



Institute for Governance & Sustainable Development

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Senate Climate Bill: “Achieving Fast Mitigation” Through Non-CO₂ Strategies

Action on black carbon, methane, HFCs and biochar to avoid abrupt climate change

Washington, DC, May 12, 2010 – The Senate climate bill unveiled today by Senators John Kerry (D-Mass.) and Joe Lieberman (I-Conn.) contains a section entitled “Achieving Fast Mitigation” to address non-CO₂ climate forcers, including black carbon soot, methane, and hydrofluorocarbons (HFCs). These non-CO₂ greenhouse gases and pollutants, together with others like ground-level ozone, make up 40-50 percent of total climate forcing.

One of the non-CO₂ forcers’ most important attributes is that they are short-lived in the atmosphere – days to a decade and a half – meaning reductions will produce benefits fast and help to avoid the tipping points for abrupt climate change. Reductions in CO₂ on the other hand, while essential for the long term, won’t produce cooling for hundreds of years.

“We’re in a race against time with climate change and it’s becoming more and more important to capitalize on the mitigation opportunities that can produce big benefits quickly,” said Durwood Zaelke, President of the Institute for Governance & Sustainable Development. “Kerry and Lieberman are breaking the mold of CO₂-only climate policy with their section to achieve fast mitigation by reducing non-CO₂ climate forcers as well as using carbon-negative strategies such as biochar. This is historic. It shows the way to win, in the short term, and in the long term.”

The call to phase down production and use of HFCs – a group of “super” greenhouse gases with hundreds to thousands the global warming potential of CO₂ – is similar to the HFC provision in the Waxman-Markey bill and complements the proposal submitted in April by the US, Canada, and Mexico under the Montreal Protocol ozone treaty which, if the Parties reach agreement in November, would result in avoided emissions of at least 100 billion tonnes of CO₂-equivalent.

Another good reason for targeting non-CO₂ climate forcers is that the technology is already available. Environmentally-friendly alternatives are available to replace HFCs in most refrigeration and air conditioning applications, and the majority of black carbon emissions can be reduced through particulate filters in diesel vehicles and cleaner-burning cookstoves in developing countries. This is reflected in the bill’s voluntary grant program to reduce black carbon emissions through the use of particulate filters as well as a study on black carbon emissions to report on both domestic reduction opportunities and how the US can assist with

reducing emissions globally.

Methane is a greenhouse gas with 20 times the warming potential of CO₂ and also contributes to another climate forcer and health hazard, ground-level ozone. The Senate bill would expand the efforts of the US-led Methane to Markets Partnership to help reduce global methane emissions as well as scale up research on new methods for reducing emissions and capturing methane for energy use.

In order to bring atmospheric levels of CO₂ back down to the safer zone of 350 parts per million, and keep global temperature rise below 2°C, the world will also need to start implementing carbon-negative strategies. Expanding biochar production is one such strategy which could provide up to 3.67 billion tonnes of CO₂-equivalent in climate mitigation per year by 2040, using only waste biomass, and perhaps as much as 20 to 35 billion tonnes per year if plantation-grown biomass is used. The Kerry-Lieberman bill will “provide grants to up to 60 facilities to conduct research, develop, demonstrate, and deploy biochar production technology for the purpose of sequestering carbon from the atmosphere.”

“These fast-action strategies offer multiple collateral benefits that go far beyond the climate issue,” said Zaelke. “For example, reducing black carbon emissions is important for climate change but it is also a major boon for public health; biochar can sequester CO₂, but it can also serve as a natural fertilizer for crops, boosting food production, and can solve some of our agricultural waste problems. Methane can be captured and turned into energy. These are critical co-benefits that should appeal to both sides of the aisle.”

In addition, the bill would require an interagency study on other potential non-CO₂ fast mitigation strategies led by the US EPA in collaboration with the Secretary of State and Secretary of Energy. The study would include a focus on measures that are carbon-negative and those that could help increase Arctic and urban albedo to reflect solar radiation.

“Cutting CO₂ is essential for the long haul, but fast action right now is key for vulnerable regions like the Arctic and island nations,” added Zaelke. “The bill’s fast mitigation measures show the way to protect them.”

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