

CARROLL LOUIS WILSON
MC 28 BOX 5, F. 153

Discussion About CO₂ and Climate, Dec 1979

WOCOL WORLD COAL STUDY

Carroll L. Wilson, Director
MIT, 1-143
Cambridge
Massachusetts 02139

Telephone: (617) 253-3418
Telex: 92-1473-

November 23, 1979

Professor Alfred Keil
M.I.T.

Dear Alfred:

I will be able to take part in the discussion of CO₂ and climate on December 10th and 11th. The subject is of more than passing interest to me.

You may recall that in 1969-70 I organized a month-long study project at Williamstown on critical global environmental problems which resulted in the SCEP report which I enclose. Of the people on your list I believe only Roger Revelle and George Woodwell took part in that project.

The findings about climate effects in the SCEP report which emerged in the U.S. scene in August 1970 at the time of an intensive debate on the effects of SST flights in the stratosphere led to my organizing the following summer in Stockholm a three-week study project involving 35 atmospheric scientists from 15 countries. I enclose the result of that project--Inadvertent Climate Modification - Report of the Study of Man's Impact on Climate (SMIC)--which was published by the MIT Press and delivered to the Preparatory Committee for the UN Conference on The Human Environment at its meeting in New York September 1971.

We tried in these two projects to assess what was known, what was not known and what needed to be known for better understanding of these subjects in five or ten years into the future. That five or ten years has now passed. Questions about climate which attracted little attention except among a few climatologists in 1970 now have moved to a high place on the agenda.

Professor Alfred Keil
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In carrying forward the World Coal Study, described in the enclosure, clearly the effects of fossil fuel combustion in producing CO₂ including coal as a somewhat heavier contributor than oil and gas was important from the very beginning. You will observe in the statements of the scope and purpose are recognition of potential climate effects at that very first meeting in Aspen in 1978 in October. At that meeting I invited Walter Roberts, who had just concluded a week-long workshop to plan a three-year study of the effects of global warming, to address us and his lecture appears in the records of that first meeting.

Now as we approach the conclusion of the World Coal Study and are drafting the final report in preparation for the final meeting in Europe in January we must decide what we say about CO₂ and climate in this report.

I have retained some of my connections with my colleagues of SCEP and SMIC including William Kellogg, Bob White (Robert M. White!), Hermann Flohn, Steve Schneider and others.

I enclose the draft statement about CO₂ from the environmental chapter draft of the World Coal Study as well as the more condensed statement in the overview section. These reflect advice and suggestions I have received from Walter Roberts and Bob White. We are also mindful of the statement made at the conclusion of the WMO/GARP two-week meeting in Geneva in February of 1979 in which Will Kellogg and Bob White had an important part.

I assume on your list you must mean Robert M. White, former head of NOA and now executive officer of the National Academy. You've got the initials R.R. but I assume you must mean Robert M. I am a little surprised that Walter Roberts and Will Kellogg are not on your list or Ed Goldberg.

It is my personal view that the effects on climate may indeed set the limit to fossil fuel use. This is a reason why we intend to use the title, "Coal--A Bridge to the Future," for the report of the World Coal Study. I think it is an

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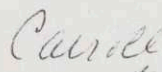
indispensable bridge but its length and width may well depend upon effects of CO₂ on climate change. At the same time one must recognize that 70 percent of China's energy is derived from coal and more than half of the Soviet energy is derived from coal and much of the rest of the world's energy is derived from oil, gas or coal so that a transition away from dependence on fossil fuels presents problems of enormous magnitude.

I shall be interested to learn how much more is now understood than nine years ago concerning the macro-thermostat which cloud cover may indeed provide. Also I heard that Bert Bolin had some interesting recent information concerning residence times of CO₂ products in the surface layer of the oceans.

I assume it is beyond the scope of this two-day meeting to consider by what steps global consensus on facts and effects might be arrived at and indeed what kind of proportionate reduction of fossil fuel use occurs and by what means as a result. No international machinery we now have remotely resembles a system which would produce such consensus and the sharing of reduction of fossil fuel combustion which might be indicated.

I am sending you this letter because I am going to Europe on Thanksgiving night to meet with the WOCOL team members in London, Paris and Rome as well as with the people at the International Energy Agency in Paris and will be back on the 3rd of December.

Sincerely,



Carroll L. Wilson

CLW:F

P.S. I don't see Dick Douglas or Bob Rotberg on your list. They were convenors of the very interesting weekend conference on climate history held last June which brought together atmospheric scientists and climate historians.

Dictated by Professor Wilson but signed in his absence.

cc: Dr. Jerrold R. Zacharias

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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Memo to.....Room.....Ext.....

Prof. ZACHARIAS

etc

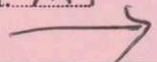
Dec. 10 & 11

969-
0440

CO₂ & climate

Tues.
11/20
Ext. AFI

from.....Room.....Ext.....



MASSACHUSETTS INSTITUTE OF TECHNOLOGY

11/20 1979

Memo to SL Room _____ Ext. _____

Yes, I will go —
May have to leave noon
11th. Circulate to Mike
& Bob

from ca Room (used) Ext. Sleep
SHIC
Enviro Chp.
Co2 PART I

Enclose SCEP, SMIC and
description of WOCOL and
draft statements described
in 4th #, page 2



SCHOOL OF ENGINEERING

CAMBRIDGE, MASSACHUSETTS 02139

15 November 1979

Professor Carroll Wilson
Room 1-143

Dear Carroll:

Several months ago Jerome Wiesner and Jerrold Zacharias decided to try to improve public understanding of energy problems, particularly through the national press and television. They have enlisted the cooperation of a number of scientists, engineers, economists, journalists, and television and film experts to address this difficult educational problem.


One of the key conclusions they reached is that many aspects of energy policy depend on understanding the interaction between CO₂ and the climate. Everyone agrees that more work is necessary to further enhance our understanding of this interaction. However, because of the significance of the CO₂ problem, we feel -- and I am sure you will agree -- that we should reach a temporary consensus on how one can best convey the present state of understanding of the CO₂ hazard and its implications to the general public.

I was asked to organize a two-day discussion to bring out the highlights of present appraisals, debate new results which may have emerged, and formulate questions and answers to convey our present understanding in a convincing manner to the public. I am sure that everyone on the attached list of invitees feels strongly that this is important. The dates of December 10 and 11 seem to be convenient for a number of people whom we have already asked. I hope that they are convenient for you, and I sincerely hope that you can join us, especially since several of the invitees have already indicated that they have new results to present.

Although the meeting will be held at M.I.T., travel and other expenses are being handled by the Education Development Center, 55 Chapel Street, Newton, Massachusetts 02160.

Jerrold Zacharias and I will try to call you about this meeting, but if somehow we do not succeed, would you call one of us. If you need hotel reservations, call (617)969-0440 as soon as possible.

Yours truly,


Alfred A. H. Keil
Professor Emeritus

Encl.

Telephone Numbers: A. H. Keil (617)253-3271; J. Zacharias (617)969-0440

List of Invitees to a Session on the
Interaction of Atmospheric CO₂ and Climate

December 10-11, 1979

(Penthouse, M.I.T. Faculty Club, 50 Memorial Drive,
Cambridge, Massachusetts)

Francis Bello
Bert Bolin
Wallace Broecker
Harvey Brooks
Jule Charney
Saville Davis
Peter Eagleson
Anthony French
Jack Goldstein
Paul Grey
Wolfgang Hafele
James Hansen
F. Kenneth Hare
Alfred A. H. Keil
Henry Paynter
Roger Revelle
Henry Stommel
Verner S. Soumi
James Wei
David White
Carroll Wilson
Jerome Wiesner
George Woodwell
Richard Wilson
Carol Surkin
Carl Wunsch
Jerrold Zacharias
Gordon MacDonald
Robert R. White
Hoyt Hottel
Richard Leacock