

Policy Brief

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WHY CAP-AND-TRADE WON'T WORK FOR ILLINOIS

(Springfield, Ill.) While there are hardly any certainties in politics, there is one thing you can be assured of – the next president will try to reduce greenhouse gas emissions. In what seems to be an emerging bipartisan issue, members of both parties, as well as numerous figures within Illinois state politics, advocated a cap-and-trade control regime on greenhouse gases.

With the Lieberman-Warner bill's recent demise in the Senate, cap-and-trade seems to be dead at the federal level—for now. However, with the Governor's Illinois Climate Change Advisory Group advocating for a cap-and-trade regime for Illinois, policy makers in Illinois need to be aware of the severe costs that that these regimes impose on an economy.¹ Only by understanding the cost and benefits of cap-and-trade regimes, as well as their past performance, can an informed discussion take place in the halls of Illinois state government.

How Cap-and-Trade Works

After a limit or cap is determined for a certain type of emission, the government or other governing body issues permits to companies and other organizations that produce this emission. The organizations are then forced to hold an equal amount of credits or allowances because of these permits. These credits allow that company or organization to emit at a certain level. Because the total amount of credits given out does not exceed the cap, emissions become fixed at that level. If a company needs to increase their emissions, they have to buy the corresponding credits in a "carbon market" from those who pollute less. Consequently, this trade rewards the seller for their reduction in carbon dioxide while penalizing the buyer for their increase. In theory, cap-and-trade gives an incentive to organizations that are able to reduce their emissions efficiently, which decreases pollution as a whole.

Problems and pitfalls

The cap-and-trade method of reducing carbon emissions has become popular in political circles for a number of reasons. Among those reasons are:

- The United States already has a functioning cap-and-trade system for another emission, sulfur dioxide.
- The European Union has implemented a cap-and-trade system for their carbon emissions.
- The Kyoto Treaty is based upon this form of emissions reduction, and as a result, the idea of an internal cap-and-trade system for the U.S. has gained prominence in discussion on carbon limitations as the international standard.
- Environmental groups generally support this method of control because it actually puts

limits on emissions.

- It is viewed as a lower-impact carbon-control method, allowing businesses the ability to pursue the most cost-effective approaches to cutting emissions.

Despite these purported benefits, cap-and-trade regimes have major flaws, many of which have only recently come to light as the theory has been put into practice—especially in Europe:

- **Implementation costs** – The design of the carbon market, the creation of the cap, the initial allocation of permits, and the creation of a bureaucracy to oversee the entire scheme will all be costly for taxpayers.
- **Regulatory Capture** – The process of setting up the rules of the game are likely to be marred by lobbying, manipulation and political jostling by large economic players seeking to limit their exposure to the system while maximizing the exposure of smaller, less organized business interests.²
- **Energy generation** – When cap-and-trade was originally put into place in Europe, utility companies, like other firms, were given slightly fewer credits than they needed to operate. Yet, instead of charging customers for the cost of buying extra credits, most utilities charged customers for entire cost of the allowances, even though the government handed them out free. The price of electricity has soared as a result.³
- **Price Fluctuations** – The sulfur dioxide trading market, which is touted as a model for the cap-and-trade regime, has had volatile market shifts. From June 2005 to June 2006, the price of a ton of sulfur dioxide nearly doubled.⁴ Similar variations in a cap-and-trade market for greenhouse gases would force utilities to pass sudden increases in costs to consumers.
- **A gap in technology** – The technology often cited as the solution to greenhouse gas emission, carbon capture and sequestration,⁵ has not been tested. It is unlikely, considering the time involved in a business cycle, that this method for carbon dioxide reduction will be commercially viable in the coming decade.

The Reality

Almost 80 percent of the electricity produced in the United States comes from fossil fuels.⁶ Because these various methods produce carbon dioxide, most electricity production would come under the regulation of the cap-and-trade system. Ultimately, millions of households and businesses would bear the burden of increased costs. Those who will be hurt the hardest, as we have been reminded from the recent string of high gasoline prices, will be the middle and the working class.

This rise in energy costs would directly impact industries in the United States, making them less competitive compared to their foreign counterparts. In an already cutthroat global market, it would be foolhardy to impose another set of complicated regulations. At a November 2007 U.S. Senate committee hearing, Anne E. Smith, the Vice President of CRA International, an economic consulting firm, stated that domestic companies competing internationally would be driven out of business, even if considerations were made to allow these businesses to thrive.⁷

Take the example of the Kollo Holdings factory in the Netherlands. The main product of this company is silicon carbide, which is used in lining for high-temperature furnaces and kilns. Because of the regulations of the European cap-and-trade system, the factory took the initiative to reduce pollution by using its waste gases to produce energy. And yet that same cap-and-trade program has

driven up electricity prices so high that the factory often has to shut down to save money. Even though the demand for silicon carbide is strong, the plant has been forced to lay off 30 percent of its employees and reduce costs through other means. At the same time, customers are turning to producers in China because it does not have the costly regulations.⁸

Larger companies might fare better, but their influence is likely to expand, filling the void where small companies have been displaced. Ron Bailey of Reason magazine quoted Chuck Chakravarthy and John Rhoads, energy consultants for Accenture, saying, "Early winners will be the companies best able to shape regulations." Bailey also noted that upwards of \$50 billion was at stake at the height of EU cap-trade-activity.⁹ There is no reason to believe that large organizations won't try to vie for a better outcome for themselves and for their respective industries. In fact, in January of last year, the United States Climate Action Partnership issued a policy statement that laid out "a blueprint for a mandatory economy-wide, market-driven approach to climate protection." This group is populated by companies including Alcoa, BP America, General Electric, DuPont, General Motors, Siemens and Xerox. In a study last year, the Financial Times supported this general sentiment by saying, "carbon markets leave much room for unverifiable manipulation."¹⁰ There is, then, the real issue of the system failing to be equitable for both large and small companies.

What is even more disheartening is that, even with the current controls and increases in prices, the European system has actually failed to decrease the amount of emissions.¹¹ And while this is only the first phase of the plan, the future does not look any more optimistic. As one aide for the European Union environmental commissioner put it, "The whole idea of the second phase is to squeeze allocations, push up the carbon price by creating scarcity and encourage companies to invest in future, green technologies."¹² However, what this agency and many people must understand is that the technology to reduce carbon dioxide without severely crippling our economy and infrastructure is, currently, just not there. Economists agree that tightening the limits on greenhouse gases must correspond to technological advancements that allow such reductions.¹³ And yet, carbon capture and sequestration is unlikely to be viable in the time frame that policy leaders want.¹⁴

The other important question that is raised asks whether or not Illinois should look at putting this system into place. The answer is a resounding no. Illinois already has two positive features that give it an advantage over states its size.

First off, Illinois has a distinct advantage when it comes to nuclear power. For the United States in total, this source produces around 19 percent of the nation's total electricity.¹⁵ In Illinois, however, this number hovers just above 50 percent every year.¹⁶ Because of the power-to-pollution ratio, environmental groups almost universally endorse nuclear power for large-scale power generation. Increasing the amount of nuclear energy is widely seen as a way to add extra energy capacity without the emissions.

The other advantage for Illinois relates to its population. Although Illinois has a high rate of emissions, the most important factor is carbon dioxide output per capita. In a study conducted by Purdue University, carbon dioxide emissions were matched to population density. The corresponding map shows a distinct spike in output per capita in the Southwest, particularly concentrated in southern California and New Mexico.¹⁷ To add to this, Illinois is in the bottom half of energy consumption per capita.¹⁸ As is always the case, we should be more concerned with relative numbers rather than absolute terms.

Conclusion

Until proponents of cap-and-trade can overcome the system's high implementation costs, as well as the potential for large corporations to game the system to their advantage over competitors – and eventually consumers – this managed-market approach is unlikely to be effective and may cause more problems than it solves.

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- 1 You can see the Illinois Climate Advisory Group's recommendations at <http://www.epa.state.il.us/air/climatechange/documents/final-recommendations.html>
 - 2 Ronald Bailey, "Carbon Taxes Versus Carbon Markets," Reason Magazine, May 24, 2007
 - 3 Steven Mufson, "Europe's Problems Color U.S. Plans to Curb Carbon Gases," Washington Post, April 9, 2007
 - 4 Environmental Protection Agency (EPA), "Progress Reports," available at <http://www.epa.gov/airmarkets/progress/progress-reports.html>
 - 5 Carbon capture and sequestration is a two step process. First, the carbon dioxide released in the production of power is captured. Then, it is injected deep in geological formations to effectively bury it. The first major power plant to use this method, FutureGen, was to begin construction within the year, however, the project has stalled.
 - 6 US Energy Information Administration (EIA), "Annual Energy Review," available at
 - 7 Anne E. Smith, prepared statement at the Legislative Hearing on America's Climate Security Act of 2007 S.2191 of the Committee on Environment and Public Works United States Senate, available at http://epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=80bc79be-c338-4a76-b438-205eb79da3d5
 - 8 Steven Mufson, *ibid.*
 - 9 Ronald Bailey, *ibid.*
 - 10 Financial Times, "CO2 needs a price but taxes are the best way to set it," April 25, 2007.
 - 11 David Gow, "Smoke alarm: EU shows carbon trading is not cutting emissions," The Guardian, April 3, 2007
 - 12 *Ibid.*
 - 13 Anne E. Smith, *ibid.*
 - 14 *Ibid.*
 - 15 Energy Information Administration "State Energy Profiles," available at http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=IL
 - 16 *Ibid.*
 - 17 Available at <http://blog.wired.com/wiredscience/2008/04/new-high-res-ma.html>
 - 18 Energy Information Administration, *ibid.*