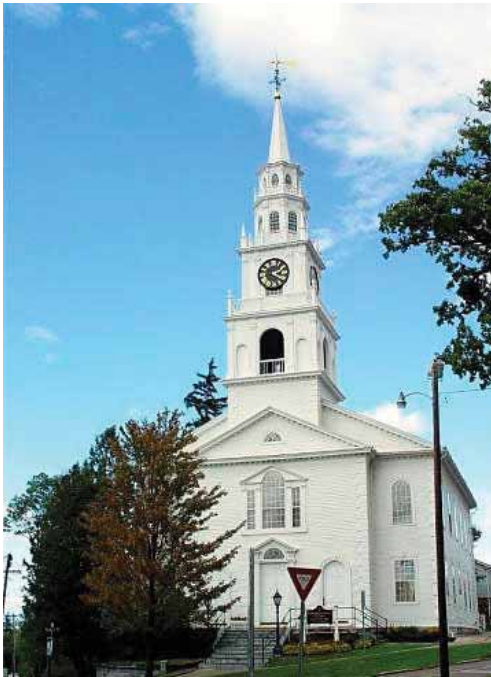


**REPORT TO THE 26th GENERAL SYNOD
OF THE UNITED CHURCH OF CHRIST
ENERGY AND CLIMATE WORK GROUP
UCC ENVIRONMENT AND ENERGY TASK FORCE**



The next 50 years: sustaining our faith and promoting peace and justice while using resources wisely to care for creation.

I. Overview of the Need for UCC Concern for Environmental Problems Associated with Fossil Fuels

In the short time since General Synod XXV in July 2005, realization of how fossil fuel use can contribute to a myriad of both societal and ecological problems has been creeping into the public consciousness. A demonstrable increase in media and political attention has occurred for issues like global climate change, the U.S. dependency on other countries for oil and natural gas, economic impacts of increased energy costs, and the potential beneficial use of biofuels. While many religious organizations are now very active in expressing concern for observable impacts of climate change associated with exponentially increasing rates of fossil fuel use, there does not yet appear to be an equivalent concern for predicted declines in oil and natural gas supplies. Perhaps this is because it is difficult to comprehend the full impacts of passing irreversibly into a new era in which demands for resources exceed supplies and people scramble to adapt to new conditions. Yet even in the great times of plenty and economic expansion that have marked the post World War II era, plentiful and undervalued supplies of fossil fuels have been utilized to create wealth while disregarding consequences like toxic waste dumps and water and air pollution to which people are often unequally exposed.

It is not the purpose of this report to recount the fears and despair growing, but often denied, for the future of societies, economies, and the health of the biosphere. There are real reasons to be concerned, but too little attention has been placed on what is possible if people come to realize that cooperation and caring at all levels of human endeavor is essential for achievement of optimum sustainable conditions for all of God's creation. The work group's focus is to help find ways that the UCC and its congregations can engage in positive responses to the energy and climate change challenges expected during the denomination's second half century. We do this with knowledge of the need to cooperate and integrate efforts with all other religious organizations, while insuring the survival of our congregations and unique programs. We pray that in these challenges we will find ways to be stronger and even more relevant than before. Christ's teachings will take on even greater meaning in times of greater need if we try harder to live by them.

The Energy and Climate Workgroup sees a need for the UCC to recognize that energy use and climate change are really two great manifestations of one big challenge for humanity: the need to achieve, as soon as possible, sustainable use of finite natural resources for the benefit of all people while maintaining healthy ecosystems and the integrity of the biosphere. Behind the apparent complexity of our environmental and social problems are some fundamental scientific principles that must be better recognized.

Because the Energy and Climate Workgroup sees a world crisis building and its relevance to how the UCC proceeds into the next fifty years of its first century, our vision is affected by a sense of urgency and uncertainty, but strengthened by hope and faith. In realistically considering our future and using it as a guide for planning, supporting congregations, and missions, we anticipate only renewed opportunities and purpose for the United Church of Christ.

II. Origin of the Energy and Climate Work Group

The UCC Energy and Climate Work Group is part of the combined UCC Environment and Energy Task Force created by General Synod XXV in Atlanta, Georgia in July, 2005 formed after the passage of two resolutions related to the environment. The two resolutions were sent directly to UCC Justice and Witness Ministry for action. A report covering the task force response to the first resolution, a “Call for Environmental Education and Action”, is being submitted to the General Synod XXVI. This report is submitted in response to the second resolution “On Supporting Congregations and Providing Guidance for Stewardship of God’s Creation during the Coming Period of Declining Fossil Fuels”. The resolution (addendum A), was initiated by Peace United Church of Christ in Duluth, Minnesota, one of ten Minnesota churches which submitted the resolution with subsequent endorsement by the Minnesota Conference. This congregational outreach action was stimulated by a sermon “Coming Down from the Peak” given on February 13, 2005 at Peace UCC in Duluth and subsequently archived on a popular web site devoted to energy and climate concerns (<http://energybulletin.net/4380.html>).

Following the initial UCC Environment and Energy Task Force (EETF) meeting at GS XXV in Atlanta, Georgia, it was decided through subsequent meetings of the Environment and Energy Task Force and UCC Justice and Witness Ministry that the two resolutions, although related on many levels, required sufficiently unique actions that warranted maintaining complementary but separate reporting tracks as the task force work progressed. An Energy Work Group was established to address the actions requested by the energy related resolution. The task force efforts related to both resolutions are intended to help create, within the UCC, a higher level of awareness of environment and energy related problems and expand the potential for incorporating this awareness into future UCC actions.

III. Development of the Energy and Climate Work Group

Following formation of the Energy Work Group within the EETF, considerable effort was spent by Dr. Philip Cook with assistance of other EETF members to recruit members for the Energy Work Group. The resolution called for a diverse group of members composed of clergy and laity from member churches, a representative of the UCC covenanted ministries, and, in addition to the theological and organizational perspectives, members with expertise in relevant disciplines such as environmental science, ecology, human behavior/sociology, economics, and alternative energy technologies. To the extent that members can not provide all the scientific and technological information relevant to energy and climate, external sources of information and expert consultations have been used. Early discussions of the work group made clear that energy and climate issues are inextricably linked so that naming the work group “The Energy and Climate Work Group” is more descriptive of the environmental problems

being addressed and emphasizes the need to consider the energy challenge to humans and the environment holistically.

Present members of the Energy and Climate Work Group are Rev. Laurie Adams of the Northern California-Nevada Conference, Rev. Gordon Bates of the Connecticut Conference and EETF, Mr. Sid Beane of the Minnesota Conference, Rev. Charles Burroughs of the Hawaii Conference and EETF, Dr. Philip Cook of the Minnesota Conference and EETF, Rev. Carlos Correa Bernier, Minister for Environmental Justice of the UCC JWM staff in Cleveland and UCC principle contact, Rev. Kent Gilbert of the Indiana-Kentucky Conference, Dr. Keith Howard of the Northern California-Nevada Conference, Ms. Jane Schaefer of the Mid-Atlantic Conference, and Rev. Felicity Wright of the Northern California-Nevada Conference.

Over several conference calls, the topic of declining fossil fuels and associated climate changes were introduced and discussed. Dr. Cook transmitted to the entire Task Force several documents explaining and explicating the nature of the overall oil production/consumption crisis that is facing the world in the 21st century. The documents included his power point presentation entitled “The UCC is Seeking a Just Energy Future;” an interview with Richard Heinberg entitled “Peak Experience: the age of oil is coming to an end;” and an example of an “Oil Depletion Protocol,” proposed by Professor Heinberg, which offers a mechanism for cooperatively avoiding international conflicts over the next five decades as oil production decreases and consumption increases. These early communications led up to an opportunity for work group members to meet in person in conjunction with a meeting of the UCC EETF in Berkeley, California on July 28-30, 2006.

IV. July, 2006 Work Group Meeting in Berkeley, California

On Saturday evening, July 29, Dr. Richard Heinberg, New College of California professor and author, addressed the EETF and Energy and Climate Work Group (Figure 1). Among energy depletion experts, Dr. Heinberg is internationally recognized as one of the most thoughtful on potential pathways for positive societal responses. He illustrated his presentation with his own power point graphics on the history of oil discovery and oil usage. He also dealt extensively with the concept of “Peak Oil,” a predictable global event in the near future when the quantity of oil available world-wide to be pumped from sub-surface reservoirs, or extractable by any other method from the earth, will reach its maximum. In the same manner, Dr. Heinberg demonstrated his conclusion that the amount of oil being consumed on a daily basis internationally would, in the next few years, outstrip all the daily production and the reserves of oil on which modern industrial nations depend, even if new fields of oil were discovered. The potential impacts on all phases of societal life, from transportation, to food production, to heating, to health care and synthetic materials we today take for granted are difficult to fully comprehend. Dr. Heinberg’s presentation was followed by a lively discussion which included remarks by another guest speaker, Dr. Richard Norgaard, professor in the energy and resources group at University of California Berkeley and President of the International Society of

Ecological Economics. Dr. Heinberg provided his PowerPoint presentation file for UCC use. The evening provided an excellent prelude to the work group's meeting which began the next day.



Figure 1. Dr. Richard Heinberg speaking to the UCC Environment and Energy Task Force on July 29, 2006 in Berkeley, California

The Energy and Climate Work Group had its first opportunity for extended discussion of the issues related to fossil fuels and the possible UCC responses to this crisis following the Task Force meeting in Berkeley, California. The Work Group met from Sunday afternoon, July 30 to Monday evening, July 31, with a majority of work group members able to be present. Initial discussions included sharing member's experiences and perspective's and clarification of Justice and Witness Ministries plans for the coming year. Dr. Correa emphasized the need for this report to document the work group's initial activities as they develop and to provide a perspective for future projects. He emphasized the short time available for preparing materials for the 26th General Synod. Many ideas were exchanged.

Desired goals and actions adopted during the meeting included:

1. To find ways to impress upon the UCC and participants at GS XXVI in Hartford, Connecticut in June, 2007 our conviction that the scope of the crises facing the world in association with the use and decline of fossil fuels is unprecedented. This encompasses the profound, present and predicted, future impacts of global and regional climate changes; associated loss and degradation of fresh water and clean air; species losses associated with habitat destruction; and energy related direct socio-economic impacts facing humanity. The energy crisis, seen with a vision for its total impact, is unique in the proximity and pervasiveness of its ultimate unchecked effects on every continent, every nation and every person.

2. To lift up the theological values which must be the foundation of any response made by the UCC denominationally, through its congregations and members, e.g.:

- A covenantal concern for and solidarity with all people of the world as part of God's creation;
- Affirmation of the goodness and integrity of all organic and inorganic being;
- Acceptance of our responsibility to care for God's garden as faithful stewards;
- Confession of our involvement in the degradation of creation and the wasteful exploitation of its natural resources;
- Openness to whatever truths are revealed to us by scientific research and a willingness to utilize the most authoritative insights offered by it;
- Resistance to any tendency to sacrifice eco-justice concerns as solutions to environmental and economic problems are sought;
- Refusal to accept "compassion fatigue" or the pervasive concern for personal security and survival as valid excuses for unilateral actions by our nation, the UCC, or individuals.

3. To urge UCC Conferences to form and support functions like that of the UCC Environment and Energy Task Force to be a conduit for information to reach all congregations, and a point of collaboration with other faith or secular groups which share our concerns about the energy crisis and the environment;

4. To search out success stories at the congregational level, outlining positive responses to environment and energy issues, and to share those through the UCC News and Conference newsletters;

5. To list, in a user-friendly way, all resources gathered by the Energy and Climate Work Group on the website of the UCC Environment and Energy Task Force (www.eco-justice.org/ucc/enviro.html), ultimately to become a component of the UCC web site and available to all UCC congregations and other interested parties;

6. To enlist the God is Still Speaking Campaign, to the extent possible, in the communication of the energy and climate crisis and the call to a faithful response;

7. To arrange a meeting of key members of the Energy and Climate Work Group and the Environment and Energy Task Force with the members of the UCC Collegium

to discuss the issues before us and explore ways we may inform and serve the UCC covenanted ministries;

8. To request of the UCC Collegium that a Pronouncement speaking to the entire denomination be submitted to GS XXVI, to be acted upon and disseminated immediately following Synod to underscore the significance of the various environmental and energy crises and the need not only for congregational awareness but for international, interfaith and ecumenical cooperation to prepare for the extraordinary conditions these crises will engender throughout the world;
9. To request that the idea of an “Oil Depletion Protocol” be considered by the Collegium and if deemed credible and helpful, that it be endorsed by the Collegium and included in a pronouncement or pastoral letter;
10. To research and make ready for distribution, a DVD or CD on the care of the environment and the decline of fossil fuels that can be utilized, with a discussion guide, by UCC congregations and other interested parties;
11. To investigate the potential for use of the UCC Cornerstone Fund as a source of grants or loans for enabling energy efficiency improvements by individual congregations;
12. To serve UCC national and conference staffs by answering questions and providing information on energy and climate that may assist programs and policy decisions.

V. Post – Berkeley Actions of the Work Group

1. In response to proposed actions # 8 and 9 above, Gordon Bates drafted a pastoral letter for consideration by the UCC Collegium (see addendum B).
2. In response to proposed action # 5 above, Jane Schaeffer has actively collected energy and climate reports and shared them with task force and work group members. She has also surveyed activities of other religious groups related to energy conservation and climate change. A list of web sites, “Resources for Faith Communities on Global Climate Change”, is available as addendum C of this report.
3. In response to proposed action # 11 above, Felicity Wright and Keith Howard have determined that the UCC Cornerstone Fund may provide low cost, no fee added loans to congregations for church renovations that are intended to reduce energy use. Management of the Cornerstone Fund requested that the work group provide guidance for assuring that proposed renovations will result in significant energy savings within five years. Philip Cook will write up criteria based on standard data available for different types of energy conservation measures and recent successful energy efficiency renovations at UCC churches.

4. In a response to proposed action # 2 above Philip Cook wrote and presented a sermon “The Greatest Challenge” (see addendum D) and initiated a trial model to see if congregation members can be challenged to collectively convert their home lighting to energy efficient compact fluorescent light bulbs (could, with other success stories, apply to action #4). The Minnesota Conference Justice and Witness Ministry Team is initiating an annual “Green Church Award” program this year.
5. In general, Work Group members have been inspired to make individual contributions on energy and climate to their conferences, congregations, and inter-denominational programs. Rev. Kent Gilbert, for example, works with church and community groups to address threats posed by mountain top coal mining practices to communities and ecosystems in Appalachia. Workshops, adult forums, worship services, symposia, energy conservation steps, etc are among our contributions to local churches and conferences. Chuck Burrows includes a concern for energy and climate as he actively serves on the boards of community, Hawaiian cultural, and UCC organizations devoted to restoration and protection of native ecosystems. The Work Group will be seeking avenues for expanding these personal experiences into UCC wide movements, policies, and programs.

VI. The Scientific Basis for Our Energy and Climate Concerns: A Short Summary

God is still speaking. We are blessed to listen in many ways. In our diversity, we have different opportunities to listen and observe. How well we communicate and combine our collective listening and observing can impact our effectiveness in preventing environmental injustices and destruction of life support systems. Thus, the work group feels the United Church of Christ should endeavor to incorporate scientific principles and relevant data into planning energy and climate related strategies, programs, policy actions, and congregational support materials. Justice and Witness Ministries programs based on the highly successful UCC Commission for Racial Justice study of toxic wastes and race in the United States provide a precedent for doing the same for addressing energy and climate concerns. In addition, a fundamental understanding of the underlying science and technologies reveals the potential for future environmental injustices which could be prevented if societies quickly prepare for future energy and climate changes. In this spirit we provide a short summary here of some of the fundamental bases for energy and climate change related concerns.

The greenhouse effect is the well known mechanism by which the earth’s atmosphere retains the amount of heat from solar energy that is required to maintain conditions favorable for life as we know it. Water vapor, which is transient in the atmosphere, and carbon dioxide (CO₂), which has a mean lifetime in the atmosphere of more than 30,000 years, are the two principal natural greenhouse gases. The Swedish chemist Arrhenius in 1895 calculated that doubling the amount of CO₂ would increase the average global temperature by 9-11 degrees Fahrenheit – a prediction that is remarkably consistent with today’s complex atmospheric model predictions and the temperature increases observed over recent decades. Figure 2 shows how ever increasing

burning of fossil fuels (coal, peat, oil, natural gas) during the present industrial age has contributed more CO₂ to the atmosphere. Thus the rate increasing levels of CO₂ measured in the atmosphere parallel the rate of consumption of fossil fuels by humans. Note that the United States is responsible for more than 25% of the total CO₂ being emitted through fossil fuel use.

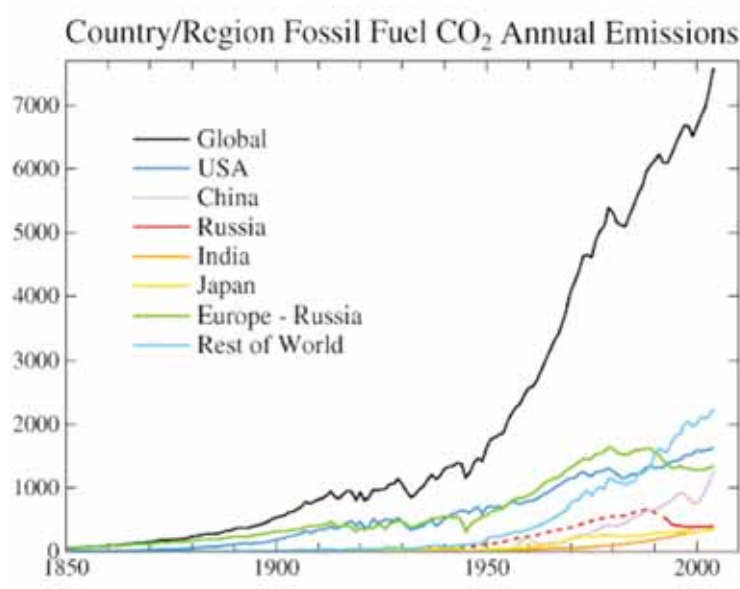


Figure 2. The industrial age has resulted in ever increasing emissions of carbon dioxide (CO₂) from ever increasing use of fossil fuels.

It is not surprising that all fossil fuels exist in the earth's crust in finite amounts and that significant percentages of each can not be recovered economically. Less recognized is the principle that if the energy required to discover, mine, process/refine, transport, etc. the fossil fuel is greater than the energy that the fuel can yield, the fuel is essentially unavailable. While there is no disagreement among energy experts that consumption of fossil fuels results in their depletion, the amounts of fossil fuels actually available in the future for economic gain is a matter of great debate. Note that the costs of environmental damages, health risks, etc. are not considered – this is the classic dilemma that leads to environmental injustices that UCC has sought to address.

Oil, or petroleum is the most valuable fossil fuel, but production peaked in the U.S. in 1970 and now appears to be globally approaching an irreversible peak in production. Figure 3 illustrates the factors that contribute to peak oil predictions that recently have contributed to a growing concern that our dependence on oil and other fossil fuels will create increasingly severe socioeconomic and environmental problems for the future. The vertical bars in figure 3 represent annual discoveries of oil which peaked around 1965. The dark line represents the annual rate of oil consumption which has increased steadily to the present time and, based on expected demand, will continue to increase if oil production can allow such. Under the consumption curve lie faint zones

that represent past and expected future production for each oil producing country. Like the United States, many countries have already experienced peak production and now are declining. It is this historical experience and the scientific principles that explain it that result in predictions of future oil production decline as seen in figure 3 after 2005. While most predictions for the timing of the peak are from now to 10 years from now, the more optimistic predictions extend out to 2030. For the latest information and convenient links to information on peak oil, energy, and climate change go to energybulletin.net.

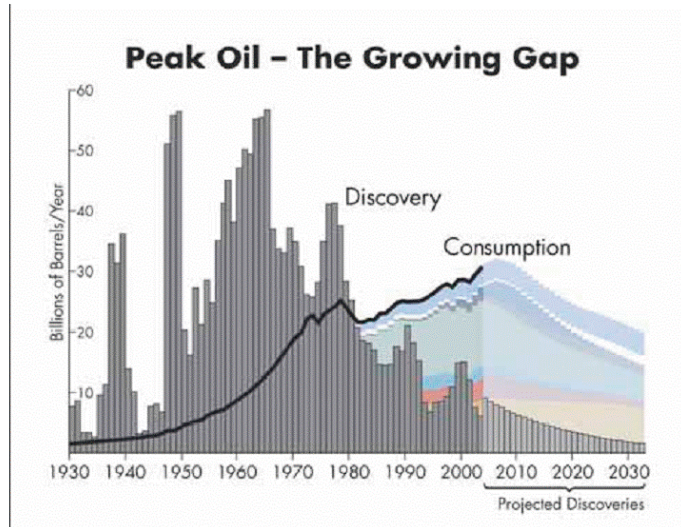


Figure 3. The Global Peak Oil Model: Historical and Predicted (post 2004) Discovery and Production/Consumption Rates.

The initial impact of declining energy supplies is increased costs, not only for gasoline, heating fuels and electricity but for food, medicines, clothing, health care, and social programs. Many may continue comfortable lifestyles during a period of increasing energy costs but many other people will be less fortunate. Already a few African countries are essentially without any gasoline for transportation and small engines because of recent increases in the price of oil. People who work for minimum or poverty level wages will struggle more to survive, especially if inflation increases in response to higher energy costs. As the resolution (Addendum A) points out, even affluent UCC congregations may be pressed to keep up with rising heating and electricity costs. The UCC's established concern for cleaning up the many toxic waste legacies of past unjust practices may be complicated by budget cuts for environmental protection programs and standards in general. Resources for responding to natural disasters such as Katrina will be harder to obtain and yet climate changes may make such needs greater. Finally, wildlife and ecosystem protection is usually the first environmental need to be forgotten.

The environment which we have chosen to impact is the entire life support system. It is finite and depends on maintenance of balance in the distribution of key elements and ambient solar energy flows. Carbon is the framework element of life and thus how it is distributed in the biosphere is a critical determinant of the status of conditions necessary for sustaining life. Figure 4 provides a conceptual basis for visualizing important compartments in the biosphere between which carbon cycles as shown by the arrows in amounts indicated by the numbers. The figure does not show all the pathways for carbon; for example, some carbon in surface sediments does cycle back into marine biota, while the remainder may be sequestered over time by burial under accumulating sediment. The pathways shown for human induced movement of carbon into the atmosphere may seem relatively small but do account for the observed increases in atmospheric carbon dioxide that have occurred during the fossil fuel era. It's obvious that the burning of fossil fuels is a significant source, but probably most people don't realize that cement production and alteration of land cover are also important net contributors of CO₂ to the atmosphere. All of the CO₂ released into the atmosphere through fossil fuel combustion or other uses is essentially carbon that would otherwise be sequestered in the earth's rock formations.

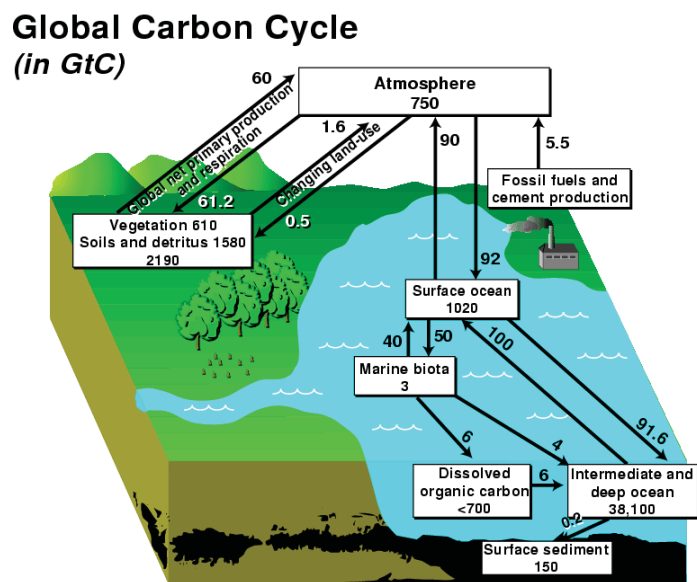


Figure 4. Human Activities Impact the Global Carbon Cycle: A Fundamental Scientific Basis for Predictions of Human Induced Global Climate Change

Specific weather events may be impacted by climate change. For example, warmer surface ocean waters can have effects on weather across great distances such as when El Nino events in the Pacific impact North American weather patterns. However, climate change is more specifically about longer term changes observable globally, but

also regionally. Carbon dioxide is not the only factor related to fossil fuel use which is impacting climate change. Figure 5 shows a number of factors which can force the climate to shift globally. All but the sun's energy input are related to use of fossil fuels. In terms of the greenhouse effect, more than 40% of the total greenhouse gases released is other than CO₂. CH₄, methane or natural gas, in some cases can be captured for use as fuel rather than released to the atmosphere. O₃ or ozone is produced by reactions of air pollutants (smog) in the lower atmosphere that are also related to fossil fuel use. Black carbon is essentially soot from combustion of fossil fuels.

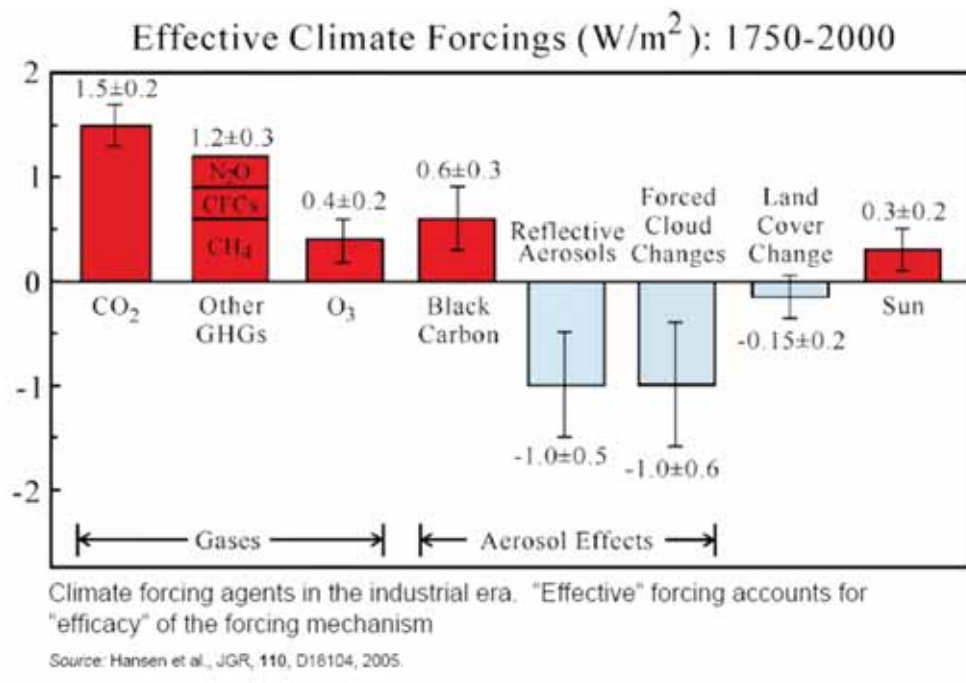


Figure 5. Carbon Dioxide is Not the Only Human Fossil Fuel Use Related Accelerant (Forcing Agent) of the Greenhouse Effect and Climate Change.

Many may read about climate change and wonder what all the fuss is about. What difference does a half degree Centigrade global annual temperature increase over recent decades make? While much of the concern expressed for climate change is based on predictions of much greater increases in global annual average temperatures in this century and the strong likelihood that these changes can not be reversed in any time period relevant to human experience, one only need to examine Figure 6 to begin to see the significance of the ongoing changes. Up to four degrees Fahrenheit increases have occurred in the arctic and northern latitudes. These changes are even more dramatic when examined on a seasonal basis and explain why we are already seeing enough change in area and time of ice cover in the north to enhance the warming process.

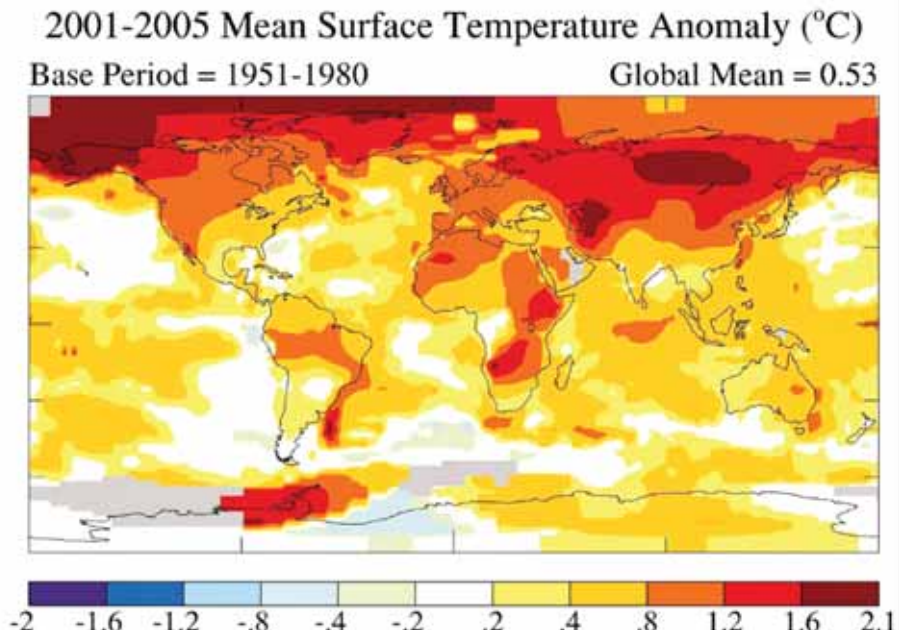
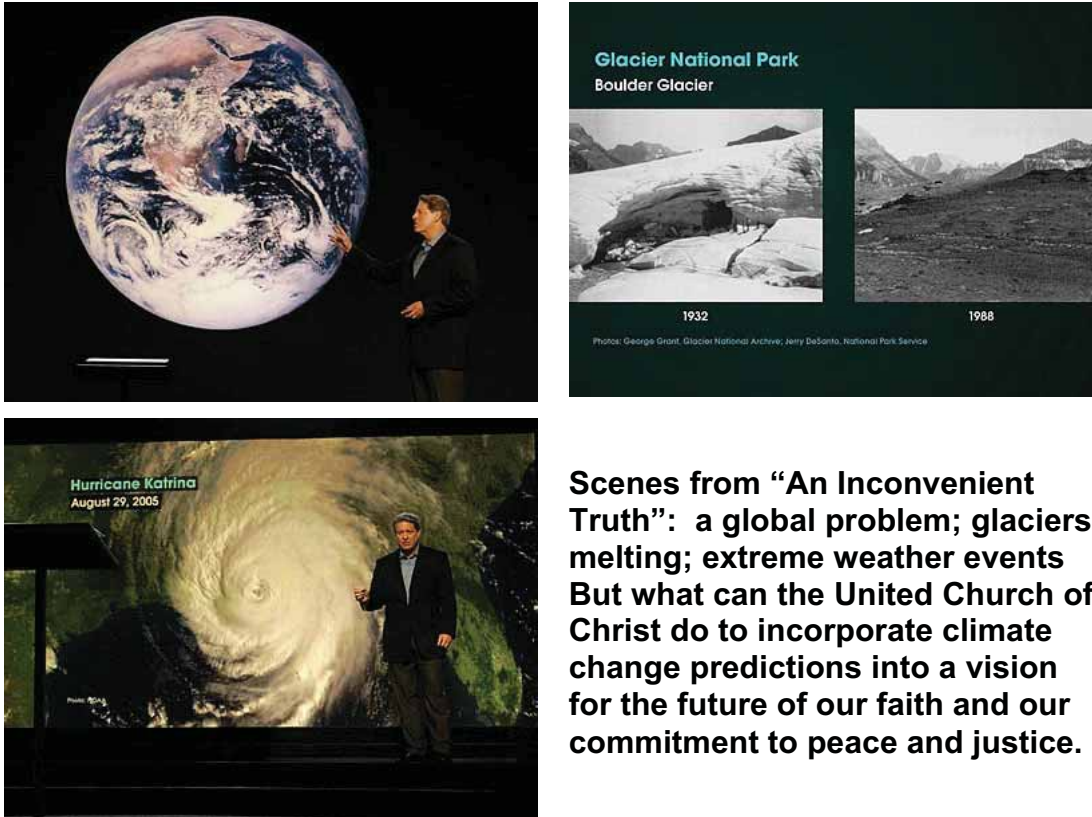


Figure 6. Recent (2001 – 2005) temperature increases across the earth’s surface (measured as five year averages compared to temperatures for the thirty years prior to 1980). As with the increased temperatures, associated climate changes are globally pervasive but regionally more intense. The global average temperature difference of 0.53 degrees Centigrade = 0.95 degrees Fahrenheit.

Scenes from the Academy Award winning movie *An Inconvenient Truth*, as shown in Figure 7, and others like *The Great Warming* have only begun the process of catalyzing public recognition that climate change will continue because of the greenhouse gases already emitted. This leads to a choice between continuing on our present path and increasing the magnitude of future climate changes, while hoping to adapt to the new conditions, or instead hoping that we can individually and collectively minimize catastrophic damage by greatly reduce greenhouse gas emissions. In a parallel manner, movies like *The End of Suburbia* present similar choices for how we use the remaining fossil fuel reserves for energy and chemical production. For members of the UCC there is a fundamental question of how we will define hope as a denomination, as conferences, as congregations, and as individuals.



**Scenes from “An Inconvenient Truth”: a global problem; glaciers melting; extreme weather events
But what can the United Church of Christ do to incorporate climate change predictions into a vision for the future of our faith and our commitment to peace and justice.**

Figure 7. Scenes from the movie An Inconvenient Truth

An example of how climate change is potentially connected to present UCC Justice and Witness Ministries programs is the impact of the present climate changes on availability of fresh water to people and their crops. Even in the Great Lakes of North America which have been coveted as a freshwater source to water deficient areas outside the region, increased evaporation and drought are presently reducing lake water levels to near record lows, causing limitations on loads carried by ship. Favorable forest conditions for native trees are moving north and to higher altitudes faster than the trees can follow and disease and insect pests are no longer kept in check by winter cold. As the Inuit people lose their connection to their traditional food supply through disappearance of ice floes and their shore line villages succumb to erosion and collapse as the tundra melts, scientists ponder how much methane (approximately twenty times more potent a greenhouse gas than carbon dioxide) will be released to the atmosphere from the tundra and ocean bottoms as warming proceeds. In the Pacific the loss of islands to human inhabitants as a consequence of predicted sea level rise seems inevitable. Existing drought problems are expected to get worse and new drought regions are predicted to develop. The UCC Environment and Energy Task Force reminds us that the integrity of ecosystems must be considered even if from an anthropocentric point of view. While the fate of megafauna like polar bears, which have no habitat to retreat to as the arctic ice

disappears, are easy for people to be concerned about, many more species, intricate food webs, and critical ecosystem functions are at risk.

Finding effective solutions to provide sustainable energy and drastically reduce greenhouse gas emissions, while maintaining expectations for continued increases in energy use, are unrealistic. This is the Achilles heal of many well intentioned responses to energy depletion and climate change: it is very unlikely that we can continue to use as much energy in the future, regardless of the development of more sustainable fuels and technologies that reduce greenhouse gas emissions. Therefore, reducing energy use and increasing efficiency are critical elements for sustaining the Church and its ability to care for people and the creation. Easy fix schemes for reducing climate change impacts like carbon trading are probably not realistic. Technologies for carbon sequestration may require unrealistic energy use and present new environmental challenges. Solutions can only be found through careful analyses of proposed processes and resource requirements. Such analyses require both moral and technical based scrutiny. Development of alternative fuels like ethanol similarly requires objective analysis. Can the process be truly sustainable; e.g. ultimately work without fossil fuel consumption and excessive use of water supplies? Can grains be used for fuel production without causing food shortages? The UCC needs to be connected to objective and capable scientific assessments when pursuing programs and policies designed to help people and ecosystems in need. The same applies to sustaining healthy local congregations as economic and environmental conditions change.

VII. Vision for the Future

The Energy and Climate Work Group of the UCC Environment and Energy Task Force has only begun to form a vision for the future. This is not a trivial task. The vision as it develops should be acceptable and relevant to the Environment and Energy Task Force and the affected UCC ministries. Much depends on what collaborative and assistance connections are possible and attainable within the existing and future polities. The actions required by the 2005 resolution on “Supporting Congregations and Providing Guidance for Stewardship of God’s Creation during the Coming Period of Declining Fossil Fuels” (addendum A) clearly apply to Local Church Ministries as well as Justice and Witness Ministries. Also the 1999 resolution on “Global Warming” called upon the UCC to keep the global warming issue as a high priority in educational and advocacy efforts while encouraging local churches, conferences, and national agencies to address institutional and personal lifestyles to assure minimum production of wastes that threaten the environment. To date we have found no record of these climate related actions being discussed, much less initiated after the General Synod XXII. Clearly, today we can see that these needs have only become more evident, urgent, and persistent. Both energy and climate are also fertile subjects for policy advocacy actions. The 1999 global warming resolution specifically called for efforts to educate and advocate for ratification of the Kyoto Climate Change Treaty. The UCC’s participation in National Council of Churches environmental advocacy actions may have involved endorsement of the Kyoto Treaty.

We choose to define the reference time period for exercising a UCC vision on energy and climate as the next fifty years, coincident with not only the second half of the UCC's first century, but also the critical period within which humanity must achieve sustainable relationships between energy uses and energy supplies while reversing the rate of environmental degradation and eliminating environmental injustices. The list of proposed actions at the end of section IV of this report represent potential areas for growth of work group efforts to serve UCC ministries, conferences, and local congregations in concert with the Environment and Energy Task Force. Our vision incorporates a need to develop more prospective approaches for preventing future environmental/ecological injustices; i.e. using an understanding of causes of past injustices combined with environmental science knowledge to prevent future injustices in a time of anticipated great stress and change. The UCC work group and task force need opportunities to meet with UCC offices to provide information on energy and climate and better determine specific collaborative efforts. Note that the 2005 energy resolution indicated that "The local church originators of this resolution will provide an in person briefing for the implementing body as an essential first step towards effectively addressing this long term problem." Although that did not happen, the work group is prepared to provide briefings while further developing our vision for service.

The work group has approached its mission with a long range view of expected conditions and challenges for the Church, humanity, and the environment. Our effectiveness will depend in part on whether others share our desire to find a path, however rocky, to a sustainable world in which peace and justice reign.

ADDENDUM A

Resources for Faith Communities on Global Climate Change

EPA's Energy Star program <http://www.energystar.gov/> 1-800-888-STAR YES or 1-888-782-7937

EPA's Energy Star for congregations - contact Joe Gillette: 301-519-6334
joseph.a.gillette@lmco.com
http://www.energystar.gov/index.cfm?c=small_business.sb_congregations

The Great Warming www.thegreatwarming.com
<http://www.thegreatwarming.com/calltoaction/faithcommunities.html>

National Council of Churches of Christ Eco-Justice Programs
110 Maryland Avenue, NE Washington, DC 20002 <http://www.nccecojustice.org>
Cassandra Carmichael, Director of Eco-Justice Programs cassandra@toad.net (202) 544-2350
ext. 27
<http://www.nccecojustice.org/climatestatement.htm> Faith Statements & Resolutions on Climate
Change

Evangelical Environmental Network EEN <http://www.creationcare.org/> 1-800-650-6600
Rev. Dr. Jim Ball, Director, 10 East Lancaster Ave., Wynnewood, PA 19096
<http://whatwouldjesusdrive.org/statement.php>

COEJL - Coalition on the Environment and Jewish Life (212) 532-7436
443 Park Avenue South, 11th Fl., New York, NY 10016 info@coejl.org <http://www.coejl.org/>

US Conference of Catholic Bishops (202) 541-3000
Office of Social Development & World Peace <http://www.nccbuscc.org/sdwp/ejp/index.htm>
United States Conference of Catholic Bishops, 3211 4th Street, N.E., Washington, DC 20017-
1194

National Religious Partnership for the Environment <http://www.nrpe.org/index.html>
nrpe@nrpe.org
49 South Pleasant Street, Suite 301 Amherst, MA 01002 413-253-1515 phone 413-253-1414
fax

Unitarian Universalist Association of Congregations uuaw@uua.org
1320 18th St. NW, Suite 300B 202-296-4672 FAX 202 296-4673
Washington DC 20036 <http://www.uua.org/uuawo/new/article.php?list=type&type=90>

Interfaith Coalition on Energy <http://www.interfaithenergy.com/> E-Mail:
andrewrudin@earthlink.net
7217 Oak Avenue, Melrose Park, PA 19027-3222 (215) 635-1122 Fax: (215) 635-1903
Andrew Rudin

California Interfaith Power and Light <http://www.interfaithpower.org>

Union of Concerned Scientists <http://www.ucsusa.org/>
http://www.ucsusa.org/global_environment/index.cfm

National Oceanic and Atmospheric Administration
www.ncdc.noaa.gov/oa/climate/globalwarming.html

Chesapeake Climate Action Network (CCAN) 301-891-6726
<http://www.chesapeakeclimate.org>

United States -Climate Action Partnership <http://www.us-cap.org/>

Pew Center on Global Climate Change www.pewclimate.org

Natural Resources Defense Council <http://www.nrdc.org>

Climate change unites science and religion
<http://environment.newscientist.com/article/dn10975-climate-change-unites-science-and-religion.html>

Harvard Medical School http://chge.med.harvard.edu/media/releases/jan_17.html

Koshland Science Museum, Washington DC www.koshlandscience.org
<http://www.koshlandscience.org/exhibitgcc/responses04text.jsp>

American CO₂ Emissions Calculator

New York Times January 29, 2007 World Scientists Near Consensus on Warming
<http://www.nytimes.com:80/2007/01/30/world/30climate.html?ex=1170824400&en=f0f92967eb064eee&ei=5070&emc=eta1>

CNN <http://www.cnn.com:80/2007/TECH/science/01/23/climate.report.ap/index.html>

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ADDENDUM B

The Greatest Challenge

Sermon by Philip M. Cook at Peace United Church of Christ

Duluth, Minnesota, November 26, 2006

For decades, many prophets' words have been lost in the winds of exuberant growth of human presence in this biosphere; the thin layer between the earth's surface and space on which all life depends. But now, the reality of the finite energy and material resources available to the biosphere as a limiting factor for life may finally be creeping into the public consciousness.

There is growing awareness that increasing energy costs, associated with demands that exceed supplies, can have profound effects on economic systems and human behavior in the near future. This awareness is accompanied by increasing concern for rapidly advancing impacts of climate change associated with exponential increases in rates of fossil fuel combustion. Our collective global human demands for power, food, and consumer products, many of which are quickly used and discarded as waste, are forcing these problems.

We in the United States have achieved the status of the world's most conspicuous consumers. This leads to all kinds of calculations of our largess. For example; one recent study reports that if all Americans were to loose enough body weight to reach their ideal condition, not only would there be more food for others in need and a healthier population, but annual consumption of gasoline for vehicular transportation in the U.S. would be cut by one billion gallons! It seems that there are many good reasons for traveling lighter as we move forward into the future.

We live in a material growth worshipping society, yet we know that we do not seem to be thereby growing peace, justice, and environmental quality – no matter how much we genuinely wish to do so. Lately, the stock markets and other investment venues have

been bullish. How can that be if we have growing concerns for the future? The answer lays in the fact that market investments are made with expectations of gain on a very short term basis. It seems like our whole strategy has been to gamble on a giant pyramid scheme. As long as we keep going on with the perpetual growth model, those with money to invest can hope for an even wealthier personal future as they work to increase the size of the pyramid (or, at least their personal piece of it). Most decisions are made without a fundamental concern for others, in part because of the belief that growth provides opportunities for all. And, prosperity also is thought to breed charity. Yet, increasingly, abundance in developed countries depends on imported energy and natural resources from less developed countries whose people and ecosystems do not seem to benefit from the trade. And charity often does little more than comfort the wealthy.

How did we evolve to this way of living? Evolution – what a beautiful word (at least to scientists); the fundamental mechanism behind the development of biological diversity and complexity of life forms. Evolution also involves the extinction of many species; sometimes through rare catastrophic events and other times thorough pathways blindly followed to species obsolescence. Among the youngest of species, homo sapiens, is uniquely capable of informed choice and contemplating the future. There was a time when humans worshipped many Gods who were responsible for all change and so the future was beyond prediction.

But in Genesis (41, v 14-57), Joseph, son of Jacob whom God named Israel, was brought from a dungeon by Pharaoh who wanted his dreams interpreted. Joseph told Pharaoh: “The dream of Pharaoh is one; God has revealed to Pharaoh what he is about to do. There will come seven years of great plenty throughout all the land of Egypt, but then seven years of famine will consume the land.” Pharaoh gave great authority to Joseph who led a program to store up all the food during the time of great abundance so there was enough bread in the land of Egypt during the seven years of famine to share with people from other lands.

Today most of us collectively choose through our societal behavior to be the instruments of change – rapid change. In this manner some claim to be acting in accordance with God’s plan. Our society follows a belief that the biosphere can be managed and manipulated for maximum profit. But what are just profits and who will share them? Armed with conviction that we know enough and have unlimited energy and resources, we move forward following the path of least resistance. Rather than acting in accordance with a divine plan for creation, it seems like we really have just chosen to live two lives; one outside of our religion and the other within our religion during the often little time we put aside for our faith.

To maintain such a bipolar existence it seems that our actions must be controlled by our frame of reference. Like choosing reading glasses to focus on that which is close, we choose to relate to what we see in our own present experience and context. So it is difficult much of the time to base values on needs of future generations or costs of accumulating externalities like environmental degradation.

Too often we see things in black and white; as comfortable or uncomfortable; right wing or left wing; evil or good. On this basis, we choose sides and pick our favorite issues, often with a personal more than an ecological and truly spiritual perspective. The net outcome is a chaotic sum of actions based on our individual, rather than community, perspectives. So, like riding a rocket accelerating into space with an uncertain fuel supply, we really haven’t figured out where we’re going together and whether we’ll ever reach a sustainable condition for life.

In biblical times fossil fuels were unknown. People could not know of the changes and events to come many centuries later. It is interesting that the eastern Mediterranean region suffered severe deforestation during the Bronze Age because the demand for wood fuel exceeded the available wood supply. This is referred to as the “Peak Wood” crisis today by those who draw analogy to today’s “Peak Oil” concerns. Of course “Peak Wood” was a regional problem whereas “Peak Oil” is a global concern. The Bronze Age

culture collapsed because the wood supply was depleted. Eventually the Iron Age (circa 1300BC) led up to the time of the Roman Empire.

Was Christ aware of the profound ecological changes that had occurred in the region as a result of human activity centuries before? Regardless, we can wonder how he would have responded to a vision of our future exploitation of fossil fuels for momentary luxuries for a relative few, while ignoring the Common Good, and degrading ecosystems.

Certainly, Jesus in both word and act taught the need for sharing and conserving limited resources. Consider today's scripture reading from John (John 6: 1-13) in which five loaves of bread provided by a boy are shared among 5000. And when they had eaten their fill, Jesus told his disciples "Gather up the fragments left over that nothing may be lost". And what they saved filled twelve baskets.

Today, as world grain stocks are decreasing to levels of concern, too few of us ponder the costs and benefits of shifting grains from food to biofuel production to make up for declining oil reserves. Our desire for easy solutions can lead us to unproductive outcomes. Biofuels like ethanol may ultimately provide some degree of truly sustainable energy but realistically can not allow continuation of the present rates of transportation fuel use. And, contrary to what many believe, combustion of biofuels will not help significantly reduce greenhouse gas emissions if we intend to continue our present wasteful and escalating use of energy. The increasing carbon dioxide levels in the atmosphere are largely determined by the rate at which the gas is delivered to the atmosphere from all sources, including burning of fuels derived from plants and deforestation. Beware of strategies that assert business as usual on the basis of a cornucopian view that assumes that technological fixes are certain to be found.

Rather than looking at energy depletion, climate change, and ecological damage as things we need to fix by just expending more energy and using more non-renewable resources,

we need to confront the real problem which is how to change our behavior when we realize that such is required. True conservation of resources should be the defining virtue of a sustainable society.

Those who are convinced that we have a looming global crisis are torn between alternative approaches to addressing this problem. All are united in concern but differ in views of what human responses are possible. Many have observed that the space between denial and hopelessness seems terribly small for most people faced with the reality of finite energy and material resources coupled with climate and ecological vulnerabilities. Acceptance of responsibility for our individual, but incrementally significant contributions to a biosphere out of balance can lead to positive changes in our personal behavior. The hopelessness seems to flow from an insular lack of trust that others will do the same and that such will be sufficient.

Richard Heinberg in his book “Powerdown” listed four options for personal and societal responses to declining energy resources. “Last One Standing” and “Waiting for the Magic Elixir” are pretty much the responses that the world is likely to follow in the absence of a renaissance. “Powerdown” is the path of cooperation, conservation, and sharing, and “Building Lifeboats” is the path of community solidarity and preservation of knowledge and cultural values. A combination of “Powerdown” and “Building Lifeboats” at local, regional, national, and global levels is most desirable but requires extraordinary actions and commitments ten to twenty years in advance of resource declines or irreversible turning points in climate change. Many believe that we are already well within that needed time period for positive response and preparation and therefore we are already in a crisis mode. It seems that religious communities should be more helpful in supporting positive transitions in collective human behavior.

Mark 14: v22 relates: “While they were eating, Jesus took bread, gave thanks and broke it and gave it to his disciples, saying, “Take it; this is my body.” This symbolic act is repeated in communion services which remind us that we are all a part of the body of

Christ; that is, part of the greater Church. All must participate and contribute harmoniously in order to give the body life and purpose. So this is about what we do together to worship; to promote truth and unity; to use our God-given spiritual and material gifts to care for creation; and to love one another like all our lives depend upon it.

The Gospel of John (John 20, v19-22) relates that Jesus breathed on the disciples in the upper room in which he appeared after the crucifixion. He told them that he was sending them out as his father had sent him. Jesus inspired the disciples by breathing his own breath into them and thus set into motion one of the most powerful potential forces for good the human spirit has ever known. Remarkably, much of Christ's breath is still in active circulation and it is probable that every breath of air we inhale today contains gas molecules that Jesus exhaled. Not only that, the food we eat contains carbon atoms from Christ, recently extracted as carbon dioxide from the atmosphere by plants in our food chain. Let us not forget that carbon is the element of life. In this way, our daily bread does contain the body of Christ which ultimately allows us to live and exhale breaths of Christ. What a finite world we live in that we are interconnected so intimately with great voices of the past and can pass them on. Yet our huge fossil fuel based carbon dioxide releases into the atmosphere take on new symbolic meaning in the course of diluting the breaths of Christ in the air we breathe and the body of Christ in all living things.

Personal steps to conserve resources and communicate concerns are very worthwhile actions; essential for growth of public awareness and building confidence that community based actions can succeed. Ultimately, collective societal acceptance and participation is required. We can choose to follow the body and breaths of Christ (and all other great faith teachers) to join one another in harmonizing and amplifying our personal efforts to reach this goal.

Let there be rejoicing and joy every time we take a step forward on this path down from the peak. May the Church not be just a place for personal coping, but rather, a light for

all together to find the way to a new world of peace, justice, love, and ecological stability.
O God, help us to find ways to be stronger together than we can be as individuals.

Body of Christ/breaths of Christ: the future of all life depends on what we collectively do,
with all that we have been given, to care for creation.

This is the greatest challenge.