INSTITUTE FOR ENERGY RESEARCH

Cap and Trade: Eight reasons why cap and trade harms the economy and reduces jobs

The most popular way to regulate carbon dioxide emissions is through a cap and trade program. President Obama and many policymakers support some form of this regulatory policy. Cap and trade aims to cap emissions of carbon dioxide at a politically-determined level and then have the users and producers of oil, coal, and natural gas buy, sell, and trade their allowance to emit a given amount of carbon dioxide. Cap and trade will increase the price of oil, coal, and natural gas in an effort to force users to switch to other, less reliable, more expensive forms of energy.

These proposals are very, very costly and economically damaging. If enacted, last year's flagship cap and trade proposal, the Lieberman-Warner bill, would increase the cost of gasoline by anywhere from 60 percent to 144 percent and increase the cost of electricity by 77 to 129 percent.

Up to four million Americans would lose their jobs under the program, which amounts to a $4,022 to $6,752 loss in disposable income per household. In return, we could have expected a 63 percent emissions cut. President Obama's budget proposes to cut carbon dioxide emissions by 83 percent. If successful, it's reasonable to conclude it would lead to even greater economic hardship than envisioned under Lieberman-Warner.

Other problems inherent in cap and trade exist, and they are manifold. What follows is a brief explanation of some of the most glaring:

Reasons why Cap and Trade is a Bad Idea:

1. **The point of cap and trade is to increase the price of energy.** Cap and trade is designed to increase the price of 85 percent of the energy we use in the United States. That is the point. For it to "work," cap and trade needs to increase the price of oil, coal, and natural gas to force consumers to use more expensive forms of energy. President Obama's OMB director, Peter Orszag, told Congress last year that "price increases would be essential to the success of a cap and trade program."[1]

[1] Peter R. Orszag, *Implications of a Cap-and-Trade Program for Carbon Dioxide Emissions before the Committee on Finance United States Senate*, Apr. 24, 2008, http://www.cbo.gov/ftpdocs/91xx/doc9134/04-24-Cap_Trade_Testimony.pdf.

2. **Cap and trade schemes for carbon dioxide have not worked to reduce emissions.** Europe's Emissions Trading Scheme (ETS) began in 2005. The first phase, from 2005 to2007, did not reduce carbon dioxide emissions. Instead, overall emissions increased 1.9 percent over that period.[2] The reason is simple: European politicians know that cap and trade is economically harmful and do not want these policies to cost more jobs, especially during these difficult economic times. German Chancellor Angela Merkel recently stated that she would not allow EU climate regulations to go forward that would "take decisions that would endanger jobs or investments in Germany."[3]

3. **Cap and trade will harm the poor.** According to the Congressional Budget Office, the costs of reducing carbon dioxide emissions would disproportionally harm the poor. A mere 15 percent decrease in carbon dioxide emissions would cost the lowest-income Americans 3.3 percent of their income, but only 1.7 percent of the income of higher income households.[4] President Obama wants to decrease greenhouse gas emissions by 83 percent, not a mere 15 percent. This will entail much greater economic sacrifice among those who have the least to spare.

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[2] *See* European Union, *Emissions trading: 2007 verified emissions from EU ETS businesses*, May 23, 2008, http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/787&format=HTML&aged=0&language=EN&guiLanguage=en

[3] AFP, *Merkel to Defend German Jobs Against Climate Deal*, Dec. 8, 2008, http://www.google.com/hostednews/afp/article/ALeqM5g4WO_672V3miIHKWLT32C99ui-2g.

[4] Congressional Budget Office, *Trade-Offs in Allocating Allowances for CO2 Emissions*, Apr. 25, 2007, http://www.cbo.gov/ftpdocs/80xx/doc8027/04-25-Cap_Trade.pdf.

Table 1.

Annual Increase in Households' Costs from a 15 Percent Cut in Carbon Dioxide Emissions

	Average for Income Quintile				
	Lowest	Second	Middle	Fourth	Highest
Cost Increase in 2000 Dollars	560	730	960	1,240	1,800
Cost Increase as a Percentage of Income[a]	3.3	2.9	2.8	2.7	1.7

Source: Congressional Budget Office.

4. **Cap and trade harms energy security**. Some proponents of cap and trade claim that cap and trade will improve energy security. Unfortunately, this is exactly backwards—a cap and trade scheme will undermine and erode our nation's energy security. When many people express concern about energy security, they are concerned about oil imported from foreign countries. They do not realize that domestically produced oil is our number one source of oil[5] and Canada is our number source of oil outside the U.S. During 2007, the last complete year for which data is available, only 17 percent of the oil we consumed came from the Middle East.[6]

   But cap and trade will assess a heavy penalty on Canadian oil. Much of the oil we get comes from its vast reserves of oil sands. Because it requires more energy to extract the resources from those sands than it does to produce oil in the Middle East, cap and trade will make Canadian oil more expensive than oil from the Middle East.

[5] *See* Energy Information Administration, *Crude Oil Production*, http://tonto.eia.doe.gov/dnav/pet/pet_crd_crpdn_adc_mbblpd_m.htm The U.S. produces around 5,000,000 barrels of oil per day. We import about 2,000,000 barrels of oil a day from Canada, out largest oil supplier. *See* Energy Information Administration, *Crude Oil and Total Petroleum Imports top 15 Countries*, http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/company_level_imports/current/import.html.

[6] *See* Energy Information Administration, *Annual Energy Review 2007*.

Cap and trade, therefore, creates incentives to import more oil from the Middle East, not less. Cap and trade also penalizes domestic oil extraction from oil shale. In Colorado, Utah, and Wyoming, estimates suggest that 800 billion barrels of oil resources are ready to be produced.[7] For a sense of scale, that's more than three times as much oil as Saudi Arabia has in its reserve. Also, the U.S. has the world's largest coal reserves.[8] At current usage rates, we have 200-250 years of demonstrated coal reserves.[9] Coal-to-liquids could give the U.S. much larger reserves of petroleum fuels.

5. **Cap and trade for sulfur dioxide emissions is not comparable to cap and trade for carbon dioxide.** Proponents of cap and trade point to the sulfur dioxide program as an example of how easy and effective it would be to institute an economy-wide cap and trade program for CO2. But sulfur dioxide and carbon dioxide emissions are not comparable. When the sulfur dioxide program started, it targeted only 110 coal-fired power plants. Later, it was expanded to 445 power plants.[10] Greenhouse gas emissions are released from millions of sources, including electricity production, planes, trains, automobiles, ships, home furnaces, fertilizer production, farm animals, and millions of other sources, including humans. Regulating millions of different and individual sources of emissions is considerably different from regulating 445 plants.

   Also, many low-cost sulfur dioxide control options existed when the program took effect.[11] This is not the case with carbon dioxide control technologies. There are no control technologies that are commercially available at commercially-competitive prices. One way to reduce sulfur dioxide emissions was to use "low-sulfur coal" but there is no "low-carbon dioxide coal."[12]

   Indeed, the cost-effective way to reduce carbon dioxide emissions is to use less energy. But energy is the lifeblood of the economy. Energy allows us to do more work with less time and effort. As a result, there is a strong

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[7] Task Force of Strategic Unconventional Fuels, *Development of America's Strategic Unconventional Fuel Resources* p. 5, Sept. 2006, http://www.fossil.energy.gov/programs/reserves/npr/publications/sec369h_report_epact.pdf.

[8] Energy Information Administration, *Coal Reserves*, Feb. 2008, http://www.eia.doe.gov/neic/infosheets/coalreserves.html.

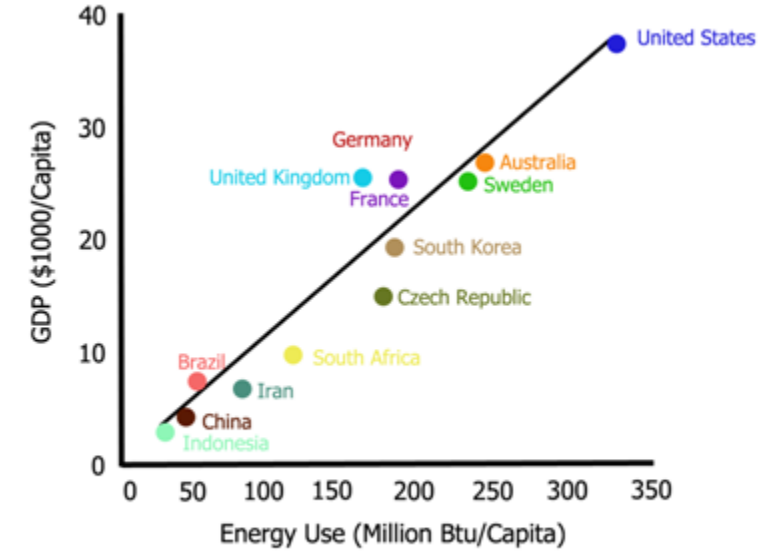
[9] Energy Information Administration, *Coal—A Fossil Fuel*, July 2008, http://www.eia.doe.gov/kids/energyfacts/sources/non-renewable/coal.html.

[10] Kenneth P. Green et. al, *Climate Change: Caps vs. Taxes*, American Enterprise Institute, (June 2007) http://www.aei.org/publications/filter.all,pubID.26286/pub_detail.asp

[11] *Id.*

[12] *Id.*

correlation between energy use and economic prosperity, as the chart below demonstrates:

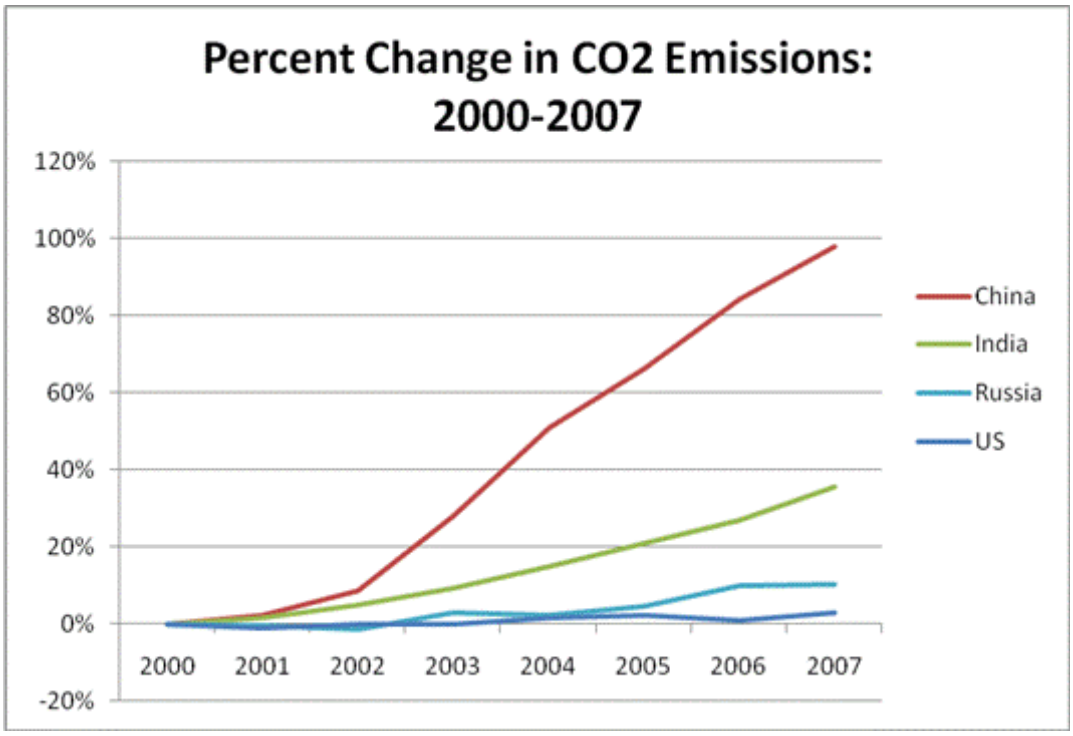


Peter Huber & Mark P. Mills, The Bottomless Less, p. 136 (2006).

6. **A domestic cap and trade program, even in the best case, can only produce marginal impacts on climate.** In 2006, China surpassed the United States as the world's largest emitter of carbon dioxide.[13] But the difference in emission growth rates is striking. According to data from the Global Carbon Project, from 2000 through 2007 global total greenhouse gas emissions increased 26 percent. During that same period, China's carbon dioxide emissions increased 98 percent, India's increased 36 percent and Russia's increased 10 percent. Carbon dioxide emissions in the United States increased by three percent from 2000 through 2007.[14] These data are displayed in the graphic below:

[13] *See e.g.* Netherlands Environmental Assessment Agency, *China now no. 1 in CO2 emissions; USA in second position*, June 19, 2007, http://www.pbl.nl/en/news/pressreleases/2007/20070619Chinanowno1inCO2emissionsUSAinsecondposition.html.

[14] Calculated using the emission data from the Global Carbon Project. In 2000, China emitted 910,950 GgC, India 316,804 GgC, Russia 391,652 GgC, and the U.S. 1,541,013 GgC. By 2007, China emitted 1,801,932 GgC, India 429,601 GgC, Russia 432,486 GgC, and the U.S. 1,586,213 GgC.



As time goes on, the United States will emit a smaller and smaller share of the world's total greenhouse gas emissions,[15] which makes unilateral efforts—such as a domestic cap and trade program—an ineffective way to influence climate. If the United States were to completely cease using fossil fuels, the increase from the rest of the world would replace U.S. emissions in less than eight years.[16] If we reduced the carbon dioxide emissions from the transportation sector to zero, the rest of the world would replace those emissions in less than two years.[17] Increases in worldwide carbon dioxide emissions are driven by developing economies, not the United States.

7. **A domestic cap and trade program will force more industries to leave America**. Energy costs are a major expenditure for heavy industry. America's

[15] According to the Global Carbon project, in 2007, China emitted 21% of the world's carbon equivalent and the U.S. emitted 19%.

[16] Calculated using the emission data from the Global Carbon Project. According to these data, the U.S. emitted 1,586,213 GgC in 2007. Without the U.S., the world's emissions were 5,203,987 GgC in 2000, increasing to 6,884,787 GgC in 2007.

[17] Calculated using the emission data from the Global Carbon Project. According to EPA, the GHG emissions from the transportation sector total 28% of total U.S. emissions. Environmental Protection Agency, *Regulating Greenhouse Gas Emissions Under the Clean Air Act; Proposed Rule*, 73 Fed. Reg. 44354, 44403 (July, 30, 2008). Twenty eight percent of the U.S.'s 2006 carbon dioxide emissions are 436,141 GgC. From 2005 to 2007, the world's emissions, with the emissions from the U.S., grew by 476,324 GgC.

natural gas prices are the highest in the world,[18] even though we have the world's sixth largest proven natural gas reserves.[19] The high price of natural gas has significantly contributed to the loss of more than 3,000,000 manufacturing jobs since 2000.[20] Cap and trade taxes will drive up the cost of natural gas because companies would use it as a substitute for coal in electricity production, which means increased electricity costs for industry and the individual. This is especially troublesome for chemical companies, all of which use natural gas not only as an energy source, but also as a feedstock. Higher natural gas prices will force them to pursue options offshore and overseas, reducing American jobs.

8. **A cap that is set at the wrong level will cause great economic harm.** Even the proponents of carbon taxes, such as Yale University Professor William Nordaus, find that once there is deviation from worldwide participation, the costs of achieving environmental global improvements dramatically rise. Nordhaus' economic model shows that an overly ambitious and/or inefficiently structured policy can swamp the potential benefits of a perfectly calibrated and efficiently targeted plan.[21] For example, Nordhaus' optimal plan yields net benefits of $3 trillion ($5 trillion in reduced climatic damages and $2 trillion in abatement costs). Yet other popular proposals have abatement costs that exceed their benefits. Take for example former Vice President Al Gore's 2007 proposal. It sought to reduce carbon dioxide emissions 90 percent by 2050. Nordhaus' model estimates this plan would make the world more than $21 trillion poorer than if there were no controls on carbon dioxide.[22]

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[18] Paul N. Cicio, *Testimony of Paul N. Cicio, President of Industrial Energy Consumers of America before the House of Representatives*, Dec. 6, 2007, http://www.ieca-us.com/documents/IECAHouseTestimony-NaturalGas_12.06.07.pdf.

[19] Energy Information Administration, *Annual Energy Review 2007,* Table 11.4, http://www.eia.doe.gov/emeu/aer/txt/ptb1104.html.

[20] *See Testimony of Paul N. Cicio.*

[21] Robert P. Murphy, *Rolling the DICE: Nordhaus' Dubious Case for a Carbon Tax*, p. 20, June 2008, http://www.instituteforenergyresearch.org/wp-content/uploads/2008/06/2008-06_rolling_the_dice_murphy.pdf.

[22] *Id.* at 20.