCASSET JACQUELINE A. LUNDEEN, MARS HILL DONALD P. BERRY, SR., BELMONT PHILIP A. CRESSEY, JR., BALDWIN KENNETH C. FLETCHER, WINSLOW STANLEY A. MOODY, MANCHESTER MAITLAND E. RICHARDSON, SKOWHEGAN

STATE OF MAINE

ONE HUNDRED AND TWENTY-FIRST LEGISLATURE

COMMITTEE ON UTILITIES AND ENERGY

December 8, 2003

Honorable Beverly C. Daggett, President of the Senate Honorable Patrick Colwell, Speaker of the House 121st Maine Legislature State House Augusta, Maine 04333

Dear President Daggett and Speaker Colwell:

Pursuant to Joint Rule 310, we are writing to notify you that the Joint Standing Committee on Utilities and Energy has voted unanimously to report the following bill out "Ought Not to Pass":

L.D. 1157 An Act To Promote Clean and Efficient Energy

We have also notified the sponsor and cosponsors of the Committee's action.

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Senate Chair

Sincerely,

Rep. Lawrence Bliss House Chair

HOUSE