



Joint Economic Committee

Republicans

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REPUBLICAN STAFF COMMENTARY

Regulating Greenhouse Gas Emissions: Small and Uncertain Benefits at Large Economic Costs

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REGULATING CARBON DIOXIDE

Introduction. In 2007, the U.S. Supreme Court ruled that greenhouse gases (GHGs) fall under the Clean Air Act's sweeping definition of "air pollutant" and that the Environmental Protection Agency (EPA) did not provide sufficient reason why it should not regulate GHGs. The Supreme Court did not rule whether the EPA could be effective in regulating GHGs, much less whether it could regulate these emissions at a reasonable cost. CO₂, a ubiquitous gas, accounts for 83% of GHG emissions.

The reasons against EPA regulation of CO₂ emissions are compelling. Regulating CO₂ is a vast undertaking in terms of both the regulatory mechanics and the evaluation of their costs, benefits, and economic effects. Sweeping or not, the Clean Air Act and its Amendments (CAAA) did not envision including GHGs as evidenced by emission limits that are much too low to be practical for CO₂. The limits were designed to control toxic pollutants, not non-toxic substances. In a clear case of regulatory overreach, the EPA now seeks to expand its reach by imposing new limits and standards that were neither envisioned nor sanctioned by Congress.

Remarkably, EPA's requirements are not aimed at specified reductions in temperature or improvements in welfare, and are not bounded by specified limits on costs. The EPA, through its own judgment, sets emission limits that will impose indeterminate costs affecting the entire population with no measurable benefit. There is not even a scientific consensus with regard to global warming, its causes, or its severity.¹

Highlights

EPA regulation is not the way to manage global greenhouse gases for many reasons:

- The American people have not given their endorsement;
- The EPA is a national agency and this is a global undertaking;
- The costs are enormous, have not been delimited, nor matched to benefits;
- The EPA mission would be to limit emissions by its judgment, not bring the global temperature to a targeted value, or generate specified improvements in welfare;
- The undertaking would have massive adverse repercussions for the economy as the needed technologies simply do not exist;
- Industrializing nations, whose emissions are rising, will not follow a U.S. example that ignores technological reality and damages the economy;
- U.S. energy policy is disorganized. Existing mandates and subsidies are not structured and coordinated to achieve concrete, attainable results. For EPA to add more of its own mandates is not the answer.

The EPA cannot set a meaningful temperature target, because CO₂ emissions are not regional phenomena with regional climate effects. CO₂ emissions are taking place everywhere and are distributed around the world. Therefore, if CO₂ emissions are a problem (which is a matter of scientific dispute), managing CO₂ is a global task, not a national task. Schemes to cap national emissions are bound to be ineffectual. Noted economist Martin Feldstein has advised “The U.S. should wait until there is a global agreement on CO₂ that includes China and India before committing to costly reductions in the United States.”²

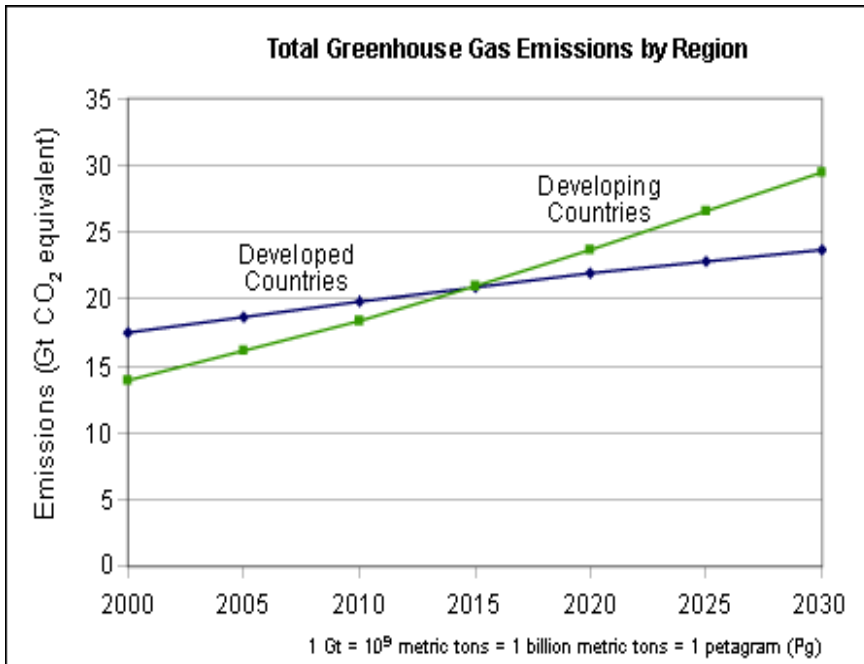
Questionable benefits. In Congressional testimony earlier this year, EPA Administrator Lisa Jackson stated that the benefits of implementing the Clean Air Act are projected to exceed the costs by a factor of 30 to 1 from 1990 through 2020.³ In 1997, the agency had claimed to provide benefits of \$22.2 trillion at a cost of half a trillion dollars from 1970 through 1990, a benefit-to-cost ratio of more than 40 to 1.⁴ Perhaps the best way to put such difficult to believe claims into perspective is to cite the work of Michael Greenstone, 3M Professor of Environmental Economics in MIT’s economics department and Director of the Hamilton Project at the Brookings Institution. In 2004, he wrote:

*The CAAs are controversial, because reliable evidence on their costs and benefits is not readily available. For instance, there is not even a consensus on whether the CAAs are responsible for the dramatic improvements in air quality that have occurred in the last 30 years.*⁵

The central point here is that the EPA follows its own convictions irrespective of what the consensus is and has the power to set any standard it wants, unless Congress intervenes.

The costs of reducing CO₂ emissions by mandate. The Heritage Foundation Center for Data Analysis (CDA) analyzed the Waxman-Markey bill that passed the House of Representatives in 2009.⁶ CDA found that, had the bill been enacted, it would have lowered CDA’s projected real GDP for 2012 by \$200 billion with job losses of 1.9 million. Waxman-Markey would have caused GDP and job losses in every year analyzed with variations peculiar to the nature of its carbon limits. But as the effective limits tightened, GDP and job losses escalated. The study extended to 2035 and calculated a cumulative real GDP loss of \$9.4 trillion. Heritage also analyzed the Boxer-Kerry bill (S. 1733) and found it would cause a cumulative real GDP loss of \$9.9 trillion to 2035 with job losses topping 2.5 million by 2032.⁷ It is important to remember that the “cap and trade” bills, which Congress rejected, imposed far more certain, quantifiable, and most likely less costly burdens on the economy than EPA’s contemplated regulatory regime for GHG emissions.

In May of 2010, the CDA also studied a renewable electricity standard of 37.5% electricity generated from renewable sources by 2035.⁸ That would cause a cumulative real GDP loss of \$5.2 trillion by 2035 and a loss of 1.3 million jobs by 2032. The President’s new goal of generating 80% of the nation’s electricity from “clean” energy sources by 2035 allows contributions from nuclear and natural gas as “clean” sources, which are not “renewable.” It is unclear how it exactly compares to the scenario studied by CDA; however, it is clear that the approach promoted by the Obama Administration as embodied by the Waxman-Markey bill, the Boxer-Kerry bill, and the EPA’s interpretation of its mission to “cleanse” the economy will inflict draconian cuts on the American standard of living.



The developing countries. Emissions are increasing significantly in the industrializing part of the world where the priority clearly is to improve the quality of life rather than to lower the global temperature (see graph).⁹ Developing countries seek lower emission technologies, but they will not cease to avail themselves of the resources they can use with technologies that exist. Unless the United States offers policies and technologies they can use to lower emissions *and* grow their economies, they will not be interested in emulating us. Tying the U.S. economy in knots will not inspire their governments to do the same.

CONFUSED ENERGY POLICY

Technology is the key to reducing GHG emissions, but the Administration's combination of mandates and subsidies is not properly organized and focused on technological advancement. Mandates are disconnected from reality, and subsidies are not conditioned on success. The subsidies do not help the economy comply with the mandates that have been set, which leaves only economic contraction to meet them. In addition, the assorted obstacles thrown up against domestic oil and gas production do not help the demand for higher cost "green" energy; they merely increase the demand for imported oil.

Mandates. In general, imposing mandates on markets is inefficient; they reduce supply and drive up price. One can think of import quotas that curtail the supply of lower cost foreign goods in favor of higher cost domestic goods. While domestic producers increase output and employment at the higher price, they will not make up for the full amount of imports forgone because domestic cost is higher. U.S. energy mandates that disfavor lower cost conventional domestic supply have the same effect, except that they also reduce domestic employment because the laid off workers in that sector are Americans. The "green" energy supply is very small compared to the conventional supply and not positioned to increase its scale dramatically.

Congress and the Administration have been imposing and proposing energy mandates without assuring that the means exist to meet them and without a Plan B. The so-called "blend wall" demonstrates what can happen as a result. It is problematic to blend more than 10% ethanol into gasoline for a variety of reasons, yet the government's mandate to use ethanol as a motor fuel is increasing. The government even requires that in the near future increasing amounts of its ethanol fuel mandate be met with cellulosic ethanol produced from wood chips, plant stems, and the like. Experimental production of cellulosic ethanol, however, shows no indication of becoming commercially viable any time soon. The result is case-by-case agency review with postponements and exceptions granted by the grace of regulators who may (or may not) allow the economy to limp through an added thicket of temporary rules into an uncertain regulatory future.

Subsidies. Since 2009, the federal government has spent unprecedented amounts in the name of pursuing lower emissions from the production and use of energy. In each of the last two years, energy related tax expenditures amounted to \$17 billion (excluding \$2.5 billion for fossil fuel each year). The Department of Energy (DOE) spent \$3.5 billion in 2009 and \$3.6 billion in 2010; the stimulus added another \$21.8 billion (all excluding fossil fuels). For 2009 and 2010 combined, the subsidies come to at least \$63 billion. Parts of auto company loans and loan guarantees extended through DOE and the stimulus could be added to this amount, as could parts of the funding via both for Basic Energy Sciences (\$3.8 billion) and Biological and Environmental R&D (\$1.4) in the two years. From 2011 through 2019, revenue losses from energy tax provisions, including grants in lieu of tax credits, in the stimulus add another estimated \$34.5 billion. The stimulus package allocates billions of dollars more for “clean energy investments” such as high speed rail service.¹⁰

Different agencies disburse these subsidies to different parts of the energy sector in the hope they will produce technological breakthroughs, largely without demanding deliverables. Yet almost all the subsidies go to existing technologies. Even when the subsidized technologies are relatively new, the money does not necessarily spur further advancements. None of the alternative transportation fuel technologies the government subsidizes, for example, has ever been commercially viable in other than niche uses, and some of them have been around for a hundred years or more. Furthermore, there is no plan to integrate new energy alternatives into a coherent whole. At the same time that it mandates increasing use of ethanol, the government is promoting other transportation technologies such as electric vehicles that require entirely different propulsion and fueling systems.

CONCLUSION

Reducing future global emissions of CO₂ is a gigantic undertaking that cannot be accomplished by one nation alone. To expect a U.S. regulatory agency to have a perceptible effect on the global temperature and thereby improve the welfare of Americans is unrealistic, to say the least. The government does not even connect its mandates to specific performance metrics that relate to global climate benefits, costs and benefits to the U.S. economy, or costs and benefits to the world economy. The mandates we have already are essentially arbitrary, disconnected from reality, and provide for no coherent fallback. When reality cannot be reconciled to the mandates, diverse ad hoc exceptions spring forth decided by regulators who have little financial or political accountability for the far reaching consequences.

The Administration has spent huge sums of taxpayer dollars in support of alternative energy generation it deems “green,” but its subsidization strategy lacks coherence and focus. It does not drive the cutting edge of energy technology forward as it might because most of the money goes to existing technologies. The Administration’s subsidization strategy is not firmly aligned with its energy mandates so as to help the economy meet them.

The EPA should not be allowed to expand its regulatory reach on its own initiative, especially when Congress has refused explicitly to grant the EPA such authority. This is especially true in light of the large costs and the negative and not fully quantifiable effects on the nation’s economy.

Endnotes:

¹ In an Open Letter to the Secretary-General of the United Nations dated December 13, 2007, 100 prominent scientists disagreed with the conclusions of the IPCC Summary (http://scienceandpublicpolicy.org/images/stories/papers/reprint/UN_open_letter.pdf). Over 31,000 American scientists have signed a petition stating that “There is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gases will, in the foreseeable future, cause catastrophic heating of the Earth’s atmosphere and disruption of the Earth’s climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects upon the natural plant and animal environments of the Earth.” (<http://www.petitionproject.org/index.php>.)

² “Cap-and-Trade: All Cost, No Benefit,” Martin Feldstein, *Washington Post*, June 1, 2009.

³ Opening statement of Lisa P. Jackson, Administrator, United States Environmental Protection Agency, Hearing on a Draft Bill to Eliminate Portions of the Clean Air Act, Subcommittee on Energy and Power, Committee on Energy and Commerce, United States House of Representatives, February 9, 2011.

⁴ “The Benefits and Costs of the Clean Air Act, 1970 to 1990,” prepared for the U.S. Congress, October 1997 by the U.S. Environmental Protection Agency (<http://www.epa.gov/air/sect812/copy.html>).

⁵ “Did the Clean Air Act Cause the Remarkable Decline in Sulfur Dioxide Concentrations?” Michael Greenstone, *Journal of Environmental Economics and Management*, Elsevier, vol. 47(3), pages 585-611, May 2004.

⁶ “The Economic Consequences Of Waxman-Markey: An Analysis Of The American Clean Energy And Security Act Of 2009,” David W. Kreutzer, Karen A. Campbell, William W. Beach, Ben Lieberman, and Nicholas D. Loris, A Report of the Heritage Center For Data Analysis, The Heritage Foundation, August 6, 2009.

⁷ “What Boxer-Kerry Will Cost the Economy,” David W. Kreutzer, Karen A. Campbell, William W. Beach, Ben Lieberman, and Nicholas D. Loris, Backgrounder, No. 2365, January 26, 2010, the Heritage Foundation.

⁸ “A Renewable Energy Standard: What It Will Really Cost Americans, David W. Kreutzer, Karen A. Campbell, William W. Beach, Ben Lieberman, and Nicholas D. Loris, A Report of the Heritage Center For Data Analysis, The Heritage Foundation, May 5, 2010.

⁹ EPA “Global Greenhouse Gas Data” webpage, Figure 3 (<http://www.epa.gov/climatechange/emissions/globalghg.html>).

¹⁰ CRS memorandum prepared for the Joint Economic Committee entitled “Federal Support for Energy,” March 28, 2011.