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# United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

BELTINA POHRS, STAFF DIRECTOR  
ANDREW WHEELER, MINORITY STAFF DIRECTOR

May 16, 2008

Dear Colleagues,

I am pleased to present you with a summary of our global warming substitute amendment, which will be the subject of floor action during the first week of June.

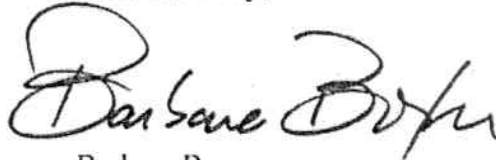
This substitute reflects an enormous contribution from Senators on both sides of the aisle, and I am happy to tell you it is deficit neutral, it provides a very large tax cut to assist consumers with their energy bills, and it follows the very strong advice of scientists, who have told us what needs to be done to avert the catastrophic effects of unchecked global warming.

As you will see, the bill sets up a cap-and-trade system to gradually reduce the amount of greenhouse gases going into the atmosphere over the life of the bill. In addition to providing the needed assistance to consumers, the revenues are used to fund the technologies that are needed to bring about a transition to clean energy.

Experts have told us that the principles of this bill will lead us in a direction that will not only achieve our goals on climate change, but will usher in a new era of technological innovation and job creation.

I hope you will join us in helping to pass this landmark bipartisan legislation.

Most sincerely,



Barbara Boxer  
Chairman

PS: You can expect that the bill will be made available early in the week of May 19.

# **A Summary of the Boxer Substitute Amendment To the Lieberman-Warner Climate Security Act**

## **Title I      Early Action**

### **Subtitle A    Tracking Greenhouse-Gas Emissions**

Subtitle A creates a greenhouse gas registry establishing a robust tracking system to inventory greenhouse gas emissions from significant sources across the country.

### **Subtitle B    Early Clean Technology Deployment**

Subtitle B authorizes a number of programs that will have an immediate impact on cutting greenhouse gas emissions even before the caps in this bill take effect. Early action includes funding for energy-efficient commercial buildings, incentives to retailers for sales of highly efficient equipment and appliances, and to operators of truck fleets to make their vehicles more efficient.

## **Title II      Capping Greenhouse Gas Emissions**

The bill allows a declining amount of greenhouse gas emissions between 2012 and 2050, reducing them by about two percent per year from 2005 levels. The bill will reduce emissions from covered facilities 19% below current levels by 2020, and 71% by 2050. It is estimated to reduce *total* US emissions (from all sources, capped and non-capped) by up to 66% by 2050.

## **Title III      Reducing Emissions Through Offsets and International Allowances**

### **Subtitle A    Offsets in the United States**

This section establishes a program that encourages farmers and foresters to generate income through the creation of domestic offset credits (such as for planting trees or farming practices that increase soil carbon), which facilities can submit for compliance. Up to 15% of covered facilities' total compliance with the carbon caps can come in the form of offsets such as these, reducing their costs.

## **Subtitle B Offsets and Emission Allowances From Other Nations**

The bill also allows U.S. facilities covered under the bill's cap to substantially reduce their compliance costs by meeting up to 15% of their greenhouse gas emission reduction obligations by reducing greenhouse gas emissions overseas, subject to specific rules. Up to 5% can be met with project-based credits (such as projects similar to the farm and forest projects described above), and up to 10% can be met by international credits for international forest protection. Any capacity not met by those two types can be met by allowances from approved international cap and trade programs like the European Union's program.

## **Subtitle C Agriculture and Forestry Program in the United States**

This program provides \$300 billion through 2050 to support agriculture and forestry programs that cut emissions but don't qualify to be used as offsets.

## **Title IV Establishing a Greenhouse-Gas Emissions Trading Market**

### **Subtitle A Trading**

This subtitle establishes the market that allows companies to trade allowances – creating a system that seeks the least expensive emissions reductions.

### **Subtitle B Market Oversight and Enforcement**

This section includes strong market oversight provisions that identify crucial principles to prevent market manipulation and disruption, and establishes an interagency group of market regulation agencies to develop recommendations and regulations to ensure these principles are met.

### **Subtitle C Carbon Market Efficiency Board**

This section establishes a Carbon Market Efficiency Board to provide general market monitoring and reporting to Congress. It can also employ cost relief measures including relaxing restrictions on borrowing or offsets.

### **Subtitle D Climate Change Technology Board**

This section establishes a board, appointed by the President with the advice and consent of the Senate, to distribute technology funding from the Act. The board must notify the relevant Congressional committees before distributing funds and Congress can cancel the funds within 30 days if they disapprove.

## **Title V     Federal Program to Prevent Economic Hardship**

### **Subtitle A, B—Banking and Borrowing**

In order to maintain stable carbon markets and prices, the bill allows the banking and borrowing of allowances.

### **Subtitle C    Emergency Off-Ramps**

If the price of carbon allowances reaches a certain price range, there is a mechanism that will automatically release additional emission allowances onto the market to lower the price. The additional allowances are borrowed so that the environmental integrity of the caps over the long term is protected.

### **Subtitle D    Transition Assistance for Workers**

The bill provides a total of \$190 billion through 2050 to fund the Energy Efficiency and Renewable Energy Worker Training Program, and a new Climate Change Worker Assistance Program.

### **Subtitle E    Transition Assistance for Carbon-Intensive Manufacturers**

Carbon-intensive manufacturing industries will receive \$213 billion through 2050 to help them adjust to the cap and trade program. This assistance is available to the iron, steel, pulp, paper, cement, rubber, chemicals, glass, ceramics, sulfur hexafluoride, aluminum and other non-ferrous metal industries.

### **Subtitle F    Transition Assistance for Fossil Fuel-Fired Electricity Generators**

The bill provides \$307 billion through 2050 in assistance for fossil electricity utilities to help them transition to the new low-carbon economy.

### **Subtitle G    Transition Assistance for Refiners of Petroleum-Based Fuel**

The bill provides \$34 billion to oil refiners for transition assistance.

### **Subtitle H    Transition Assistance for Natural-Gas Processors**

The bill provides \$20 billion through 2050 in transition assistance to natural gas processors.

## **Subtitle I Financial Relief for Consumers**

The bill sets aside a nearly \$800 billion tax relief fund through 2050, which will help consumers in need of assistance related to energy costs. The precise details of the relief will be developed by the Finance committee.

## **Title VI Partnerships with States, Localities and Indian Tribes**

### **Subtitle A Partnerships with State Governments to Prevent Economic Hardship While Promoting Efficiency, Including in States with Heavy Manufacturing and Coal**

The bill provides \$911 billion through 2050 to consumers through local electricity and gas utilities (local distribution companies) to ensure that consumers are protected from increases in energy costs, and to promote low carbon energy, and energy efficiency.

The bill also provides \$254 billion through 2050 to states that rely heavily upon manufacturing and coal, to help them transition to a low-carbon economy.

### **Subtitle B Partnerships with States, Localities, and Indian Tribes to Reduce Emissions**

The bill provides \$171 billion in funding for mass transit through 2050.

The bill also funds the Energy Efficiency and Conservation Block Grant program established in the recent Energy Bill is funded with a total of \$136 billion through 2050.

The amendment rewards states that take actions to reduce greenhouse gas emissions with \$566 billion through 2050. These funds can be used to reduce impacts on low income consumers, promote efficiency and investment in non-emitting electricity, improve transit and rail service, reduce vehicle miles traveled, sequester carbon, address local or regional impacts of climate change, help workers, mitigate impacts on carbon-intensive industries, fund projects to address water resource problems, encourage recycling, and for certain other purposes.

### **Subtitle C Partnerships with States and Indian Tribes to Adapt to Climate Change**

The bill directs \$253 billion through 2050 to states and Indian tribes to help them adapt to climate change impacts including coastal impacts, impacts on water resources and agriculture, impacts on Alaska, and impacts on Indian tribes.

## **Subtitle D Partnerships with States, Localities, and Indian Tribes to Protect Natural Resources**

The bill expands support for state wildlife adaptation programs by providing \$237 billion through 2050 to the Pittman-Robertson Wildlife Conservation and Restoration Account and the Land and Water Conservation Fund.

## **Title VII Recognizing Early Action by Companies**

This title recognizes companies that have taken early steps to reduce emissions by rewarding them with \$30.7 billion through 2050 as compensation for the early actions these emitters have taken to reduce greenhouse gas emissions.

## **Title VIII Efficiency and Renewable Energy**

### **Subtitle A Efficient Buildings**

The bill provides \$51 billion through 2050 to a new program to encourage the construction of highly-efficient commercial buildings and fund retrofits of existing buildings.

### **Subtitle B Efficient Equipment and Appliances**

The bill directs \$51 billion through 2050 to a new initiative, the Super-Efficient Equipment and Appliances Deployment Program, to reward retailers and distributors for increasing their sales of high efficiency building equipment, electronics and appliances to consumers.

### **Subtitle C Efficient Manufacturing**

The bill directs \$51 billion through 2050 to support manufacturers that achieve high energy efficiency gains at their manufacturing facilities.

### **Subtitle D Renewable Energy**

The bill provides \$150 billion through 2050 to owners or operators of facilities that deploy renewable energy technologies.

## **Title IX    Low Carbon Electricity and Advanced Research**

### **Subtitle A    Low Carbon Electricity Technology**

The bill provides \$92 billion through 2050 for a program to assist in deploying low carbon electricity technology. Electricity generators and manufacturing facilities which manufacture these technologies or components for these technologies can qualify for awards. Low or zero carbon technologies can include nuclear power and solar energy, for example.

### **Subtitle B    Advanced Research**

This title provides \$17 billion through 2050 for advanced energy research through DOE.

## **Title X    Future of Coal**

### **Subtitle A    Kick-Start for Carbon Capture and Sequestration**

**Earlier delivery of CCS technology funds.** Delays and shortfalls in projects like FutureGen have highlighted the need for significant funding for CCS technology to begin flowing as soon as possible. In order to expedite the widespread commercialization of this technology, the bill moves significant resources forward for early funding for this technology, with \$15.7 billion dollars of support.

### **Subtitle B    Long-Term Carbon Capture and Sequestration Incentives**

The bill will expedite the development of CCS by providing bonus allowances for the geological sequestration of CO<sub>2</sub>.

### **Subtitle C    Legal Framework**

This section addresses legal issues raised by CCS including ensuring the regulation of underground CO<sub>2</sub> storage and pipelines.

## **Title XI    Future of Transportation**

### **Subtitle A    Kick-Start for Clean Commercial Fleets**

This program directs \$4 billion in early funding for a new program to support the changeover of large commercial truck fleets to fuel-efficient hybrids.

## **Subtitle B    Advanced Vehicle Manufacturers**

The bill provides \$68 billion to help auto manufacturers retool facilities to manufacture advanced vehicle technology (hybrids, plug-ins, fuel cell vehicles, advanced light duty diesel, electric cars).

## **Subtitle C    Cellulosic Biofuel**

The support for cellulosic biofuels in the first five years (2012-2017) under this amendment would be about \$5 billion, with a total of \$26 billion over the life of the program.

## **Subtitle D    Low-Carbon Fuel Standard**

The bill includes a low carbon fuel standard (LCFS), which sets up a performance-based market for reductions in the carbon content of fuels through biofuels, plug-in vehicles, and hydrogen. The LCFS is integrated with the revised Renewable Fuel Standard – promoting a long term market for substitutes to petroleum.

## **Title XII    Federal Program to Protect Natural Resources**

### **Subtitle A    Funds**

### **Subtitle B    Bureau of Land Management Emergency Firefighting Program**

### **Subtitle C    Forest Service Emergency Firefighting Program**

### **Subtitle D    National Wildlife Adaptation Strategy**

### **Subtitle E    National Wildlife Adaptation Program**

This section contains provides \$288 billion through 2050 for natural resource funding. Combined with the State-level funding now listed in Title IV, it provides a robust framework to help wildlife and natural resources adapt to climate impacts.

## **Title XIII    International Partnerships to Reduce Emissions and Adapt**

### **Subtitle A    Promoting Fairness to American Workers While Reducing Emissions**

This bill directs the President to enter into international negotiations to ensure all major emitters of greenhouse gases enter into agreements mandating binding emissions reductions. This provision levels the playing field by requiring importers to submit allowances for foreign goods from countries without emissions limits.



## **Subtitle B International Partnerships to Reduce Deforestation and Forest Degradation**

This bill contains a new program to create offset credits for reductions in international deforestation, which will substantially reduce compliance costs in the United States for emitters, while reducing global warming emissions from international deforestation. It also adds \$68 billion in funding through 2050 for other deforestation-prevention activities for countries which are not yet capable of participating in the offset program.

## **Subtitle C International Partnerships to Deploy Clean Technology**

This section contains a new international technology transfer provision.

## **Subtitle D International Partnerships to Adapt to Climate Change and Protect National Security**

The bill provides \$342 billion through 2050 to support for international adaptation and to protect national security.

## **Title XIV Deficit Neutrality**

This section auctions allowances and transfers the proceeds to the Treasury to ensure that the bill is deficit-neutral.

## **Title XV Capping Hydrofluorocarbon Emissions**

The bill directs the EPA to set up a separate cap and trade program for hydrofluorocarbons, a class of potent greenhouse gases used in air conditioners and refrigerators.

## **Title XVI Periodic Reviews and Recommendations**

The bill requires regular reviews of the latest scientific information and performance of the Act by the National Academy of Sciences, to be followed by recommendations one year later from the EPA. It also directs the president to deliver legislation updating the Act in response to the EPA and NAS reports by 2020.

## **Title XVII   Miscellaneous**

### **Subtitle A   Climate Security Act Administrative Fund**

This section funds EPA and other agencies to conduct the needed programs.

### **Subtitle B   Paramount Interest Waiver**

This section allows the President to make an emergency declaration modifying any provision of the Act, in the event of a national security, energy security, or economic security emergency. It is subject to Congressional rescission or modification.

### **Subtitle C   Administrative Procedure and Judicial Review**

This section provides for rulemaking and judicial review procedures.

### **Subtitle D   Retention of State Authority**

This section allows states to take measures to combat global warming, provided that those limits are not less stringent than this bill.

### **Subtitle E   Tribal Authority**

This section allows the Administrator to treat any federally recognized Indian tribe as a state.

### **Subtitle F   Retail Carbon Offsets**

This section directs the EPA to develop requirements for carbon credits or carbon offsets for consumers or retail use through the Energy Star program. These informal offsets cannot be used in satisfaction of any mandatory compliance obligation under a regulatory system for reducing greenhouse gas emissions.

### **Subtitle G   Clean Air Act**

This section directs the President to submit a study to Congress on the best way to ensure efficiency and certainty in the Federal government's regulation of carbon-dioxide emissions.

## **Subtitle H Study on State-Federal Interaction**

This section creates a National Academy of Sciences study to examine the benefits and costs of state cap and trade programs, state programs to reduce emissions other than cap and trade, and their interaction with the Federal program.

## **Subtitle I Funding**

This section clarifies that no revenues or outlays can be disbursed from the treasury by the Act except pursuant to legislation reported by the relevant committees.