MAINE STATE LEGISLATURE

State of Maine

March 25, 2011

Senator Michael D. Thibodeau, Chair
Representative Stacey Allen Fitts, Chair
Members of the Joint Standing Committee on Energy, Utilities and Technology
2 State House Station
Augusta, ME 04333

RE: Regional Greenhouse Gas Initiative (RGGI) Annual Report

Dear Senator Thibodeau, Representative Fitts, and members of the Joint Standing Committee on Energy, Utilities and Technology:

Public Law, Chapter 317 of the 123rd Legislature (replaced by Public Law, Chapter 372 of the 124th Legislature) directed the Department of Environmental Protection and Efficiency Maine to annually submit a joint report to the Joint Standing Committee on Energy, Utilities and Technology regarding implementation of the Regional Greenhouse Gas Initiative (RGGI). It is important to note that on July 1st of 2010 Efficiency Maine Trust assumed responsibility for the duties of the Energy and Carbon Savings Trust. This letter serves as that report and addresses the seven elements the Legislature directed the Department and the Trustees to review, and provides an update on the appropriateness of the number of allowances reserved in accordance with the voluntary renewable energy set-aside provisions. Because the RGGI program is only two years into the six-year initial emissions stabilization period, there are not yet meaningful statistics for certain items required to be addressed in the report. Subject to that qualification, the following is our report for 2010.

A. The reductions of greenhouse gas emissions from carbon dioxide budget units, conservation programs funded by the Regional Greenhouse Gas Trust Fund and Efficiency Maine Trust pursuant to Title 35-A, section 10109 and carbon dioxide emissions offset projects.

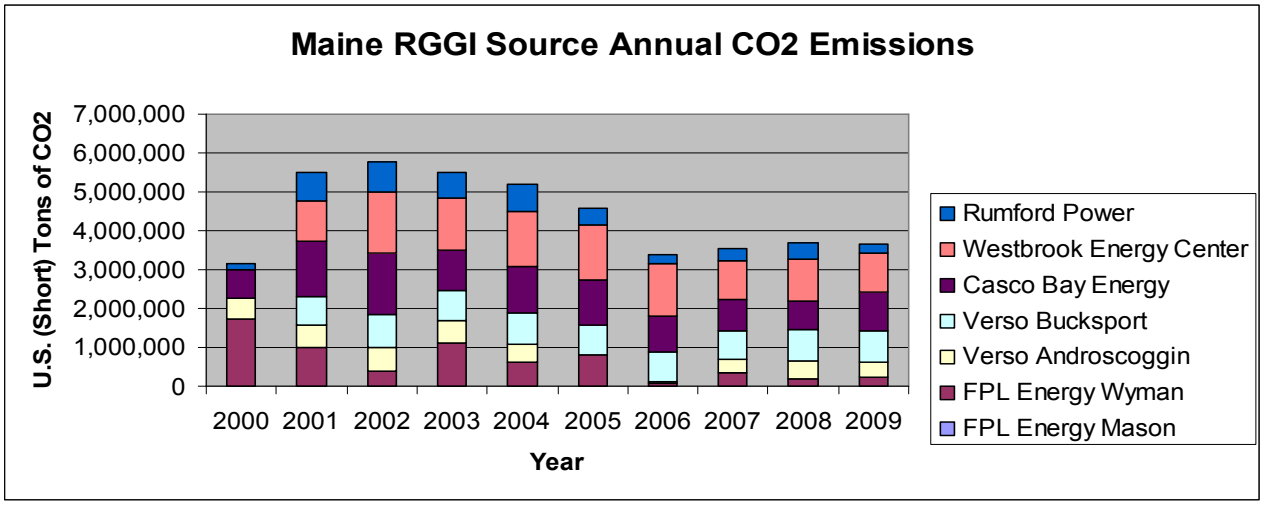
Reductions of greenhouse gas emissions from carbon dioxide budget units. The RGGI program is designed to stabilize carbon dioxide (CO_2) emissions from the CO_2 budget units (RGGI units) in the region from 2009 through 2014 until the annual cap begins to be reduced in 2015. Maine and the RGGI region have experienced reductions in CO_2 emissions from the baseline period (2000 to 2005) before and since the program began with the first auctions in 2008 (see Tables 1 and 2).

We believe these reductions are due to a combination of factors, including fluctuating fuel prices, generally milder winters and cooler summers in the Northeast, weak economic conditions, and the increased availability and marketability of renewable energy sources such

as wind and biomass. Other factors which in part have influenced this downward trend include the renewable portfolio standard, a system benefit charge, renewable energy development, and efficiency improvements at some RGGI sources. The downward trend in CO_2 emissions from Maine's RGGI sources could reverse direction with an increase in demand for electricity in the region due to a warmer summer or colder winters or improving economic conditions. Further, as Maine and regional policies continue to shift to cleaner (less carbon intensive) sources of electricity this could result in a slight shift in more usage of Maine sources since most of Maine's RGGI sources combust natural gas, and as more renewable sources are built in Maine. In other words, because Maine's electrical generation mix is relatively clean and low-carbon, more generation from Maine units including wind and gas could help the region shift to a less intensive carbon footprint.

The tables below contain CO_2 emissions data from Maine's RGGI units from 2000 thru 2009. Emissions data for 2010, although we project will be slightly higher than 2009 emission levels, will not be complete until sometime in the second quarter of 2011, and so are not included with this report.

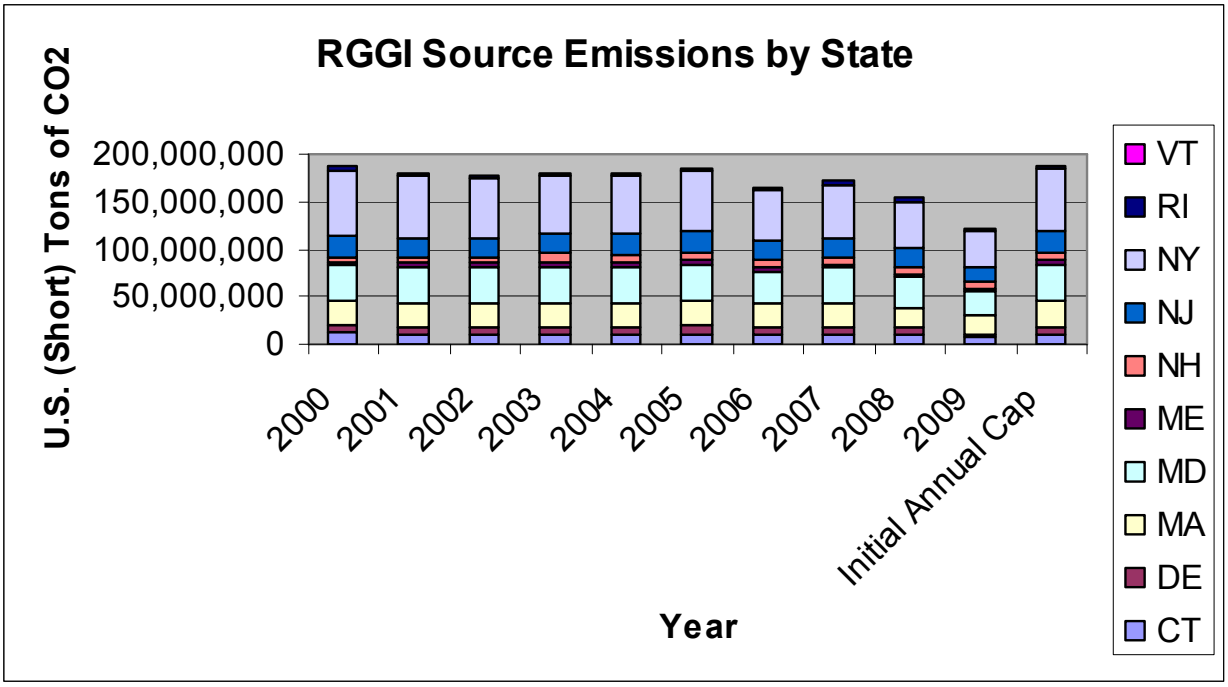
Table 1



Year	Maine RGGI Source Annual CO2 Emissions (U.S. Tons)						Annual Totals
	FPL Energy Wyman	Verso Androscoggin	Verso Bucksport	Casco Bay Energy	Westbrook Energy Center	Rumford Power	
2000	1,731,846	519,770	0	744,689	0	153,306	3,149,611
2001	1,010,729	565,951	731,450	1,402,914	1,042,637	762,634	5,516,315
2002	397,062	608,960	829,490	1,582,011	1,580,945	782,900	5,781,368
2003	1,119,510	571,181	778,527	1,025,612	1,358,157	661,740	5,514727
2004	616,030	472,481	810,749	1,178,901	1,412,282	701,496	5,191,939
2005	788,209	1,019	792,796	1,153,173	1,419,619	432,298	4,587,114
2006	70,853	24,826	780,609	946,041	1,341,636	207,857	3,371,822
2007	357,638	349,532	708,412	831,251	991,719	294,645	3,533,197
2008	185,915	481,163	796,139	730,736	1,090,087	407,238	3,691,278
2009	242,371	357,730	809,077	995,235	1,015,132	223,948	3,643,493

Note: Emissions from the former Mason Station in Wiscasset are not included in this table because it has not operated since 2003 and is not a RGGI Source.

Table 2



RGGI Source Annual CO2 Emissions by State (U.S. Tons)											
Year	CT	DE	MA	MD	ME	NH	NJ	NY	RI	VT	10 STATE ANNUAL TOTALS
2000	11,977,434	7,308,248	25,452,680	38,446,856	3,156,292	5,178,731	21,954,959	69,809,356	2,959,594	24,914	**186,269,063**
2001	11,005,310	7,612,366	25,400,430	36,980,555	5,517,285	4,862,445	20,177,621	65,553,672	1,782,110	22,015	**178,913,809**
2002	9,842,414	7,616,896	25,278,273	37,084,544	5,784,563	5,556,992	21,145,667	61,367,406	3,254,015	5,171	**176,935,941**
2003	9,273,759	7,628,367	27,218,204	37,064,738	5,515,325	8,478,382	20,543,331	62,129,292	2,668,990	12,094	**180,532,482**
2004	9,989,119	7,884,001	26,369,630	36,281,466	5,191,939	8,812,538	21,133,145	62,612,353	2,219,100	14,779	**180,508,070**
2005	11,323,844	8,300,628	26,640,945	37,263,686	4,587,114	8,972,027	21,937,521	62,718,683	2,692,228	7,781	**184,444,457**
2006	10,761,759	7,561,295	23,449,199	35,233,070	3,371,822	7,568,884	20,224,255	53,638,129	2,625,422	6,337	**164,440,172**
2007	10,052,782	8,744,154	25,366,733	35,700,194	3,533,197	7,314,954	21,515,622	55,717,151	3,161,200	6,112	**171,112,099**
2008	8,988,858	7,615,966	21,438,041	32,383,517	3,691,278	7,095,147	20,601,805	48,348,177	3,292,517	2,559	**153,457,865**
2009	7,322,364	3,708,331	18,661,076	25,572,943	3,643,493	5,769,881	16,359,443	37,700,661	3,416,783	1,965	**122,156,140**
Initial Annual Cap	**10,695,036**	**7,559,787**	**26,660,204**	**37,503,983**	**5,948,902**	**8,620,460**	**22,892,730**	**64,310,805**	**2,659,239**	**1,225,830**	**188,076,976**

Note: Maine's emissions for the years 2000 to 2003 are slightly higher than in Table 1 because emissions from the former Mason Station in Wiscasset are included in this table as part of Maine's baseline emissions under RGGI.

Reductions of greenhouse gas emissions from conservation programs funded by the Energy and Carbon Savings Trust and Efficiency Maine Trust.
The carbon dioxide savings from conservation programs funded by RGGI monies to-date is estimated at 968,956 short tons[1], from both direct fossil fuel reductions and reduced electricity use. It is important to note that Maine statute requires the vast majority, 85%, of Trust funds be allocated towards electrical conservation projects and that no more than 15% of the funds are targeted specifically to fossil-fuel conservation projects that directly decrease greenhouse gas emissions by decreasing fossil fuel use. The primary goal currently set in Maine statute is to decrease electricity consumption with reductions in carbon dioxide emissions as a secondary purpose.

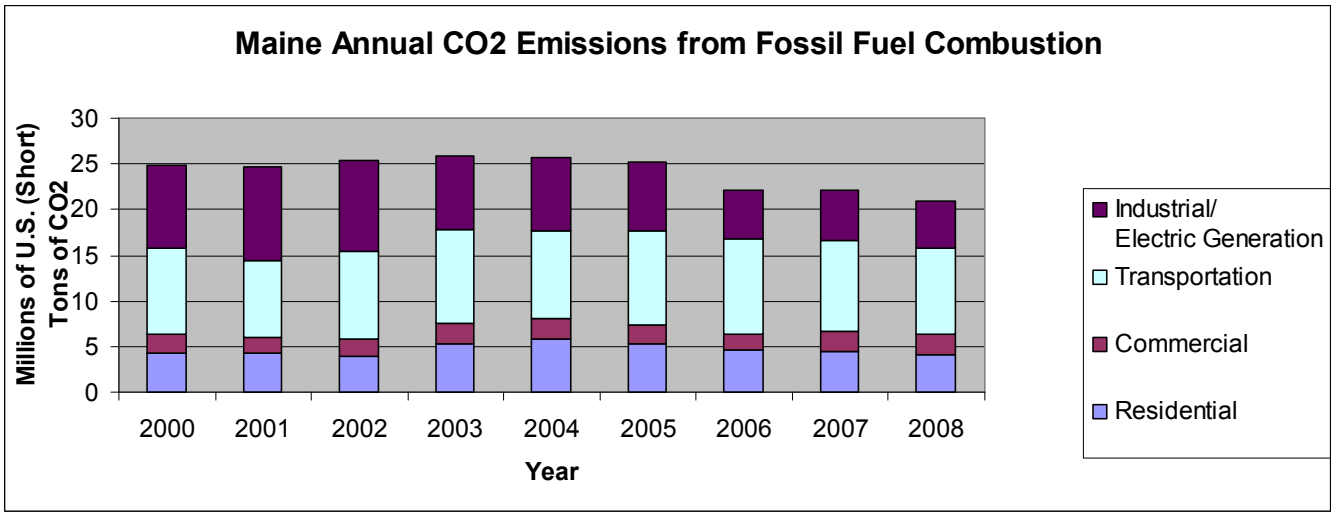
Note 1: Total carbon dioxide emissions from fossil fuel combustion in Maine were about 21 million short tons in 2008.

Reductions of carbon dioxide emissions from offset projects.
The offset project certification and application process was implemented in June of 2009. Independent third-party verifier status has been approved for a private entity in three RGGI states. No third-party verifier has sought approval in Maine to date. Maine has received no applications for offset projects in Maine and there have been limited applications received by other RGGI states. No applications have completed the review process to date, therefore no offset projects have been approved under the RGGI program to date. The lack of significant interest in offset project applications being received within RGGI is believed to be due to the relatively low cost of CO_2 allowances at this time as a result of the supply of CO_2 allowances being greater than the demand in this stage of the program. If emissions from RGGI units were to increase then the demand for allowances would follow suit, raising the value of allowances thus making offset projects more attractive to apply for under the program.

B. The improvements in overall carbon dioxide emissions and energy efficiency from sources that emit greenhouse gases including electrical generation and fossil fuel fired units.

Improvements in overall CO_2 emissions from sources that emit greenhouse gases are indicated in Table 3.

Table 3



Sector	2000	2001	2002	2003	2004	2005	2006	2007	2008
Industrial/ Electric Generation	9.06	10.31	9.80	8.03	8.01	7.55	5.28	5.55	5.16
Transportation	9.45	8.43	9.65	10.22	9.56	10.35	10.36	9.94	9.43
Commercial	1.96	1.60	1.97	2.38	2.32	2.12	1.85	2.17	2.08
Residential	4.35	4.37	3.89	5.24	5.76	5.24	4.55	4.44	4.19
Total	24.82	24.71	25.31	25.87	25.65	25.26	22.04	22.10	20.86

Note: Emissions data for calendar year 2009 are not yet available, but are expected to be similar to 2008 levels.

C. The maximization of savings through systemic energy improvements statewide

Efficiency Maine's programs are described in more detail in section E. Review of Efficiency Maine's 2007, 2008, 2009, and 2010 annual reports clearly illustrates a strong cost effective statewide presence through program participation and vendor partnerships with a solid infrastructure to deliver energy efficiency programs.

D. Research and support of new carbon dioxide offset allowance categories for development in the State.

With the supply of CO_2 allowances in the RGGI program being substantially greater that the current demand, and consequently CO_2 allowance prices hovering around $2 per allowance, there has not been a demand for offset allowances in 2010 (or the projects that create them). As such, work on developing offset projects within the RGGI region has been put on hold.

Much work was done in 2007 and 2008 when the Department collaborated with the Maine Forest Service; Environment Northeast; and the Manomet Center for Conservation Sciences to develop a proposal for including new forest offset categories in RGGI. This project was initiated in response to a request by the RGGI Staff Working Group in March, 2007. The proposal would broaden the existing forest offset category, currently limited to afforestation, to include specific protocols for forest management; urban forestry; and avoided deforestation. If adopted, these would have the potential to generate an additional revenue stream for Maine forest land owners in order to keep forests as forest while increasing the active sequestration of carbon.

Initial recommendations were reviewed by a diverse group of stakeholders, including state foresters across the country and leading public interest groups involved in forest issues such as The Nature Conservancy, The Wilderness Society, and the Pacific Forest Trust, and the proposal was modified to account for many of their suggestions. Leading academic researchers were also consulted, and Maine's approach compared to similar efforts in California and Washington. The final draft recommendations were presented to RGGI for their consideration in the summer of 2009. The RGGI states and the stakeholders involved in developing the recommendations recognize that there is still much work to do to finalize the draft recommendations and that given the projected cost of CO_2 equivalent reductions generated by this type of forestry offset project would be in the range of $10 to $20 per ton (or per allowance) there may not be much demand for these projects given current RGGI CO_2 allowance prices. Due to the wide price gap, work on these potential offset project categories has been put on hold. Should the projected price gap narrow, work in this area will be resumed through the continued development of the methods and procedures that these types of forestry offset projects would use to document the sequestration of greenhouse gases that these projects could produce. The groups involved also recognize that any resulting changes to the types of projects allowed to be considered under the RGGI program would have to be approved by each of the RGGI states, including governors and legislators as required in each state.

Although there were numerous inquiries at the start of the RGGI program on potentially developing other offset project categories including agriculture offsets and weatherization, and potentially other energy reduction technologies, work on these offset project categories were in the early phases of development and have also been put on hold due to the current low RGGI CO_2 allowance prices.

E. Management and cost-effectiveness of the State's energy conservation and carbon reduction programs and efforts funded by the Energy and Carbon Savings Trust and Efficiency Maine Trust established pursuant to Title 35-A, section 10109.

On July 1st of 2010 Efficiency Maine Trust assumed responsibility for the duties of the Energy and Carbon Savings Trust.

By statute, no less than 85% of RGGI funds go towards electrical efficiency and no more than 15% go towards fossil-fuel eligible greenhouse gas reduction efforts. For the first part of 2010 the Energy and Carbon Savings Trust continued under the plan adopted in March of 2009 that directed 50% of electrical efficiency funds be transferred to Efficiency Maine and split equally between the business and the residential programs, the next 25% to be allocated

through a competitive bid process. The final 25% held in reserve was split between the competitive bid process and the Business program on the basis of cost effectiveness and need. The Trust then allocated the remaining greenhouse gas reduction funds to the Large Project Grants to be disbursed through a competitive bid process based on cost effectiveness of carbon reduction.

Table 4 lists the allocation of funding in 2010 to date. Details on each of these major programs follow.

Table 4: Funding Allocations.

Program	**2010 Fundings**
EM Business Program	$ 4,405,978.13
EM Residential Program	$ 1,505,338.13
Industrial Grants	$ 5,536,702.00
Administration	$ 221,234.59
Total	**$ 11,669,252.85**

The Efficiency Maine Business Program
RGGI funds have allowed Efficiency Maine's business program to continue the policies set up in 2009:

a) Increased the annual incentive cap per business from $100,000 to $300,000
b) Allowed transmission and sub-transmission customers to be eligible for the program

RGGI funds have enabled Efficiency Maine's business program to reach more Maine Businesses allowing them to overcome cost barriers and invest in low cost energy supply. In 2010, $4,405,978 of the funds were expended with a lifetime savings of 252,229,254 kilowatt hours. These projects will yield approximately 57.2 kilowatt hours saved per Trust dollar expended.

As noted in b) above, transmission and sub-transmission customers are now eligible to participate in Efficiency Maine's business program and that customer class has demonstrated significant interest. $1.4 million in project incentives enabled projects at 42 transmission and sub-transmission customers to complete projects in 2010.

Efficiency Maine Residential Program
In 2009, with RGGI funds, Efficiency Maine was able to initiate a rebate program for ENERGY STAR rated appliances, such as clothes washers, dehumidifiers and air conditioners. In 2010, the program provided incentives for over 31,000 appliances which are expected to save 47,771,662 kWh over their lifetime, yielding 31.7 kWh per dollar of Trust funds and reducing carbon dioxide emissions by 24,504 short tons.

Large Project Grants
The Energy and Carbon Savings Trust partnered with Efficiency Maine for the second time to issue a request for applications for large energy efficiency and conservation grants, expected to range from $100,000 to $1 million for both reductions in grid electricity use and fossil fuel conservation. In the second round the Energy and Carbon Savings Trust and Efficiency Maine issue two separate RFP's one for electrical reduction and one for

greenhouse gas reductions. Funding for the first two rounds of grants came from a combination of the American Recovery and Reinvestment Act (Recovery Act) and the Regional Greenhouse Gas Initiative (RGGI).

Through this program Efficiency Maine has funded projects that include cost-effective, heat recovery, efficient drives and processes, and biomass projects. Awards are based upon a competitive process where projects are evaluated principally for the amount of annual energy reduced per dollar of grant funding. Awards have ranged from $100,000 to $1,000,000, with exceptions made for extraordinary projects, and applicants have been required to provide at least a 50% of funding match. To date $14.5 million in grants over two rounds has attracted $76 million in private investment.

In 2009 and 2010, a total of 30 grants were awarded, 19 of which were funded by RGGI. Appendix A to this page is a summary of all grants given out through two rounds of funding to date. There are three projects that were listed on last year's report that are not included as the grantees were unable to secure the private match.

Table 5: Program Results

Program	Funds in 2010	Lifetime kWh savings	KWh savings per Trust dollar	Lifetime CO_2 savings short tons	Tons of CO_2/ Trust dollar
EM Business Program	$4,405,978	252,229,254	57.2	129,542	.029
Large Projects Grant 2010 (electrical reduction)	$4,303,402	379,778,198	88.8	195,104	.045
Large Projects Grant 2010 (GHG Reduction)	1,233,300	N/A	N/A	619,807	.50
EM Residential Program	$1,505,338	47,771,662	31.7	24,504	.016
Total or Average	**$11,448,018**	**679,719,114**	**59.26**	**968,957**	**.085**

F. The extent to which funds from the Regional Greenhouse Gas Initiative Trust Fund established pursuant to Title 35-A, section 10109 serve customers from all classes of the State's transmission and distribution utilities.

Funding from the Energy and Carbon Savings Trust has been used to provide programs for residential, commercial and industrial customer classes, including transmission and sub-transmission customers as set forth in previous sections of this report.

G. The revenues and expenditures of the Regional Greenhouse Gas Initiative Trust Fund, established pursuant to Title 35-A, section 10109.

Revenues from the sale of Maine's allowances under RGGI have totaled $23.5 million as of the end of 2010 ($5.6 million in 2008, $9.6 million in 2009, and $8.3 million in 2010). Expenditures of the Regional Greenhouse Gas Initiative Trust Fund are described in section E of this report.

Voluntary Renewable Energy Set-aside

At this time, the Department recommends keeping the amount of the set-aside of CO_2 allowances for the Voluntary Renewable Energy set-aside program at 2% on an annual basis. Although the first year of RGGI only resulted in the retirement of approximately 0.2% of Maine's annual budget of CO_2 allowances, the voluntary purchase of renewable energy is expected to grow over the next several years and the Department believes the 2% will remain appropriate at least over the next few years.

Recommendations

The statutory reporting requirement also provides for the Department and Efficiency Maine to propose changes for the committee to consider that could be made to improve the program.

Neither the Department nor Efficiency Maine recommends changes to the program at this time. The Department is currently involved in a review of the program with the other RGGI participating states and expects to have some recommended changes to the program following completion of this process, however this review is not expected to be completed until sometime in 2012.

The Department and Efficiency Maine will be available to present our report, and answer any questions you may have.

Respectively submitted,

Patricia Aho, Deputy Commissioner
Maine Department of Environmental Protection

Michael Stoddard, Executive Director
Efficiency Maine Trust