

## **Climate Change in the Adirondacks: The Path to Sustainability**

Author: Dunbar, Katherine W.

Source: Mountain Research and Development, 32(2) : 260-261

Published By: International Mountain Society

URL: <https://doi.org/10.1659/mrd.mm102>

---

BioOne Complete ([complete.BioOne.org](https://complete.BioOne.org)) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at [www.bioone.org/terms-of-use](http://www.bioone.org/terms-of-use).

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

---

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

## Climate Change in the Adirondacks: The Path to Sustainability

By Jerry Jenkins. Ithaca, New York: Cornell University Press, 2010. xv + 183 pp. US\$ 24.95. ISBN 978-0-8014-7651-8.

As stated early and often by the author, this book is a call to fellow citizens of the Adirondacks to understand the changes underway for the region and to be part of a strategy forward. The strategy suggested is to dramatically reduce or possibly eliminate dependence on fossil fuel use, thereby minimizing carbon emissions and attempting to avoid “dangerous climate change” that will irrevocably change the Adirondack landscape (p 3).

Part I provides an overview of the global and Adirondack-specific changes in climate that have been reported to date, based largely on data from the Intergovernmental Panel on Climate Change and local weather monitoring stations that contribute to the US Historical Climatology Network. In Chapters 1 and 2, Jenkins describes what he calls “the climate problem.” Mirroring the global increases in temperature, temperatures in the Adirondacks are gradually rising. He provides a brief discussion of the possible impacts of various temperature increases over the next century when considering carbon emission scenarios, and concludes that only a low-emission scenario will keep the Adirondacks’ temperature increase under what would trigger an “unrecognizable” shift in the landscape (p 3). Chapter 2 provides illustrations, graphs, and maps for temperature changes, shifts in lake ice freezing and thawing dates, and fluctuations in precipitation for the Adirondacks, based on US Historical Climatology Network data from 1920, along with the myriad ecological consequences of such changes.

Chapter 3 begins the core of the argument, specifically that climatic changes are a result of fossil fuel use, thus “the climate problem is an energy problem” (p 11). The chapter describes the historical switch to fossil fuels and their current distribution and use globally, and considers if they can be replaced by other sources of energy. It also discusses the general energy budget of a household in the Adirondacks and lays the groundwork for the author’s argument that, because household energy consumption is significant, reducing it would also be significant for the national energy budget.

Chapter 4 reviews the connection between carbon dioxide and temperature increases and the possible scenarios given various carbon reduction timelines put forth by the Intergovernmental Panel on Climate Change. The author then illustrates what the Adirondacks could look like when considering the various possible temperature shifts, with a focus on the snow and ice that so define the area, ecologically and culturally. This leads into the discussion in Chapters 5 and 6 that detail the elements and species that could be lost given the possible warming scenarios. Beyond the ecological loss, the shifting of northern environs will affect the economy of the Adirondacks which is oriented toward winter recreation.

Part II discusses the carbon footprint of the region in detail and what steps could reduce it. The assessment begins with a discussion of the direct and embedded energy budgets of households and counties for electricity, transportation, food, and goods and services. Jenkins concludes that transportation and housing energy costs are the largest direct carbon emitters for the region. After this conclusion, Chapters 8 and 9 outline the strategies to reduce transport and housing emissions, respectively, through behavioral thrift and efficiency upgrades. Chapter 10 discusses the benefits and limitations of unconventional energy supplies already available in the

Adirondacks: photovoltaic, thermal, wind, hydroelectric, shallow geothermal, nuclear, and biomass.

Chapter 11 provides an overview of how Adirondack forests absorb carbon and thus provide carbon offsets. The Adirondacks have a large carbon bank, although there is no guarantee that the forests will reach maturation. Further, as the temperatures and climates change, the rate at which forests absorb carbon also shifts. The various ways in which the 2.6 million acres of private forest is managed will affect the carbon offset for the region, and thus Jenkins details 4 possible carbon management strategies. Chapter 12 asks whether the Adirondacks can become energy independent by generating enough renewable energy to eliminate fossil fuel for local uses. He argues that, because much energy in the region is wasted, the first step is to use thrifty and efficient practices to reduce the overall consumption. Second, he hopes that fuel prices and carbon taxes will encourage vehicle efficiency and that new and renovated construction will reduce the number of “old leaky buildings” through incentives such as low-interest loans and tax incentives (p 147). He argues that the question is not “if” but “how” to produce this renewable energy. This chapter reviews possible combinations of renewable sources that could supply the necessary energy for independence from fossil fuels.

In addition to potential fuel savings and a reduction of carbon emissions, these strategies could encourage the economic independence of the region, as the Adirondacks would own much of the energy production. Jenkins suggests that financing energy independence should start with government subsidies to compete with fossil fuels, and guaranteed rates for generated renewable power. Chapter 13 is a review of the limitations and benefits of these funding mechanisms and the current state of “perverse incentives” (p 157) that currently operate in the US renewable energy market.

The book ends with a “sober” conclusion that, although the Adirondacks could be among the United States’ first energy independent regions, there is little political leadership focused on that goal. Jenkins views the main obstacles as technical and economic and, most importantly, behavioral. He cites the significant opposition to renewable projects with big footprints, for example, commercial wind, and a national preference for big houses and cars. He argues that price increases for fuel alone will not affect individual behavior regarding energy use. Instead, he proposes establishing incentives for conservation and renewable energy at both individual household and commercial production levels. Because significant behavioral obstacles are one of the main conclusions, specifics of

current political and societal perspectives on climate change within the Adirondacks and the vision of current political leaders for the region would have strengthened Jenkins’ arguments. He recommends that the best strategy to change energy use patterns is for interested individuals to prove the cost savings of renewable energy, beyond the theoretical benefits, by creating examples of savings. As part of this strategy, he advocates avoiding the political pitfalls by talking about economic benefits over climate. Economic benefits, he suggests, are more difficult to argue against than the environmental costs and benefits discussions within the highly politicized arena of climate change.

Climate change impacts and the potential responses are compelling topics, with many recent volumes

attempting to unpack incredibly complex ideas in an easily digestible package. The colorful diagrams and maps provided in this book, along with some specific calculations for households and larger units, will be appealing to audiences seeking to connect the larger narrative of climate change with specific impacts and potential responses. Ultimately, this is a well-illustrated and extremely approachable discussion for people invested and interested in the energy future of the Adirondacks.

#### AUTHOR

**Katherine W. Dunbar**

*dunbar@uga.edu*

*Center for Integrative Conservation Research,  
University of Georgia, Athens, GA 30602, USA*

Open access article: please credit the authors and the full source.