

DATE August 18, 1981

TO W. Glass	REFERENCE
FROM R. W. Cohen	SUBJECT

I have looked over the draft of the EED reply to the request from O'Loughlin. The only real problem I have is with the second clause of the last sentence in the first paragraph: "but changes of a magnitude well short of catastrophic..." I think that this statement may be too reassuring. Whereas I can agree with the statement that our best guess is that observable effects in the year 2030 are likely to be "well short of catastrophic", it is distinctly possible that the CPD scenario will later produce effects which will indeed be catastrophic (at least for a substantial fraction of the earth's population). This is because the global ecosystem in 2030 might still be in a transient, headed for much more significant effects after time lags perhaps of the order of decades. If this indeed turns out to be case, it is very likely that we will unambiguously recognize the threat by the year 2000 because of advances in climate modeling and the beginning of real experimental confirmation of the CO₂ effect. The effects of such a recognition on subsequent fossil fuel combustion are unpredictable, but one can say that predictions based only on our knowledge of availability and economics become hazardous.

I would feel more comfortable if the first paragraph concluded with a statement to the effect that future developments in global data gathering and analysis, along with advances in climate modeling, may provide strong evidence for a delayed CO₂ effect of a truly substantial magnitude, a possibility which increases the uncertainty surrounding the post-2000 CPD scenario.

ROGER W. COHEN

RWC:tmw

Attachment

cc: H. N. Weinberg
A. J. Callegari

INTER-OFFICE CORRESPONDENCE

DATE 8/14/81

O See Below	REFERENCE
FROM W. Glass	SUBJECT

J. F. Black
R. W. Cohen
S. A. Diamond
H. Shaw

Morey O'Loughlin has asked Ed David for ER&E's views on the realism of CPD's projections for fossil fuel combustion out to 2030 (attached) in view of potential "greenhouse" and "acid rain" problems. I have been asked to draft a short reply.

A preliminary draft for EED's reply is attached. It is based not on any calculations but on my "understanding" of what I think I've heard you say and write in the past. I would appreciate your reviewing this preliminary draft very critically and letting me know promptly of any changes you would like to see. EED wants to get an answer back to MEJO'L by August 21.

Thank you for your cooperation.



WG:bl
Attachments

c: T. K. Kett

DRAFT
EED TO MEJO'L

You asked about our views on possible emission consequences of the CPD-projected fossil fuel consumption levels out to 2030. Much is still unknown about the sources and sinks for atmospheric CO₂, as well as about the climatic effect of increasing CO₂ levels in the air, so that prognostications remain highly speculative. The models that appear most credible (to us) do predict measurable changes in temperature, rainfall pattern, and sea-level by the year 2030 for the postulated fossil fuel combustion rates, but changes of a magnitude well short of catastrophic and probably below the magnitude that need trigger otherwise non-economic responses to the problem of energy supply.

The fossil fuel contribution to the localized problem of acid rain appears handlable by limiting the release of SO_x, NO_x, and chlorides to the atmosphere--which would decrease but by no means eliminate the economic advantage of fossil fuels.

We would be happy to discuss this with you in greater detail.

INITIAL PROJECTION WORLD ENERGY SUPPLY (EXCLUDES CPE)

