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CONGRESSIONAL TESTIMONY

The Economics of Cap and Trade

**Testimony before
The Ways and Means Committee
Of
The United States House of Representatives**

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My name is David Kreutzer. I am the Senior Policy Analyst in Energy Economics and Climate Change at The Heritage Foundation. The views I express in this testimony are my own, and should not be construed as representing any official position of The Heritage Foundation.

Mr. Chairman, I want to thank you and the other members for this opportunity address you on the topic of climate change.

What is the problem with carbon dioxide (CO2)?

Carbon dioxide is not a toxin, is not directly harmful to human health, and is not projected to become so—even without legislative or regulatory action. CO2 is fundamental to all known forms of life. Indeed, studies show that increased CO2 levels are beneficial for crop production.

However, higher CO2 levels are expected to have negative effects due to temperature increases that some predict will be brought on by these higher levels. If the negative effects of CO2 increases outweigh the positive, the question becomes: What are the benefits of limiting CO2 emissions and how do these benefits compare to the costs?

Costs and Benefits

Some have made estimates of all the damage that global warming will do and present them as the benefit of reducing CO2 emissions. Often called “the cost of doing nothing,” this approach has two fatal flaws.¹ First, the estimated costs (such as the property damage from higher sea levels or crop loss from drought) are based on a world that is richer, in large part, because of the energy use that supposedly causes the projected sea-level rise or drought. The sea-level rise affects more expensive buildings, and the drought reduces crops that are worth more per bushel because the world is richer.

That is, the “cost of doing nothing” is an impossible cost to avoid since the magnitude of the damage depends on the much richer world that energy use will create. Using similar logic I could consider my six-dollars-per-day Metro commuting expense “the cost of work” and estimate I would be \$120 per month richer if I didn’t go to work. It is a silly exercise.

The second fatal flaw occurs when the total estimated cost of global warming is compared to the cost of reducing a small, often insignificant, portion of that warming. Sticking with the previous analogy, it would be comparing the \$120 per month commuting cost to the salary lost by staying home one day per month. The lost day’s salary needs to be compared to the six dollars saved not to the whole month’s commuting cost.

¹ For instance see: Frank Ackerman, et al., “The Cost of Climate Change: What We’ll Pay if Global Warming Continues Unchecked,” 2008, Natural Resources Defense Council. Accessed on September 7, 2008 at: <http://www.nrdc.org/globalwarming/cost/cost.pdf>

So it is with proposals for a carbon tax or a cap-and-trade scheme. We need to look at the cost of these proposals in light of what difference these proposals make. None of the proposals will entirely eliminate predicted climate change regardless of the assumptions, models, computers or theories used.

The Costs

The typical cap-and-trade proposal seeks to reduce CO2 emissions by 60 percent to 80 percent by 2050 where the comparison year is usually 2005. The Center for Data Analysis at The Heritage Foundation did an analysis of the costs of meeting the goals of the Lieberman-Warner bill, S.2191, this past spring. The report on this analysis is attached.²

Our analytical models are not suited to making projections beyond 2030. Nevertheless, the costs of S.2191 just in the first 19 years were eye opening. The estimated aggregate losses to Gross Domestic Product (GDP), adjusted for inflation, are \$4.8 trillion. By 2029 the job losses in the manufacturing sector will be nearly 3 million. This is over and above the significant manufacturing job losses that most economists predict will occur even in the absence of global-warming legislation.

Some of the workers forced out of manufacturing will find employment in the service sector but overall the economy loses jobs. In some years this overall job loss exceeds 900,000.

Eighty-five percent of our energy use today is based on CO2 emitting fossil fuels. The ability to switch to non-CO2-emitting energy sources over the next 20 years is limited and expensive. Therefore, significant cuts in CO2 emissions require significant cuts in energy use.

The cap-and-trade schemes, as well as carbon taxes, limit emissions by making energy more expensive. In addition to having a direct impact on consumers' budgets for gasoline, heating oil and natural gas, these higher energy costs force cutbacks on the production side of the economy and lead to lower output and income.

These losses occur after consumers, workers and businesses have adjusted as well as they can to the higher energy costs. Household energy prices rise 29 percent above the business as usual prices, even though consumers will have switched to smaller cars, live in more energy efficient houses and make greater use of public transit.

Production drops even though firms will have adopted more energy efficient technologies and processes. To reiterate, the trillions of dollars of lost GDP and the hundreds of thousands of lost jobs occur even after homes and businesses have made the switch to greener ways of doing things. The hoped-for green-job gain is a mirage.

² William W. Beach, et al., "The Economic Cost of the Lieberman-Warner Climate Change Legislation," Center for Data Analysis Report #08-02.

http://www.heritage.org/Research/EnergyandEnvironment/upload/cda_0802.pdf

Cap-and-trade programs frequently include provisions to protect domestic industries from competition with firms in countries that haven't adopted similarly costly mechanisms for reducing CO₂. While the intent is certainly understandable, the provisions create the possibility of a protectionist wolf in global warming clothes.

While the theory of this trade-protection makes sense, putting it into operation is a bureaucratic nightmare. Every product from every country will need to be judged for how much of an advantage it may have due to different carbon-cutting regimes. Since different countries can have different approaches and since different manufacturers can use different technologies and processes, assigning an offsetting CO₂ tariff will necessarily involve arbitrary decisions. The potential for a trade war is very real.

Note: Current law already has many provisions for curtailing CO₂ emissions. They range from local renewable-fuel mandates to increased nationwide Corporate Average Fuel Economy (CAFE) standards to subsidies for ethanol production. While the reductions in CO₂ emissions are included, the considerable cost of these programs is not included in our analysis. This is because the costs are attributable to existing legislation and will occur even without additional laws or regulations. Of course, if they were included, job and GDP loss totals would be even higher.

The Gain

Analysis by the Environmental Protection Agency (EPA) shows that a 60 percent reduction in CO₂ emissions by 2050 will reduce CO₂ concentrations by only 25 ppm in 2095. This reduction would affect world temperatures by 0.1 to 0.2 degrees C. In other words it makes virtually no difference.

Some argue that if the United States adopted a sufficiently severe cap on CO₂ emissions that would induce the rest of the world to do the same. The same EPA analysis runs through just such a scenario and finds with the "leadership" effect the drop in CO₂ concentrations are larger—perhaps enough to reduce world temperature by 1-2 degrees C.

However, the assumptions made to achieve even this reduction are entirely unrealistic. It is assumed that our leadership causes the developed world to reduce their emissions by 50 percent by 2050 and that the developing world would cut its emissions to the 2000 level by 2035.

Seeing what that means for just two countries, India and China, illustrates how unlikely it will be to meet that goal.

In 2000, China's CO₂ emissions per capita were about 2 tons per year. In India the 2000 per capita emissions were barely above 1 ton per year. Currently the U.S. emits about 20 tons. With no population growth, a 70 percent cut would bring us down to about 6 tons per capita per year. Expecting China and India to cut back to levels that are 1/3 or 1/6 of ours is unrealistic. Even holding them to our limit of 6 tons per capita would cause their

emissions to grow more than enough to offset our 70 percent cut. The rest of the developing world would be no more inclined to abide by similarly stringent limits.

The Tax

Implementing a cap-and-trade program to cut emissions by 70 percent creates a transfer within the United States that is equivalent to taxes on the order of \$250 billion to \$300 billion per year, just for the years 2012 to 2030. This takes the purchasing power from the households and turns it over to the federal government or to whomever it assigns the rights to permits for emissions (allowances). This would be one of the largest taxes in the economy—almost twice as large as the highway use taxes.

Conclusion

The legislation analyzed seeks to cut CO2 emissions by 70 percent. This cut will have little impact on global temperatures but even the 30 percent cut that we analyzed will reduce incomes, raise taxes and destroy jobs. The true comparison is trillions of dollars in lost income and hundreds of thousands of lost jobs vs. a fraction of a degree change in average world temperature 85 years from now.

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