

Climate Stewardship and Innovation Act of 2005 -- Summary

Senators Lieberman and McCain today introduced the *Climate Stewardship and Innovation Act of 2005*. The bill would require the Administrator of the EPA to promulgate regulations to limit the greenhouse gas emissions from the electricity generation, transportation, industrial, and commercial economic sectors as defined by EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks*. The affected sectors represent approximately 85 percent of the overall U.S. emissions for the year 2000. The bill also would provide for the trading of emission allowances and reductions through the government provided greenhouse gas database which would contain an inventory of emissions and a registry of reductions.

Targets The bill would establish a target for the year 2010. The 2010 target would set the U.S. emissions level for the affected sectors at 5896 million metric tons (or the year 2000 levels) measured in units of carbon dioxide equivalents. Emissions in 2000 were quite close to today's levels. The quantity of emissions (number of tons) would be specified, as opposed to specifying the year, and are based upon the EPA's *Inventory of U.S. Greenhouses Gas Emissions and Sinks*, which is submitted annually to the United Nations as part of the U.S.'s commitment under the United Nations Framework Convention on Climate Change. The methodologies used are consistent with other international practices for measuring a country's greenhouses gas emissions. The bill's emission limits would not apply to the agricultural and the residential sectors. Certain areas within the affected sectors may be exempt if the Administrator determines that it is not feasible to measure emissions from that area. These limits would be subject to a bi-annual review for adequacy by the Under Secretary of Commerce for Oceans and Atmosphere.

Allowances All covered entities, those which have at least one facility which emits more than 10,000 metric tons of greenhouse gases measured in units of carbon dioxide equivalents per year, would be required to submit to the EPA one tradeable allowance for each metric ton of greenhouse gases emitted during the reporting period. For the transportation sector, each petroleum refiner or importer would be required to submit an allowance for each unit of petroleum product sold that will produce a metric ton of emissions. The Administrator will determine the amount of emissions that will be emitted when a unit of petroleum products is used.

The Secretary of Commerce would be required to determine the amount of allowances to be given away free and the amount to be reserved for the public and report to the appropriate Congressional Committees. The Secretary's determination would be subject to a number of allocation factors identified in the bill. The publicly reserved allowances would be sold by a newly established Climate Change Credit Corporation. Proceeds from the sale of these allowances would be used to reduce energy costs of consumers, assist disproportionately affected workers, help low income communities and individuals, disseminate technological solutions to climate change and aid fish and wildlife, in adapting and mitigating the impacts of climate change.

Alternatively, an entity may satisfy up to 15 percent of its emission allowance requirements by submitting tradeable allowances from another nation's market in greenhouse gases, submitting a registered net increase in sequestration, or submitting emission reductions that was registered by a person that is not a covered entity. If a covered entity has an excess of tradeable allowances for a reporting period, the entity may hold those allowances in order to sell, exchange, or use in the future.

The Administrator would be required to establish a loan program by which a covered entity may borrow against anticipated future reductions to meet current year emissions requirements. The loan

would be attributable to either capital investments or new technology deployment. Interest rates would be at 10 percent annually, up to 5 years.

Penalty Any company not meeting its emission limits would be fined for each ton of greenhouse gases over the limit at the rate of three times the market value of a ton of greenhouse gas. The market value would be based upon the price of emission credits from trading system provided for in the bill.

Trading Emissions trading would be effectuated by incorporating the registry system as part of a database to collect, verify, and analyze emission information. It would allow companies that realized a verifiable emission reduction to register that reduction in the registry and subsequently trade them on the open market. Companies not regulated under the mandatory limits would be permitted to participate in the trading system. By participating, they would be required to report their emissions as part of the emission reductions verification process. This provision would allow regulated companies to trade emission reductions with non-regulated companies.

The EPA Administrator would be required to implement a comprehensive system for greenhouse gases reporting, inventorying, and reductions registrations. The system would be, to the maximum extent possible, complete, transparent, and accurate. The system would also minimize costs incurred by entities in measuring and reporting of emissions. The Secretary of Commerce, within one year of enactment, would be required to develop measurement and verification standards and standards to ensure a consistent and accurate record of greenhouse gas emissions, emission reductions, sequestration, and atmospheric concentrations for use in the registry.

Research The bill would establish a scholarship program at the National Science Foundation for students studying climate change, require a report from the Department of Commerce on technology transfer, and require a report from the Secretary of Commerce on the impact of the Kyoto Protocol on the U.S. industrial competitiveness and international scientific cooperation.

The bill also would make changes to the U.S. Global Change Research Program, establish an abrupt climate change research program at the Department of Commerce, and establish a research program at the National Institute of Standards and Technology in the area of standards and measurement technologies.

Innovation The Technology Administration within the Department of Commerce would be renamed the Innovation Administration. The responsibilities of the Secretary of Commerce would be expanded to include the development of climate change innovation policies. A variety of programs and studies would focus on fostering climate change innovation ranging from grade school and university programs to technology transfer and patents.

Additional research and demonstration programs would be set up for cleaner transportation, retooling of vehicle manufactures for advanced low greenhouse gas emitting vehicles, for energy efficiency, and for managing and monitoring agricultural and geological sequestration and a variety of other specific concerns.

Technology Revenues generated by auctioning allowances granted to the Climate Change Credit Corporation, would be used to create three different aspects of technology innovation and deployment –1) first of a kind engineering, 2) construction of the first generation of facilities that use substantially new technology, and 3) via a grant program, the marketing and procurement of low/no greenhouse gas emitting power or low greenhouse gas producing products. Projects for first of the kind engineering

and construction support would be selected on the extent to which they reduce greenhouse gas emissions, are a substantially new technology; and attain cost effectiveness and economic competitiveness, among other criteria. The construction loan program for new facilities that meet the criteria would include at most 3 Integrated Gasification combined Cycle Advanced coal power generating facilities that use carbon capture technology with geological storage of greenhouse gases; 3 nuclear reactors (one of each new certified design); 3 large scale biofuels facilities that maximize cellulosic biomass use, 3 large scale solar power facilities, and would be open to other unspecified technologies meeting the environmental and economic criteria.

The funding provided for first of the kind engineering would be reimbursed to the Corporation by facilities that made subsequent use of the engineering and design supported by this program. The financial support for construction would be through secured loans or loan guarantees that will be paid back to the Corporation. The reimbursed funds could be placed in a revolving fund to continue these programs as long as the Corporation deemed appropriate. Support for the marketing and procurement of low/no-emitting end products would be funded directly from the proceeds of auctioning 50% of the Climate Change Credit Corporation's allowances. This program would be designed to evolve as innovation and technology moved forward.

The Climate Change Credit Corporation would generate \$1 billion dollars in funding annually if it received as little as 2% of the allowances and the price for carbon dioxide was under \$10 dollars a ton. The quantity of allowances allocated to the Corporation is not specified in the bill.