

AMERICAN MATERIALS MANUFACTURING ALLIANCE

The Honorable Evan Bayh
The Honorable Arlen Specter
The Honorable Sherrod Brown
The Honorable Claire McCaskill
The Honorable Debbie Stabenow
United States Senate
Washington, DC 20510

Dear Senators:

The Effects of HR2454 on International Competitiveness and Emission Leakage in Energy-Intensive Trade-Exposed Industries [the “Interagency Analysis”] can be read in a positive light if one focuses on the statement “we consider this report to be a first step in the Administration’s engagement with stakeholders...” as this signals the beginning of a process leading to getting climate policy right for energy-intensive, trade-exposed industries [EITEs]. On the other hand, if one focuses on the statement “the modeling also finds that the allocations to LDCs and “trade-vulnerable” industries can eliminate almost all—and, in some cases, more than all—of those cost impacts...” and concludes the competitiveness issue is solved by the measures in Waxman-Markey, there can only be negative consequences for both climate policy and energy-intensive, trade-exposed industries.

The Interagency Analysis concludes, on a theoretical basis, HR2454 can effectively eliminate the competitiveness impacts of US climate legislation on energy-intensive, trade-vulnerable manufacturers. To achieve that desired outcome all the variables and moving parts built into the design of the Waxman-Markey program have to work exactly right. Design mistakes can have enormous consequences for manufacturers and the millions of Americans whose jobs depend on a competitive and healthy domestic manufacturing sector. For example:

- From the EPA analysis [by state] and the Minnesota Power analysis [by utility company; both attached], we know that coal-intensive utilities, typical of those operating in Michigan, Indiana, Ohio, Pennsylvania and Missouri, will be severely under-allocated. These are generally states where EITEs operate. This means they will have to buy allowances just to meet their *direct emissions* obligations. This also means there will be no allowances left over to use to offset the cost of replacing coal capacity with gas or wind [which includes new transmission infrastructure for wind and solar]. All of these substantial costs will be passed on to EITEs as much higher energy prices. Any program to regulate greenhouse gases must mitigate against the impact of these uncompensated energy costs or EITEs will become uncompetitive and leakage is certain.
- The suggestion EITEs can lower energy intensity 20-45% by 2020 is a key assumption leading to the conclusion the EITE allowances are sufficient. This

- assumption is false. EITEs have reduced energy use substantially from 1990-2007 and most are on the flat part of the curve (e.g., steel energy intensity is down 33% from 1990 levels, chemicals absolute emissions are down 16% vs. 1990; aluminum CO2 equivalent emissions are down 50% from 1990; paper's energy intensity is down 11% from 1990-2006). Explanatory charts are attached.
- The Interagency Report does not recognize the 15% allowance cut required to meet CBO scoring rules, further reducing LDC and EITE allowance sufficiency.

The idea LDC and EITE allowances are sufficient is the foundation of the conclusion of the Interagency Analysis, i.e., "... that the allocations to LDCs and "trade-vulnerable" can eliminate almost all—and, in some cases, more than all—of those cost impacts..."

The Interagency Analysis recognizes the challenges of implementing such a complex emissions trading program have not been "fully considered." An example is the enormous amount of work still needed to devise an allowance distribution system that does not unfairly penalize competitive manufacturers and result in production migration within and outside of the US. The potential for a system to unfairly create "winners and losers" in the marketplace must be avoided at all cost. Similarly, we would like to delve deeper into the assumptions leading to a \$20/t carbon price to determine their feasibility in comparison to modeling that has yielded higher carbon cost.

The Waxman-Markey measures for EITEs are inadequate. The absence of consideration of all of the costs that EITEs will confront in a carbon capped economy and the absence of a fair allowance distribution system call into question the ability to properly design an economy-wide cap and trade mechanism. Further, a poorly designed program will impact more than just our direct employees [the employment levels used in the Interagency Analysis] as the men and women whose businesses depend on healthy EITE sectors number in the millions.

More work, the Interagency Analysis says, will need to be done to improve assessments of competitiveness impacts and to address various implementation challenges presented by output-base allocations. We agree. An analysis of cost and job impacts on EITEs using proper and practical assumptions regarding LDC allowances, EITE efficiency and other parameters will tell the true story... a story that could lead to a climate policy construct that lowers CO2 emissions while growing manufacturing jobs and encouraging the development of transformational industrial processes.

EITEs look forward to the next steps with the Administration to build on our long record of developing policy solutions that help create jobs and reduce emissions.

Aluminum Association
American Chemistry Council
American Forest and Paper Association
American Iron and Steel Institute
The Fertilizer Institute

Attachment I

EPA was asked to provide technical assistance on the following questions. EPA's responses are provided below the questions.

Do you have any analysis of the effects of distributing allowances to utilities based on W-M formula vs. based 100% on emissions vs. 100% load (any regional/state break-down; any calculations of %age of emissions covered)? I understand EEI might have some of this too. I believe this is what my boss discussed with the Administrator, and is the issue my boss is hearing a lot about from the state. And what is the Agency's read on often over-looked insertion before House floor vote that appears to prevent a utility from receiving more allowances than its emissions? Does EPA agree that this language trumps the formula and would in fact prevent windfalls for major energy producers of low-carbon emitting sources (e.g., nuclear)? There seems to be a split interpretation of this restriction.

EPA RESPONSES:

Allocation Estimates

Estimates for state allocations are included in Table 1. Note that these are rough estimations based on the best currently available data, described in more detail below. Actual allocations will be different, since the owner or operator of each LDC has the ability to define their baseline as a period of any 3 consecutive years from 1999-2008. Furthermore, this analysis does not consider the impact of new coal generation built prior to 2013.

Only 2012 allocations are presented, as the following years will change proportionately (absent updating based on number of customers). In 2012, LDC allocations are equal to 43.75% of the total allowance pool after 1% of allowances are withheld for strategic reserve auctions. We assume the maximum allocation to merchant coal generators (10% of LDC allocations, phasing out over time), and withhold that value from these estimates.

Delivery estimates are based on sales reported in EIA 861, taking the average of 2006 and 2007 total retail sales by distribution company.

Emissions were estimated using the average of 2006 and 2007 EIA 861 retail sales by delivery state and applying EPA eGRID regional emission factors. These emission values are rough estimates, since the emission factors are based on large geographic regions (see figure 1), and were calculated using available 2005 emission and generation data.

Prohibition against excess distributions in Sec. 783(b)(4)

The language prohibiting distribution of more allowances than "necessary to offset any increased electricity costs to [the electric distribution company's] retail ratepayers, including increased costs attributable to purchased power costs, due to enactment of this title" does take precedence over, and sets a limitation on each electric distribution company's [LDC's] annual distribution of allowances under, the language establishing an allowance distribution methodology based on LDC emissions and deliveries. This is because the prohibition language states that the prohibition applies "notwithstanding" the distribution methodology language.

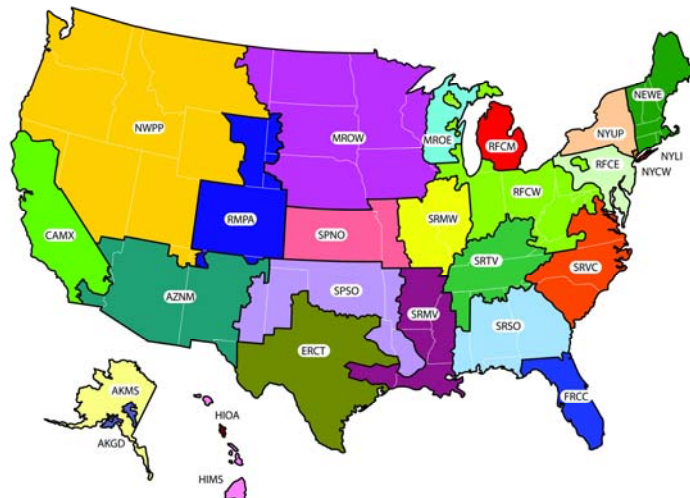
However, the prohibition provision would be very difficult to implement because it would require a great deal of speculation. First, the Administrator would need to determine (either through projection before the year for which allowances are distributed or through actual data after the year for which allowances are distributed) the total cost of the electricity distributed to its customers each year starting with 2012. Second, the Administrator would need to estimate (again either up front or after the year of the allowance distribution) what each LDC's total cost of electricity would be each year in the absence of the ACES GHG cap and trade program. Total electricity costs would depend on a number of factors that would have to be projected, including the sources and amounts of purchased power, the mix of generation of purchased and LDC generated power, fuel costs, technology advancements (e.g., in generation), transmission constraints, and electricity demand. Any attempt to remove the impact of the cap and trade program on these factors and thus on total electricity costs would be speculative at best. The Administrator might also have to consider the ability of each LDC to pass through these costs to its customers. The difference between these two total cost figures for a given year, divided by the market value of an allowance for that year, would be the limitation on the amount of allowances that an LDC could be distributed for that year. The limitation could be implemented by limiting up front the distribution or by requiring the LDC to return later to the Administrator any amount of allowances in excess of the limitation. The excess allowances would be redistributed to other LDCs, but an iterative process would be required to ensure that the redistribution of excess allowances would not increase any LDC's total allowance distribution above that LDC's limitation. EPA notes that the prohibition provision could reward higher costs to LDC retail ratepayers in that the higher the level of an LDC's costs, the higher the limitation on the LDC's allowance distribution.

Table 1. Allocation Estimates by Delivery State

| | | 2012 Allocation (Million Tons) | | | | | 2012 Allocation (Million Tons) | | |
|----------------|---|--|----------------------|-----------------|----------------|---|--|----------------------|-----------------|
| Delivery State | Annual Emissions Estimate (Million Tons)* | HR 2454 Formula (50/50 Emission /Load) | 100% Emissions-Based | 100% Load-Based | Delivery State | Annual Emissions Estimate (Million Tons)* | HR 2454 Formula (50/50 Emission /Load) | 100% Emissions-Based | 100% Load-Based |
| AK | 3 | 3 | 3 | 3 | MT | 6 | 6 | 5 | 7 |
| AL | 62 | 47 | 50 | 44 | NC | 67 | 58 | 54 | 62 |
| AR | 26 | 22 | 21 | 23 | ND | 10 | 7 | 8 | 6 |
| AS | 0 | 0 | 0 | 0 | NE | 23 | 16 | 19 | 13 |
| AZ | 45 | 36 | 36 | 36 | NH | 5 | 5 | 4 | 5 |
| CA | 87 | 99 | 70 | 127 | NJ | 41 | 36 | 33 | 39 |
| CO | 43 | 30 | 35 | 24 | NM | 14 | 11 | 11 | 11 |
| CT | 14 | 14 | 11 | 16 | NV | 19 | 16 | 15 | 17 |
| DC | 6 | 5 | 5 | 6 | NY | 57 | 58 | 46 | 69 |
| DE | 6 | 5 | 5 | 6 | OH | 110 | 82 | 89 | 76 |
| FL | 138 | 111 | 112 | 111 | OK | 41 | 30 | 33 | 27 |
| GA | 92 | 70 | 74 | 66 | OR | 20 | 20 | 16 | 23 |
| GU | 1 | 1 | 1 | 1 | PA | 84 | 70 | 68 | 72 |
| HI | 8 | 6 | 7 | 5 | PR | 14 | 11 | 11 | 10 |
| IA | 36 | 25 | 29 | 21 | RI | 3 | 3 | 3 | 4 |
| ID | 10 | 9 | 8 | 11 | SC | 42 | 37 | 34 | 39 |
| IL | 107 | 78 | 87 | 70 | SD | 9 | 6 | 7 | 5 |
| IN | 75 | 56 | 61 | 52 | TN | 72 | 54 | 58 | 51 |
| KS | 35 | 24 | 29 | 19 | TX | 205 | 165 | 166 | 164 |
| KY | 62 | 47 | 50 | 44 | UT | 11 | 11 | 9 | 13 |
| LA | 42 | 36 | 34 | 38 | VA | 61 | 51 | 49 | 53 |
| MA | 24 | 23 | 19 | 27 | VI | 1 | 0 | 0 | 0 |
| MD | 35 | 29 | 28 | 31 | VT | 2 | 2 | 2 | 3 |
| ME | 5 | 5 | 4 | 6 | WA | 35 | 35 | 28 | 41 |
| MI | 77 | 57 | 62 | 52 | WI | 55 | 39 | 44 | 34 |
| MN | 56 | 39 | 45 | 33 | WV | 23 | 17 | 19 | 16 |
| MO | 70 | 49 | 57 | 40 | WY | 8 | 7 | 7 | 7 |
| MS | 29 | 23 | 24 | 23 | Total | 2,234 | 1,802 | 1,802 | 1,802 |

* Estimate calculated using 2006-2007 retail sales and eGRID emission factors

Figure 1. eGRID Emission Factor Regions



Sampling of Utilities for Waxman Markey Impact Comparison

| Utility (Sampling) | 2006 Tonnes CO ₂ per MWH | 2006 Reported Emissions (1000s of tonnes CO ₂) Purchased Energy Not Included | 2012 Estimated Free Allowance Allocations (1000s) Merchant Power Not Included | Percent coverage of 2006 historic emissions | 2012 Market Value of First Year Surplus or (Shortfall) \$ Millions at \$15 per tonne | 2012 Benefit or (Shortfall) \$/MWH |
|-----------------------------------|-------------------------------------|---|---|---|--|------------------------------------|
| PG&E | 0.013 | 430 | 7,384 | 1717% | \$ 104 | \$3.13 |
| Exelon | 0.068 | 10,386 | 36,971 | 356% | \$ 398 | \$2.61 |
| Entergy | 0.264 | 30,457 | 36,024 | 118% | \$ 84 | \$0.73 |
| Florida P&L | 0.332 | 46,978 | 47,086 | 100% | \$ 2 | \$0.01 |
| Constellation | 0.346 | 16,948 | 16,765 | 99% | (\$ 3) | (\$0.06) |
| PSEG | 0.360 | 22,583 | 21,795 | 97% | (\$ 12) | (\$0.19) |
| Dominion | 0.500 | 51,693 | 41,151 | 80% | (\$ 158) | (\$1.53) |
| Westar | 0.708 | 18,422 | 12,303 | 67% | (\$ 92) | (\$3.54) |
| Wisconsin Energy | 0.722 | 20,921 | 13,841 | 66% | (\$ 106) | (\$3.66) |
| Southern | 0.740 | 149,238 | 97,704 | 65% | (\$ 773) | (\$3.83) |
| Xcel | 0.768 | 61,402 | 39,512 | 64% | (\$ 328) | (\$4.11) |
| DTE Energy | 0.785 | 33,663 | 21,456 | 64% | (\$ 183) | (\$4.27) |
| AEP | 0.826 | 154,561 | 96,419 | 62% | (\$ 872) | (\$4.66) |
| MidAmerican | 0.860 | 65,438 | 40,126 | 61% | (\$ 380) | (\$5.00) |
| ALLETE (Purchased Power Included) | 0.986 | 10,647 | 6,185 | 58% | (\$ 67) | (\$6.21) |
| Great Plains | 0.995 | 20,412 | 11,817 | 58% | (\$ 129) | (\$6.29) |
| ALLETE (unadjusted) | 1.036 | 6,278 | 3,580 | 57% | (\$ 40) | (\$6.60) |
| Basin Electric Coop | 1.101 | 18,102 | 10,100 | 56% | (\$ 120) | (\$7.32) |
| Great River Energy | 1.130 | 11,714 | 6,475 | 55% | (\$ 79) | (\$7.62) |

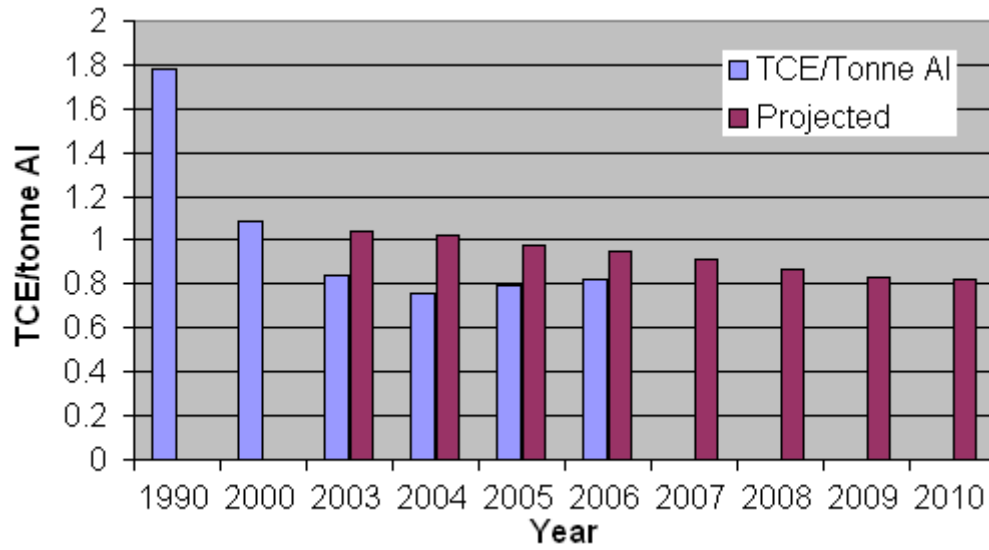
Reference: Data derived from PSEG/NRDC/CE RES Top 100 Utility Emissions 2006. Cost of WM renewables and power purchase emissions not included.

Att't II

MN Power Analysis

Attachment III

DOE's Climate VISION program – Primary Aluminum

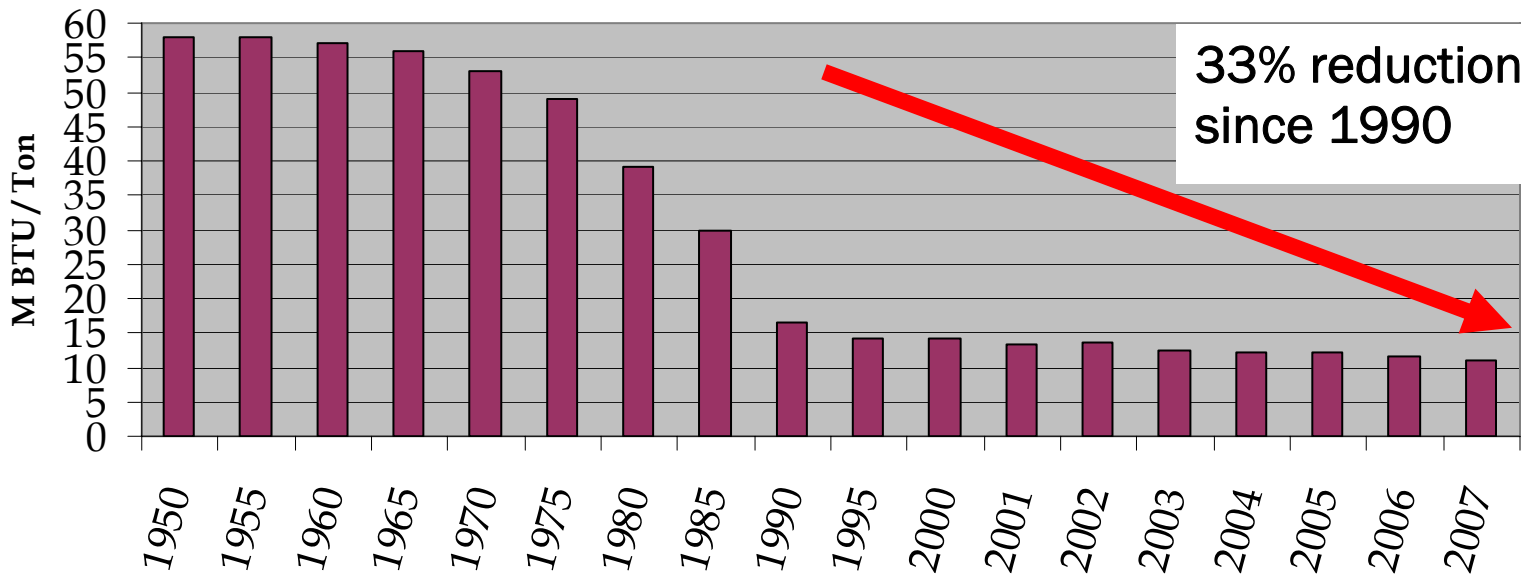


TCE/tonne Al = Tonne of Carbon Equivalent per tonne Al

Note the flattening of the actual data and the projection. Source—Climate VISION Website

Attachment IV
Steel Industry Energy Efficiency Improvement

Energy consumption per ton of steel shipped in the U.S. steel industry



Note the flattening of the curve during the 2000's as performance approaches physical limits.

Source: AISI Statistics