Senate Emission Reduction Bills in the 110th Congress

The Lieberman-Warner Climate Security Act of 2008 contains several provisions that would authorize climate research, generate new funds for specific research activities, and ask for synthesis reports. In addition, several amendments of relevance to the climate research community were introduced during the floor debate in June 2008. This section reviews these provisions:

Title I, Subtitle C: Research
Section 131 authorizes research into adaptation by drinking water utilities. Research will be conducted by “a non profit water research foundation and sponsored by drinking water utilities” and coordinated by EPA, Commerce, DOE, and Interior.

Section 134 authorizes EPA to conduct a study on the role of black carbon in climate.

Title III, Subtitle C: Agriculture and Forestry
Section 333 authorizes EPA and USDA to prepare a report and subsequently conduct additional research on forestry and agriculture activities. No funding is provided.

Title VI, Subtitle C: Partnership with States and Indian Tribes to Adapt to Climate Change
This subtitle allocates 3% of the allowances (rising to 3.5% and then 4% in 2016 and 2031 respectively) for various adaptation programs related to impacts on coastal states (40%), water resources and agriculture (25%), Alaska (20%), and Indian tribes (15%). The degree to which basic or applied research is eligible within each program is not always clearly specified. This subtitle largely devolves implementation and planning to the state level.

Section 632 (Coastal Impacts), subsection (d) lists some research areas. Subsection (d)(5), urges universities to focus resources on the goals of the section but provides no authorization or new program.

Section 633 (Water and Agriculture), Section 634 (Alaska), and Section 635 (Indian Tribes) do not specifically mention research, although some applied research could be involved in adaptation planning.

Title VI, Subtitle D: Partnerships with States, Localities and Indian Tribes to Protect Natural Resources
This subtitle allocates 2% of the allowances (rising to 3% and then 4% in 2024 and 2027 respectively) for adaptation programs related to natural resource conservation. There is no specified role for basic or applied research.

Title XII: Federal Program to Protect Natural Resources
Subtitle D authorizes the President to develop a National Wildlife Adaptation Strategy. Section 1245 establishes a Climate Change and Natural Resources Science Center within Interior, in coordination with EPA, USDA, Commerce, and Defense. The Center will conduct research on climate impacts as they relate to these agencies’ missions. The Center is directed to “consult, and to the maximum extent practicable, collaborate with” various non-federal entities including universities. The development of the Strategy and operation of the Center are to be guided by a non-FACA Science Advisory Board established in Section 1244.
Section 1251 establishes a National Wildlife Adaptation Program, which will receive funding from the allowance auction (in an amount that depends on two other funds’ use of revenue). The Program does include a specific role for research and education activities. The federal agencies involved are Interior, Forest Service, EPA, Army Corps of Engineers, and Commerce.

Section 1257 authorizes an NAS report on regional ecological impacts within the US.

**Title XIII, Subtitle D: International Partnerships to Adapt to Climate Change and Protect National Security**

This subtitle use auction revenue to fund international adaptation efforts (1% of allowances in 2012, rising in steps to 7% starting in 2039). Section 1344 lists the various purposes which include subsection 6 on adaptation research in the most vulnerable developing countries.

**Title XVI: Periodic Reviews and Recommendations**

Section 1601 directs EPA to contract with NAS to complete a report in 2012 and then every 3 years on the latest climate science and various aspects of the performance of the legislation. Section 1601(b) includes a review of recent scientific reports, and trends and projections in US and global emissions, concentrations, temperatures, and impacts. Section 1601(c) includes, among other aspects of the legislation’s effects, the contribution to preventing dangerous temperatures and concentrations.

**Amendments**

There were no votes on any of the following amendments during the June 2008 floor debate of the bill, but many of these provisions addressing various aspects of climate research will likely be considered as emission reduction bills evolve.

Of particular interest to the science research community is an amendment proposed by Senator Cardin which would increase funding for a wide range of climate-related research. This funding would be derived from a portion of the auctioned allowances under the cap-and-trade system established by this bill.

Other amendments that address climate science and research:

- S.A. 4823. Whitehouse. Establishes Institutes for Ocean and Coastal Adaptation
- S.A. 4833. Kerry, Feinstein, Snowe. Implications of limiting warming below 2 degrees Celsius
- S.A. 4835. Lautenberg. Measures to insulate science from political pressure
- S.A. 4844. Menendez, Kerry. Research report on climate impact costs
- S.A. 4862. Dole, Whitehouse. Coastal impacts and adaptation