

Cap-and-Dividend and Agriculture

Background:

Congress and the Administration continue to address greenhouse gas (GHG) reduction policies. Cap-and-dividend policies addressed below, as well as other alternatives to cap-and-trade, are being considered. The potential for revenue and the ability to mitigate costs for agriculture are dependent on how the policies are crafted and how they use market mechanisms such as carbon offsets.

Policy points to consider:

- How could climate policy be designed to help alleviate costs to consumers that need protection from higher energy prices?
- Could the program be structured to mitigate costs to industry, agriculture and thus consumers?
- How could the cost of the program be contained?
- How would the program incentivize practices such as carbon sequestration that have the potential to lower greenhouse gas emissions – and could these practices be used to lower the costs of compliance?
- How could the system be designed to ensure the most cost-effective solutions to carbon reduction are the ones that are employed?

What is cap-and-dividend?

Cap-and-dividend is an approach to reducing greenhouse gas (GHG) emissions. The concept is simple: a limit or cap is placed on greenhouse gases from certain sources; these sources are required to obtain permits to cover their greenhouse gas emissions; and dividends from the sale of the permits are returned directly to consumers through rebates or tax credits to compensate for increased energy costs. The cap is typically placed on “upstream” sources – like fossil fuel suppliers – to cover the carbon content of the fuels they distribute. Some limited trading may be allowed, but typically only among covered sources.

Cap-and-dividend is supposed to be a simpler system than cap-and-trade, because it does not allow extensive trading or offsets. However, this has implications for costs. The “trade” piece of cap-and-trade allows the market to determine the most efficient way to reduce greenhouse gases, whether by reducing emissions, purchasing allowances, or trading offsets. The dividend in cap-and-dividend is the mechanism that is intended to alleviate the cost of the program – by direct rebate.

How is cap-and-dividend different from cap-and-trade?

Following are some things to keep in mind when considering cap-and-dividend in comparison to other programs to reduce GHG emissions like cap-and-trade or other market-based policies:

- **Who gets the rebates and how does this offset costs?**
 - If rebates are returned equally, regardless of energy usage or need, this could favor particular regions or

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consumers that have better access to lower-carbon energy or efficiencies. For example, Midwestern states, which rely more on coal, would be more impacted by GHG limits than Coastal states, which generate more of their electricity from hydro, nuclear, and natural gas. Rebates or allowances can either be allocated equally or they can be allocated to the areas or sectors with the most exposure to higher costs.

- If rebates or dividends are given back to the individual consumer, not industry or business, then industry must rely on consumers to make up for increased costs. Rebating costs directly to consumers does not necessarily alleviate direct costs to industry (such as fertilizer) and indirect costs to businesses (like farmers) – and, eventually, indirect costs to consumers – except to the extent that costs can be offset by raising prices. The assumption with cap-and-dividend is that capped entities and then industry would pass the higher costs of fossil fuel to consumers through higher prices, and the consumer would compensate for the higher prices with their dividend. Midstream industries, like farmers, would balance the higher cost of energy to inputs like fertilizer by raising the price of food. This differs from cap-and-trade, where the cost of the program can be addressed with mechanisms to either lessen energy cost increases (such as offsets or allowances) or to provide support to those that experience more of the costs (through distribution of allowances).
- **How is the cost of the program contained?**
 - By definition, a cap-and-dividend program does not include offsets. A cap-and-trade program allows trading and offsets to reduce the direct costs of the program by allowing the market to choose the most cost-efficient way of reducing GHGs. Cap-and-dividend allows limited trading among covered entities. Other mechanisms to alleviate program costs could be features of either cap-and-trade or cap-and-dividend, such as banking or a carbon price ceiling.
- **How do uncapped sectors like agriculture participate?**
 - In a cap-and-dividend program, some program revenue could be given to uncapped sectors like agriculture in order to incentivize practices like carbon sequestration. However, the scale of this type of program is unlikely to be the same as a cap-and-trade program that includes a robust market for offsets. A properly designed cap-and-trade program can promote additional mitigation while generating revenue for uncapped sectors like agriculture through both offsets and allowance programs.
- **Who distributes program revenue?**
 - In a cap-and-dividend program, the redistribution of any program revenue is in the hands of government. In cap-and-trade, revenue is redistributed through the market. That is, while the revenue from a cap-and-dividend program could be redistributed to deal with costs or promote practices like carbon sequestration, this would be done by Congress and not market mechanisms like a cap-and-trade program.

What about the Cantwell-Collins proposal?

In December 2009, Senators Cantwell and Collins released the Carbon Limits and Energy for American Renewal (CLEAR) Act (S.2877). The CLEAR act is a cap-and-dividend approach. It has been called a “100-75-25-0” policy: 100 percent of the permits are auctioned, 75 percent of the revenue is returned as dividends, 25 percent of the revenue is invested and zero offsets are allowed.ⁱ In more detail:ⁱⁱ

- 100% auction of GHG permits for upstream sources under the cap (producers and importers of fossil fuels)
- 75% of auction revenue returned to individual consumers
 - The plan calls for every individual who resides legally in the United States to receive a check via electronic transfer from the federal government each month. A family consisting of three children and one parent would receive the equivalent of four checks.

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- 25% of auction revenue allocated to the Clean Energy Reinvestment Trust (CERT) Fund for transition assistance and public investments
 - Includes, among several other priorities, funding to finance cost-effective domestic and international projects that verifiably reduce, avoid, or sequester greenhouse gas emissions through the modification of agriculture, forestry, or other land use practices.
 - Allocation subject to annual appropriations
- Trading is allowed but only among covered entities and a few specialized groups (those that capture and sequester fossil carbon). No offsets. No derivatives.
- Includes a price collar on the price of carbon permits in order to limit market volatility.
- Uses border adjustments or fees on imports of energy-intensive commodities from countries that do not have similar limits or fees on carbon.

How does Cantwell-Collins treat “offsets”?

Cantwell-Collins would not create a market per se for carbon credits or offsets. However, the proposal would establish a fund (the “CERT” fund) with auction revenue to finance transition assistance and public investments, including domestic “offset-type” projects. The actual funding amounts for each program in the CERT fund would be determined by annual Congressional appropriations. Senator Cantwell has estimated that funding for offset-type projects could be on the order of \$0.8 to \$6.3 billion a year for domestic offset-type projects (such as agriculture, forestry, and energy efficiency).ⁱⁱⁱ In comparison, analysis has indicated that Waxman-Markey or ACES (HR.2454), a cap-and-trade program, could create a domestic offset market on the order of \$2.7 - 3.4 billion per year in the nearterm rising to \$9.6 – 32.5 billion per year in the longterm.^{iv}

What are the other alternatives should cap-and-trade fail to pass Congress?

Other alternatives to cap-and-trade include sector-specific strategies, a carbon tax and EPA regulation.

Sector-Specific Strategies

As opposed to an economy-wide cap-and-trade system, a sector-specific climate policy would focus on particular sectors such as utilities or manufacturing, but could still use a market-based approach. A sector-based strategy could start for example with a cap on one sector, such as utilities, and then phase-in other sectors later, such as manufacturing. The cost and benefits of a sector-based climate approach depend on which sectors are covered, how much emissions are lowered, and how much trading is allowed. Offsets could be a key part of a sector-based approach as offsets both contain the overall costs of the program and create opportunities for sectors such as agriculture to generate revenue.

Carbon Tax

A carbon tax would be a tax levied on carbon emissions by the government. A carbon tax could cover certain sources – such as large, point sources – or it could be focused on particular sectors such as transportation. A carbon tax sets a price on carbon, but not an economy-wide carbon emission reduction goal. While revenue from a carbon tax could theoretically be redistributed to incentivize additional mitigation activities, such as from the ag and forest sector, this redistribution of funding would be determined by the government and not the market. *A carbon tax would not generate additional revenue for the agricultural and forestry sectors for implementing GHG reduction measures in the same way as a cap-and-trade system.*

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EPA Regulation

In 2009, the U.S. Environmental Protection Agency (EPA) formally declared that greenhouse gases (GHG) pose significant harm to human health and welfare. Following a recent Supreme Court ruling, the EPA has the authority to control greenhouse gases under the existing Clean Air Act. The method in which the EPA decides to use this authority remains up for debate. Analysts predict that if the agency were to regulate GHG emissions using the Clean Air Act, those regulations would not include an economy-wide cap-and-trade program or other market mechanisms that allow for flexibility in meeting the assigned emissions target since such mechanisms do not exist in the current law. Instead, there would likely be a combination of various command-and-control policies targeting major emitters such as power plants and automobiles.^v This means that EPA would be in charge of telling capped entities how to comply with reducing their emissions rather than empowering these companies to find the most cost-efficient means themselves. *There would be no guarantee that agriculture would be allowed an exemption from regulation and there would be no offsets market to participate in since this option would require additional authority.*

The EPA Administration has shown strong support for cap-and-trade legislation. The EPA recognizes that the Clean Air Act was not intended to deal with the complexities of regulating GHG emissions and it would prefer to have specific guidance in the form of legislation on this topic. However, should the pending legislation fail to become law, EPA is obligated to resort to mandatory command-and-control methods to regulate emissions without the flexibility measures included in cap-and-trade such as banking, trading emissions reductions, or an offsets market. These flexibility measures are extremely important for reducing the cost of compliance and therefore, for bringing down the cost of climate law for the entire economy.

ⁱ Pethokoukis, J. 14 Dec 2009. "Cap-and-Dividend Instead of Cap-and-Trade?" Message posted to <http://blogs.reuters.com/james-pethokoukis/2009/12/14/cap-and-dividend-instead-of-cap-and-trade/>.

ⁱⁱ Developed from the legislative proposal and information on Senator Cantwell's website. Senator Cantwell. 2009. The Carbon Limits and Energy for America's Renewal (CLEAR) Act: Documents. Retrieved online from <http://cantwell.senate.gov/issues/CLEARAct.cfm>.

ⁱⁱⁱ Calculated using the following estimates: revenue generated by the auction (\$42 to \$126 billion annually); funding used for domestic offset-type projects (2-5% of auction revenue). Estimates are for the years 2012 to 2050. These numbers do not include funds allocated for non-CO2 reduction projects, such as for methane and nitrous oxide. Estimates from: Senator Cantwell. 2009. The Carbon Limits and Energy for America's Renewal (CLEAR) Act: Documents. Retrieved online from <http://cantwell.senate.gov/issues/CLEARAct.cfm>.

^{iv} Ag Carbon Market Working Group. 2009. *The Value of a Carbon Offset Market for Agriculture*. Retrieved online from: http://www.agcarbonmarkets.com/documents/TCG_White_Paper_Value_of_Offsets_Final_1.pdf. Calculations based on 2009 EPA analysis of domestic offset usage under the domestic and international offset market scenarios with carbon priced at \$15 per ton and \$15 per with an annual 5% price increase. Data from: U.S EPA. 2009. EPA Analysis of the American Clean Energy and Security Act of 2009 H.R. 2454 in the 111th Congress. Retrieved online from: http://www.epa.gov/climatechange/economics/pdfs/HR2454_Analysis.pdf.

^v Nicholas School of the Environment. 2009. Bill Chameides. *EPA Announces Endangerment Finding*. Retrieved online from: <http://www.nicholas.duke.edu/thegreengrok/epa-endangermentfinding/>.