

## Climate Change

**Issues:** Climate has always and will always change as a result of natural factors. However, for the first time, human activities, primarily emissions of carbon dioxide, as the result of the use of fossil fuels and changes in land-use, and other greenhouse gases (methane, nitrous oxide, etc.) are also impacting the climate system. Human-induced climate change and the mitigation measures proposed to respond to it pose both short- and long-term concerns for management of the Appalachian National Scenic Trail (ANST). Short-term concerns focus on the impacts of proposed mitigation measures, including the location of wind energy projects, increased coal fired power, and electric utility lines. Mid-term, we need to face dramatic increases in transportation costs for managing the A.T., as well as our own “carbon footprint.” Longer-term, climate change could significantly alter the ecosystems through which the ANST passes and dramatically change the experiences it offers.

**Background:** Concerns centering on global climate change have been growing for several decades. In 1992, 157 nations signed the Framework Convention on Climate Change, which called for developed nations to voluntarily reduce their emissions of the greenhouse gases (GHGs) that cause human-induced climate change. The U.S. ratified this treaty, but it and most other developed nations failed to meet their commitments. In 1997, 178 nations negotiated the Kyoto Protocol, which called for mandatory reductions in developed nation GHG emissions. President Clinton signed this treaty but never submitted it for ratification. In 2001, the Bush administration formally withdrew the U.S. from this treaty, while emphasizing its commitment to voluntary actions to reduce GHG emissions. These voluntary approaches have not stopped the growth in U.S. GHG emissions, which in 2006 were 21 percent above the U.S.’ Kyoto target. Since 2001, numerous states and municipalities have sought to limit GHG emissions, principally carbon dioxide. Industry has also taken steps to prepare for a low GHG-emission future, leading to new interest in non-fossil fuel energy sources, particularly wind, solar and biomass. Looking forward to a new presidential administration in 2009, the U.S. can be expected to take more action on this time-critical issue.

While the causes of climate change may continue to be debated by some scientists, the international scientific consensus is that the ongoing buildup of human-caused GHGs in the atmosphere threatens the stability of the climate system. Unless controlled in the next few decades, climate change would cause profound changes on all continents including:

- accelerated melting of the Greenland and Antarctic ice sheets
- rising sea levels
- changes in distribution and mass extinction of plant and animal species
- increased desertification
- increasing frequency of both floods and droughts
- more intense tropical storms
- a variety of other effects (see [www.ipcc.ch](http://www.ipcc.ch))

Scientists predict that unless action is taken soon, the global average surface temperature could rise as much as 0.7 degrees Fahrenheit in the next twenty years and 2.0 – 11.5 degrees in the next century. Temperatures over land are projected to rise more rapidly, although with significant regional variation. Along with its members, partner agencies and maintaining clubs, ATC is deeply concerned about this projected climate change, which would affect both the natural resources and the visitor experiences of the ANST.

Climate effects are particularly noticeable in national parks like the ANST because of their predominantly natural condition. ATC, its maintaining clubs, longstanding maintainers and staff have already noticed the incremental, but inexorable, effects of climate change. Ten of the hottest years recorded since 1850 have occurred in the last 15 years, with obvious, if anecdotal, impacts on our favorite places, plants, animals and pastimes.

**Current Situation:** In part due to a growing consensus regarding climate change as well as the Energy Policy Act of 2005, both environmentalists and utility investors have increased their interest in renewable energy resources. Separately, new coal-fired power generation is being installed along and upwind of the A.T., even though these plants are a major contributor to carbon dioxide emissions. A summary of ATC's responses to these events follows:

*Wind Power:* As a result of the 15-year long battle with Endless Energy, Inc., a wind-power developer in Maine, last November the ATC Board of Directors adopted a Policy on Wind Energy Facilities that states that ATC “may oppose, may not oppose or may endorse any project.” Of the seven wind-tower proposals reviewed so far by ATC and its partner clubs, only the project on Redington and Black Nubble Mountains was opposed, due to the extraordinary scenic and natural resources evident in the high peaks region of Western Maine.

In light of climate change concerns, ATC and the National Park Service were criticized for opposing that project. However, ATC's wind-energy policy is similar to its Policy on Roads and Utility Development. ATC does not oppose electric generation or wind power, etc., *a priori*. ATC supports properly sited facilities that are in compliance with existing laws protecting the environment, including the National Environmental Policy Act, the Endangered Species Act, the National Historic Preservation Act, and state laws such as Maine's land-use planning statute. In fact, Maine's Land Use Regulation Commission just approved a project that ATC did not oppose (See [Kibby Mountain approved](#)). Any utility development, including wind turbines, biomass, hydropower, solar energy, or electric transmission lines, impacting the Trail's natural, cultural and scenic qualities, will remain of paramount concern to the Conservancy. They must meet existing laws before we will either support or not oppose them.

*Power Lines and Coal Power:* Due to anticipated reliability problems and predicted growth in electricity use, the Department of Energy and utilities are expediting major expansion of coal-fired power generation and enhancements to utility-line distribution systems. Most of the coal-fired power plants are upwind of the Appalachians in western

Pennsylvania, the Ohio River Valley, West Virginia, southwest Virginia, Tennessee and Kentucky (see [Opposition Mounts to Clean Air Change Affecting Parks](#)).

Currently, three major power lines are proposed in Virginia, Maryland and Pennsylvania and more are expected. These “extension cords” will connect coal-rich states with growing demand in eastern seaboard cities. Despite climate change concerns, policymakers feel that coal will be critical to meet growing energy demand. New “cap-and-trade” legislation, aimed at setting overall carbon emission limits nationally, began working its way through the last Congress (Climate Security Act, *aka* Lieberman-Warner bill) but was tabled for the next Congress and administration.

Partially in response to the wind-power development proposals, the Stewardship Council formed an energy subcommittee to develop direction on wind and other energy-generation related issues and to address the growing concerns about energy use and climate change. The energy subcommittee’s goals are now centered on climate change, energy developments, and transportation as they relate to management of the Appalachian National Scenic Trail.

The following discussion questions are meant to aid dialog and input from the RPCs and Trail clubs. A draft resolution prepared by the subcommittee and shared with the council and ATC board of directors follows the questions.

#### Discussion Questions:

- 1) What standing do ATC and the Trail clubs have in the climate change debate?
- 2) Are there synergies or conflicts between addressing climate change and ATC’s core mission?
- 3) Should ATC limit its climate change activities to those with direct trail/operations impact or get involved with broader policy issues and projects?
- 4) Should ATC’s focus be on reducing carbon footprint or on reducing energy use?
- 5) How will volunteer clubs and ATC cope with dramatic increases in transportation and energy costs?
- 6) Does ATC need a climate change resolution? Is this ‘window dressing’ or can a resolution provide specific guidance?
- 7) What concerns might the ATC community have to a resolution?
- 8) What are the human and financial resource/capacity limitations on ATC’s activities on climate change?

## **Draft ATC Resolution Regarding Climate Change**

**Whereas** there is widespread international scientific consensus that the continued increase of greenhouse gases, primarily carbon dioxide (CO<sub>2</sub>), in the atmosphere due to human activities threatens the stability of the global climate system;

**Whereas** CO<sub>2</sub> concentration in the atmosphere is currently at a significantly higher than the historic background level due primarily to the burning of fossil fuels and deforestation;

**Whereas** atmospheric concentration of CO<sub>2</sub> is expected to continue to rise if changes in technology, behavior, and energy and land-use policies are not implemented;

**Whereas** the potential impacts of global climate change including: long-term drought, extreme weather events, increased forest fires, and changes in the timing of the seasons may cause major disruption to the Appalachian Mountain ecosystem and threaten the health and sustainability of the ANST's flora and fauna;

**Whereas** these impacts will directly affect the Appalachian Trail footpath itself due to increased treadway erosion and blowdown obstruction from severe storms, increased invasion of exotic species, desiccation of water sources due to drought, and compromising of the "Walking With Spring" experience due to climatic shifts and timing of the seasons;

**Whereas** ATC has, since its inception, advocated for the primeval environment of the Appalachian forest, has fought to protect thousands of acres of forest lands, and supports the protection of national and state forests and parks and designated wilderness areas;

**Whereas** ATC is charged "to ensure that future generations will have clean water and air, scenic vistas, a healthy natural environment and opportunities for recreation and renewal along the entire Trail corridor" (from mission statement) and through its agreements with the National Park Service, Department of Interior and other agencies, ATC is obligated to the highest standards of protection of the ANST;

### **Therefore be it resolved that the Appalachian Trail Conservancy will:**

Reduce its own carbon emissions by implementing cost-effective energy technology and behavior changes in its operations;

Support energy conservation and renewable energy technology where appropriate;

Educate ATC members and Trail visitors on climate change and its effect on the ANST;

Monitor climate change indicators and collect climate-relevant data through the MEGA-Transect and other environmental monitoring programs;

Support appropriate state and federal carbon-reducing policies and regulations;

Urge continuing efforts to protect Appalachian forest lands for the increasingly important purpose of carbon sequestration and climate moderation;

Conduct further research and analysis with the Appalachian Trail Park Office to determine if the ANST can meet the criteria for inclusion in the National Park Service's "Climate Friendly Parks" program in concert with the implementation of these efforts;

Partner with other like-minded organizations in carbon reducing efforts and climate change education programs.