

# Background

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## By Any Other Name, Energy Cuts Still Stink

David W. Kreutzer, Ph.D.

**Abstract:** Eighty-five percent of the energy that fuels the American economy is from coal, petroleum, and natural gas. An unavoidable by-product of burning these fuels is carbon dioxide (CO<sub>2</sub>). Analyses of the Waxman–Markey cap-and-trade bill make clear that CO<sub>2</sub>-reduction targets will not be met through increases in renewable energy production. So, cutting CO<sub>2</sub> means cutting energy use; and cutting energy use means throttling economic growth. The President’s recently proposed clean-energy standard (CES) seeks cuts that are just as severe as those under Waxman–Markey.

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When cap-and-trade legislation died last year, President Barack Obama famously said, “There is more than one way to skin a cat.” This may well be true, but the cat gets the same bad deal either way. So it is with global-warming legislation and the economy. Government-forced cuts in energy use, whether by cap and trade or by a clean-energy standard, would cut incomes and destroy jobs.

Eighty-five percent of the energy that fuels the American economy is from coal, petroleum, and natural gas. An unavoidable by-product of burning these fuels is carbon dioxide (CO<sub>2</sub>). Analyses of the Waxman–Markey cap-and-trade bill make clear that CO<sub>2</sub>-reduction targets will not be met through increases in renewable energy production.<sup>1</sup> So, cutting CO<sub>2</sub> means cutting energy use; and cutting energy use means throttling economic growth. The President’s recently proposed clean-energy standard (CES) seeks cuts that are just as severe as those under Waxman–Markey.

### Talking Points

- The clean-energy-standard (CES) approach is at least as costly as the cap-and-trade proposals that Congress repeatedly rejected because of their extraordinary costs.
- Those contending that markets do not take full advantage of efficiency have themselves ignored other factors that should be included.
- If the energy source emits colorless, odorless, non-toxic, necessary-component-for-photo-synthesis CO<sub>2</sub>, then it gets tripped up on the President’s definition of clean energy.
- Since natural gas emits about 60 percent as much CO<sub>2</sub> as coal on an equivalent energy basis, it may receive only a 40 percent clean credit. If so, then Obama’s CES starts to look more and more like cap-and-trade, especially given the intention of allowing producers to trade clean-energy credits.
- Since the proposed CES seeks to cut 66 percent of CO<sub>2</sub> emissions by 2035, the cuts proposed in the CES are comparable to, if not greater than, the cuts targeted under Waxman–Markey.

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While some ways of cutting CO<sub>2</sub> emissions can impose greater inefficiencies than other ways, forcing cuts in CO<sub>2</sub> pushes the economy below its best growth path. There are no silver-bullet solutions that avoid this problem.

Under cap and trade, the government creates an artificial scarcity of fossil fuels by limiting the CO<sub>2</sub> emissions that burning these fuels inevitably creates, with impacts very similar to an energy tax. A CES can mandate identical CO<sub>2</sub> cuts but implement these restrictions via an awkward and even less efficient set of mandates and regulations. The CES approach is at least as costly as the cap-and-trade proposals that Congress repeatedly rejected because of their extraordinary costs.

### Taxing Milk

A hypothetical illustration may help clarify the economy-crushing impacts that a CES shares with a carbon tax or cap and trade.

Suppose the federal government imposed a tax on milk of \$3 million per gallon. Further suppose that this tax suppresses demand such that only one person (presumably a very rich person) buys milk, and he buys only one gallon each year. The tax revenue would be \$3 million per year—very small by Washington's standards. In fact, some would claim that if a penny were rebated to all 300 million Americans, there would be no net impact from the tax, since \$3 million would be both collected and distributed.

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However, the dairy industry would be devastated by this tax as milk production drops from billions of gallons per year to a single gallon. The facilities that process milk would be shut down and their employees laid off. Dairy farmers would have to slaughter their herds and scrap their dairy houses. Innumerable other activities related to the dairy industry would stop, along with the jobs and value they generate for the economy. This lost economic activity (in econom-

ics jargon, the “excess burden” of the tax) is measured by lost national income—e.g., gross domestic product (GDP). This lost GDP, and not the \$3 million collected and distributed, is the net cost of the tax. In addition, people would not have the health benefits and enjoyment of consuming dairy products.

### Capping Milk

Suppose that instead of a \$3 million per gallon tax, the government created a cap-and-trade program requiring a permit for each gallon of dairy products that is consumed. Further suppose that the permits are auctioned by the government to the highest bidder(s) and that they auction only one permit each year.

In this case, bidding for the permit (by the same rich consumer as in the tax example) would push its price to \$3 million, and the impact would be identical to the \$3 million dairy tax. The \$3 million does its round trip through the government (the money comes from the one consumer and goes to whomever the government chooses) and the dairy industry is still decimated along with its jobs and contribution to GDP.

### A Non-Dairy Agriculture Standard

Instead of using a milk tax or a cap-and-trade plan for milk, the government could create a non-dairy standard that specifies the fraction of agricultural output that must come from sources other than milk.

One gallon of milk represents about 0.0000000008 percent of total farm income. So a 0.9999999992 percent non-dairy standard for U.S. agriculture could also limit milk production to one gallon per year—decimating the dairy industry and cutting GDP as effectively as a \$3 million per gallon tax or a one-gallon production/consumption cap. The only difference is that the government, in this case, does not collect and spend the \$3 million.

Depending on how the standard is implemented, the price of milk may not rise. For instance, if the standard were achieved by mandating the use of disposable diamond-encrusted drinking cups for milk, the cost of drinking milk could be \$3 million per gallon even though the price of milk may remain at \$3.50 per gallon. Here the costly purchase of equip-

1. Congressional Budget Office, “The Costs of Reducing Greenhouse-Gas Emissions,” November 23, 2009, p. 5, at [http://www.cbo.gov/ftpdocs/104xx/doc10458/11-23-GreenhouseGasEmissions\\_Brief.pdf](http://www.cbo.gov/ftpdocs/104xx/doc10458/11-23-GreenhouseGasEmissions_Brief.pdf) (March 30, 2011).

ment necessary for consuming milk—not the milk’s price—is what drives the consumption down.

### Why Mandated Conservation Is Costly

The average person needs about 1.5 gallons of water per day in direct consumption just for survival. Fortunately, most of us have access to many more gallons than that, and we can use water for all sorts of other valuable uses.

However, suppose the government set a target of limiting consumption for each person to 1.5 gallons. This goal could be met with a tax or cap-and-trade program—each of which would need a mechanism for significant transfers of wealth—or a simple but onerous law directing that no one can consume more than 1.5 gallons per day.

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Because all water would be used for drinking, there would need to be alternatives for doing all the other important things currently done with water. Waterless laundry technology, waterless bathing technology, waterless industrial processes, waterless carwashes, etc., would all have to be developed and implemented. All of them would be costly, many very costly. In addition, there are likely some things for which there is no waterless substitute.

A program analogous to a CES for the water example would be to set standards that require use of the waterless technologies and ban activities where there is no waterless substitute. It might then be argued that consumers are saving money on water even though the overall cost of the various processes can be much higher.

### In Hot Water

Proponents of efficiency standards often argue that even including the costs of the new, more

expensive technology, the overall cost of the activities will fall over time. The implication here is that consumers and producers are unwilling to save money. A more likely explanation is that those contending that markets do not take full advantage of efficiency have themselves ignored other factors that should be included.

The author’s 1993 Maytag dishwasher used nine gallons of hot water and took 84 minutes to clean a normal load of dishes.<sup>2</sup> The current model Maytag dishwasher uses seven gallons of hot water and takes 120 minutes to clean a normal load of dishes.<sup>3</sup> This increase to a two- to three-hour cycle is typical and is the result of efficiency mandates that are met by using fewer gallons of water with much longer cycle times.<sup>4</sup>

The cost of two gallons of hot water is less than a dime. For many people, the additional cycle time of an energy-efficient dishwasher will be an inconvenience greatly exceeding the 10-cent savings. Some people would alter their behavior (sometimes washing their dishes by hand, for example), which could entirely offset these gains. However, the regulator’s calculation of savings ignores these costs. Markets, on the other hand, do not.

### A Clean Energy Standard

In his State of the Union address, President Obama set a clean-energy target of 80 percent. That means that 80 percent of electric power must be generated by energy that he defines as clean. If the energy source emits colorless, odorless, non-toxic, necessary-component-for-photosynthesis CO<sub>2</sub>, then it gets tripped up on the President’s definition of clean. Though he listed natural gas in his list of clean-energy sources, subsequent comments out of the White House suggest that natural gas will receive only partial credit. That is, a fraction of natural gas generation will count toward the “clean” 80 percent, while a fraction will go toward the catch-all 20 percent.

Since natural gas emits about 60 percent as much CO<sub>2</sub> as coal on an equivalent energy basis, it may

2. Maytag Owner’s Manual, p. 8, at <http://www.kitchenaid.ca/assets/pdfs/literature/DWU8860AAE.pdf> (March 25, 2011).

3. ConsumerReports.org, review of the Maytag MDB8959AW[W] dishwasher, at <http://www.consumerreports.org/cro/appliances/kitchen-appliances/dishwashers/dishwasher-ratings/models/overview/maytag-mdb8959aww-99030224.htm> (March 25, 2011).

4. KitchenAid, “Energy Efficiency Dishwashers,” at [http://kitchenaid.custhelp.com/app/answers/detail/a\\_id/1846/~energy-efficiency-dishwashers](http://kitchenaid.custhelp.com/app/answers/detail/a_id/1846/~energy-efficiency-dishwashers) (March 25, 2011).

receive only a 40 percent clean credit. If so, then Obama's CES starts to look more and more like cap-and-trade, especially given the intention of allowing producers to trade clean-energy credits.

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Each unit of electricity from natural gas emits about 0.6 times as much CO<sub>2</sub> as coal-fired electricity.<sup>5</sup> Counting about 40 percent of gas-generated electricity as “clean” puts the current overall power mix at about (coincidentally) 40 percent “clean” and 60 percent “dirty.” To meet the overall goal of 80 percent “clean” by 2035 means that two-thirds of this “dirty” power needs to be transformed to “clean.” In other words, the CO<sub>2</sub> emissions from power generation need to be cut by two-thirds by 2035.<sup>6</sup>

### Cap and Trade by Comparison

The Environmental Protection Agency's (EPA) analysis of the Waxman–Markey cap-and-trade bill projected CO<sub>2</sub> cuts from electricity generation of about 60 percent by 2035. These cuts in electricity generation comprise about 85 percent of the overall cuts in CO<sub>2</sub> emissions for the whole economy.<sup>7</sup>

Since the proposed CES seeks to cut 66 percent of CO<sub>2</sub> emissions by 2035, the cuts proposed in the CES are comparable to, if not greater than, the cuts targeted under Waxman–Markey.

Further, the EPA analysis of Waxman–Markey projected a near doubling of nuclear power generation over the next 25 years. Given the Administration's attempts to block access to developing the Yucca Mountain repository for nuclear waste, the

fact that not one new nuclear power plant has been licensed for over 30 years, and the lack of nuclear regulation reform in the Administration's discussion, building 70–100 nuclear power plants in the next 20 years is a heroic assumption. The recent events in Japan hardly increase the odds. In the absence of a nuclear renaissance, meeting the CES targets would be even more costly.

### Costs of Cap and Trade

The Heritage Foundation's Center for Data Analysis analyzed the economic impact of the Waxman–Markey cap-and-trade legislation. The bill would have had the following effects:

- Cumulative national income losses, as measured by GDP, of \$9.4 trillion between 2012 and 2035;
- Single-year GDP losses reaching \$400 billion by 2025 and ultimately exceeding \$700 billion (note that the total economic damage from the recent earthquake and tsunami in Japan is projected to be \$200 billion to \$300 billion)<sup>8</sup>; and
- Net job losses of 2.5 million in 2035.

### A Less-Flexible Waxman–Markey

Though a CES may sound innocuous, the CES proposed by President Obama has targets that are nearly identical to the Waxman–Markey cap-and-trade bill. Since it has less flexibility in meeting these targets, it can be expected to have economic impacts that are at least as great. In short, it seems that the President's CES is not so much another way of skinning the cat as it is another way of saying it.

—David W. Kreutzer, Ph.D., is Research Fellow in Energy Economics and Climate Change in the Center for Data Analysis at The Heritage Foundation.

5. U.S. Department of Energy, Energy Information Administration, “Carbon Dioxide Emissions from the Generation of Electric Power in the United States,” July 2000, at [http://www.eia.doe.gov/cneaf/electricity/page/CO2\\_report/CO2\\_report.html](http://www.eia.doe.gov/cneaf/electricity/page/CO2_report/CO2_report.html) (March 8, 2011).

6. This view is overly kind to the CES because cutting emissions comes from switching fuels and cutting energy use. While most previous attempts at a CES (called a renewable portfolio standard since they did not include nuclear power or natural gas power) allowed some use reduction to count as clean energy produced, not all energy-use cuts will be included in this calculation. When emissions reductions from energy cuts do not count toward meeting the CES, the clean energy ratio, as defined, is lower—necessitating even further fuel switching to meet the CES target of 80 percent.

7. U.S. Environmental Protection Agency, Office of Atmospheric Programs, *EPA Analysis of the American Clean Energy and Security Act of 2009, H.R. 2454 in the 111th Congress*, June 23, 2009, p. 60, at [http://www.epa.gov/climatechange/economics/pdfs/HR2454\\_Analysis\\_Appendix.pdf](http://www.epa.gov/climatechange/economics/pdfs/HR2454_Analysis_Appendix.pdf) (March 22, 2011).

8. Sarah Veysey, “Japan Quake, Tsunami Economic Losses Could Reach \$300B: RMS,” *Business Insurance*, March 21, 2011, at <http://www.businessinsurance.com/apps/pbcs.dll/article?AID=/20110321/NEWS/110329997> (March 23, 2011).