

Historical Briefing Paper  
House Concurrent Resolution 56  
16<sup>th</sup> Alaska Legislature  
Relating to Global Climate Change

In Support of  
House Concurrent Resolution 30  
Creating an Alaska Climate Impact Assessment Commission  
24<sup>th</sup> Alaska Legislature

March 30, 2006

Prepared by Gary Newman

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907-488-2001

## Introduction

In 1989, while Director of Energy and Housing for Tanana Chiefs Conference, I developed a proposal to establish a Governor's Blue Ribbon Commission on Global Climate Change. The intent was to develop policies that could reduce our state's contribution toward global climate change.

The model used was that of the Commission on the Future of the Permanent Fund. It followed action by Thomas Kean, then republican Governor of the State of New Jersey, who acted via executive order. Folks may recognize his name, as he was co-chair of the 9-11 Commission more recently.

The commission proposal was panned, as folks felt that "yet another commission" was considered by the public to be a waste of money. As a result, a less ambitious alternative was developed as embodied in House Concurrent Resolution 56 in the 16<sup>th</sup> Alaska Legislature and sponsored by Rep. Niilo Koponen of Fairbanks. It subsequently passed the House and the Office of the Governor took some action as far as a draft report.

In the current 24<sup>th</sup> Legislature, we are now offered House Concurrent Resolution 30, which seeks to develop policies to mitigate the impacts of climate change.

As societal and governmental entities, despite many informed testimony and evidence, we have obviously failed to take effective action, so are now having to pay the consequences and will cost much more than had we implemented policies when we were informed of the potential of our behavior. Still, some action toward mitigation of our contribution toward climate change can hopefully be helpful toward mitigating the effects of future accelerated climate change.

I present the history of HCR 56 to assist in the deliberation over passage of House Concurrent Resolution 30.

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# **Governor's Blue Ribbon Commission On The Role Of The State Of Alaska In Combatting Global Warming**

## **I. FINDINGS:**

Global warming, also known as the greenhouse effect, is modifying the climate of the earth, through the generation of carbon dioxide and other trace gases (methane, tropospheric ozone, chlorofluocarbons, and nitrous oxide).

These gases are, in large part, the result of human activities, including the widespread use of fossil fuels, population growth, deforestation, agricultural practices, and use of chlorofluorocarbons.

Current scientific understanding predicts that continued alteration of the global atmosphere will cause widespread temperature extremes and sea level rise which will, in turn, have serious implications for the Earth's ecosystems, agricultural production, water supply, human health, wetlands, and climate.

Shifts in the climate will cause catastrophic disruption of economic, political, social, and ecological systems on earth of all nations.

Further scientific evidence suggests that such changes will be felt sooner and more extremely in the arctic, which includes Alaska.

It is incumbent upon policy-makers to understand the links between our actions in the past and now and the likely resultant damage to our planet. It is further incumbent upon policy-makers to take measures to reduce those actions which are causing global warming.

The State of Alaska needs to develop policies to assist in reducing the increase of greenhouse gases in the atmosphere.

## **II. PURPOSE:**

The Governor's Blue Ribbon Commission On The Role Of The State Of Alaska In Combatting Global Warming will develop a base of information on global warming.

Upon that base of information and with public input to be solicited statewide, the Commission will draft suggested options and policies to be presented to the Governor as to ways in which the State of Alaska can reduce the state's contribution to greenhouse gases in the atmosphere.

Furthermore, the Commission will assess national and international programs involved in global change and recommend optimal ways for the state to actively participate in those programs.

## **III. ORGANIZATIONAL GUIDELINES:**

The Commission will be composed of 11 members with geographical representation, selected by the Governor, and be concerned, involved and/or knowledgeable about the various elements of global warming, such as scientific, energy conservation, utility, agricultural, environmental and economic. Two members will be appointed from state government and two members from the legislature (one from the House and one from the Senate). The Chair will be selected from other than those serving in State Government or the Legislature.

The Office of the Governor will provide sufficient staff for the Commission and meetings will be held as frequently as necessary to accomplish the tasks of the Commission. No compensation, other than that for travel and per diem expenses, will be made to Commission members.

Within six months after convening, the Commission shall present a draft report for public review. Public input will be solicited statewide. A final draft, incorporating public testimony as appropriate, will be then be prepared and presented to the Governor within two months after completion of the public hearings on the draft.

The final report will suggest specific policies and make specific suggestions as to how best the State of Alaska can reduce the increase in greenhouse gases. Short and long term economic analyses of the policies and options will be a part of the report.

# GLOBAL WARMING IMPACTS UPON ALASKA

Certain human activities on earth are creating an imbalance on our planet known as "*Global Warming*" or the "*Greenhouse Effect*". This is a phenomenon where we are adding certain gases into the atmosphere and actually warming the earth and creating an imbalance in the earth's biological systems.

While the scientific community does not fully understand all of the details, from what we know now, **it is imperative that we take action now, since if we wait until the predicted dire consequences occur, it will be too late.** This is a complex and global issue that calls for action at all levels of society. It is said that it takes a lot of drops to fill a bucket. We must all do what we can.

The Governor's Blue Ribbon Commission is intended to start the process for Alaska to do its part in reducing our contribution to global warming. With our cold climate, we contribute more carbon dioxide per capita. In addition, the temperature increase in the arctic will be greater and felt sooner than in temperate climates. More precipitation is also anticipated.

## **Manmade contributions to global warming come from the following sources:**

|                             |  |     |
|-----------------------------|--|-----|
| ◦ 1. Carbon dioxide         | Fossil fuel burning, deforestation       | 49% |
| ◦ 2. Methane                | Agriculture, fertilizers                 | 18% |
| ◦ 3. Chlorofluorocarbons    | Foam insulations, refrigerants, aerosols | 14% |
| ◦ 4. Nitrous oxides         | Combustion by-products, manufacturing    | 6%  |
| ◦ 5. Other greenhouse gases | Combustion, manufacturing                | 13% |

## **Impacts from rapid (3-9 degrees in 50 years) increase in temperature**

- Raising of water levels through melting of polar ice
- Melting of permafrost
- High fluctuations in weather patterns
- Loss of plant and animal habitats due to inability to adapt to rapid change.

## **Impacts on communities**

- River and sea level increase leading to increased flooding and loss of coastal land and low lands adjacent to rivers.
- Foundations of structures, roads, airports, water and sewer and other improvements threatened.
- Loss of subsistence livelihood through loss of habitat.

## **Examples of what can be done now to reduce the impact**

- Apply least cost planning to new capital projects.
- Increased energy efficiency of heated structures including heating systems and appliances.
- Increased efficiency of diesel electrical generation. Co-generation of fuels, waste heat recovery, fuel substitutions, alternative and renewable fuel source development.
- Promoting methods of increasing efficiency in all modes of transportation.
- Sustainable yield harvesting of timber. Increased tree planting where feasible (trees absorb carbon dioxide).
- Re-cycling of waste products, such as aluminum cans, bottles, newspaper, etc.
- Working with congressional members toward national recognition and action on the problem.
- Education of our children on the problems and solutions (they will pay for our inaction).

## **Immediate benefits of doing something now**

- Reducing impact of global warming.
- Increased health safety and comfort in operating heated structures and electrical appliances.
- Decreased cost in operating heated structures and electrical appliances.
- Reduced cost and increased life in operation of moving vehicles.
- More affordable housing.
- Productive local jobs.
- Increased standard of living, less time and money spent on energy.
- Assured source of wood (In forested areas).
- Increased capacity of landfills.
- Sustained ecosystem for fish and game.

TANANA CHIEFS CONFERENCE, INC.  
Executive Board of Directors  
Resolution No. 89-18

A RESOLUTION IN SUPPORT OF ESTABLISHING  
A STATE COMMISSION ON GLOBAL WARMING

WHEREAS, there is evidence that activities of man are rapidly increasing the amount of greenhouse gases in the upper atmosphere, through burning of fossil fuels, use of CFC's, etc., and;

WHEREAS, the evidence is that increase of these gases will lead to rapid warming of our climate, and;

WHEREAS, rapid warming of our climate will lead to major environmental damage to ecosystems and improvements upon the land, and;

WHEREAS, we in Alaska, have ample opportunities to reduce our use of fossil fuels and better our standards of living through increased efficiency and available energy conservation technology, and;

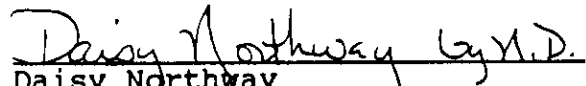
WHEREAS, investigating what we can do now will reduce the future high cost of mitigating the likely damages that will result, and;

WHEREAS, the State of Alaska should take a lead role in this issue for the protection of the health, safety and welfare of its citizens,

THEREFORE, BE IT RESOLVED, that the Tanana Chiefs Conference request the State of Alaska to establish a commission to investigate what can and should be done to address the issue of global warming.

C E R T I F I C A T I O N

I hereby certify that this resolution was duly passed by the Tanana Chiefs Conference, Inc. Executive Board of Directors on December 14, 1989 at Nenana, Alaska and a quorum was duly established.

  
Daisy Northway  
Secretary/Treasurer





# Fairbanks North Star Borough

25th Silver Anniversary

## FAIRBANKS NORTH STAR BOROUGH PLANNING COMMISSION

### RESOLUTION

#### IN SUPPORT OF ACTIONS TO MITIGATE THE EFFECT OF GLOBAL WARMING

WHEREAS, mankind's activities are contributing to major environmental change on our planet, and;

WHEREAS, this environmental change is likely to have major impact upon our planet and incalculable costs associated with the rapid change, and;

WHEREAS, the cost of implementing solutions now will be far less costly than in waiting to see irrefutable evidence to everyone's satisfaction before taking action.

WHEREAS, action must be taken by all countries, governments, and people to effectively mitigate the damage;

THEREFORE, BE IT RESOLVED, that the Fairbanks North Star Borough Planning Commission supports local, state, and federal action in support of ways to reduce our contributions to global warming and to mitigate its effects.

A handwritten signature in cursive script, reading 'Charles J. Goff'.

Charles Goff, Chairman

Fairbanks North Star Borough Planning Commission



# COOPERATIVE EXTENSION SERVICE

## UNIVERSITY OF ALASKA, USDA & SEA GRANT COOPERATING

University of Alaska Fairbanks, Fairbanks, Alaska 99775-5200

November 28, 1989

Governor Steve Cowper  
P.O. Box A  
Juneau, Ak 99811-0101

Dear Governor Cowper:

I am writing to support the idea of forming a Blue Ribbon Commission on the role of the State of Alaska in combating Global Warming. Mr. Gary Newman has passed his original outline of the idea along to me for comment and support. I fully support it.

I share Mr. Newman's concern and urgency about address the issue of Global Warming. In September of this year the Arctic Science Conference in Fairbanks covered extensively the issue of Global Warming as it is now understood and it's relevance to the arctic regions. It is very clear and evidence strongly suggests that the Arctic will be among the first areas to be affected. The agents of change will be the greatest in rapidity of occurrence and also in magnitude in the arctic regions. Since it is incumbent upon policy-makers to understand this pressing issue, and to anticipate it's changes, it is incumbent upon us to take measures to reduce these actions and address them in a Blue Ribbon Commission such as Mr. Newman is suggesting.

As further evidence of my interest in this matter, I have originated a New Program Plan within the Cooperative Extension Service at the University of Alaska called "Global Warming and the Greenhouse Effect" in which I plan undertake some of the following educational initiatives. First, through assembling the knowledge base from the research and scholarly activities at the University of Alaska, a transfer of that knowledge in an understandable form to the public can be accomplished for stimulating individual action and building awareness. Since the Cooperative Extension Service is philosophically poised to take this knowledge and research from the University and




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distribute it to the public in a useful form, a unique opportunity exists to do this. It is very clear from initial discussions of the Effect that change will likely be accelerated at high latitudes. So, the need to take action will be much greater. Extension faculty, especially myself, will participate in the delivery of programs to schools for educational purposes, the development of new policies, and provide educational leadership when it is requested by these clientele groups as well as to state and national policy makers.

I urge you to consider at your earliest convenience the establishment of the Blue Ribbon Commission. I also would very much consider making this a part of my work as a interested professional in Alaska. I am presently in the middle of an application for the Kellogg National Fellowship to expand my role in extension work to the area of Global Warming and how I might educate people to deal with this threat. I perceive Global Warming to be the single most critical emerging issue of the 90's. Alaska would do well to put it's people on notice early and credibly respond to concerns with such a Blue Ribbon Commission.

Thank you for the time and hearing me out on this issue.

Sincerely,



Richard D. Seifert  
Associate Professor  
CES

amn

cc: Gary Newman  
Mike Musick  
Harvey Bowers  
Irv Skelton  
Niilo Koponen

# STATE OF ALASKA

## THE LEGISLATURE

1990

Source

CSHCR 56(Res) am

Legislative  
Resolve No.

111



Relating to global climate change.

### BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS there is evidence that the activities of humans are rapidly increasing the amount of greenhouse gases in the upper atmosphere through the burning of fossil fuels and are destroying the ozone layer through the use of CFC's and other chemicals; and

WHEREAS the evidence is that the increase of these gases and the destruction of the ozone layer will lead to warming of our climate; and

WHEREAS rapid warming of our climate will lead to major environmental damage to ecosystems and improvements upon the land; and

WHEREAS the people of Alaska have ample opportunities to reduce their use of fossil fuels and ozone-destroying chemicals and to better their standard of living through increased efficiency and available energy conservation technology; and

WHEREAS investigating what can be done now will reduce the future high cost of mitigating the likely damages that will result; and

WHEREAS the State of Alaska should take a lead role in this issue for the protection of the health, safety, and welfare of its citizens; and

WHEREAS the National Governors Association and the National Conference of State Legislatures are investigating potential actions that states may take to reduce global warming and are preparing recommendations for a national policy with regard to global climate change; and

WHEREAS the governor of the State of New Jersey has issued an executive order charging state entities in New Jersey to pursue policies and conduct activities so as to reduce the threat of global climate change;

BE IT RESOLVED by the Alaska State Legislature that the governor is respectfully requested to investigate possible state policies and procedures that can be implemented, if necessary, to determine how the state can most effectively help to combat global climate change.

**Alaska State Legislature  
Representative Niilo Koponen**

Pouch V  
Juneau, Alaska 99811  
(907) 465-4992

House District 21

119 N. Cushman, Suite 207  
Fairbanks, Alaska 99701  
(907) 456-8172

October 11, 1990

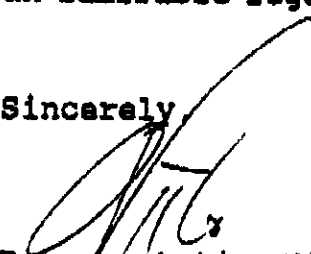
Governor Steve Cowper  
PO Box A  
Juneau, AK 99811

Dear Governor Cowper:

With the world once again facing a crisis over energy and the cry for more oil intensifying, it seems prudent to remind ourselves of the consequences of unrestrained burning of fossil fuels. While public attention may be temporarily distracted by the possibility of war, the threat of global climate change has not diminished. Indeed, both calamities issue in part from a single failure: our inability to control our appetite for fossil fuels.

HCR 56 of last session requested that you identify policies and practices which could most effectively combat global climate change. Now seems a prudent time for a progress report. With a new administration only weeks away, such a report could help push responsible energy use higher on the agenda. I think many Alaskans would view such an outcome as an admirable legacy.

Sincerely,



Representative Niilo Koponen  
NK/DO

STEVE COWPER  
GOVERNOR



STATE OF ALASKA  
OFFICE OF THE GOVERNOR  
JUNEAU

October 29, 1990

Mr. Gary C. Newman  
1083 Esro Road  
Fairbanks, Alaska 99712

Dear Gary,

Many thanks for your inquiry regarding the State policy in response to climate change. A member of my staff, Dr. Henry Cole, has been working with the Science and Engineering Advisory Commission to prepare a draft plan for an Alaskan response to global climate change. It identifies six sectors of Alaskan concern, and a series of contact persons have been assigned in various State agencies to assist in the initial scoping phase of the project.

I will instruct Henry, who has been working most closely on this project, to send you the draft proposal. I encourage you to work with Henry and the Commission to provide your viewpoint and information.

I personally hope that this effort is sustained into the next Administration and encourage your involvement as well as the Tanana Chiefs Conference.

Many thanks for your interest.

Most sincerely,

A handwritten signature in black ink, appearing to be "Steve Cowper", written over a circular stamp or mark.

Steve Cowper

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**AN ALASKAN STRATEGY IN RESPONSE TO GLOBAL CLIMATE CHANGE**

**I. INTRODUCTION**

The Governor has taken a national lead, within the National Governors' Association and internationally at the Northern Regions Conference, to endorse the protection of the environment. Increasingly, a major element of world environmental concern has focused upon the probability and impact of global climate change. Alaska State House Concurrent Resolution #56 requests the Governor's Office to investigate possible State policies to respond to the impacts of warming. Other inquiries and statements of concern from Alaskan citizens have also been received by the Governor's Office.

The State's dependence on oil and recent events in the Middle East make it important to address these issues and relate them to a more effective and efficient State energy policy. This paper is a proposal to explore options, cost benefits and actions for an Alaskan global climate change response upon which a clear policy should be based.

Our basic context for creating an Alaskan response lies in the principles expressed in the Brundtland Report, *Our Common Future*, prepared by the World Commission on the Environment and Development. In the preface it is stated that we must devise strategies in all countries that "lead to the achievement of common and mutually supportive objectives that take account of the interrelationships between people, resources, environment and development." Each community on earth must contribute to the solution of these global problems with solutions adapted to its unique circumstances.



## DRAFT

### Basic Scientific Questions

The "greenhouse effect" is a warming of the atmosphere due to the trapping, by carbon dioxide and other gases, of long wave energy emitted by the earth. This effect makes earth habitable. The possibility of *increased* temperature, however, due to an increase in greenhouse gases is under considerable scrutiny by the world scientific community to determine both whether or how rapidly the effect may occur and what the precise mechanisms are. The ability to predict climate change due to an enhancement of the greenhouse effect, caused mostly by the burning of fossil fuels, requires answers to the following questions:

- What will be the global energy demand through the next century?
- How will this demand be met by fossil and non-fossil energy sources and what may be the changes in concentration of greenhouse gases?
- What are the interactive biological, chemical and geophysical mechanisms for production and loss of greenhouse gases?
- What is the magnitude of impact of the greenhouse effect on the earth, oceans or climate for given levels of CO<sub>2</sub> and other greenhouse gases?

It is not our purpose to consider the details of the supporting research or degree of credibility of the scientific debate at this time. There exist considerable uncertainties as to the extent, future trend and role of many important physical mechanisms affecting global climate change. What is intended to emerge from this exercise is an exploration of the sensitivity to climate change of the Alaskan environment, economy and social structure; an examination of the cost and benefit for various actions; and the development of a coherent Alaskan policy for a response to climate change.

Many of the effects of programs to be proposed in this debate may possess significant economic and environmental benefit over the long term *regardless* of whether any climatic change ever occurs. Likewise, we also note that this exercise may lead to an improved State energy and environmental policy.

**DRAFT****II. ALASKAN ISSUES**

Six major issues are related to the possibility of global climate change in Alaska. These are presented below as a framework for discussion, along with a list of action items, which, if undertaken, will further define and clarify possible policy options. The action items recommended are not complete but suggestive; the intent is not to design the complete scheme but merely indicate the direction in which we should start. The final specific Alaskan policy can be fully developed only after a careful study and knowledge of the options is achieved.

1. The long term production and marketing of Alaskan fossil fuels. International market behavior for oil or sanctions on fossil fuel may be influenced by the evidence for and perceived risk of greenhouse warming due to increased CO<sub>2</sub> emissions. Sanctions upon chemical emissions into the atmosphere are not new. The 1972 discovery of an ozone destroying mechanism linked to freon (CFCs) resulted in 1985 in the Montreal Protocol at which 24 nations set limits on CFC production. The recently passed Federal Clean Air Act is another example of increased national emission controls. We must understand and anticipate economic impacts from international crises or potential federal policies such as emissions or fossil fuels tax and be prepared to rank/order our potential actions. Since Alaska is a fossil fuel producing state, we must formulate strategies to maximize and optimize State income in the long term. Other fossil fuels, such as natural gas and coal, should be similarly assessed for their role as export fuels.

*Action items:*

- Evaluate worldwide scenarios for population growth and energy demand and how it relates to greenhouse gas release.

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- Follow the research on the relationship between CO<sub>2</sub> release and atmospheric composition and warming.
- Monitor the international political climate to anticipate impacts, sanctions and policies which could influence fossil fuel consumption and production.
- Evaluate scenarios for growth of alternative and/or non-fossil fuels capability, including increased replacement of current fuels with methane, coal or other fuels.

*Agencies:* OMB, DNR, UA, Industry.

**2. Long term economical mix of energy production for in-state use.** As North Slope oil production declines, becomes expensive, or is otherwise modified by outside forces, we must be prepared to diversify energy production for in-state use to keep our long term energy supply cost economical and stable in the face of outside shocks. Diversification strategies would possibly encourage the use of coal or natural gas or non-fossil energy sources such as hydro-electric or geothermal. At the same time, technologies must be developed for more efficient power production and less carbon dioxide or greenhouse gas emission. This could mean encouraging development of regional energy production, which could also offset power subsidies in rural areas. Alaska, with its wide diversity of fuels, has more potential flexibility in its energy strategy than states with no fuels.

*Action items:*

- Assess the magnitude, status and potential of the fossil and non-fossil energy production in-state by region and end use.
- Determine the scenarios for growth or decline of various energy sources by region and possible economic, social or environmental impact.
- Determine the immediate potential for non-fossil and alternative energy development.

*Agencies:* UA, DNR, DCRA, DCED, Industry, AEA, APUC, citizen groups.

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3. The efficiency and effectiveness of energy end use services (on the demand side). Forty percent of electrical energy in the U.S. is used in buildings. Energy efficiency improvements forced by the 1973 oil embargo have resulted in savings of energy equivalent to 13 million barrels of oil per day or \$150 billion each year. In view of these national economies, and that of several State programs in the early 1980s that focused on increasing thermal efficiencies, we propose a review of the potential benefit or cost of demand side strategies related to energy efficiency. These programs can create benefit and savings in energy use in public and private buildings, transportation and manufacturing, and end use demand efficiency through new technologies and retrofit.

*Action items:*

- Catalog the allocation of energy use in Alaska by population, function, political group, region or other required categories within the State.
- Evaluate the potential benefit, costs, and associated effects (such as those to health or air quality) which could occur through improvements in demand side energy use and efficiency, technology, design and retrofit in cold climates. These can be applied to the areas of residential or State-owned buildings, construction, transportation or manufacturing.
- Formulate the administrative or management structure through which State agencies and utilities, AEA, local governments and native corporations could coordinate to achieve improvements in effective and beneficial energy end use.
- Determine contributions which citizen groups, schools, industry and small businesses may make in identifying and taking action on additional items of concern and potential improvement in energy utilization.

*Agencies:* DCRA, AEA, APUC, DOT, Industry, Native Corporations, citizens groups.

4. The impact of climate change on Alaska. The specific impacts of climate modifications in Alaska, whether related to snow melt, precipitation, temperature or other parameters, are unclear. Since 60% of Alaska's land

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area contains discontinuous permafrost, much construction, many airfields and roads will be damaged if melting occurs in permafrost which is close to the freezing point. Under these conditions, pipeline construction, TAPS and surface operations on the North Slope, as well as drilling and well completion, may require costly new technology. Changes in basic climatic variables would also have an impact on the hydrology, biology and wildlife in Alaska: glacier melt and sea level, ocean water temperature and salinity changes affecting ocean ecology, and displacement of ecosystems. Equally importantly, social effects will occur: impact upon rural communities, changes in subsistence usage, agricultural land use, or hydro-electric generation capacity, to name a few.

*Action items:*

- Monitor, on a continuous basis and throughout the State, the basic changes in climatological parameters, including, for example, changes in temperature, hydrology, snow and sea-ice cover.
- Monitor shifts in mass balance of glaciers supplying water for hydro-electric generation.
- Monitor the changes on permafrost extent and soil stability to estimate how this may affect engineering and construction practices in Alaska.
- Prepare for possible changes needed in drilling practices, well construction and waste disposal on the North Slope.
- Determine the changes in atmospheric weather patterns and oceanic temperature and circulation which would affect fish and wildlife habitat, the health of wildlife, fisheries and commercial use.
- Work cooperatively with native corporations and rural communities to formulate and carry out programs for the assessment of impacts on social and subsistence needs caused by climate variability.

*Agencies:* UA, ADFG, DNR, DEC, Native Corporations, Industry, Federal

5. Alaska as a high latitude site for climate change monitoring, analysis, modeling and prediction. Many general circulation models used in

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greenhouse studies indicate that the high latitudes will register climate changes earlier and to a greater degree than lower latitudes. Furthermore, certain feedback phenomena may be easily studied in Alaska, such as methane emissions from tundra, the release of methane gas hydrates from the North Slope and the role of arctic cloud cover. Alaska is equipped by location and existing scientific talent to make a significant scientific contribution in the monitoring, analysis and modeling of global change effects and causes.

*Action items:*

- Monitor the effects and concentration of greenhouse gases; model the causes and effects of global climate change, including the atmospheric chemical reactions; and develop predictive capability.
- Identify interaction feedback loops between the atmosphere, landforms and vegetation, such as tundra, snow and ice cover and albedo and other atmospheric, earth and oceanic exchanges.
- Establish baseline studies for flora and fauna, agricultural potential and forestry. Cooperate in programs using Long Term Ecological Research (LTER) and International Biosphere Geosphere Program (IBGP) sites.

*Agencies:* UA, Federal

6. Alaska as a participant with other Arctic and non-Arctic countries engaged in scientific research and the development of effective long term public policy. The International Arctic Science Committee (IASC), the recent Finnish Initiative on the Environment and the U.N. Environmental Program are important global scientific efforts in which Alaska may play a significant role. Requisite geophysical knowledge must be acquired globally and response of nations must be multilateral and by consensus. The State needs to build more extensive links with other Arctic countries through conferences, information exchange and political forums. The planned Northern Forum, the follow-on of the Governor's Northern Regions Conference of September, 1990, would provide an important regionally-sensitive contact point.

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### *Action items:*

- **Coordinate State efforts in response, modeling and research with various agencies involved in complementary Arctic efforts in global climate change. These include the IASC and the Finnish Initiative. In addition, coordinate with Federal agencies working in these areas, such as NOAA, NSF, DOE, and groups such as the Arctic Research Consortium of the United States and the United States Arctic Research Commission.**

*Agencies:* UA, Federal

## **III POLICY DEVELOPMENT**

The State will ultimately have to articulate a policy to respond to the impacts of global climate change. The objective of this current proposal is to initiate an analysis of action alternatives and impact sensitivities in the six topic areas listed. These alternatives are, of course, highly dependent on rapidly changing outside influences, such as the price of oil, public awareness, sanctions, or new technologies. Nevertheless, by defining the questions, establishing a basic data base for energy and related issues, raising the level of governmental and public awareness, and determining the range of possibilities for action, this work will be of use in the development of public policy goals.

Below are a few possible policy directions for consideration:

- **Maintain an optimum fossil fuel export strategy for the State and protect against shocks in the oil market.**
- **Enable Alaska to satisfy in-state energy needs and efficient use in the best possible fashion.**
- **Reduce Alaska's contribution to the production of any greenhouse gases.**
- **Prepare an appropriate scientific monitoring and research program for the State.**

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- **Establish Alaska as a leader in arctic science and technology and in the field of climate change research and social impact.**

**The Commission will be initiating this policy development in early 1991 by meeting with representatives of appropriate agencies and groups to begin the task of creating the specific implementation plans.**





Memorandum

To: Henry Cole

From: Gary Newman

Date: November 15, 1990

Re: Governor's Draft Response to HCR 56

I have reviewed the draft response and have the following comments/concerns.

The first concern I have is over diversification of fuel to include coal. Coal produces at least twice as much CO<sub>2</sub> as any other form of fossil fuel. If we are to reduce greenhouse gas emissions, coal is the least preferred form of fossil fuel to encourage. This is mentioned on pages 3 and 4. You likely recognize this, but it isn't explicitly stated. Considering the number of folks who will read your report, with different backgrounds and less thorough understanding of the issues, somewhere in the report should include the impact of what we must do to reduce greenhouse gas contributions. Mentioning coal as a possible option muddies the waters considerably.

The second concern is the contrast between the State of Alaska looking to maximize state income from export of fossil fuel. I think the question is more properly put to maximizing income with a quantification of the risks to the biosphere from such exportation. Perhaps this is what you mean by "the long term" (page 3). If this is so, it needs to be stated explicitly, for example: "... we must formulate strategies to incorporate the climatic/environmental impact of fossil fuel development and exportation on the biosphere (including Alaska) into our consideration for insuring adequate state financial return for our products." The externalities need to be factored in to the equation.

I would also suggest you add "Local Governments" as an agency where appropriate.

Lastly, I have submitted to you the Executive Order issued by Thomas Kean, former Republican Governor of New Jersey, on his policy directive on reducing his state's contributions to global climate change. As I think this would make a good next step for our state, you might want to include it in the appendix. I don't know what else you intend to include with the report, but I could likely offer you additional relevant background information, if you weren't on such a short time line with the report.

In general, the draft report details where we might go toward developing specific policies, but I think it falls short of addressing HCR 56, which states: "...the Governor is respectfully requested to investigate possible state policies and procedures that can be implemented..." Perhaps I'm expecting too much from the process. If so, please excuse my impatience for action.

I do appreciate and thank you for your efforts on this and hope that the efforts won't stop with the next Administration. Certainly the need to address the issues won't go away.

June 6, 1989

DEPARTMENT OF  
NATURAL RESOURCES

JUN 06 1989

The President  
The White House  
Washington, DC 20500

Dear Mr. President:

Events in Alaska since the March 24 oil spill from the tanker EXXON VALDEZ have focused national and international attention on our State--attention which covers a spectrum of environmental concerns.

You announced during your campaign your intention to hold an international conference on the environment, and most recently indicated your plans to sponsor this fall an international workshop on global climate change. I can think of no other location in the United States better suited to either of these gatherings than Alaska.

The interest in the environmental effects of a major spill, the key role Alaska plays in the nation's energy supply, and the fact that Alaska is America's only arctic region are elements we believe can be used to focus general environmental concern over the spill and to direct this attention toward issues such as monitoring global climate change in high latitude regions and arctic waters.

Should you consider convening the workshop or the conference in Alaska, I would be pleased to have my staff and key members of the University of Alaska assist you.

Sincerely,

S/S Steve Cowper

Steve Cowper  
Governor

bcc: Rebecha Miller  
Henry Cole  
Luis Proenza  
Don Collinsworth  
Denny Kelso  
Lennie Gorsuch  
Denby Lloyd  
John W. Katz  
Mary Ellen Tiffany  
Regional Offices

SC/DSL/JB/lh  
president/DEN11

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**NSA STAFF DRAFT  
REPORT ON GLOBAL CLIMATE CHANGE:  
SUMMARY OF FINDINGS**

The atmosphere acts like a greenhouse around the earth. Certain gases, most of which naturally occur in the atmosphere in minute quantities, trap the sun's heat and warm the planet. Without this natural occurrence, the planet would be some 60 degrees Fahrenheit colder than it is now, the seas would be permanently frozen, and life as we know it could not exist. We literally owe the habitability of our planet to the phenomenon commonly called the greenhouse effect.

In recent years, proof that human activities are changing the composition of the atmosphere have caused increasing concern. The world energy system, industrial and land use practices, agriculture, and population growth are adding certain greenhouse gases to the atmosphere faster than they can be removed by natural processes. As concentrations of greenhouse gases increase, the heat-trapping properties of the atmosphere also increase, like a more efficient blanket around the globe. Almost all scientists believe that this increase in greenhouse gases results in a theoretical increase in average global temperature. However, there is debate about the extent and timing of actual impacts. The EPA and others have predicted that a doubling of atmospheric carbon dioxide (CO<sub>2</sub>) or its equivalent in some combination of greenhouse gases — expected by the middle of the next century — could raise the earth's average temperature by 3 to 9 degrees Fahrenheit.

Although the implications of such a temperature increase are not well understood, they could include an increase in the frequency and severity of climate extremes such as droughts and storms; changes in rainfall patterns; rising sea level with consequent shore line and beach erosion, flooding of estuaries, and loss of wetlands; desertification; and migration of agricultural and forest zones, among others. This issue represents one of the most serious threats to the global environment.

At the same time, global climate change may be the most complex environmental and economic problem man has ever faced, for several reasons. First, there are substantial scientific uncertainties regarding the rate, magnitude, and regional effects of future climate change, and these uncertainties are likely to persist for some time. These scientific uncertainties and the difficulty in accurately predicting climate change are compounded by the existing natural variability of meteorological and biological systems. Second, the social and economic costs of the measures which may be required to reduce the threat are not yet well understood, and comprehensive assessment of the available options has only recently begun. And finally, climate change is an issue which can only be effectively addressed with the cooperation of all nations. Unilateral measures by the United States are likely to be quickly overtaken by events elsewhere if other nations do not cooperate in a coordinated response, and could reduce American bargaining power in future international negotiations.

To address this issue, NSA Chairman Governor Terry Branstad created the Task Force on Global Climate Change. The task force was charged with developing recommendations for the nation for the decade of the 1990s, and illuminating the role that states can play in addressing the problem of global climate change. To accomplish this mission, the task force met with senior scientists and policymakers from several nations, and engaged in constructive dialogue with business and environmental leaders, whose support is crucial in any response to this problem.

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After careful deliberation, the Task Force makes the following findings:

First, atmospheric concentrations of greenhouse gases are increasing due to human activities. In the last 100 years, atmospheric concentrations of CO<sub>2</sub> have increased by about 25 percent. Concentrations of methane have increased about 240 percent, and there have been significant increases in concentrations of other greenhouse gases, including chlorofluorocarbons (CFCs) and nitrous oxide.

Second, there is a broad scientific consensus that increasing the concentration of carbon dioxide and other greenhouse gases will increase the atmosphere's heat trapping and warm the climate to some degree. There is debate, however, about the magnitude and timing of the warming and the implications of that warming for the earth's climate system, environment, and economies.

Third, controlling emissions is central to reducing the anthropogenic greenhouse effect. For CO<sub>2</sub>, change in energy policy is the primary strategy for stabilizing or reducing emissions. Other measures, such as slowing the loss of tropical forests, are also critical.

Fourth, states have an important role to play in addressing this problem, as the result of their authority over utilities, land use, transportation, taxation, and other important factors.

Fifth, any effective solution or response to global climate change must necessarily include the federal government. The international community must also be an active participant in any effort to solve global climate change, if such effort is to have any hope of success.

The central question facing policymakers — and the primary issue facing the task force — is whether we know enough about global climate change to warrant taking action now to reduce it. Although considerable uncertainties must be acknowledged, reputable scientists and government agencies in several countries have predicted that significant global climate change could be evident within the next decade or two.

The social and economic costs of the measures which may be necessary to reduce greenhouse emissions are under evaluation. We know they may be significant, and that the cost of over-reaction could be great. The next generation deserves to inherit the healthiest possible economy as well as the healthiest possible environment.

Yet, the costs of our response to the threat of global climate change must be weighed against the severity of the problem if man's activities do change the climate in the ways predicted, and the risks associated with delay in our response. Because CO<sub>2</sub> and other greenhouse gases remain in the atmosphere for centuries or longer, emissions are cumulative in their effect upon the climate. Though the magnitude and timing are uncertain, today's emissions are virtually certain to "commit" the planet to some degree of warming. The cost of delay could be very high compared to scenarios in which we begin now to address emissions of greenhouse gases.

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Considering the evidence and the risks of both over and under-reaction, the task force finds that those steps which provide a reasonable return on investment and improve efficiency and those measures which provide other social and economic benefits — no regrets measures even if new scientific evidence were to reduce the urgency of addressing global climate change — should be taken now.

In view of these findings, the task force embraces several goals for America and the states in response to global climate concerns. These include:

- Supporting an aggressive program of research to reduce key uncertainties regarding global climate change and the necessity and economic consequences of various response options. The nation's goals should be continually reassessed in light of this research;
- Eliminating the production and release of CFCs as expeditiously as possible;
- Implementing cost effective energy conservation and efficiency measures with the goal of stabilizing national emissions of CO<sub>2</sub> at 1990 levels by the year 2000;
- Implementing cost-effective strategies for stabilizing or reducing other greenhouse gases to the maximum extent;
- Supporting an aggressive program to research and develop energy efficiency technologies, renewable energy sources, technologies for the cleaner use of fossil fuels, and advanced nuclear technologies;
- Planting trees, especially in urban areas, and engaging in other measures to offset or reduce CO<sub>2</sub> emissions; and
- Adjusting policies and conducting planning and research to facilitate adaptation to climate change, with particular attention to sea level rise, water policy, and agricultural practices.

These goals must be combined with an international strategy to stabilize the global release of anthropogenic greenhouse gases. In particular, it is important that U.S. reductions in CO<sub>2</sub> emissions not simply lead to a shift in emissions to the north or south of our borders.

The Task Force urges the development of an environmental ethic which promotes man's stewardship of the earth. This embraces a commitment to pass on to future generations a planet as rich, diverse, and productive as that which we inherited. To sustain this environmental ethic, the Governors support the development of environmental education programs and other efforts to give us all greater insight into the ways in which we knowingly or unknowingly manipulate the complex environmental system in which we live.

# Kean initiative on greenhouse to limit CFCs

TRENTON (AP) — Gov. Thomas H. Kean ordered state government yesterday to take steps against the pollution that causes global warming and to begin preparations for the predicted changes in sea level and climate.

Kean's executive order calls on the New Jersey bureaucracy to do its part to release fewer chlorofluorocarbons, or CFCs, into the atmosphere. The chemicals are blamed as a major factor in the breakdown of the earth's protective ozone layer.

Other measures include energy conservation, consideration of regulations on citizens' and industry's use of CFCs and a campaign to plant more trees, which produce oxygen.

Kean also urged a campaign to educate citizens to understand the global warming phenomenon and to begin preparations to cope with the slight rise in the sea level that is expected to accompany the higher temperatures.

The Republican governor and Brenda Davis, his chief of policy and planning, called it the broadest initiative yet launched by a state against global warming.

"Global warming and ozone depletion may lack the drama of an earthquake or flood, but they pose a far greater threat to our safety than all the storms and quakes in history," Kean said.

Scientists have been warning for years that a buildup of carbon dioxide — most of it from auto emissions — and a breakdown of the ozone layer are beginning to produce an effect similar to a greenhouse. That scenario envisions a warming of three to 10 degrees by the year 2050.

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## EXECUTIVE ORDER NO. 219

WHEREAS, a scientific consensus exists that emissions of certain gases, including carbon dioxide, methane, nitrous oxide, chlorofluorocarbons (hereinafter "CFCs"), and halons are causing significant changes in the composition of the Earth's atmosphere; and

WHEREAS, a scientific consensus also exists that these emissions are likely to cause significant changes in the Earth's climate, including overall warming, increased drought, an increase in the intensity of hurricanes and other major storms, as well as increased incidence of harmful ultraviolet radiation; and

WHEREAS, these climatic changes are predicted to result in increases in sea levels, geographic shifts in the habitats of many plants and animals, and the extinction of potentially large numbers of species; and

WHEREAS, reductions in emissions of these gases can diminish the overall magnitude and rate of climatic change, as well as reduce the depletion of stratospheric ozone; and

WHEREAS, energy conservation can achieve significant reductions in emissions of carbon dioxide, a necessary byproduct of the combustion of fossil fuels and a major contributor to global climate change; and

WHEREAS, protection of the social, economic and environmental interests of the citizens of New Jersey requires the State to implement policies and regulatory practices that will serve the dual purpose of reducing such emissions and of facilitating adaptation to those changes that are predicted to occur; and

WHEREAS, the public's understanding of the causes of global climate change and ozone depletion and possible responses thereto is essential to ensuring that appropriate steps are taken; and

NOW, THEREFORE, I, THOMAS H. KEAN, Governor of the State of New Jersey, by virtue of the authority vested in me by the Constitution and by the Statutes of this State, do hereby ORDER and DIRECT:

1. State entities shall foster energy conservation to the maximum extent practical, in order to reduce emissions of carbon dioxide and other gases that contribute to global climate change.
  - a. All State entities with responsibility for constructing, purchasing, leasing, operating or maintaining capital facilities and equipment shall employ state-of-the-art equipment for efficient heating, ventilation, air conditioning and lighting, and in other major energy using applications, where such equipment or techniques will result in lower costs over the lifetime of the equipment.
  - b. All State entities exercising regulatory authority over actions that directly or indirectly relate to the production or consumption of energy, shall review their policies and regulatory practices to ensure that they provide maximum incentives designed to conserve energy and increase reliance upon sources of energy that contribute fewer emissions of those gases responsible for global climate change.
2. All State entities that use or purchase CFCs and halons or that use, purchase, or maintain equipment that contains CFCs or halons, shall investigate the use of all practicable and safe alternatives to those compounds and ensure that emissions and losses of those compounds, including those occurring during maintenance, are reduced to the maximum extent practicable.
3. The Department of Environmental Protection shall investigate the feasibility of regulatory controls to reduce the use and release of CFCs and halons in New Jersey and make recommendations for any necessary regulatory or legislative action.
4. All State entities with responsibility for the maintenance of State property shall promote the absorption of carbon dioxide by maximizing the planting of trees and ensuring at least one-for-one replacement (either on-site or elsewhere) for trees lost as a result of construction or other activity which requires or results in loss of trees.
5. All State entities with responsibility for policies or regulations affecting the location, construction or maintenance of public or private facilities (including residential developments) shall:
  - a. Ascertain the degree to which those facilities will be affected by predicted changes in sea level; and
  - b. Develop policies, in consultation with the general public and other governmental entities, to respond to such predicted changes in sea level.
6. All State entities with responsibility for the purchase or protection of land for the purposes of open space protection or related objectives shall, as appropriate, undertake such acquisition or protection activities in a manner that furthers the creation of corridors of linked public and private open spaces known as "greenways," which aid the adaptation of natural systems by providing corridors for migration as climatic conditions change.
7. All State entities shall review their programs designed to facilitate public awareness of environmental issues and revise such programs to ensure, to the maximum extent practicable, the effective communication of information that will enhance the public's understanding of the basic processes involved in global climate change, the causes of such change, and possible approaches to reducing and adapting to such change.
8. This Order shall take effect immediately.

*Tom Kean*

/s/ Thomas H. Kean  
GOVERNOR



**Gary C. Newman  
1083 Esro Road  
Fairbanks, Alaska 99712  
907-488-2001**

June 2, 1989

The Honorable Frank Murkowski  
United States Senate  
Washington, D.C. 20510

Dear Senator Murkowski,

I was unfortunately unable to appear before you earlier this week in Fairbanks regarding oil spill legislation and mitigation. From the reports I had on the meeting, you heard a variety of comments on oil spills, responsibilities and so forth. While some testimony was perhaps not directly germane, perhaps it can offer guidance in developing such legislation.

You no doubt have heard many present a case for or against oil development, various additional laws, regulations, fines, etc. for such as occurred with the Exxon Valdez a couple months ago. The discussion and suggestions are important and no doubt some ideas should be implemented.

I would like to offer a different perspective on oil spill prevention legislation, one that does not seek to vindicate or to punish, but to positively motivate.

Not so much an alternative, but a parallel and broader course to the direct issue of oil spill prevention, the suggestions I make are based on the fact that the more you do something that is hazardous, the more probable something will go wrong. This holds true with not just oil spills, but with many things.

The importance of perspective in dealing with the issues of resource development and energy use are not disputed, the question is whose perspective. For example, the long term cost of the Exxon Valdez disaster is fairly high. If we had considered the occurrence likely and the costs of such a major spill when we first addressed the Trans-Alaska Pipeline, would we have considered the current cost acceptable? That which follows is my perspective and I hope you can concur with the findings and take action on the suggestions.

### **I. LEAST COST PLANNING AND INCREASED ENERGY EFFICIENCY**

I first suggest that we reduce the probability of oil spills by **increasing our efficiency in using fossil fuel energy products.** This country is profligate with its use of fossil fuel energy. Current technology can allow for a 50% reduction in energy use, with a payback of five years or less.

Let us implement a standard of applying least cost planning concepts to all sectors which use energy: transportation, commercial, manufacturing and other industrial uses, residential, etc.

This can partly be done by reducing some current federal subsidies and by increasing others. We must modify our tax policy to encourage the increased efficiency. The short term result of implementing this policy would be to create jobs in a variety of sectors and to reduce the federal deficit.

The Bush Administration's re-imposition of stronger fuel efficiency standards is a first good step in this direction. The federal government can reward that imposition upon automakers by encouraging sales of energy efficient autos: raise the gas tax by a healthy bit over a moderate period of time. For a better euphemism of "gas tax", consider it instead to be just a users

fee for the costs that government incurs in preserving the health, safety, and welfare of its citizens in mitigating the negative effects of our preferred method of transportation.

To equalize the apparent injustice to western states, an oil import fee might also be in order. The oil import fee would also reduce our dependence on foreign oil, increase the viability of using American fossil fuels and renewable energy. As a healthy side note, it would also make a considerable contribution to the treasury of the State of Alaska.

The income from these federal fees should be used to offset the costs of the various subsidies and programs that are implemented as a part of this policy. That will free up the cost of current subsidies thus help reduce the national debt. I would of course expect the State of Alaska to do no less than apply the same principles to its energy sector.

## **II. REDUCE GLOBAL WARMING**

Let us apply one additional standard. Let us examine and modify each of our federal policies with regard to that policy's contribution toward global warming. Since we know that consumption of fossil fuel energy leads to an increase in carbon dioxide in the atmosphere, let us reduce the risk for the health of future generations. Even if there is not unanimous agreement amongst the scientific community on the extent of the problem, from what we know now, it is folly to not take immediate action. If we wait for near unanimous agreement, it will likely be too late. I won't dwell on this subject further at the present time, but it is probably the most important thing we do, short of avoiding thermonuclear war.

### III. RECYCLE WASTE

Increased attention toward waste disposal should be given. Solid waste is currently overflowing in many of our cities and towns. Much of the waste can be reduced simply by more intelligent packaging. Reduced use of oil derived plastics, where practical, will lead to reduced consumption of oil. Increased recycling of many materials will certainly reduce disposal costs to cities and help to encourage a new industry. One mechanism I would suggest Congress investigate is a producers fee on packaged goods that is based upon the full cost of an item, including the cost of disposing of that item. The revenue collected from that fee should be used for technical assistance and local government projects for recycling of waste. Again, the short term benefit is jobs and reduced cost to local government.

### IV. CONCLUSION AND RECOMMENDATIONS

We are starting to realize that we are now a global community. What America does affects other countries and vice versa. Clean air, clean water, a sound economy, food for the hungry, shelter for the homeless, all these are laudable goals. Yet we cannot hope to come close to these goals without being able to understand the broader issue and how the issues are linked together.

Perhaps this is what makes these issues so difficult to address. Long term problems seem to resist political solutions, especially when they cross borders. Yet without seriously applying ourselves to these issues in the political arena, we will likely fail. It makes no sense to consider only short term gain if it destroys the long term collateral of a healthy country and world. We must have the courage to make needed changes. You as one of a hundred senators and an Alaskan can apply yourself to these changes.

Some of the suggestions I have made are not currently in any legislation. Many however are. To address those that are, I request you first **become an active co-sponsor of S. 324, the National Energy Policy Act** and secondly, take a look at **incorporating those sections from H.R. 1078, the Global Warming Prevention Act that are not part of S. 324 into the body of the senate bill.**

To get items in either bill moving, the sections will likely be taken as piecemeal legislation, but caution should be taken to not lose site of the overlying goal of the bill. Both of these bills are quite comprehensive and deal with many more specifics than I will address in this letter. But we need speedy action.

There is a need to rise above what has already happened and to go forward and use the knowledge we should have gained from our errors. The suggestions I offer in this letter will not only reduce the possibilities for oil spills, but will also help, without pretension, to make possible our survival in the next century.

I thank you for your consideration of these issues.

Sincerely,

**/s/ Gary Newman**