

Summary of Waxman-Markey American Clean Energy and Security Act Analysis



The Breakthrough Institute has published [twenty](#) separate “real-time” analyses of major provisions in the Waxman-Markey climate and energy bill, entitled the “American Clean Energy and Security Act” (ACES), tracking changes and conducting analysis as the bill has evolved from initial discussion drafts in May into House-passed legislation in June. The following bullets summarize major findings of these analyses, which primarily focus on the potential impact of the legislation on energy innovation, the deployment of emerging clean energy technologies, and the competitive position of American clean energy industries:

- **The bill’s greenhouse gas emissions cap is effectively non-binding for the first decade or more and is unlikely to drive significant near-term changes in the U.S. energy economy.** In order to control costs of the cap and trade program created by the bill, firms are permitted to purchase up to 2 billion tons of offsets annually – roughly equal to one third of total emissions in sectors of the economy that fall under the emissions cap – instead of reducing their own emissions. Up to 1.5 billion tons could be offset by overseas emissions reduction projects. Projections of likely offset usage are generally lower than the legal maximum due to expected limits in the supply and availability of low-cost offsets. However, analysis of the legislation published by multiple government agencies projects that regulated firms will utilize enough offsets each year to render the cap effectively non-binding for most of the next decade or two. Firms would be legally permitted to continue business-as-usual emissions and practices through the end of 2017 under the most conservative offset projections (from the CBO) and through 2027 under the most expansive estimate (from the EPA). Emissions could fall for other reasons during this time period but would not be required to by the emissions ‘cap.’

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- **The global recession is likely to drive an oversupply of emissions permits under the cap and trade program for several years.** Unless the economy rapidly recovers, U.S. emissions in 2012 (when the cap and trade program would be implemented) will likely remain lower than the emissions cap for several years, leading to an over-supply of permits and a collapse in carbon market prices to at or near the floor price on auctioned permits established by the bill (\$10 per ton, rising slowly over time). Firms will purchase and bank low-cost permits and emissions offsets during this period, undermining the stringency of the emissions cap in future years, as well. Under likely emissions and economic recovery scenarios, U.S. emissions in capped sectors could rise for much – if not all – of the next two decades by utilizing only a fraction of the offsets permitted by the bill.

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- **The carbon price signal established by the cap and trade program is expected to be modest and insufficient to pull emerging clean energy technologies into the market or spur significant investment in clean energy innovation.** Estimates of carbon prices for the first decade under the bill range from \$11-\$16 per ton of CO₂ under EPA forecasts¹ to \$15-\$26 per ton under CBO projections.² If the economic recession results in lower-than-previously-forecasted emissions levels and emissions permits are over-supplied (as discussed above), prices will be even lower, likely remaining at or near

the \$10 per ton auction floor price established by the bill. For comparison, carbon prices in the European Union's Emissions Trading Scheme (ETS) have regularly traded at more than \$30 per ton of CO₂ and have been insufficient to drive significant clean energy innovation or deployment of low-carbon energy sources.

- **The renewable electricity standard (RES) established by the bill will not ensure any increase in U.S. renewable energy deployment beyond already conservative business-as-usual projections.** After exemptions are factored in, the bill's combined energy efficiency and renewable electricity standard will require between 8% and 11.5% of U.S. electricity generation from qualifying renewable sources by 2020. Without any RES, the U.S. Energy Information Administration (EIA) already projects 10% of U.S. electricity will come from qualifying renewable energy sources by 2020 under their business-as-usual forecasts. EIA's projections are considered conservative, because they assume tax credits driving wind, solar and other renewable energy deployment expire without renewal (in 2012 for the production tax credit and 2018 for the investment tax credit). Analysts with the Union of Concerned Scientists conclude, "Bottom line: The Waxman-Markey RES does not ensure that any new renewable electricity will be developed beyond the renewables that are already projected to occur under the business as usual forecast by the [EIA]."

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- **The bill invests far less in clean energy technologies and industries than either the American Recovery and Reinvestment Act (ARRA) or the direct investments being made by competing nations, including China, South Korea and Japan.** At an average carbon price of \$15 per ton of CO₂, clean energy technologies would receive just \$9 billion out of over \$70 billion in annual allowance revenue generated by the bill's cap and trade program. Only about \$1 billion annually would be directed to clean energy R&D, just one fifteenth of President Obama's proposed investment in next-generation energy research and development.³ An additional \$1 billion annually would be directed through a separate provision towards the demonstration and early deployment of carbon capture and storage (CCS) technology for coal-fired power plants, bringing the bill's total direct investment in clean energy technology to an estimated \$10 billion annually. In contrast, ARRA (the stimulus bill) will invest over three times more – roughly \$33 billion annually – in clean energy technology in 2009 and 2010. The Chinese government is planning to invest \$44 to \$66 billion annually in China's own clean energy technologies and industries over the next ten years and South Korea and Japan are also making aggressive investments to position their clean energy industries at the lead of the burgeoning global clean energy sector.

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¹ "EPA Analysis of the American Clean Energy and Security Act of 2009." U.S. Environmental Protection Agency, (June 2009). Available at: http://www.epa.gov/climatechange/economics/pdfs/HR2454_Analysis.pdf

² "H.R. 2454, American Clean Energy and Security Act of 2009." Congressional Budget Office, (June 2009). Available at: <http://www.cbo.gov/doc.cfm?index=10262>

³ "Energy & Environment" WhiteHouse.gov. http://www.whitehouse.gov/issues/energy_and_environment/