

Carbon Dioxide Regulation and the American Conservation Ethic

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Regulation of CO₂ imposes high costs on both the economy and the environment. Proposals to restrict CO₂ emissions explicitly by means of cap-and-trade legislation or a clean energy standard lead to higher energy costs and lower economic output. Less direct forms of CO₂ regulation, such as targeted loan guarantees and efficiency mandates, misallocate capital, drive up consumer prices, and hobble economic growth. Scientific integrity is another casualty of CO₂ regulations because the science used to justify the costly regulations is becoming increasingly politicized.

Though it is colorless, odorless, non-toxic, and critical to photosynthesis (the process upon which all green vegetation depends), carbon dioxide (CO₂) has been rebranded as a pollutant harmful to human health. This transformation—based on exaggeration and misinformation—is now fueling misguided calls for CO₂ regulation. Yet by relying on politically driven science, these new regulations will result in higher energy costs and lower economic growth while having little impact on CO₂ emis-

sions. Furthermore, CO₂ regulation impedes economic freedom—the greatest source of progress toward environmental protection.

Any discussion of carbon dioxide regulation must begin by noting two facts: CO₂ is a greenhouse gas, and anthropogenic (man-made) CO₂ emissions have likely contributed to the observed warming of the past 50 years. The calls for CO₂ regulation, however, are not based on these facts; rather, the current regulatory hysteria is the result of misinformation regarding the projected future levels of warming, as well as exaggerations over how much any future warming could be attributed to anthropogenic CO₂. In addition, extreme weather events are increasingly attributed to anthropogenic CO₂ emissions, despite a lack of evidence for any long-term change in these events.

Al Gore's *An Inconvenient Truth* is the most notorious purveyor of this exaggeration and misinformation. From the 20 feet of projected sea-level rise over the next century (18 feet–19.5 feet more than the amount predicted by the Inter-

governmental Panel on Climate Change) to hysterical predictions of hurricane activity, this movie embodies nearly all of the transgressions of the global-warming movement.

In short, the global-warming movement takes the general agreement concerning the modest warming that has occurred over the past century and asserts that there is a similar consensus about an impending climate catastrophe. It should be no surprise, therefore, that such scientific bait-and-switch yields poor public policies.

In addition to promising higher energy costs and lower economic growth, CO₂ policies have huge impacts on land use and put wildlife at risk. Reversing CO₂ policies will cut inefficient land use while increasing safety for bats and birds. Reducing the costly CO₂ regulations will also allow for a stronger economy, which in turn will create the wealth necessary for real environmental improvement. The regulation of CO₂ conflicts with several principles of the American Conservation Ethic.

Ignoring the Creative Powers of Free Markets

Even if the benefits of reducing CO₂ emissions were to exceed the costs, command-and-control approaches are the least efficient environmental policies. Specifically, such policies ignore the creative powers of free markets while diminishing the security of property rights—security that provides incentive to husband and improve resources.

Policies to regulate CO₂ violate Principle III of the American Conservation Ethic, which states that private property protections and free markets provide the most promising new opportunities for environmental improvements. Instead, CO₂ regulation taxes private property, channels resources toward politically preferred technologies, and expands government control of energy production.

CO₂ regulations take many forms, such as grant- and loan-guarantee programs to subsidize low-carbon technologies, efficiency mandates, cap-and-trade programs, and carbon taxes. In addition to these more direct controls on CO₂, other policies—moratoria on oil and gas drilling, increased regulatory burdens on resource extraction, restrictions or bans on necessary technology—can limit access to fossil fuels.

Grant- and loan-guarantee programs replace decentralized market interactions with centralized political calculations that

determine the mix of energy, its delivery, and its use. The recent failure of Solyndra illustrates how political influences drive an inefficient investment process; even the government's own procedures appear to have been violated for political expediency. As a result, the taxpayers stand to lose most, if not all, of the \$530 million loaned to Solyndra.¹

Efficiency mandates also sacrifice individual choice on the altar of political calculus. For example, consider appliance efficiency, home heating and cooling efficiency, and automobile efficiency (corporate average fuel economy, or CAFE) standards: Political concerns are at the heart of each of these mandates.

Almost invariably, the mandates are justified by the claim that the consumers will, on net, save money. The consumers in question are not just households, but commercial and industrial entities as well. The claim that mandates lead to savings assumes systematic avoidance of money-saving (and profit-creating) investment. Of course, all other things being equal, better energy efficiency is beneficial. However, on top of the higher initial purchase price, the calculations to support the cost-saving claims often ignore the

1 As is frequently the case with loan guarantees, the loan, while guaranteed by one agency (in this case the Department of Energy), was actually made by another, usually the Department of Treasury: That is, one federal agency guaranteed a loan made by another agency. In any event, the taxpayers are on the hook one way or the other.

value of convenience, safety, and reliability. And they always ignore consumer freedom.

For instance, automobile efficiency mandates, in the form of CAFE standards, push consumers into smaller and more expensive cars than they otherwise would choose. Though the smaller fleet may save fuel costs, the smaller cars are less safe, less commodious, and often less comfortable—all features that have real value to consumers.²

The need to mandate efficiency conflicts with the Environmental Protection Agency's own analysis of its voluntary Energy Star program. In an unsurprising development, the EPA's surveys reveal that consumers strongly prefer and will buy energy-efficient appliances.³ The difference between this voluntary program and mandates is that under a voluntary program, consumers and producers get to decide which energy savings make sense.

Cap-and-trade schemes for pollution control are nominally based on appealing economic logic.

2 News release, "New Crash Tests Demonstrate the Influence of Vehicle Size and Weight on Safety in Crashes; Results Are Relevant to Fuel Economy Policies," Insurance Institute for Highway Safety, April 14, 2009, <http://www.iihs.org/news/rss/pr041409.html> (accessed May 8, 2012).

3 U.S. Environmental Protection Agency, Office of Air and Radiation, Climate Protection Partnerships Division, *National Awareness of Energy Star® for 2009: Analysis of CEE Household Survey, 2010*, Environmental Protection Agency, <http://www.energystar.gov/ia/partners/publications/pubdocs/National%20Awareness%20of%20ENERGY%20STAR%202009.pdf> (accessed May 8, 2012).

However, several inconvenient realities have made a mockery of the “market-based” claims of such legislation’s authors:

- The scope and scale of CO₂ restrictions;
- The extremely weak link between cap-and-trade’s domestic CO₂ reductions and any environmental benefit; and
- The Byzantine special-interest regulations that larded the cap-and-trade bills offered by Congress (such as the Lieberman–Warner bill, the Waxman–Markey bill, and the Kerry–Boxer bill).

Estimates of the economic impact of the various cap-and-trade bills projected national income losses, as measured by lost gross domestic product (GDP), of up to \$10 trillion over the first 25 years—hundreds of billions of dollars per year. In addition, over a million jobs could be lost.⁴

Renewable energy standards (RES) mandate minimum fractions of electric power that must be produced by designated renewable sources. Typically, the fraction starts out low and ratchets up each year. By forcing a switch to the technologies cap and trade

would induce, an RES would have similar impacts on costs, income, and employment. An RES that starts out at 3 percent in 2012 and rises 1.5 percent per year through 2035 would reduce aggregate GDP by over \$5 trillion and lead to a million lost jobs.⁵ The costs of cap-and-trade and renewable energy standards generate no equivalent environmental benefits to offset their vast economic costs.

Though fossil-fuel access restrictions are often nominally justified on other grounds, the general intent is to reduce fuel use and, therefore, CO₂ emissions. Examples include postponing approval of the Keystone XL Pipeline, permit denial/deferral for Shell Oil’s lease in the Beaufort Sea, opposition to hydraulic fracturing, and onshore and offshore drilling moratoria.

The drop in oil and gas production from federal land and offshore reserves, especially given the contrasting sharp increases from private leases, reveals the magnitude of the problem. According to data compiled by the Energy Information Administration (EIA), crude oil and lease condensate production on federal and Indian lands is 13 percent lower than in fiscal year (FY) 2010. Furthermore, natural gas production on federal and

Indian lands has decreased every year over the past nine years and is 10 percent lower than in FY 2010.⁶ Meanwhile, from 2010 to 2011, there was a 14 percent increase in oil production on private and state lands and a 12 percent increase in natural gas production on private and state lands.⁷

Because energy is costly, consumers have an incentive to economize on its use. Indeed, since 1980, energy use per dollar of national income has dropped by over 40 percent.⁸ The CO₂ emitted per dollar of GDP has dropped by a similar amount.

In part because of the expanded use of hydraulic fracturing (a technology many environmentalists oppose), natural gas-fired electricity has displaced more CO₂ since 2000 than all wind and solar energy combined.⁹ That is, market-driven natural gas use cut CO₂ emissions more than all the wind turbines and

4 David W. Kreutzer, Karen A. Campbell, William W. Beach, Ben Lieberman, and Nicolas D. Loris, “What Boxer–Kerry Will Cost the Economy,” Heritage Foundation *Backgrounder* No. 2365, January 26, 2010, <http://www.heritage.org/research/reports/2010/01/what-boxer-kerry-will-cost-the-economy>.

5 David W. Kreutzer, Karen A. Campbell, William W. Beach, Ben Lieberman, and Nicolas D. Loris, “A Renewable Electricity Standard: What It Will Really Cost Americans,” Heritage Foundation *Center for Data Analysis Report* No. 10-03, May 5, 2010, <http://www.heritage.org/Research/Reports/2010/05/A-Renewable-Electricity-Standard-What-It-Will-Really-Cost-Americans>.

6 Institute for Energy Research, “Fossil Fuel Production on Federal Lands at 9 Year Low,” March 15, 2012, <http://www.instituteforenergyresearch.org/2012/03/15/fossil-fuel-production-on-federal-lands-at-9-year-low/> (accessed May 8, 2012).

7 Institute for Energy Research, “IER Analysis: Oil and Gas Production Declines on Federal Lands in FY2011,” February 23, 2012, <http://www.instituteforenergyresearch.org/2012/02/23/ier-analysis-oil-and-gas-production-declines-on-federal-lands-in-fy2011/> (accessed May 8, 2012).

8 U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*, October 2011, Table 1.7, <http://www.eia.gov/totalenergy/data/monthly/#summary> (accessed May 8, 2012).

9 David W. Kreutzer, “U.S. Way Ahead in Clean Energy Race,” The Heritage Foundation, The Foundry, October 25, 2011, <http://blog.heritage.org/2011/10/25/u-s-way-ahead-in-clean-energy-race/>.

solar installations combined even with their huge subsidies.

Negligible Benefits

The supposed goal of policies to reduce CO₂ emissions is the moderation of global warming. However, the policies proposed in the U.S., including cap and trade, would have a negligible impact on world temperatures. Regardless of whether the projected modest warming is a problem, policies focusing on the reduction of CO₂ emissions lack genuine environmental benefits. Therefore, CO₂ reduction policies violate Principle IV of the American Conservation Ethic, which states that efforts to reduce, control, and remediate pollution should achieve real environmental benefits.

Though the list of enacted and proposed constraints on CO₂ is long and costly, the impact of these constraints on CO₂ emissions is scant. In 2009, for example, the U.S. accounted for only 18 percent of all carbon emissions world-wide¹⁰—a percentage that continues to fall as other countries' economies (especially China's) continue to grow. Thus, even if the U.N.'s Intergovernmental Panel on

Climate Change (IPCC)¹¹ were correct in its best estimate that a doubling of atmospheric CO₂ (2XCO₂) will increase global temperatures by 3 degrees Celsius, the U.S. would be responsible for only about 0.5 deg. C of that total.

While one might argue that the U.S. is responsible for a much greater percentage of the extra CO₂ that has already accumulated in the atmosphere, the majority of the emissions that will be responsible for the doubling of atmospheric CO₂ has yet to occur. In fact, the world is only about 40 percent of the way to this expected doubling, and America's percentage contribution to future emissions will continue to fall as other countries grow and free-market technologies become less CO₂ intensive.

It would be difficult for the U.S. to reduce CO₂ emissions by a substantial amount without one of the following events: the development of a new energy technology, widespread and rapid construction of many dozens of nuclear power plants, or a collapse of the American economy. Consequently, America's contribution to the assumed 0.5 deg. C of future warming could not be reduced by much more than 0.1 deg. C, which is unmeasurable on the time scales involved (many decades).

And even this estimate is likely too large because the 3 deg. C best estimate for future warming could be overestimated by a factor of three or more. This uncertainty is related to the "sensitivity" of the climate system to extra CO₂, a controversial subject in the climate research community. Estimates of climate sensitivity based upon observations of today's climate system tend to support lower sensitivity than the IPCC has assumed.¹² As a result, the impact of any reasonable U.S. efforts to help forestall warming would be limited to hundredths of a degree—a minuscule, meaningless result.

While doing "something" about U.S. carbon emissions through, for example, the deployment of solar and wind energy might feel good, the amount of energy recoverable by these technologies is relatively small—unless America commits to covering vast tracts of land with solar collectors and wind turbines. The energy density of wind and sunlight is relatively low, whereas carbon-based fuels represent very concentrated forms of energy. Furthermore, wind and solar power plants have their own environmental impacts (for example, on the local wildlife). There are no zero-risk energy technologies, so their use always involves cost-benefit tradeoffs.

10 International Energy Agency, *CO₂ Emissions from Fuel Combustion: Highlights* (Paris: IEA Publications, 2011), <http://www.iea.org/co2highlights/co2highlights.pdf> (accessed May 8, 2012).

11 Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis* (New York: Cambridge University Press, 2007), http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg1_report_the_physical_science_basis.htm (accessed May 8, 2012).

12 Reto Knutti and Gabriele C. Hegerl, "The Equilibrium Sensitivity of the Earth's Temperature to Radiation Changes," *Nature Geoscience*, Vol. 1 (November 2008), pp. 735-743, <http://www.iup.uni-heidelberg.de/institut/studium/lehre/Uphysik/PhysicsClimate/equilibrium%20sensitivity%20ngeo337.pdf> (accessed May 18, 2012).

Finally, the premise that CO₂ emissions are necessarily harmful has not been convincingly established. It may well be that there is an environmental downside to a reduction in CO₂ emissions. Carbon dioxide is necessary for life on Earth to exist, as it is required for the photosynthesis at the beginning of the food chain on land and in the ocean. More CO₂ makes plants grow faster while increasing their tolerance to heat and drought. It is estimated that global agricultural productivity has increased by about 15 percent simply due to the increase in atmospheric CO₂ alone, while hundreds of scientific studies have established the positive benefits of CO₂-enriched air on a wide variety of plant species.¹³

While early research suggested that increasing CO₂ could harm ocean life through “ocean acidification” (a misnomer, since the oceans are alkaline and will never reach a pH below 7.0), recent research suggests that life in the ocean will experience little, if any, adverse effects from anticipated reductions in ocean pH, with even those pH changes projected to be weaker than the IPCC has predicted.¹⁴

13 Craig Idso and S. Fred Singer, *Climate Change Reconsidered: 2009 Report of the Nongovernmental International Panel on Climate Change (NIPCC)* (Chicago: The Heartland Institute, 2009), <http://nipccreport.org/reports/2009/pdf/CCR2009FullReport.pdf> (accessed May 8, 2012).
14 Craig D. Idso, Robert M. Carter, and S. Fred Singer, *Climate Change Reconsidered: 2011 Interim Report of the Nongovernmental International Panel on Climate Change (NIPCC)* (Chicago: The Heartland Institute, 2011), <http://www.nipccreport.org/reports/2011/pdf/2011NIPCCinterimreport.pdf> (accessed May 8, 2012).

Science Driven by Politics

There is general agreement that public policy should be guided by good science. In the CO₂ debates, this principle is turned on its head: Policy goals frequently direct the scientific research and significantly color the reported results. Principle VII of the American Conservation Ethic states that science should be employed as one tool to guide public policy rather than the other way around.

Over the past 50 years, the purpose of environmental regulation has undergone a radical shift. Although government regulation of the environment began as a series of policies designed to address real and pressing pollution problems—such as water pollution and particulate air pollution levels, which became dangerous on a local level to humans and wildlife by the late 1960s—such regulation is now an end in itself.

For example, the EPA continually pushes the acceptable levels of a variety of pollutants to increasingly minuscule levels—changes based upon the theory that any amount of those pollutants presents a risk and that the risk can be reduced to zero. Sometimes, the allowable levels are below what occurs naturally in the environment. On February 3, 2012, for instance, EPA Assistant Administrator Gina McCarthy informed Chairman Fred Upton (R-MI) of the House Committee on Energy and Commerce that the EPA considers no level of fine particulate matter (PM_{2.5}) emissions to be safe to hu-

man health—despite the fact that such particulates are naturally produced everywhere in the world (primarily from wind-driven soil erosion) and that relatively dry areas have natural PM_{2.5} levels above what the World Health Organization has deemed to be healthy.

Unfortunately, these regulations’ cost to society has become so large that the diversion of economic resources to achieve reductions can significantly increase risks to society associated with reduced prosperity. For instance, in the case of carbon dioxide, the Intergovernmental Panel on Climate Change was formed in 1988 to build the scientific case for regulation of CO₂ emissions. While the IPCC claims to be policy-neutral, the IPCC leadership highlights alarmist theories which, in turn, help achieve regulatory ends—all the while systematically minimizing or even ignoring peer-reviewed science that might deemphasize the need for greater regulation.

For example, the thousands of “Climategate” e-mails exchanged between the core group of IPCC scientists that were released in November 2009 and November 2011 reveal bias against any opposing scientific views and even collusion to pressure scientific journals into not publishing research that did not support the policy goals of the IPCC.¹⁵ These e-mails even reveal

15 Steven Mosher and Thomas W. Fuller, *Climategate: The Crutape Letters* (CreateSpace, 2010), p. 186.

admissions among those scientists that the IPCC leadership puts politics above the scientific evidence.

Clearly, the science of climate change has been so corrupted that in its present form, it cannot serve as the foundation for this nation's energy policy.

Toward Wise Stewardship

The American Conservation Ethic maintains that wise stewardship of the world's resources is essential to the welfare of both current and future generations. Policies, both proposed and implemented, to regulate CO₂ do not constitute wise stewardship; they offer only high costs and little to no benefit.

Instead of science driving policy, there is significant evidence that the reverse is occurring—that chosen policy outcomes are bending science toward predetermined conclusions. Furthermore, even if these conclusions were true, the policies in question do not achieve benefits commensurate with their costs and, in the process, erode the economic freedom that is a critical component of innovation and wise stewardship.

Recommendations

Explicitly exempt CO₂ from the Clean Air Act. CO₂ is colorless, odorless, nontoxic, and a byproduct of, or necessary nutrient for, all living organisms on Earth. Even if CO₂ were a problem, the Clean Air Act, which was designed to limit toxic emissions, is unsuitable for CO₂ regulation. When applied to CO₂, the extraordinarily broad scope of the CAA could place millions of additional businesses under costly and time-consuming EPA regulations—with little or no accompanying environmental benefit.

Oppose efficiency mandates.

Efficiency mandates suffer from a fundamental flaw: the assumption that neither consumers nor producers care about energy costs. The evidence is

overwhelming that consumers do care and that producers know this: Even surveys done by the EPA and Department of Energy for their voluntary Energy Star Program show that consumers pay attention to efficiency. Further, the manufacturers devote significant resources to meeting the demand for efficiency and to earning the Energy Star designation. What consumers and producers do *not* want is efficiency that comes at too high a cost—whether in purchase price or inconvenience. Efficiency mandates frequently ignore these costs and force consumers to buy products they do not want.

Repeal and prevent clean energy and renewable energy standards.

Though “clean” is a very appealing adjective, CO₂ is not dirty. Clean Energy and RES mandates threaten the stability and reli-

ability of electricity supply, raise costs to households and businesses, and provide little environmental benefit.

Eliminate subsidies for all forms of energy.

The growing list of failed firms and products that have received government subsidies provides a storehouse of object lessons for bad policy—Solyndra, Beacon Power, Evergreen Solar, and others. Worldwide, energy is a trillion-dollar market. Any energy source or technology that can capture even a fraction of a percent of the energy market will be rewarded with billions of dollars. That is plenty of incentive; government interference is not necessary. Subsidies will more often be pay-offs to technologies spurned by the market, not to a technology embraced by it.