

# Appropriate Energy Efficiency Allowance Allocation Levels



## State Approved Energy Efficiency Programs

April 27, 2009

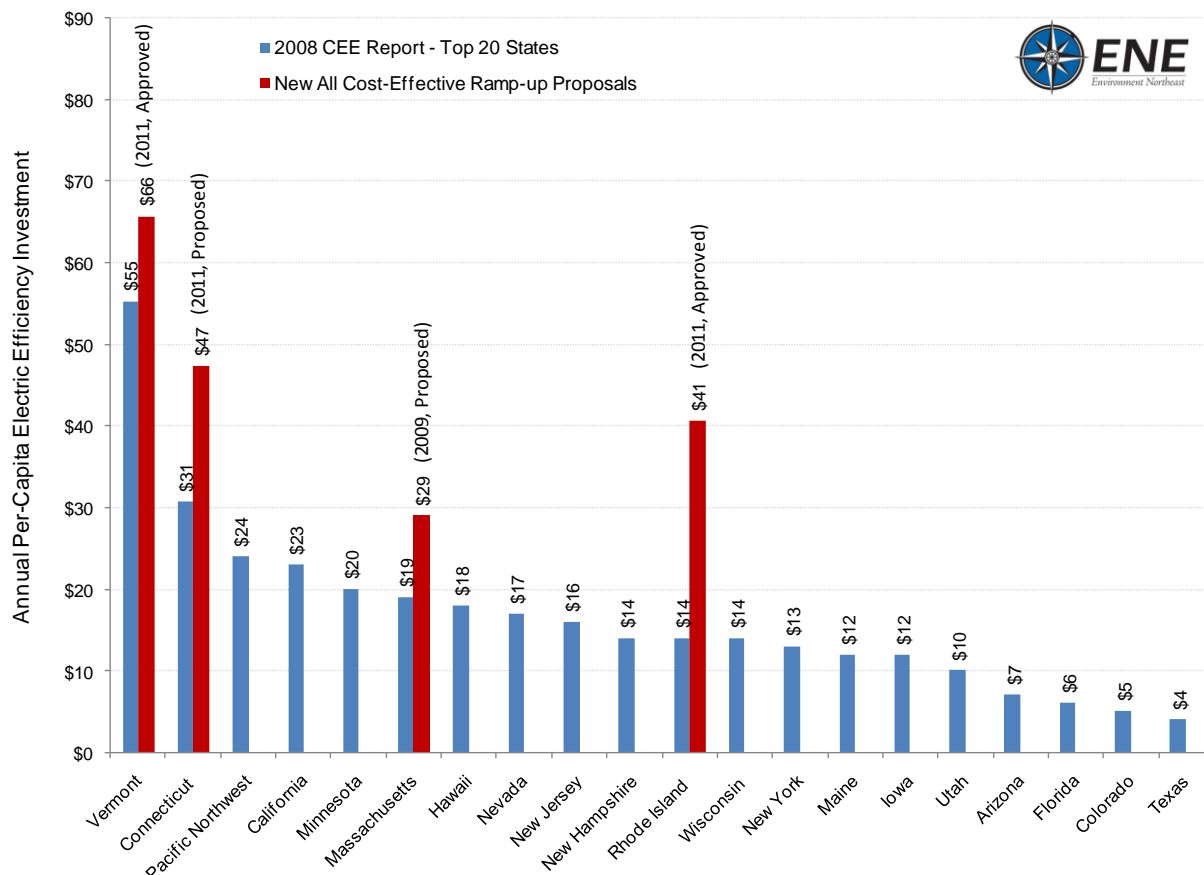
As important decisions are made about how to allocate allowance value in a federal cap and trade system, significant stakeholder support has coalesced behind an allocation to energy efficiency. This allocation would direct 26% of total allowances to efficiency, with 17% of total allowance (or 2/3 of the allocation) directed to state-approved efficiency programs and 9% of total allowances (or 1/3 of the allocation) directed to federal efficiency programs. This document provides the underlying rationale for the proposed allocation of 17% of allowances to state-approved efficiency programs.

State-approved programs represent the core efficiency infrastructure available in the U.S. today. These programs are run by utilities, states, and third parties under the oversight of state regulators. Programs exist for electric and natural gas customers and need to be developed for unregulated fuels like heating oil and propane. Running comprehensive and coordinated all-fuel efficiency programs will help consumers use less energy; saving billions of dollars and replacing fossil fuel expenditures with energy service jobs weatherizing homes and replacing antiquated equipment.

### Electric Efficiency Programs

The following figure compares 2008 per-capita state electric efficiency program investments with proposed and approved spending for New England states requiring utilities to procure all cost-effective energy efficiency.

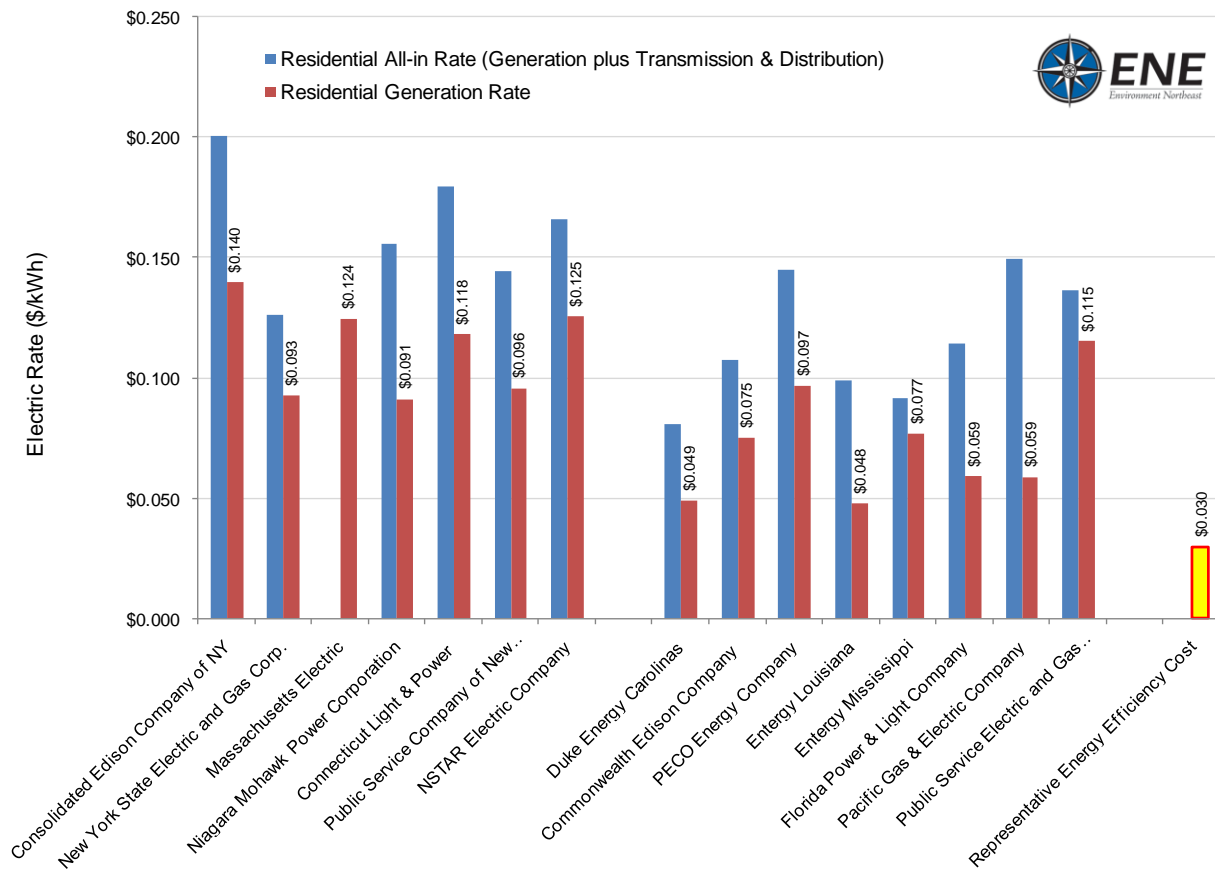
**Existing & Proposed Per-Capita Electric Efficiency Investment Levels for Top-20 States**



Efficiency programs should be expanded across the country, especially in the context of a carbon cap and trade program. Even in areas of the country with low electric rates, energy efficiency investments are cost-effective today and will only become more cost-effective with a price placed on the emission of carbon.

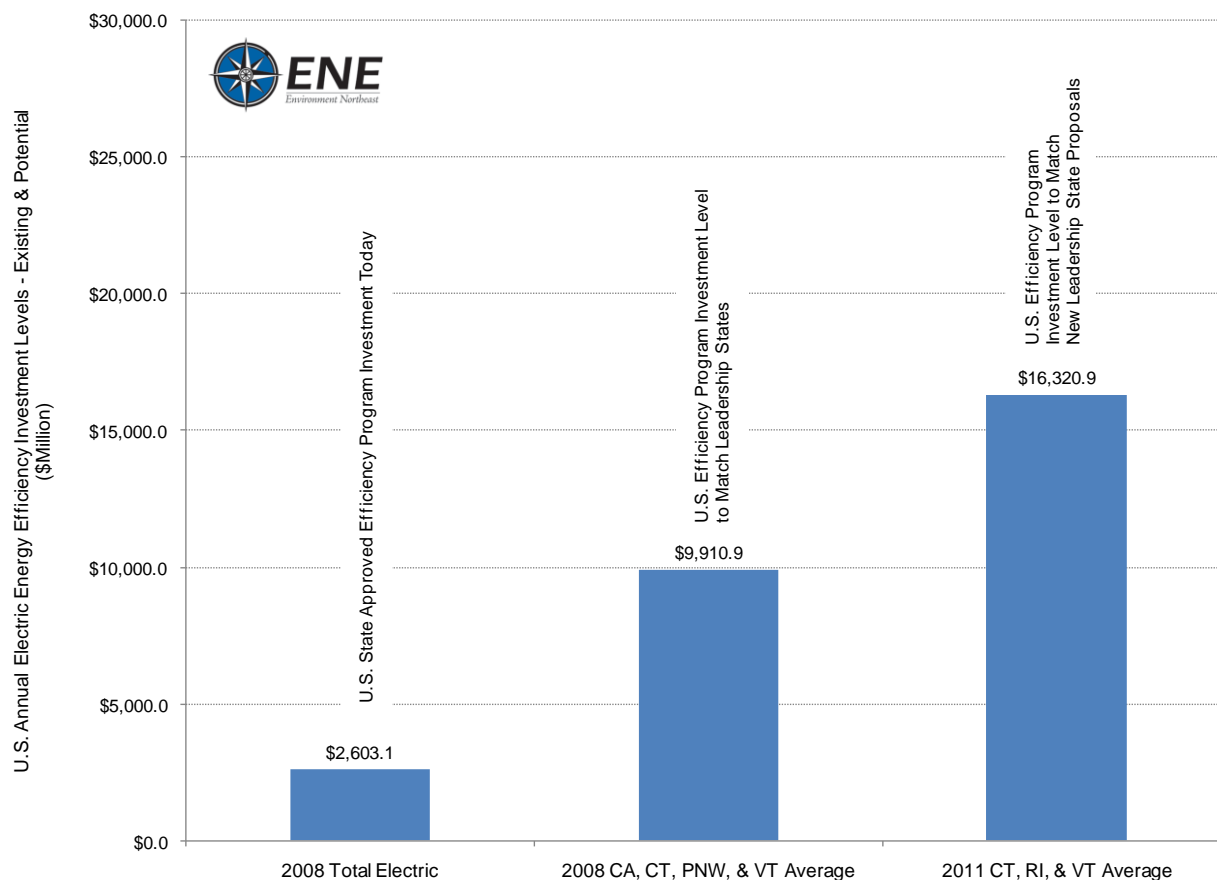
### Comparison of Current Utility Electric Rates vs. Representative Efficiency Program Costs

In the U.S. each year about \$215 billion is spent on electric supply at a price of 5¢ to 12¢ per kWh while only \$2.6 billion is invested in efficiency that costs around 3¢ per kWh. For natural gas, about \$92 billion is spent on supply at a price of \$6 to \$8 per Mcf and only \$0.5 billion is spent on efficiency at \$1 to \$2 per Mcf. We are radically under-investing in low-cost efficiency resources and need to rebalance our investment choices in order to save billions, create jobs, increase our energy independence, and reduce GHG emissions.



In order to determine how much money should be invested nationally in electric efficiency programs, we considered two scenarios: 1) all states invest at the average investment rate of Vermont, Connecticut, the Pacific Northwest, and California (\$33 per-capita); or 2) all states invest at the 2011 planned investment rate of Vermont, Connecticut, and Rhode Island (\$55 per-capita). These two scenarios indicate that U.S. investment in electric efficiency programs would rise from \$2.6 billion in 2008 to \$10-16 billion if all states had adequate funding to match investment levels in leading states.

## Existing and Proposed U.S. Electric Efficiency Investment Levels



A similar assessment conducted by ACEEE found that it would cost approximately \$13 billion annually to achieve a reduction in annual electric energy consumption of 1.5% per year (which leading states are achieving today).

### Natural Gas Efficiency Programs

To date natural gas efficiency programs have been far smaller than electric efficiency programs, but similar savings potential exists. In 2008, \$530 million was invested in state-approved natural gas efficiency programs nationally. Increasing per-capita investments nationally to the level of leading states (such as Wisconsin, which invests \$11 per-capita) would require \$3.4 billion annually. ACEEE analysis arrives at a higher figure of \$4.6 billion, based on saving 1.5% of natural gas consumption annually.

### Unregulated Fuels Efficiency Programs

Efficiency programs for unregulated fuels are essentially non-existent, despite the need to help residential, commercial, and industrial customers use fuel oil, propane, coal, wood and other fuels more efficiently. Measured by energy use (Btu basis), unregulated fuel consumption is about 1/2 the amount of natural gas consumption. We believe that efficiency funding for the unregulated fuels should thus be at least 1/2 of funding required for natural gas – or \$2-4 billion annually.. These fuels also have higher carbon contents than natural gas, and efficiency investments for these fuels should thus be maximized to achieve greater emissions reductions. In analysis limited to residential and commercial heating oil and

propane usage (excluding some fuels and industrial energy use), ACEEE found that approximately \$1 billion would be needed to achieve 1.5% annual energy savings.

### **Total Funding & Allocation Recommendation**

In order to increase national efficiency investments to the levels of leading states we recommend that funding on the order of \$20-25 billion be allocated annually to state-approved energy efficiency programs. This funding will allow state-approved programs to be ramped-up for all customers and all fuels. Efficiency programs being operated today deliver approximately \$3 in benefits for every \$1 of cost, meaning that \$20-25 billion in investment should deliver \$60-75 billion in savings to customers.

What's more, savings would be significantly higher under a carbon constraint. Under a cap and trade program, reduced energy consumption will directly reduce the demand for emissions allowances and thus reduce allowance and energy prices. This reduction in carbon costs increases the benefits of the efficiency investments dramatically.

Our proposal to allocate 17% of emissions allowances to state approved efficiency programs is based on an allowance price of \$25/ton and a cap of 5 billion tons, which would yield about \$21 billion per year in funding for efficiency.

### ***Federal Efficiency Program Funding***

The allocation to federal energy efficiency programs of 9% of total allowances is based on a need to provide long-term funding to the Weatherization Assistance Program, new federal buildings and appliance programs proposed in the Waxman-Markey draft, and energy efficiency R&D funding. 9% of allowances would deliver annual funding of approximately \$11 billion annually, assuming a \$25/ton allowance price.

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*Note: contact ACEEE.org for their analysis, which was shared with ENE and the Energy Efficiency & Climate Change Coalition as a personal communication.*