# The Heritage Foundation's Waxman-Markey Analysis

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Structured from: http://switchboard.nrdc.org/blogs/ljohnson/seven_questions_to_ask_of_any.html
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The Heritage Foundation's May 13, 2009 Web Memo "analysis" of the precedent-setting Waxman-Markey Bill, the American Clean Energy and Security Act (ACES, HR. 2454), not surprisingly gets it all backwards. An engine of economic growth, job creation, energy security, and protection from dangerous and costly global warming pollution is magically transformed into all that is bad. How? With embarrassingly bad economics and deceptive presentation.

The Heritage Foundation has made itself a predictable source for economic nay-saying on climate and energy issues, with a history of missing the mark on the basics of climate and energy economics. This latest analysis is unfortunately no exception. The usual tricks are all here. Any GDP and income growth predicted by their own model, a ubiquitous result of all major climate economic models—including their analysis last year of the Lieberman-Warner Bill, is concealed. There are no costs of inaction. And aside from the cap on emissions, virtually *none* of the bill is modeled: 1) the allowance value disappears instead of being spent on consumer relief, clean energy, adaptation, and other measures; 2) no cost containment provisions such as banking, the strategic reserve, and offsets are included; and 3) no complementary policies promoting energy efficiency and clean energy are allowed. And so, the usual results are also here: predicted prices are drastically higher than those found in widely-respected and peer-reviewed analyses done by government agencies and universities, forcing extreme differences in results.

Read below to find out what questions to ask of the authors, and of the people who cite the study to defend their obstructionist views.

1. **Top Line Question: How much larger (than 2008) does this model predict GDP will be in 2030 under an emissions cap? *(Do not accept* a "how much less GDP is relative to no policy" answer).**

   - The authors don't seem to want you to know; it is not provided.
   - Based upon the Heritage Foundation's analysis last year of the Lieberman-Warner (LW) Bill, we can expect GDP to increase significantly in this analysis as well. The LW analysis projected GDP increasing by almost 70% by 2030 (67.6%) relative to 2008 levels, under a cap on carbon emissions. Healthy GDP growth is a ubiquitous result in economic climate models, both partisan and non-partisan, so we should expect the same from this analysis. Studies also find very small differences in growth rates between the policy and no-policy cases; we should again expect the same to be true here.
   - The Heritage Foundation's analysis last year of the LW Bill also contained the following projections:

    - An average increase of $467 per year (2006$) in an average household's energy costs (presumably due to the climate cap alone, not also expected price increases in the baseline)
    - An average increase of $2,025 per year (2006$) in an average household's disposable income (lower than the baseline but still impressive)
- Conclusion: Even with exaggerated costs (see question 5 below) and extreme assumptions (see questions 2-4 and 6-7 below), their forecasts show the economy growing at a healthy clip under climate policy, and household income increasing many times the estimated costs. Torture the model as much as you like, its still impossible to make the case that the economy/U.S. businesses aren't smart enough to adapt and innovate. We always have in the past, and the models show that we will again. Results like these are conveniently not presented because they contradict the main conclusion of the paper, that imposing a cap on emissions will cause severe economic harm.

**2. Does the analysis actually even model the WM bill?**

**Where does the allowance value go?**

- No allowance value is spent on energy efficiency
- No allowance value is spent on renewables and CCS incentives
- No allowance value is allocated to regulated utilities, who must pass on their value to their customers
- No allowance value is allocated to energy-intensive firms to keep manufacturing jobs in the U.S.
- "Losses" in GDP appear to *exceed* the value of the allowances (the average GDP loss is not given, but it begins at $200 billion in 2012 and rises to a peak in 2031 greater than $500 billion). The authors describe their model as resembling an energy crisis. But in an energy crisis, money flows out of the country to OPEC, whereas a cap on carbon does not. Does the allowance value just evaporate?

**Are any cost-saving provisions modeled?**

- No reductions in other GHG gases besides CO2, some of which are much cheaper to reduce than CO2, are said to be modeled
- No energy efficiency standards (or clean technology incentives) are said to be modeled; this is somewhat astonishing, as they have a large impact on modeling results and are key components of the EPA and EIA models and WM
- No offsets appear to count towards CO2 reduction**
- No banking is said to be modeled

** It is not clear whether the use of offsets helps meet the cap in the analysis: Other than saying real offsets are not likely to exist, the authors write: "This analysis assumes that [offsets] will increase the effective CO2 caps by 15%." It sounds as if they are claiming that the cap is broken (i.e. increased by 15%) by invalid offsets. While this would reduce the cost of the bill, the effect would be much smaller than

allowing offsets to be utilized in the way they are specified in WM and EPA's offset supply curves. Not only does this framework not model WM, it is a very odd way to demonstrate that offsets were not ignored.

***In fact, while the Heritage Foundation says it is modeling the WM Bill, it explicitly states that it doesn't:*** *"[T]his paper's analysis looks only at the cost of a simple cap-and-trade approach. Consequently, the economic impact estimates reported here will likely be lower than the economic cost of cap and trade hobbled by further mandates."* Among other things, this statement implies that the authors believe that energy efficiency actually decreases economic efficiency, and that energy markets are perfect—i.e. no energy is currently being wasted, there are no pollution externalities, and there is no history of heavy subsidies for the fossil fuel industry—which distort energy markets.

3. **How much do consumers save in total from energy efficiency improvements between now and 2030?**

   None are reported, which is not surprising since no efficiency standards or spending on efficiency programs are analyzed.

   This can make a big difference. In EPA's draft analysis of the WM Bill, energy use levels stay at their 2015 levels all the way through 2050, while at the same time the economy grows three times its size. In the last 40 years, roughly 70% of our energy has come from energy efficiency gains, even without a climate cap. In the last 30 years, California held its per capita electricity consumption constant, while its economy grew faster than other states. (California's per capita electricity consumption is now 40% lower than it is in the rest of the country). The Union of Concerned Scientists provide another good example of how much households can save from energy efficiency measures (http://www.ucsusa.org/assets/documents/clean_energy/acfcdcham.pdf).

4. **How is it that this study finds net job losses, when it likely (see question 1) predicts substantial increases in GDP, when economic analyses of past environmental regulations on average show an increase in jobs from environmental regulation (http://epi.3cdn.net/83dfae8d6d0c6151e1_55m6id8x6.pdf) and when energy efficiency and clean energy create 3 times as many jobs as fossil fuel energy (http://www.peri.umass.edu/green_recovery and http://switchboard.nrdc.org/blogs/paltman/clean_energy_just_the_stimulat.html )?**

   Answer: *No increases in renewables are allowed, and the analysis assumes CCS doesn't get produced in any "significant quantities."* Combined with assuming no energy efficiency, these assumptions *guarantee* that energy prices for all types of energy will be high, and that there will be a contraction in economic output. Any productivity gains we could earn from improved energy efficiency are assumed away.

This is a critical reason this and other partisan studies do not assume increased energy efficiency under climate policy: increased productivity increases jobs.

In addition, the job loss projections make no sense. Losses start out at their highest in the first year of the cap, and *decline* until 2020 *as the cap tightens*.

5. **What are the allowance prices? In contrast to all studies, allowance prices simply aren't given. They claim gasoline prices will be 74% higher in 2035. If you assume a $2.00/gasoline baseline price, then a 74% increase in gasoline corresponds roughly to a $150/ton allowance price, which is far greater than estimates from EPA and EIA models.**

   **High allowance prices usual result in high costs to households and higher energy prices. Why are projected costs so much higher than those in the EPA's draft analysis of the WM Bill?**

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| Annual cost to households 2030* | At least** 8.4 times higher than EPA |
| Increase in gasoline price 2030 | (also) 8.4 times higher than EPA |
| Increase in electricity price 2030 | 3.8 times higher than EPA |
| Increase in natural gas price 2030 | 3.3 times higher than EPA |

* EPA projects $98 to $140 per household per year through 2050, an average of $119. This figure is the net cost to households, not their energy bill alone.
** There are no estimates of indirect costs, which would increase these cost estimates. The Heritage Foundation report says that over a period of 24 years a typical family of four will pay $24,000 more in direct energy costs, or $1,000 per year.

6. **How much do renewables and advanced coal w/ CCS grow in the model after carbon reductions begin? Is there any enhanced oil recovery?**

   *As discussed above, renewables are constrained to current levels, and CCS doesn't get produced in any "significant quantities."*

   We can also infer from the results that there is no increased domestic oil production from using captured CO2 to enhance oil recovery from domestic wells. This technique makes it possible to extract more oil, increase domestic oil production, decrease oil imports, and offset some of the cost of capturing CO2, thereby lowering allowance prices. The technology is not discussed.

7. **Did the study model the costs of *inaction*, such as property lost to sea level rise, more intense hurricanes, forest fires, water shortages, national security threats (from millions of people losing fresh water supplies as glaciers evaporate and droughts intensify), increasing world food prices due to water shortages, and lost ecosystems and species?**

No. The analysis further asserts that benefits will be non-existent by asserting that other countries' emissions will not decrease.

**8. Has their analysis been formally peer-reviewed by external parties?**

The Global Insight model used is proprietary, and it appears that the Heritage Foundation does not subject their use of the model to any external review. It is therefore difficult to know all of the assumptions that have been made. For example, how does the 2008 economic growth baseline affect emissions projections and therefore the difficulty of reaching a cap? The lower economic growth in the 2009 baseline by the Energy Information Administration (EIA) substantially lowered expected costs in EPA and EIA models. The effects of the ARRA clean energy spending also affect the baseline, but there is no discussion of this.