

**To:** Jeff Kupfer  
**From:** Adele Morris, Office of Economic Policy  
**Date:** March 11, 2001  
**Subject:** Global climate change and a possible multi-emissions strategy

Thank you for the opportunity to comment on the draft climate memos.

### The Science

- Climate change is a real risk, and the Administration will continue to receive strong domestic and international pressure to take it seriously. For sound scientific input, (b) (5) (b) (5) For example, OSTP could clarify the recent statements by Dr. Hansen, which I understand to be an endorsement of broader action to cover more emissions rather than a recantation of the risk of global climate change.

### Carbon Dioxide's Impact on Coal Use and Electricity Prices

- Here are some clarifications about the DOE study to which this memo refers and its characterization in the options memo:
  - The DOE study evaluated very stringent caps on carbon dioxide (CO<sub>2</sub>): 1990 levels of utility emissions by 2005 or 2008 and 7% below that by 2008 to 2012. The report notes that less severe limits would produce much lower increases in electricity prices and overall compliance costs. A longer time to compliance can also reduce disruption in the natural gas sector, which may experience inelastic short run supplies.
  - Although the DOE study does model CO<sub>2</sub> controls using a tax instead of a cap and trade system, the economic effect on electricity prices and other key results should be the same under either system. Applying a tax is a matter of modeling convenience.

### Evaluating the Options

#### *Neither extreme is warranted*

- Given the increasing conclusiveness of the science on the risks of global climate change, it would probably not be advisable to negate now the idea of eventual mandatory reductions in greenhouse gases. On the other hand, there is no environmental or economic reason to immediately launch into costly and severe reductions of CO<sub>2</sub> by power plants.
- In particular, a commitment to address greenhouse gas emissions does not necessarily translate into a policy that would control carbon dioxide (CO<sub>2</sub>) using the kind of utility-based four-emissions approach embedded in recent legislation. Many options exist, and a complete

interagency analysis is important to fully identify options and to determine an appropriate level of effort.

*A broader climate effort would be more efficient than a sector-by-sector approach*

- CO<sub>2</sub> emissions from electric utilities comprise only 30% of all U.S. greenhouse gas emissions (on a carbon-equivalent basis). A real effort to control greenhouse gas emissions would require a broader approach, both in the sectors and the gases it covers.
- Economists agree that the most efficient broad approaches to limit CO<sub>2</sub> would apply a price signal to carbon at a level *above* electric utilities in the supply chain for fossil-based energy. An upstream system could include a cap and trade system amongst fossil fuel producers. For example, a “permit-to-market” approach could apply at the coal mine mouth, oil and gas wellhead, and the border for imports. Another option is an upstream carbon tax. Either approach would have the objective of making energy more costly by an amount that depends on the greenhouse gases it produces.
- An upstream approach would regulate fewer entities (for example, compare the number of oil producers to the number of motorists) and yet provide greater application of the price signal throughout the economy. A modest, predictable and broad price signal would produce the greatest reductions in greenhouse gas emissions for the least cost to the economy.
- A utility-level multi-emissions approach could lead towards inefficient and ineffective control policies in other sectors. For example, since oil would remain largely untouched by a utility bill, environmentalists would call for more stringent automotive fuel economy standards. That approach, paradoxically, can worsen emissions relative to no policy by raising the cost of replacing the oldest and dirtiest cars.

*Regulatory uncertainty is a legitimate concern*

- Regulating carbon dioxide emissions as part of an overall clean air package can indeed reduce costs for utilities relative to first regulating conventional pollutants and then unexpectedly limiting CO<sub>2</sub> later. This is because the scrubbers used to control sulphur dioxide (SO<sub>2</sub>), nitrous oxide (NO<sub>x</sub>), and mercury (Hg) are not effective in controlling CO<sub>2</sub> (which generally requires switching from coal to natural gas). Under the current regulatory uncertainty, utilities appropriately fear incurring unnecessary costs because they have incorrectly predicted government policies.
- On the other hand, the savings from resolving regulatory uncertainty about CO<sub>2</sub> for utilities now could be swamped by the costs of pre-empting more efficient climate policies that we could have developed with more time.

*The allocation of allowances in a cap and trade system is key*

- Utilities may also support a four-emissions cap and trade system because they anticipate favorable approaches to allocating the limited allowances to emit CO<sub>2</sub>. If allowances are granted to utilities free of charge (as opposed to through an auction, for example), then utilities can actually be made *better off* than they would be without an emissions control regime in place. That is because giving them all of the valuable permits can go beyond compensating producers for their share of the total costs, some of which passed on to consumers.
  - Most economists recommend auctioning off emissions allowances so that the revenues can be used to reduce other distortionary taxes. If desired, some allowances could be given to producers so that they are no worse off than they were before the control regime.
  - The allocation scheme can have other important efficiency implications. At least one multi-emissions bill (S. 1369) could act as a production subsidy for some producers, possibly leading to perverse incentives and outcomes.

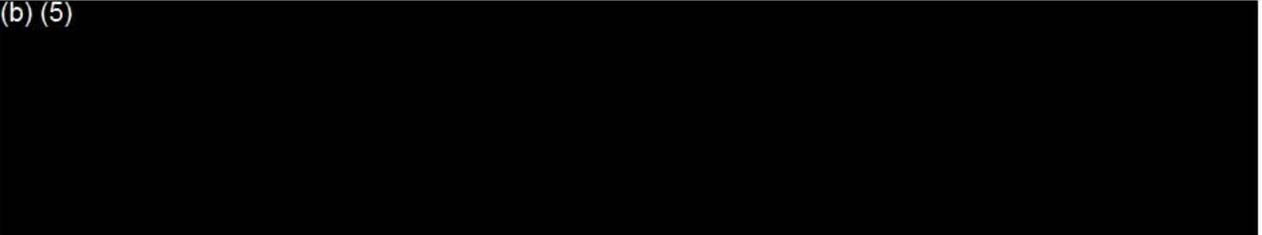
*Other possible motives for supporting a multi-emissions strategy*

- Northeastern legislators may favor a four-emissions approach because they may believe that only by seeking aggressive limits on CO<sub>2</sub> can they ensure the demise of coal, whose SO<sub>2</sub> emissions threaten their hardwood forests with acid rain.

**Conclusions and Recommendations:**

- (b) (5)
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Here are some suggested modifications to Option 2 talking points and Q&A:

- (b) (5)
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- Recognize that whether or not carbon dioxide is properly deemed a “pollutant” under the Clean Air Act, controlling it would be an innovative enough policy step to warrant new, carefully crafted, legislation. [This could sidestep a distracting debate about interpreting the CAA.]
- Carbon dioxide is a **compound** on which life depends. [Pedants could point out that carbon dioxide is not an element.]

- (b) (5) [Redacted]
- The President recognizes the value of reducing the regulatory uncertainty that makes long term planning difficult, but he believes that it is appropriate to take the time to develop the right approach to the complex issues raised by global climate change. (b) (5) [Redacted]  
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