



Research

Administration's GHG Regulation Surpass Cap-and-Trade Costs

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Recently, the Environmental Protection Agency (EPA) released its second round of greenhouse gas (GHG) standards for heavy-duty engines and trucks. The [\\$30 billion regulation](#) comes on the heels of a 2011 regulation that also addressed fuel efficiency and imposed \$8.1 billion in long-term costs. EPA's patchwork of GHG rules under the Clean Air Act is quickly growing into a regulatory behemoth.

[Waxman-Markey](#), the cap-and-trade bill that narrowly [passed the House](#) in 2009 but stalled in the Senate, would impose tremendous burdens on states and private entities. However, there was a real concern at the time that even that flawed bill was preferable to EPA's ad hoc, point-source by point-source approach to GHG regulation. With several years of EPA regulation as a baseline, it's likely that the regulatory approach imposes more economic burdens than even Waxman-Markey. EPA's GHG rulemakings could impose at least \$25.1 billion in annual economic costs, omitting Department of Energy rulemakings and the most recent proposal for trucks. Waxman-Markey would have imposed roughly \$22 billion in unfunded private sector and local government burdens.

WAXMAN-MARKEY

H.R. 2454 was a massive regulatory overhaul of the energy and manufacturing sectors. The [1,428 page-bill](#) would have added \$845 million in additional taxes during a ten-year period and more than \$820 million in spending during the same time. To date, EPA's GHG regulation has consumed more than 2,100 pages of regulatory text. The Congressional Budget Office (CBO) analyzed the regulatory implications of Waxman-Markey as part of its obligations under the Unfunded Mandates Reform Act in 2009.

This CBO analysis was able to quantify and monetize some of the unfunded mandates placed on the private-sector and local government from Waxman-Markey:

- **Cap-and-Trade Program for Greenhouse Gases:** CBO estimated that this program, where facilities submitted allowances for carbon dioxide emissions, would cost “tens of billions annually” for private-sector entities and roughly \$1 billion annually for local governments. **Estimated total cost: \$21 billion.**
- **Reporting Requirements:** this would have required entities to report information on greenhouse gas emissions. CBO estimated the cost at \$50 million annually, but EPA already required some reporting. **Estimated total cost: \$50 million.**
- **Carbon Capture and Sequestration:** Estimates here ranged up to \$175 million for public entities and \$925 million for private companies. **Estimated total cost \$1.1 billion.**
- **Performance Standards for Coal Plants:** There was a lingering question about whether coal plants would opt for carbon capture and storage technology, so CBO wrote, “the cost of the mandate is uncertain.”
- **Emission Reduction Standards:** Since these measures depended on further action from EPA, the cost here was uncertain.

- Limitations on Transactions in Commodities: The bill imposed mandates on “position limits” for energy commodities. Again, CBO had no basis for quantifying this impact.
- Combined Energy Efficiency and Renewable Electricity Standard: CBO actually estimated the cost for this would be relatively small and did not monetize the figure.
- Hydrofluorocarbon (HFCs) Restrictions: This would have applied to private entities only, establishing a cap-and-trade system for HFCs, a potent greenhouse gas. CBO estimated a cost of \$600 million in the first year. **Estimated total cost: \$600 million.**
- The bill also called for lighting and appliance efficiency standards, in addition to heightened motor vehicle standards, but because they were dependent on future regulation action, CBO did not quantify them.

Total: At least \$22.7 billion

As noted, there were several provisions that would have imposed additional costs, but CBO was unable to monetize these estimates. Regardless of the total amount, consider that in 2013 the total net present value of all final regulation was [\\$29.4 billion](#), or approximately \$9.4 billion annually. Waxman-Markey would have easily imposed two year’s worth of regulation from just one bill. Despite its scope and cost, recent EPA regulations are actually more expensive and never received a single “yes” vote in the House or Senate.

EPA REGULATION

It’s easy to forget that during Senate debate over Waxman-Markey, many were eager for a legislation solution as opposed to an “impractical” regulatory approach from EPA. Although EPA was essentially ordered to regulate GHGs, there were plenty of glaring legal and implementation hurdles. Below is just a sample of commenters’ unease about using the Clean Air Act, an invention of the 1970s, to regulate carbon.

- *Mother Jones* called EPA regulation “[an imperfect](#)” tool to address GHG’s, compared to a legislative approach.
- Resources for the Future, a consortium of center-left environmental economists, [wrote](#), “EPA action under the act is a clear second-best option to new legislation from Congress, especially over the long term.”
- Columbia Law School’s Center for Climate Change Law [argued](#) EPA’s regulatory path suffered from “inconclusive legal precedent and practical limitations.”

After Democrats and Republicans rejected the administration’s legislative approach, the executive branch has imposed their “top-down” approach ever since. In many ways, it resembles the broad approach of Waxman-Markey, without the legal certainty.

EPA has finalized at least 11 rules covering GHGs, including measures for reporting, two major rounds of efficiency standards for cars, and a rule on fuel efficiency for heavy-duty trucks and engines. The 2017 to 2025 standards for cars and light-trucks is one of the most expensive rulemakings in U.S. history, with \$10.8 billion in annual costs and more than \$150 billion in long-term burdens. Below is a snapshot of the notable GHG final rules from EPA to date.

<u>Rule</u>	<u>Annual Cost</u>	<u>Paperwork Hours</u>
2017-2025 Vehicle Efficiency Standards	\$10.8 billion	5,667
2012-2017 Vehicle Efficiency Standards	\$4.9 billion	39,940
Heavy-Duty Truck Efficiency Standards	\$600 million	58,064
Reporting of GHGs for Natural Gas	\$22 million	396,474
Reporting of GHGs from Manufacturing	\$5.5 million	981,032
<u>Totals</u>	<u>\$16.3 billion</u>	<u>1.48 million hours</u>

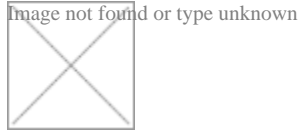
These are only the current final measures, however, and looming on the regulatory horizon are some of the most expensive measures yet. No one expects the administration to scuttle its GHG standards for new and existing power plants, for example. At **\$8.8 billion**, it would push the administration's GHGs agenda to roughly \$25.1 billion in annual costs and two million paperwork burden hours, arguably more than Waxman-Markey.

The above figure also excludes new measures or those without public cost estimates. The administration's second round of efficiency standards for heavy-duty trucks will cost \$30 billion. In addition, EPA has signaled a willingness to go after methane emissions for fracking, even though fracking emissions are **already regulated** by EPA and the Department of the Interior regulates possible groundwater concerns. Not to rest on its laurels, EPA will soon begin regulating **aircraft emissions**, despite annual efficiency improvements of one to two percent and the incredible incentives that airlines have to reduce fuel consumption.

DON'T FORGET ABOUT DOE

Buried in the morass of Waxman-Markey was a call for greater energy efficiency measures. Although the Department of Energy (DOE) was already active on this policy front, the pace has accelerated since the demise of a legislative solution to climate change.

The chart below details the number of "**major**" DOE rules that the Office of Information and Regulatory Affairs (OIRA) has approved from 2007 to 2014, with the corresponding net present value (NPV)(unadjusted for inflation) published cost of all DOE measures.



As the chart displays, DOE has imposed substantial burdens on the manufacturing sector, and ultimately consumers who must eventually pay higher prices. The above figure even excludes two significant final rules from 2015. The agency is now averaging 3.25 major regulations annually since 2007 (compared to five a year from EPA). The eight major DOE rules approved in 2014 was a record, [according to OIRA](#), and there does not appear to be a slowdown pending. The latest [Unified Agenda](#) outlined 11 new major rules from DOE that could be completed before 2016. For comparison, the Clinton Administration approved just six major DOE measures during its eight years in office. Adding the annualized cost of DOE measures since 2010 (\$8.2 billion) to EPA's tally of \$25.1 billion yields \$33.3 billion annual burdens.

CONCLUSION

Regardless of what Waxman-Markey would have looked like in practice, and it probably would not have been pretty, after five years of regulating it's clear that the piecemeal regulatory approach to GHGs is even uglier. At least \$25 billion in annual burdens is essentially an entire year's worth of regulation and EPA has devoted these burdens to one policy problem, with the promise of more regulation in the future.