Energy Efficiency: Economic Engine For the Region

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Daniel L. Sosland, Executive Director

Rockport, Maine

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ENE – About Us

- **Policy Research and Advocacy**
  - **Non-profit NGO**
  - **Rockport, ME / Portland, ME / Boston, MA / Providence, RI / Hartford, CT / Charlottetown, PEI**
  - **Independently Funded: Foundation Supported**
- **Policy Areas**
  - **Energy and Climate**
  - **Transportation**
  - **Forest & Land Use**

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Efficiency: Two Key Themes

- **Efficiency Transitioning from a Social Benefit Program to a Low Cost Energy Resource**
  - Significant Macroeconomic and System Benefits
  - States Moving To All Cost-Effective Investment Levels
- **Federal (US and Canada) Climate Policy Can Provide State and Provincial Program Revenue**
- **Recommendations**: Implications for State/Provincial, Regional and National Policies

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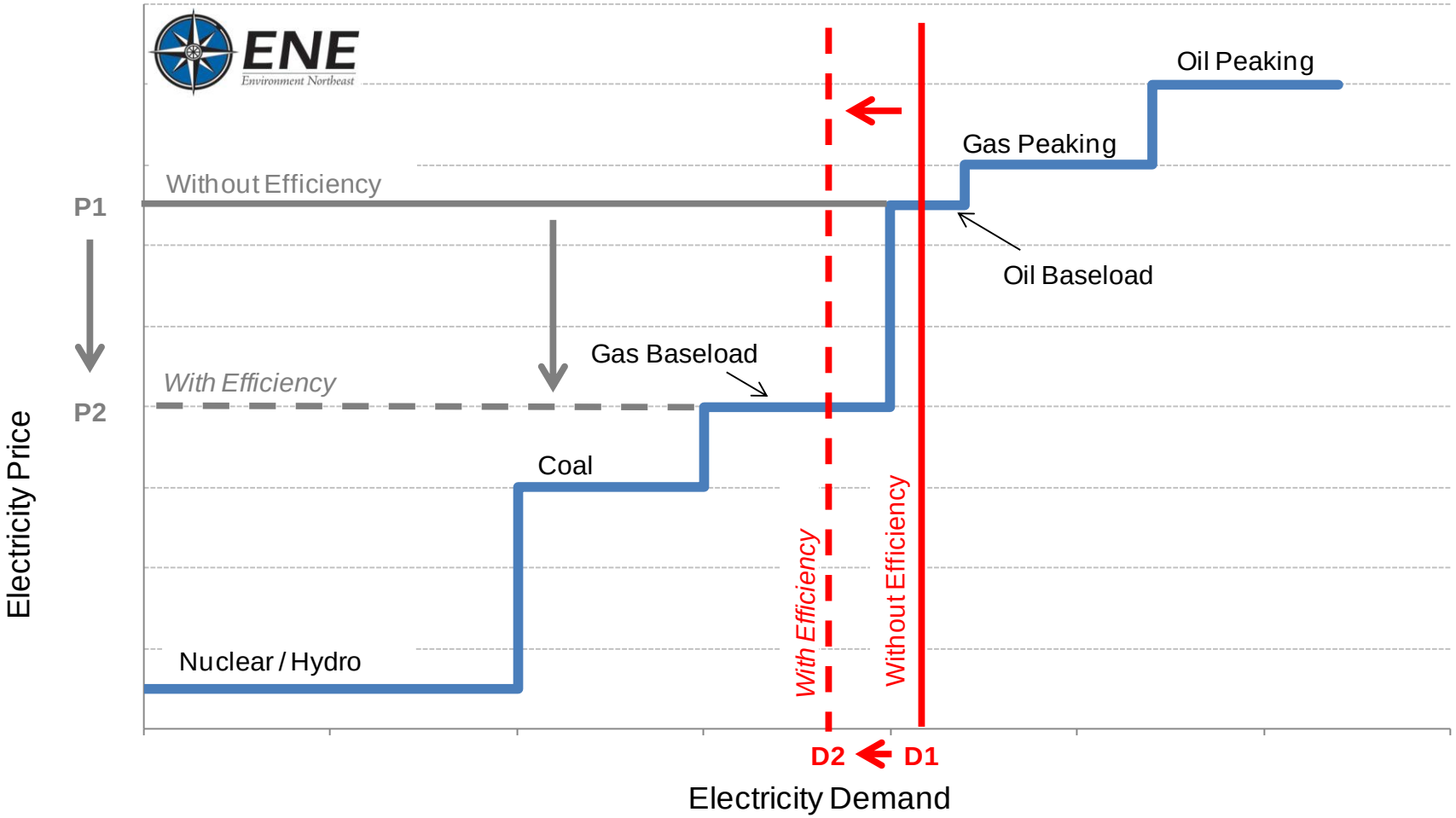
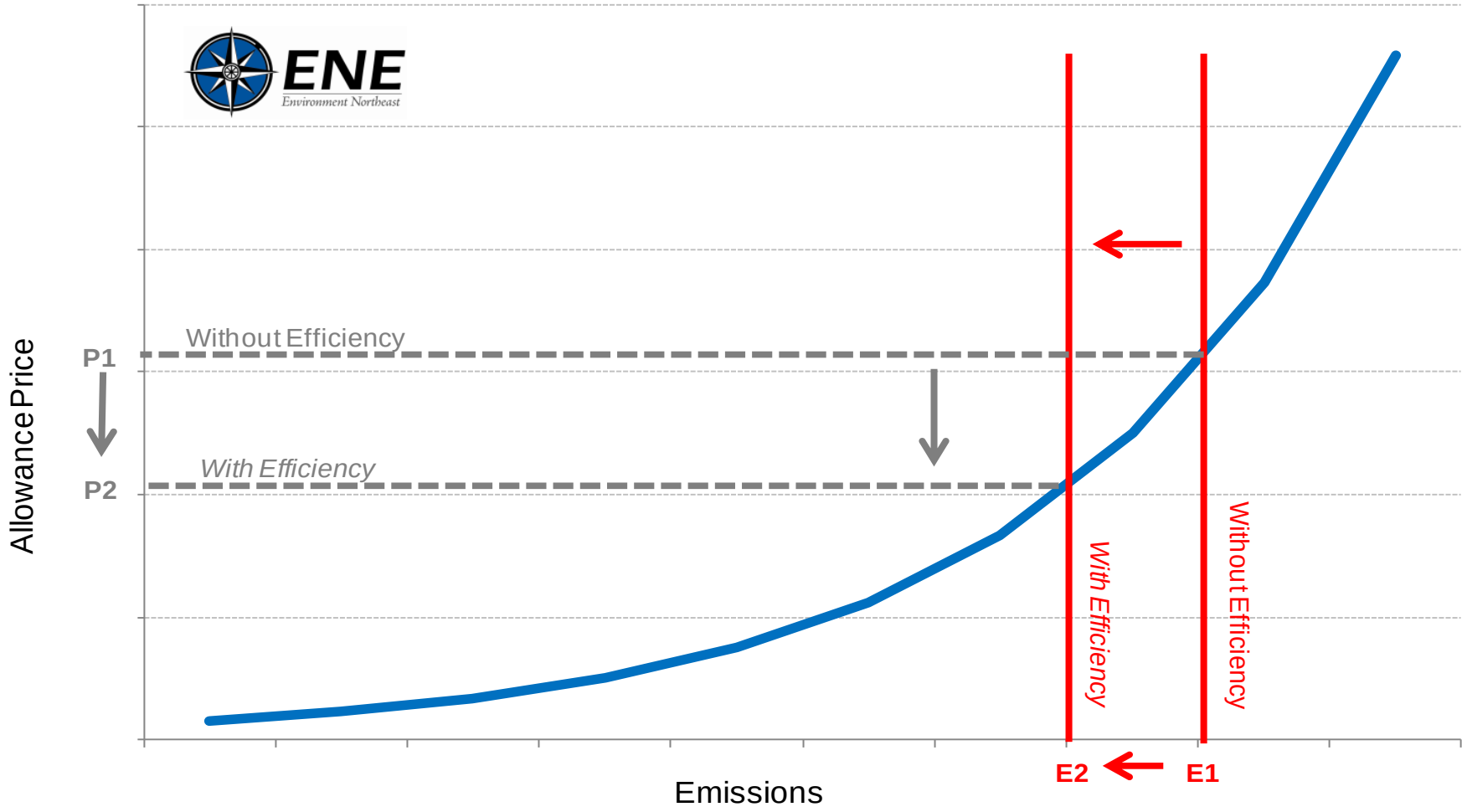
In addition to Significant Consumer Benefits in Lower Bills - Energy Efficiency Reduces Electricity Prices



Energy Efficiency Lowers Cap and Trade Allowance Prices



Efficiency Increases in Gross State Product

Increase in GSP for Each $1 of New Program Funding

	Electric	Natural Gas	Unregulated Fuels
Connecticut	$5.7	$7.0	$7.1
Massachusetts	6.4	7.5	10.9
Maine	4.9	12.4	7.0
New Hampshire	5.9	10.8	8.5
Rhode Island	5.4	5.7	7.6
Vermont	4.3	6.5	7.4
New England	$5.9	$7.4	$8.5

Source: ENE, ***Energy Efficiency: An Engine of Economic Growth*** , 2009 (Draft) – assumes funding sufficient to capture all cost-effective efficiency

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Efficiency Impact: Significant Job Generation (Direct & Indirect)
(Job-Years per $Million of Program Funding)

	Electric	Natural Gas	Unregulated Fuels
Connecticut	41.2	9.5	17.7
Massachusetts	43.4	14.7	18.2
Maine	58.1	6.5	64.1
New Hampshire	52.7	13.5	35.8
Rhode Island	48.7	18.7	23.3
Vermont	49.6	6.3	37.4
New England	45.5	12.3	24.8

Source: ENE, ***Energy Efficiency: An Engine of Economic Growth*** , 2009 (Draft) – assumes funding at levels sufficient to capture all cost-effective EE

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Efficiency Assists Capacity Savings

Implications for Transmission and Grid Forecasts

	2010	2011	2012
Connecticut	80 MW	101 MW	107 MW
Massachusetts	96 MW	122 MW	157 MW
Rhode Island	15 MW	18 MW	n/a
Total	**191 MW**	**241 MW**	**(274 MW)**
Regional Estimate			**~ 300MW**
10 Year Period (ISO Planning Period)			**3,000 MW**

Note: RI program budget is approved by regulators , CT and MA for 2010-2012 are proposed by utilities but not yet approved

- *Incorporate Efficiency Demand Reductions in Regional Grid Planning*
- *Impacts are Significant: over 10 years, avoid 3,000MW Capacity Needs (3 Nukes)*

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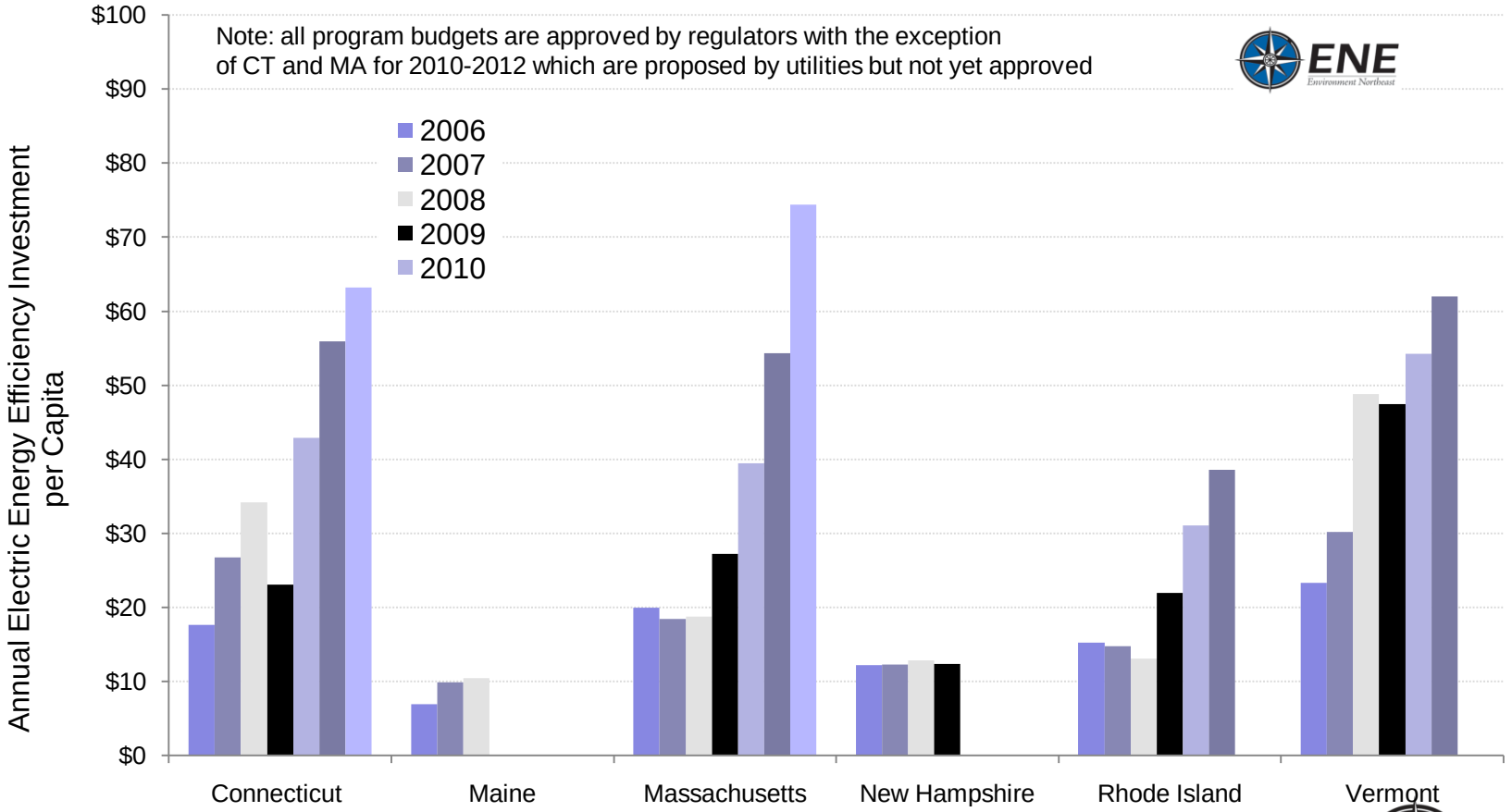
Emerging Reliance on Efficiency as Low Cost Energy Resource to be Acquired



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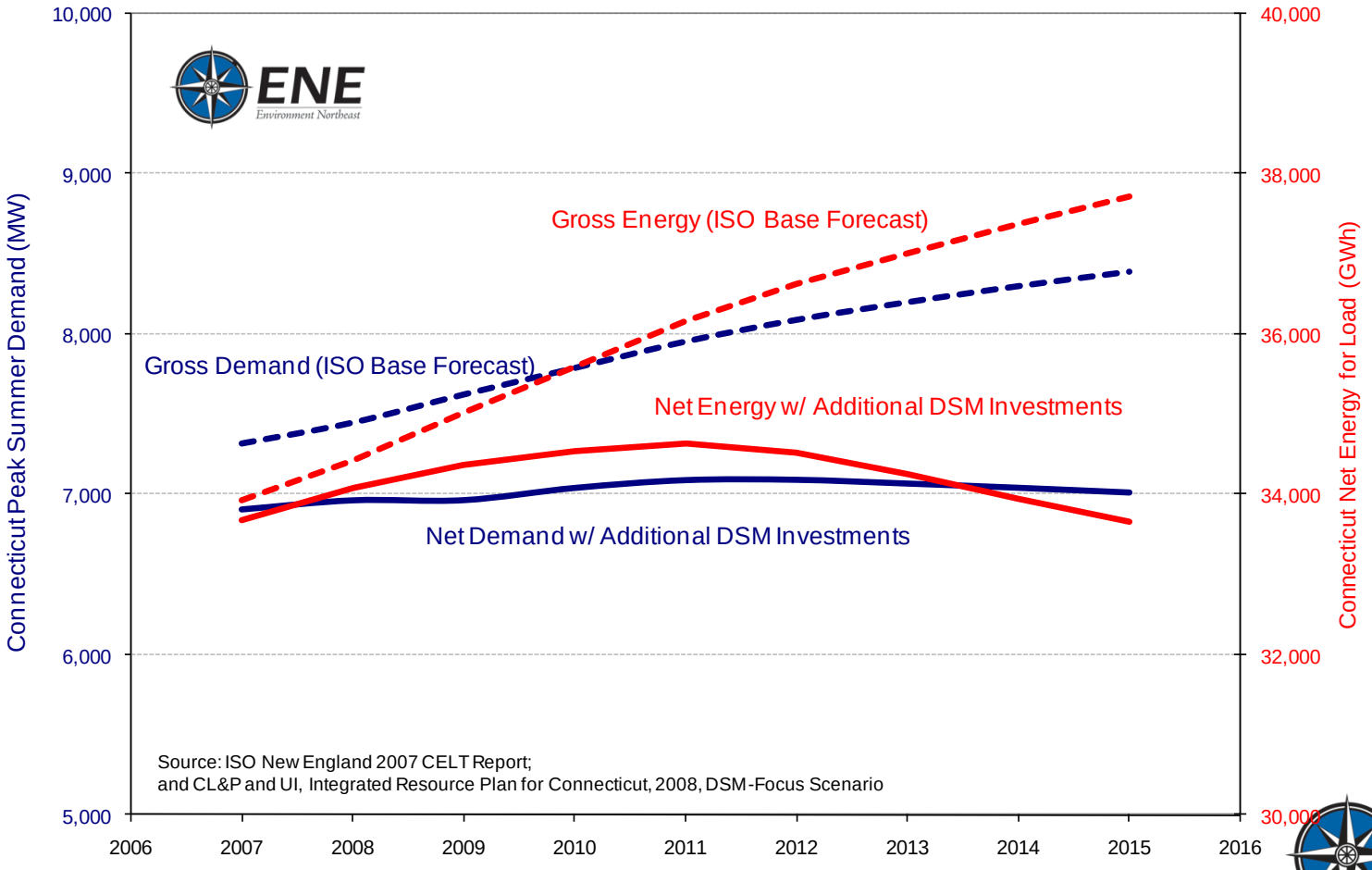
Energy Efficiency: Most Cost Effective Option to Meet Load and Capacity Needs



RGGI is Providing Significant Funding for State Efficiency Investments (RGGI Auctions 1 – 5)

ENE Environment Northeast	2009 Allocation *(short tons)*	Auctions 1-4 Revenue *($)*	Auction 5 Revenue *($)*	Totals to-date Revenue *($)*	Efficiency Funding *($)*
Connecticut	10,695,036	$18,718,498	$4,052,085	$22,770,583	
Delaware	7,559,787	$8,044,331	$1,797,539	$9,841,870	
Maine	5,948,902	$11,623,982	$1,883,428	$13,507,410	
Maryland	37,503,983	$72,369,609	$12,424,386	$84,793,995	
Massachusetts	26,660,204	$59,427,741	$10,223,116	$69,650,857	
New Hampshire	8,620,460	$12,482,660	$2,767,655	$15,250,316	
New Jersey	22,892,730	$47,319,194	$4,206,966	$51,526,160	
New York	64,310,805	$127,869,789	$27,429,289	$155,299,078	
Rhode Island	2,659,239	$5,955,596	$1,022,455	$6,978,051	
Vermont	1,225,830	$2,745,349	$471,320	$3,216,669	
Total	**188,076,976**	**$366,556,748**	**$66,278,239**	**$432,834,987**	**$284,304,553**

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Federal Climate Policy Can Benefit State Efficiency -- Funding from ACES

($ Million)	SEED	Oil	Natural Gas	Electric If 1/3 allocation prevailed	Total Funding	Savings	Jobs (Direct)
Connecticut	$438	$362	$95	$674	$1,570	$4,709	13,969
Maine	$308	$270	$10	$289	$878	$2,633	7,810
Massachusetts	$625	$464	$195	$1,276	$2,560	$7,681	22,786
New Hampshire	$291	$166	$21	$303	$781	$2,342	6,948
Rhode Island	$270	$83	$34	$162	$549	$1,646	4,882
Vermont	$246	$96	$8	$81	$431	$1,294	3,838

Source: ENE, 2009, *ACES Funding for Efficiency Investments State Summaries* (http://env-ne.org) – energy efficiency typically returns $3 for every $1 invested (Savings); direct job savings estimate based on Doyle/Green Economy, 2009.

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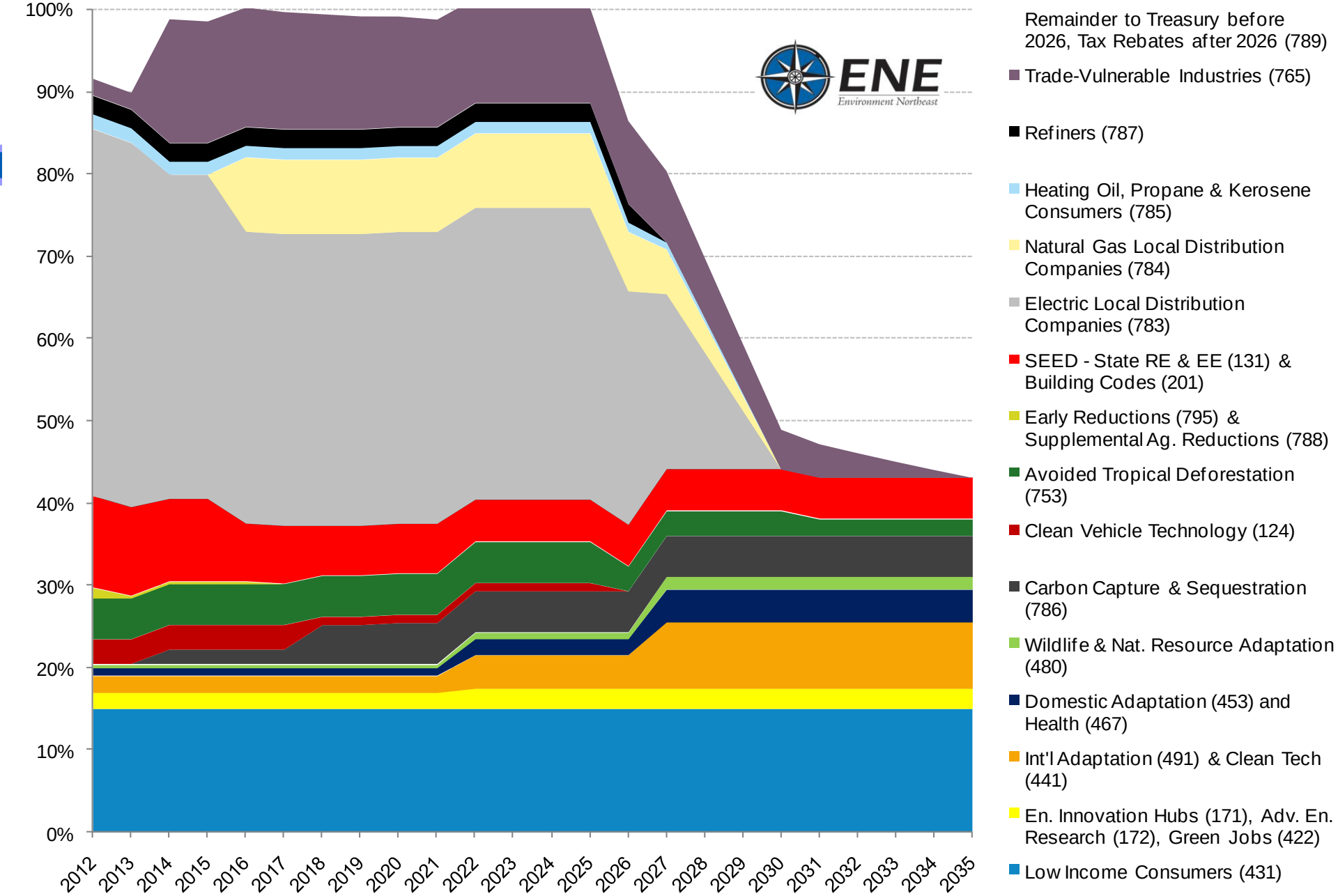
Waxman-Markey (ACES) Allocations



Recommendations

- NEG-ECP Support For National Cap and Trade Policies that Maximize Efficiency
  - *Recognize EE as the primary cost containment tool*
  - *EE offers consumer protection by lowering energy consumption, which reduces GHG emissions and demand for carbon allowances.*
  - *Lower allowance prices = lower costs for cap & trade*
- Maximize State/Provincial Efficiency Investments
- Factor new era of EE investment impacts into longer term planning (job training, load growth, transmission needs)

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Contact

Daniel L. Sosland

Executive Director

207-236-6470

dsosland@env-ne.org

8 Summer St, PO Box 583

Rockport, ME 04856-0583

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Rockport, ME / Portland, ME / Boston, MA

Providence, RI / Hartford, CT / Charlottetown, PE

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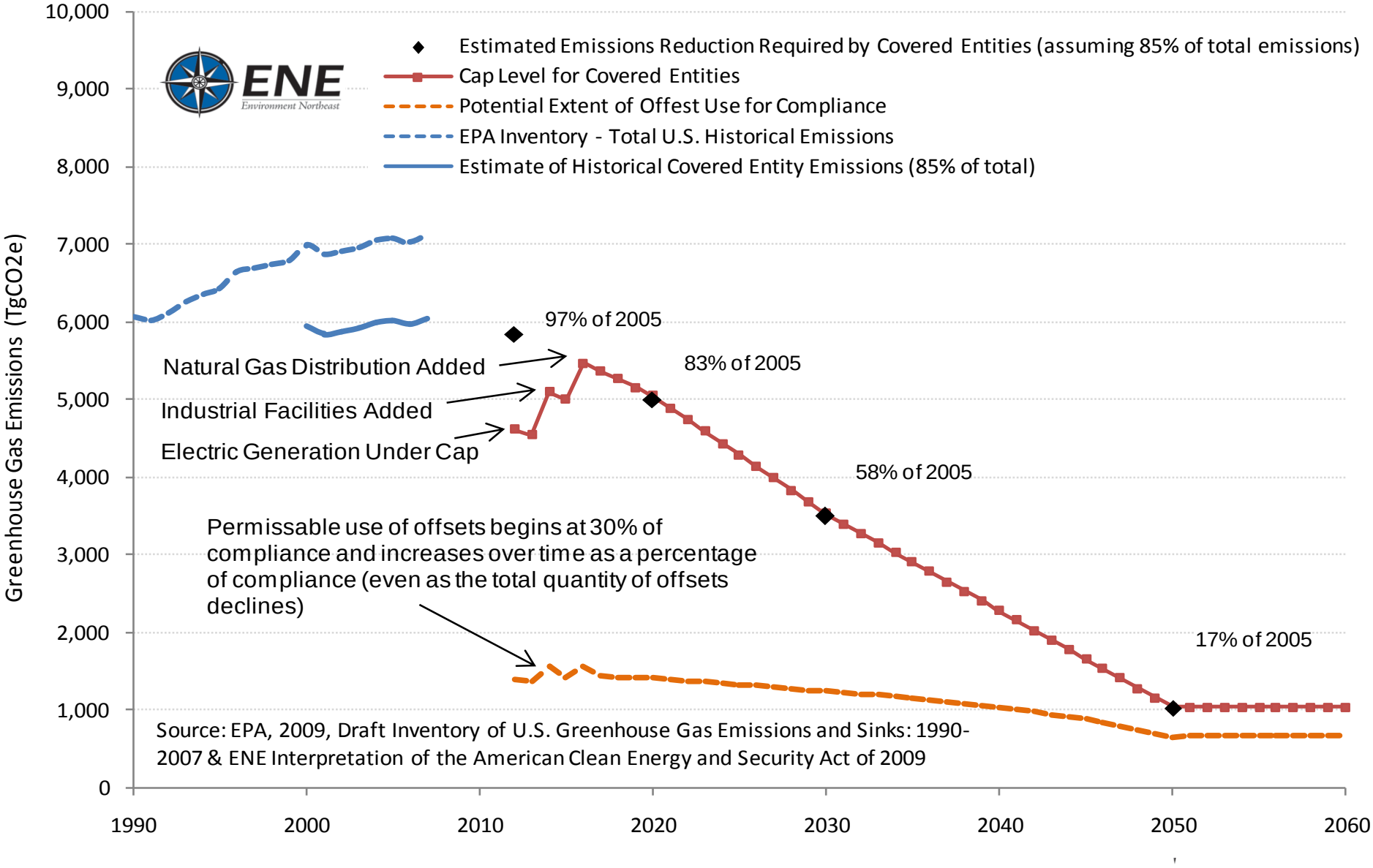
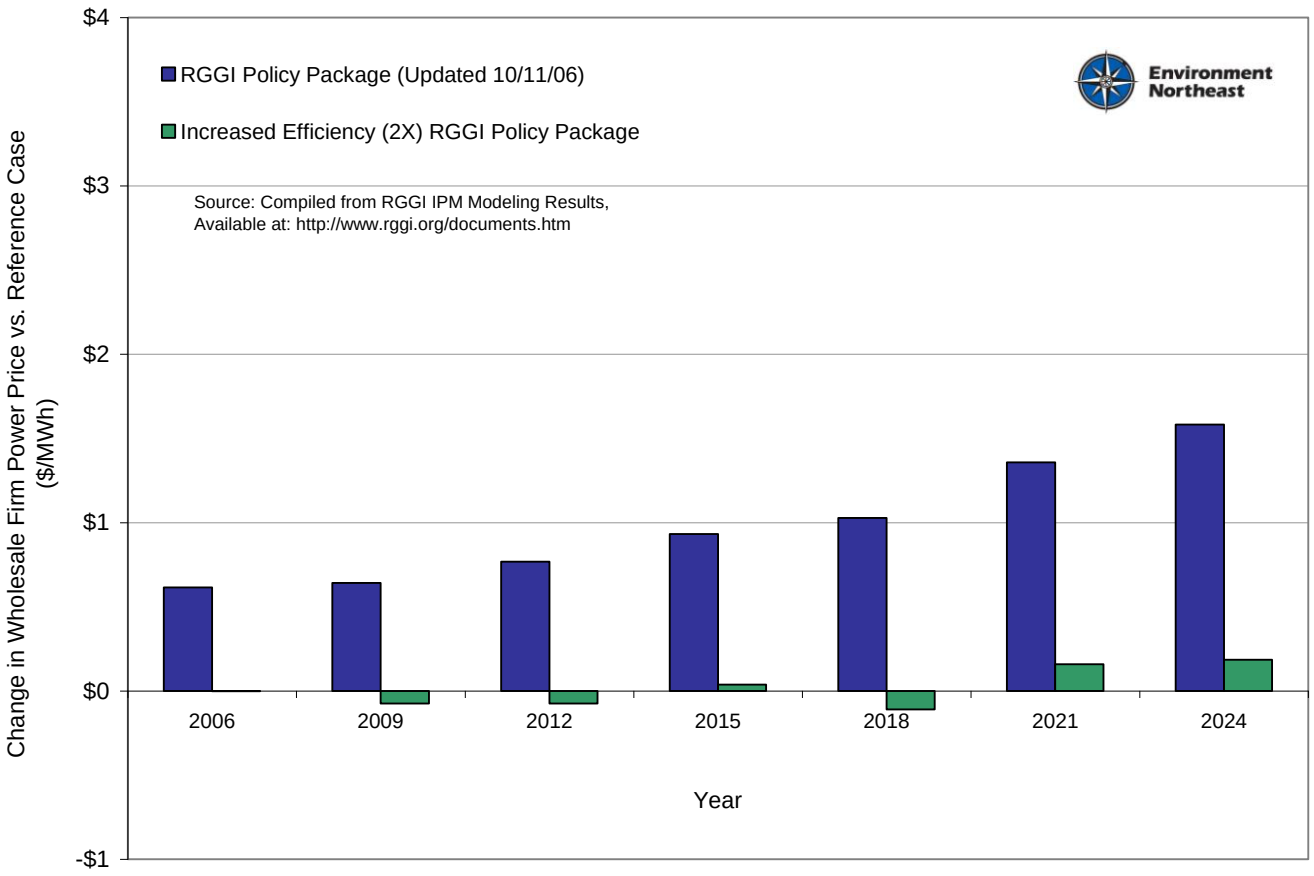
Addendum 1: American Clean Energy and Security Act



Addendum II
Efficiency As Primary Cost Containment Method in Cap and Trade: RGGI Modeling



Modeling results demonstrate that efficiency reduces allowance prices and impact on electricity prices; lowers overall cost of program

Estimated cost without new efficiency

Estimated allowance cost with expanded efficiency

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Efficiency Economic Impact:
Significant Increases in Gross State Product and Job Creation (New England states)

	Productivity (Increase in GSP for each $1 of new EE Program Funding)	**Job Creation – Direct & Indirect** (Job-Years per $Million of Program Funding)
Electric	$4.3 – $6.4	41.2 – 58.1
Natural Gas	$5.7 – $10.8	6.3 – 18.7
Unregulated Fuels	$7.0 – $10.9	17.7 – 64.1

Source: ENE, ***Energy Efficiency: An Engine of Economic Growth*** , 2009 (Draft) – assumes all 6 states fund programs at levels sufficient to capture all cost-effective EE

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