

©Copyright 2002 Sustainable Energy Institute. All Rights Reserved.

January 29, 2002

SEI Congressional Report 2002-2:

**January 29 Senate Environment and Public Works Committee,
Subcommittee on Clean Air, Wetlands and Climate Change, Hearing on
The Clean Power Act of 2001 (S.556)**

This subcommittee hearing appears to be the final one on The Clean Power Act (S.556, the "Four-Pollutant" bill) that will be held within the Environment and Public Works Committee prior to the committee's markup of the bill, now scheduled for February 14, 2002. This hearing was organized by the Subcommittee chairman, Senator Joseph Lieberman (D-CT), at the behest of its ranking minority member Senator George Voinovich (R-OH). It focused primarily on the availability and cost of technologies for reducing CO₂ and mercury emissions from coal-fired power plants. In addition to Lieberman and Voinovich, the hearing was attended by four senators from the northeastern U.S.: Tom Carper (D-DE), Hillary Rodham Clinton (D-NY), Jon Corzine (D-NJ) and Bob Smith (R-NH). Additional statements were submitted for the record. Two panels of witnesses testified, including representatives from the U.S. Department of Energy, the Electric Power Research Institute, General Electric, Global Energy (owner of a power plant employing IGCC clean coal technology), the Chicago Climate Exchange and several manufacturers of emissions control equipment.

The following notable issues were discussed in the Senators' opening statements and in discussions with the first panel of witnesses:

- **Carbon Trading:** Senators Carper and Smith both expressed support for establishing a cap-and-trade system for controlling carbon emissions, as was introduced last August by Subcommittee Chairman Lieberman and Senator John McCain (R-AZ). DOE's Bob Kripowicz, Acting Assistant Secretary for Fossil Energy, also agreed that emissions trading can help a great deal as it allows compliance with emissions limits at the lowest possible cost. Richard Sandor, chairman of the Chicago Climate Exchange, described his group's pilot project in carbon trading, a voluntary system in the Upper Midwest that covers 20% of the U.S. electric power sector. Lieberman noted that he hopes to introduce cap-and-trade legislation soon and found the Chicago initiative particularly interesting.
- **Impact of Mandated Carbon Cuts on the Coal Industry:** There was debate over whether mandated carbon reductions would cause a large-scale shift away from coal and towards natural gas, or new clean coal technologies would be deployed on a broader scale allowing compliance with such reduction requirements. Voinovich, from coal-rich Ohio, warned that

the Four-Pollutant bill will kill the coal industry and cause a massive shift to natural gas. DOE's Kripowicz agreed that mandated cuts would have a tremendous impact on the amount of coal use in the United States, until such time as Integrated Gasification Combined Cycle plants (an important example of clean coal technology) begin to have economic benefits. He noted DOE estimates that a carbon cap would cause a 43% increase in electricity costs by 2010 and a 38% increase by 2020. Sandor responded that there is insufficient data on pricing and that a trading system needs to be demonstrated in order to determine the impacts. Chairman Lieberman commented that coal can be part of the solution to climate change, and that we do not need to "move beyond coal," referring to the possible use of clean coal technologies.

- IGCC Efficiency: General Electric's Ed Lowe indicated that IGCC systems allow a 13% improvement in efficiency at a coal-burning power plant and therefore 13% less carbon emissions. Furthermore, IGCC plants provide a pure carbon stream that is more conducive to the application of carbon capture and sequestration technologies. Lieberman noted a recent National Coal Council report indicating up to 20% efficiency improvements from IGCC, suggesting that such facilities could become economical in the future.
- Bush Administration Position: Kripowicz testified that the Administration does not support the CO₂ cuts that would be mandated under S.556. He indicated that they support a three-pollutant approach addressing SO₂, NO_x and mercury, but that they are still analyzing the levels they support and that such numbers would likely differ from those in S.556. Voinovich suggested that the Administration "ought to get moving" and that "we've been waiting, waiting and waiting" for their position.
- Chicago Climate Exchange: As noted above, this is a voluntary trading system in the Upper Midwestern states. The demonstration project, funded by the Joyce Foundation, is currently in a feasibility study phase, leading to a "price discovery" phase in which the marginal costs of CO₂ cuts will be identified. Subsequently, efforts will be made to reach consensus on the level of cuts to be targeted. Sandor anticipates that the member companies will all ultimately agree to participate in reduction programs to achieve those consensus cut levels. Members of the group include Ford, DuPont, American Electric Power, Cinergy and International Paper.

Lieberman suggested that imposing a cap on all four pollutants will drive new technologies, and summarized the panel discussion by noting the nation's great capacity for ingenuity and asking why we cannot figure out how to cut emissions without increasing power costs.