



The State of New Hampshire  
**Department of Environmental Services**



**Robert R. Scott, Commissioner**

March 27, 2018

The Honorable Gary Daniels  
Chair, Senate Finance Committee  
State House, Room 103  
Concord, New Hampshire 03301

**Re: HB 559-FN, *An Act relative to expenditures from the Energy Efficiency Fund***

Dear Chair Daniels and Members of the Committee:

Thank you for the opportunity to testify on HB 559-FN. This bill, as amended in the House, modifies the allocation of the energy efficiency fund (EEF) and increases the amount of funds that are utilized for energy efficiency projects and programs. More specifically, HB 559-FN increases the amount of funds dedicated to low-income residential customers, for municipal, school district, and local government efficiency projects, and fuel-neutral efficiency projects implemented by gas and electric utilities. The attached slides show the allocations under current law and potential allocation under HB 559-FN if passed. The New Hampshire Department of Environmental Services (NHDES) supports this bill.

In the Fall of 2017, a committee established by SB 125 (2017) was convened to study costs in the state's electricity system and ways to mitigate those costs. Its findings included<sup>1</sup>:

- Generation costs are at their lowest in recent history, reaching a 15-year low in 2015;
- Regional transmission costs have increased significantly from 2005 to 2015;
  - There has been more than \$8 billion invested in transmission infrastructure since 2005;
  - ISO-NE conservatively estimates \$4 billion more in future investment through 2022;
    - The amount of electricity demand in each state determines its share of the cost; in 2016, NH represented 9.5% of the New England total; and
- Energy efficiency is one of many ways to offset rising energy costs and can reduce demand.

The full committee's recommendations included:

- Reduce transmission costs and other costs allocated to NH by increasing spending on rigorously validated, cost-effective distributed generation, distributed resources, and energy efficiency programs that lower coincident peak demands.

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<sup>1</sup> See report at <http://www.gencourt.state.nh.us/statstudcomm/reports/1337.pdf>.

In addition to the above-listed unanimous recommendation, the report also included recommendations from individual members. Senator Kahn recommended *“Use RGGI funds fully to provide a stable funding source for energy efficiency and renewable fuel investment incentive programs.”*

Representative Backus recommended, *“Since NH ranks 21<sup>st</sup> in the nation in energy efficiency, according to the American Council for an Energy Efficient Economy (ACEEE), and alone among New England States rebates all RGGI proceeds above the first dollar, an amount that amounts to only a few cents a month for most residential customers (and is too little to help finance energy efficiency projects for most customers), the full available proceeds from the program should be used to fund energy efficiency projects.”*

Most Regional Greenhouse Gas Initiative (RGGI) states already invest the majority of their proceeds in energy efficiency (58% of total RGGI cumulative investments)<sup>2</sup>. Thus, electricity demand is forecasted by ISO-NE to decrease in the other New England States. Because NH invests less in energy efficiency, its demand is forecasted to increase in relationship to demand in other New England States. This could cause NH’s share of the \$4 billion in anticipated future transmission infrastructure investment to increase above its current 9.7%. Thus, a 0.5% increase in load percentage would result in \$20 million in increased costs to New Hampshire.

One criticism often heard regarding investments of state proceeds from RGGI allowance auctions into energy efficiency is that such investments are perceived as beneficial only to those individuals, municipalities, and businesses directly receiving EEF funds. To the contrary, as described below any investment in cost-effective energy efficiency directly benefits *all* New Hampshire citizens and ratepayers by reducing the overall demand for electricity, which in turn reduces the additional capital investment in generation, transmission, and distribution by electricity providers. In particular, the high cost of “peaking” plants to meet demands on the hottest days of the year are reduced or avoided. All of these costs are ultimately passed on to all New Hampshire consumers, so keeping them low is in the best interest of all citizens, businesses, and municipalities. Thus, investments in energy efficiency ultimately reduce costs for everybody, particularly in the transmission component as noted above.

In addition, investment of RGGI proceeds in municipal, school, and local government efficiency projects help to reduce that community’s operating expenses, thus reducing local property taxes by an indeterminable amount.

The *“NH Greenhouse Gas Emissions Reduction Fund Annual Evaluation (July 2011 – June 2012)”*<sup>3</sup> indicated that each dollar invested in energy efficiency resulted in \$4.95 in energy savings. An

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<sup>2</sup> *“Investment of RGGI Proceeds Through 2014”* [http://rggi.org/docs/ProceedsReport/RGGI\\_Proceeds\\_Report\\_2014.pdf](http://rggi.org/docs/ProceedsReport/RGGI_Proceeds_Report_2014.pdf)

<sup>3</sup> *“NH Greenhouse Gas Emissions Reduction Fund Annual Evaluation (July 2011 – June 2012)”*

[http://puc.nh.gov/Sustainable%20Energy/GHGERF/Evaluations/GHGERF\\_Year%203\\_annual\\_report\\_2011-12\\_FINAL.pdf](http://puc.nh.gov/Sustainable%20Energy/GHGERF/Evaluations/GHGERF_Year%203_annual_report_2011-12_FINAL.pdf)

independent report by the Analysis Group<sup>4</sup> found that the investment of RGGI proceeds in the region from the first three years:

- Generated \$1.6 billion in net economic benefit region-wide through the end of the decade;
- Put \$1.1 billion in electricity bill savings back into the pockets of consumers in the region over the next decade;
- Created 16,000 job-years in the region; and
- Kept \$765 million in the local economy due to reduced fossil fuel demand.

A second report<sup>5</sup> by the Analysis Group found that implementing RGGI from 2012-2014 added \$1.3 billion in economic value to the nine-state RGGI region, led to the creation of more than 14,000 new jobs, and cut electricity and heating bills, saving consumers \$460 million. Each individual state saw economic benefits as the region cut annual carbon emissions by more than a third from 2008 (133 million tons) to 2014 (86 million tons), according to the report. A new independent study<sup>6</sup> revealed that RGGI improved health, saved lives, and generated \$5.7 billion in benefits from 2009 to 2014.

These four independent reports, as well as the RGGI report cited previously, show that New Hampshire ratepayers would be well-served through increased investment of our RGGI proceeds in cost-effective energy efficiency. NHDES has prepared an addendum to this testimony letter that describes the nature of the regional grid and RGGI further.

Thank you again for the opportunity to comment on HB 559-FN. Should you have further questions or need additional information, please feel free to contact either Michael Fitzgerald, Assistant Director ([michael.fitzgerald@des.nh.gov](mailto:michael.fitzgerald@des.nh.gov), 271-6390) or Joseph Fontaine, Technical Programs Manager ([joseph.fontaine@des.nh.gov](mailto:joseph.fontaine@des.nh.gov), 271-6794) of the Air Resources Division.

Sincerely,



Robert R. Scott  
Commissioner

cc: Sponsors HB 559: Reps. Richardson, Shepardson, Backus; Sens. Feltes, Fuller Clark

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<sup>4</sup> "The Economic Impacts of the Regional Greenhouse Gas Initiative on Ten Northeast and Mid-Atlantic States – Review of the Use of RGGI Auction Proceeds from the First Three-Year Compliance Period" November 15, 2011

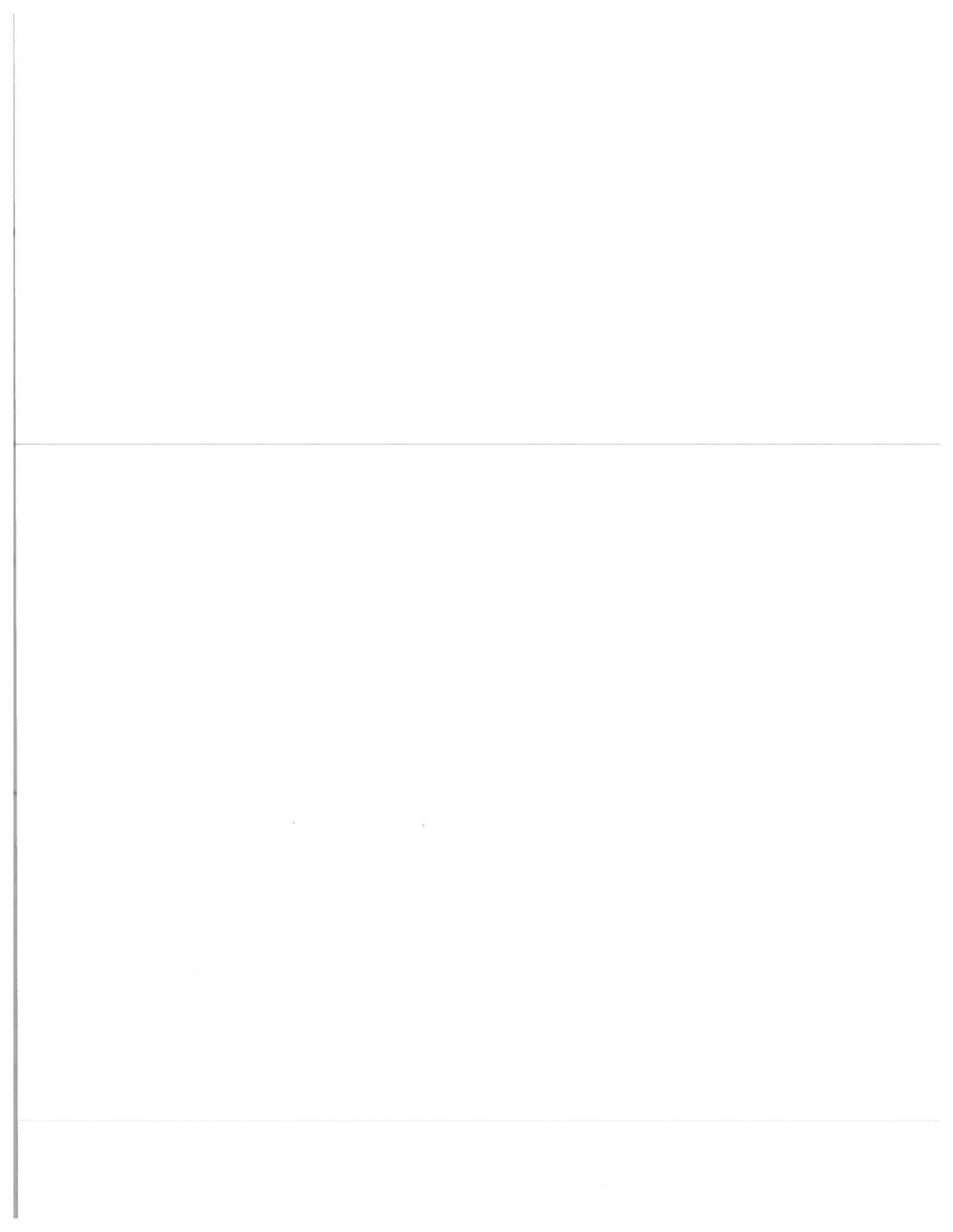
[http://www.analysisgroup.com/uploadedFiles/Publishing/Articles/Economic\\_Impact\\_RGGI\\_Report.pdf](http://www.analysisgroup.com/uploadedFiles/Publishing/Articles/Economic_Impact_RGGI_Report.pdf)

<sup>5</sup> "The Economic Impacts of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Atlantic States" July 14, 2015

<http://www.analysisgroup.com/news-and-events/news/energy-report--states-that-limit-carbon-emissions-through-markets-see-economic-benefits/>

<sup>6</sup> "Analysis of the Public Health Impacts of the Regional Greenhouse Gas Initiative" January 11, 2017

[http://www.abtassociates.com/NewsReleases/2017/RGGI-Improves-Health,-Saves-Lives,-and-Generates-\\$.aspx](http://www.abtassociates.com/NewsReleases/2017/RGGI-Improves-Health,-Saves-Lives,-and-Generates-$.aspx)





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**Addendum to NHDES Testimony regarding House Bill 559-FN,  
An Act relative to expenditures from the Energy Efficiency Fund**

The complex nature of the regionally interconnected ISO-NE grid and wholesale electricity and forward capacity markets presents challenges to analyzing price impacts of any individual state policy upon that state's (or the region's) electricity prices. Such analyses require the utilization of regional energy and economic impact models such as REMI. NHDES is only aware of two such analyses,

- A January 2008<sup>1</sup> analysis conducted by University of New Hampshire Whittemore School of Business and Economics Professor Ross Gittel, Ph.D. at the request of NHDES to inform the legislature during its initial consideration of the RGGI program which concluded;

***"For utility customers (both PSNH and other NH utility customers) increased costs are minimized if all allowance revenue were to be dedicated to ratepayer benefit. Cumulative costs would be minimized if 100% of allowance revenue went to energy efficiency. In the short term, utilizing allowances to directly rebate customers would have the most significant reduction on rates, but over the long term would result in higher costs than investment in energy efficiency. Energy efficiency investment would have the lowest short term rate impact, but over the long term would result in lower costs than rebating."***

- An independent report<sup>2</sup> by the Analysis Group found that implementing RGGI from 2012-2014 added \$1.3 billion (\$2015) in economic value to the nine-state RGGI region. New England's sub-total was \$520.5 million and NH's share was estimated to be \$67.3 million<sup>3</sup>.

The following table displays the current allocation investment of RGGI revenues by state. Note that NH currently primarily allocates these proceeds to customer rebate, while the rest of the NE ISO states primarily direct these proceeds to energy efficiency. This is one reason why the American Council for an Energy Efficient Economy (ACEEE)<sup>4</sup> ranked NH 21<sup>st</sup> amongst states on energy efficiency policy and program efforts, while MA ranked 1<sup>st</sup>, RI 3<sup>rd</sup>, VT 4<sup>th</sup>, CT 6<sup>th</sup>, and ME 13<sup>th</sup>.

<sup>1</sup> [Economic Impact in New Hampshire of the Regional Greenhouse Gas Initiative \(RGGI\): An Independent Assessment](#)

<sup>2</sup> "The Economic Impacts of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Atlantic States" July 14, 2015 <http://www.analysisgroup.com/news-and-events/news/energy-report--states-that-limit-carbon-emissions-through-markets-see-economic-benefits/>

<sup>3</sup> NOTE: During the 3-year time period 2012-2014, NH invested a greater portion of its proceeds in energy efficiency. The statutory amendment enacting the \$1 threshold for ratepayer rebates was in 2012 and implementation was in 2013.

<sup>4</sup> <https://database.aceee.org/state-scorecard-rank>

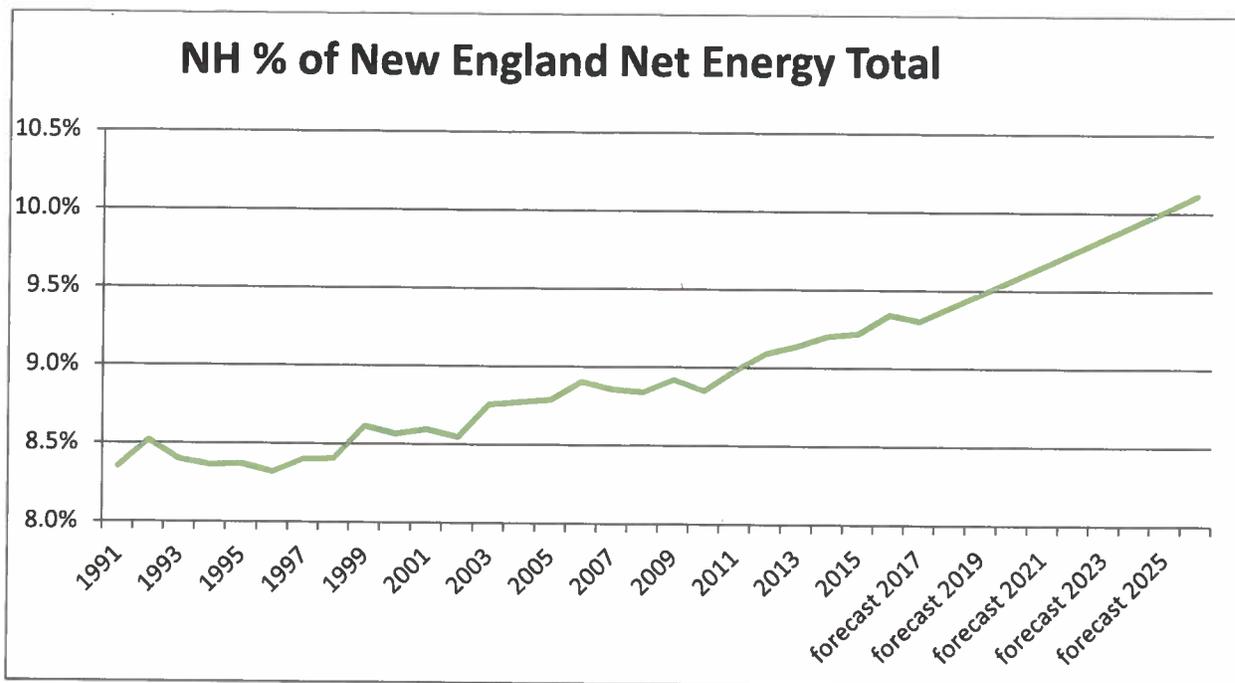
| State | Electric EE | Fossil Fuel EE | Clean & Renewable Energy | GHG Abatement & Climate Change | Direct Bill Assist. | Admin/ Other |
|-------|-------------|----------------|--------------------------|--------------------------------|---------------------|--------------|
| CT    | 4%          | 65%            | 23%                      | 6%                             | --                  | 1%           |
| DE    | 50%         | 20%            | 5%                       | 15%                            | 5%                  | 5%           |
| ME    | --          | 74%            | --                       | --                             | 19%                 | 7%           |
| MD    | 25%         | --             | 10%                      | 10%                            | 50%                 | 5%           |
| MA    | 92%         | --             | --                       | 5%                             | --                  | 3%           |
| NH    | 7%          | 3%             | --                       | --                             | 88%                 | 1%           |
| NY    | 35%         | 20%            | 20%                      | 13%                            | --                  | 12%          |
| RI    | 50%         | --             | 40%                      | --                             | --                  | 10%          |
| VT    | --          | 98%            | --                       | --                             | --                  | 2%           |

Generation costs are at their lowest in recent history, reaching a 15 year low in 2015; investment in energy efficiency by other New England states has helped lower generation costs. If generation costs were the only costs, then NH could ride the coattails of the other states, and continued NH rebates could save NH ratepayers money *over the short-term*.

Transmission costs have increased significantly from 2005 to 2015; these costs are allocated by state peak load share among the ISO NE states and are mitigated by energy efficiency measures which reduce the need for additional transmission infrastructure. There has been more than \$8 billion invested in transmission infrastructure from 2002 through June 2017; ISO-NE conservatively estimates an additional \$4 billion more in future investment through 2022; a 1% increase in a state's share of the total costs represents a potential \$40 million increase in that state's costs.

Each year the New England Transmission Owners jointly file with the FERC to change the Regional Network Service (RNS) transmission rate effective June 1. The RNS rate is calculated by dividing the total transmission cost allocated to regional service by the sum of the twelve monthly coincident peak loads for the system for the prior calendar year. The load rate share used to determine PSNH's allocated cost, effective June 1, 2016, was 8.7%. Similarly, the load rate share used to determine the NH portion of New England Power's allocated cost for the same period was 1%, such that the total NH share was 9.7%.

The annual amount of electricity demand (or "load") in each state can be used to approximate each state's share of the cost (see following figure); since 1991 NH's share has risen steadily by about 1% cumulatively; ISO-NE forecasts an increase in NH costs of nearly 1% more through 2026 as other states lower their shares by investing in energy efficiency and reducing their demand.,resulting in a potential additional cost of \$40,000,000 to NH ratepayers. Any increase in funding of EE programs such as proposed in the amendment to HB 559 would serve to reduce or offset these cost increases.



In addition, we also know energy efficiency can be purchased much more cheaply than the electricity it replaces (see <http://www.gencourt.state.nh.us/statstudcomm/committees/92/documents/Kushler%20Presentation%20-%20Energy%20Efficiency%202015.pdf>, pages 7 and 62). That is why energy efficiency may qualify as a resource in ISO-NE's Forward Capacity Market, i.e. the markets recognize the value of these energy efficiency investments as a less expensive alternative to the purchase of additional electricity necessary to meet demand.

The NHSaves programs<sup>5</sup> report to the PUC that they provide value to all customers. Energy efficiency saves energy at a cost significantly lower than current retail prices. The NHSaves programs save electricity at an average cost of approximately \$0.0366 per lifetime kWh, compared to the retail price of \$0.1629. The NHSaves programs will save customers \$148 Million in energy costs over the life of the measures. Lifetime kWh Savings are estimated to be 799,341,344. Program Funding is approximately \$29 million annually.

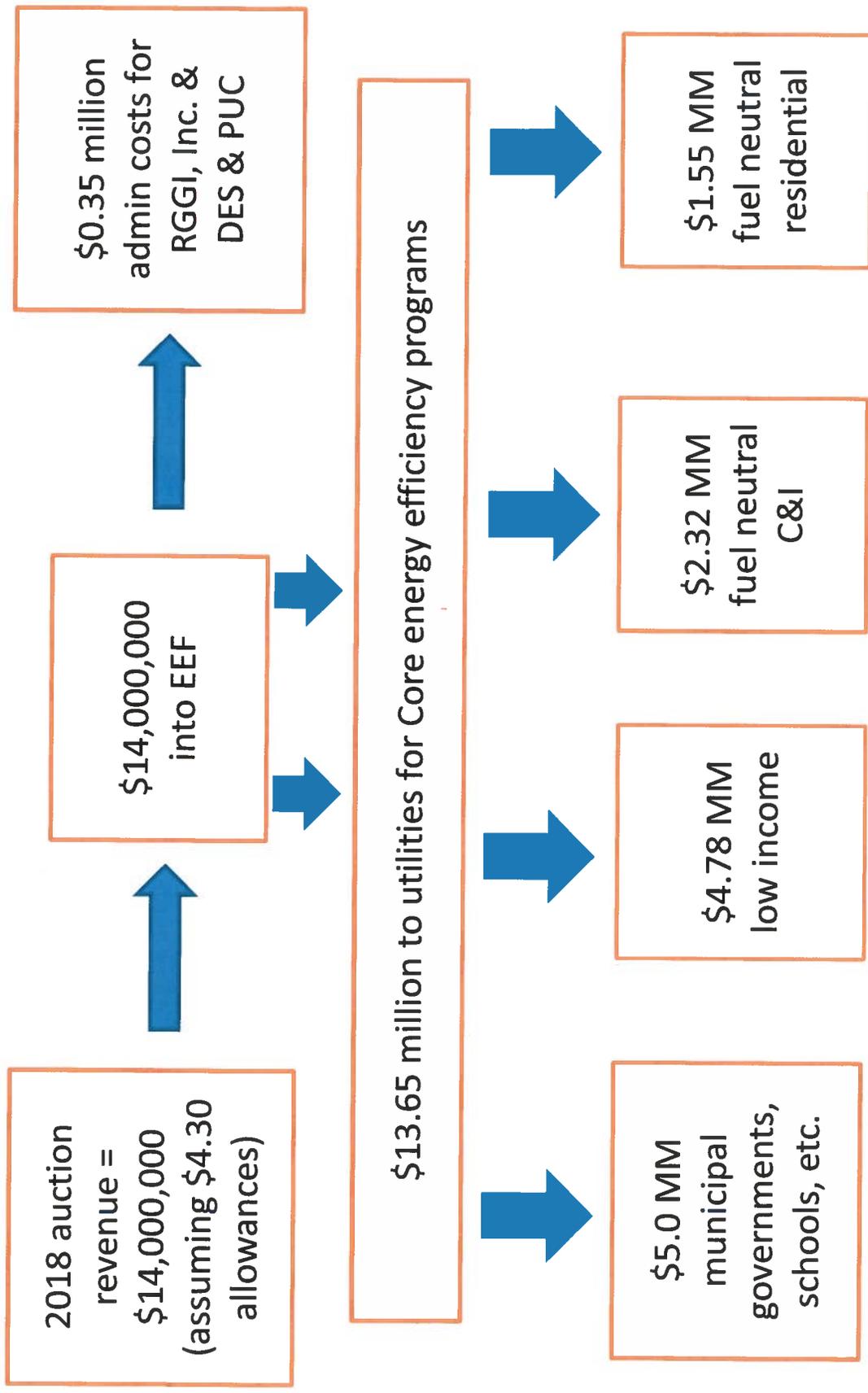
On August 2, 2016, the Public Utilities Commission issued Order 25,932 to adopt an Energy Efficiency Resource Standard ("EERS")<sup>6</sup>, which establishes energy savings goals as a percentage of

<sup>5</sup> NH Core Energy Efficiency Reports DE 14-216, 2017 CORE NH Electric and Gas Energy Efficiency Programs [2017 New Hampshire Statewide Energy Efficiency Plan](#)

<sup>6</sup> New Hampshire Public Utilities Commission (2016, August 8), Order No. 25,932, "Energy Efficiency Resource Standard – Order Approving Settlement Agreement". Retrieved from <http://www.puc.state.nh.us/Regulatory/Orders/2016orders/25932e.pdf>

the NH utilities' retail sales. The cumulative energy savings goal over the 3-year planning period (2018-2020) equates to 3.10% of retail electric sales. The Settlement Agreement provides a mechanism to adjust funding levels in order to meet the increased energy savings goals. The NH utilities will request any necessary changes to the System Benefits Charge (SBC) annually for the electric utilities. Projected annual SBC funding needs are \$29.448 million in 2018, \$39.996 million in 2019, and \$56.803 million in 2020. If greater RGGI funding were available, then some of these costs may be offset. PUC's docket and analysis supporting this order confirms that investments in energy efficiency are beneficial to all ratepayers.

# RGGI Revenue Allocation Under HB 559-FN



# RGGI Revenue Allocation Under Current Law

