

US EPA ARCHIVE DOCUMENT

# Ways in Which Revisions to the American Clean Energy and Security Act Change the Projected Economic Impacts of the Bill

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On April 20, 2009, EPA released a preliminary economic analysis of the draft American Clean Energy and Security Act of 2009. EPA had conducted the analysis at the request of the draft's authors, House Energy and Commerce Committee Chairman Waxman and Energy and Environment Subcommittee Chairman Markey. Congressmen Waxman and Markey subsequently revised their draft and introduced it as H.R. 2454. The Energy and Commerce Committee's staff has asked EPA to describe the ways in which the revisions made to the draft bill change the agency's projections of the legislation's economic impacts. This memorandum describes those changes in qualitative and, where it has been possible in the time available, quantitative terms.

## Summary

On balance, compared to the draft bill, H.R. 2454 would likely result in lower allowance prices, a smaller impact on energy bills, and a smaller impact on household consumption, based on EPA's preliminary reading of the bill.

## Cap Levels

*The change in early-year cap levels lowers allowance prices slightly.* In the draft bill, the year-2020 emissions cap for covered sources was set at 20% below the year-2005 level. In H.R. 2454, the year-2020 cap is changed to 17% below the year-2005 level. (The 2012, 2030, and 2050 targets remain the same.) That relaxation of the cap, by itself, will lower allowance prices by 3%. Accordingly, that single change will lower the cost of the legislation for households, in part by lowering the impact on household energy bills.

## Offsets Provisions

*Changes to several provisions increase the use of offsets, especially domestic ones, and consequently lower the cost of the program.* The offsets provisions in H.R. 2454 differ from the provisions in the draft bill. Domestic offsets in the introduced bill have a one-to-one turn-in ratio (i.e., only one ton of offsets needs to be turned in for every ton of covered sector emissions being offset). International offsets have a one-to-one turn-in ratio for the first five years of the policy. After the first five years, five international offsets must be turned in for every four tons of covered emissions being offset. Domestic and international offsets are each limited to 1,000 MtCO<sub>2e</sub> each year. If the limit on domestic offsets is not met, the limit on international offsets increases up to 1,500 MtCO<sub>2e</sub> each year, while the limit on domestic and international offsets combined remains 2,000 MtCO<sub>2e</sub> annually.

As was shown in EPA's modeling of the draft bill, using a one-to-one turn-in ratio for domestic offsets instead of the five-to-four turn-in ratio that was specified in the draft increases the total purchase and use of domestic offsets by 11% and increases the average price paid for domestic offsets by 16%. The effect of that change alone is to lower allowance prices by 7% in each year. While moving to a one-to-one turn-in ratio increases the usage of domestic offsets, the 1,000 MtCO<sub>2</sub>e annual limit on the use of domestic offsets is still not met in any year.

When the 1,000 MtCO<sub>2</sub>e annual limit on the use of domestic offsets is not binding, the revised bill allows up to an additional 500 MtCO<sub>2</sub>e of international offsets while still maintaining the 2,000 MtCO<sub>2</sub>e annual limit on total offsets use. Allowing those additional international offsets into the system has the potential to lower allowance prices significantly further than the 7% reduction described above.

### **Allowance Allocations for Protection from Electricity Price Increases**

*The allocations to local distribution companies in H.R. 2454 lessen the impact on electricity bills.* The largest allowance allocation specified in H.R. 2454 gives 30% of allowances to local electric distribution companies for the purpose of protecting consumers from increases in electricity bills. On the other hand, it also will place slight upward pressure on allowance prices, because it will lessen somewhat the incentive for consumers to conserve electricity. That slight upward pressure on allowance prices will be overpowered, however, by the substantial downward pressure caused by the relaxation in the year-2020 cap level and the increased use of domestic and international offsets.

### **Incentives for Carbon Capture and Storage**

*Changes to the incentive structure for carbon capture and storage (CCS) increase the deployment of that technology.* Both the draft bill and the introduced H.R. 2454 provide incentives for carbon capture and storage. Based on guidance from Committee staff, EPA analyzed the draft assuming that the first 3 GW of CCS will receive a subsidy of \$90/ton captured for 10 years, that the next 3 GW of CCS will receive a subsidy of \$70/ton captured for 10 years, and that a significant additional amount of CCS will receive a subsidy of \$50/ton for 10 years. H.R. 2454 provides opportunities for greater subsidies. Up to 6 GW of CCS may receive a subsidy of \$90/ton captured for 10 years. Additional allowances are available through a reverse auction, allowing much of the additional, eligible CCS to receive subsidies greater than \$50/ton. The reverse auction ensures that CCS projects are neither over- nor under-subsidized, and that the bonus allowances will be distributed in a way that maximizes the amount of CCS deployed in response to the bonus allowances.

Those changes are likely to result in greater penetration of CCS in 2020 and 2025 than EPA saw in its analysis of the draft bill. That will likely result in somewhat higher use of coal in 2020 and 2025 than EPA saw in its analysis of the draft. Beyond 2025, the use of the reverse auction has the potential to extend the use of CCS bonus allowances to a greater number of projects than shown in EPA's preliminary modeling of the draft.