

FORUMS

Introduction: Ask Not...Voices from Maine Addressing Climate Change and Energy

Sam Townsend, Guest Editor 12

Maine's Climate Yesterday, Today, and Tomorrow

Based on a recently completed study, the authors describe the changes Maine's climate is likely to undergo over the next century and suggest that the state needs to be prepared for the impact that climate change will have on various ecosystems and economic sectors within the state.

George L. Jacobson, Ivan J. Fernandez,
Paul A. Mayewski, Catherine V. Schmitt 16

Understanding the Global Energy Industry Is Key to Meeting Maine's Energy Challenge

Elizabeth Wilson analyzes the global petroleum industry and the challenges and solutions ahead for the U.S. and Maine as we seek to reduce dependence on fossil fuels and develop other cleaner and cost-effective energy sources.

Elizabeth A. Wilson 24

The Energy Challenge—Gone Today, Back Tomorrow: Maine's Key Role

Although world energy trends suggest that increased demand for fossil fuels is likely to continue, William Hastings argues that Maine is nonetheless poised to potentially become an energy leader in the near future, as a surprising number of new projects are increasing the diversity of the state's energy supply.

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THE MARGARET CHASE SMITH ESSAY

Challenging Climate Change

U.S. Senator Olympia J. Snowe 8

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What We Can Expect from the Federal Government to Address Climate Change and Energy Independence

Adam Cote highlights major federal energy and climate initiatives likely to be introduced by the new administration and Congress; many could be important for Maine, particularly those that promote clean energy, energy efficiency, conservation, and "green-collar" jobs.

Adam Cote 46

Confronting Global Warming: Maine's Multi-Sector Initiatives, 2003–2008

David Littell, Gary Westerman and Malcolm Burson describe Maine's pioneering efforts in reducing greenhouse gas emissions, promoting energy efficiency, and developing less carbon-intensive and more sustainable energy sources, particularly the goals and accomplishments of the state's Climate Action Plan.

David P. Littell, Gary S. Westerman,
Malcolm C. Burson..... 52

The Effects of Climate Change on Economic Activity in Maine: Coastal York County Case Study

Charles Colgan and Samuel Merrill evaluate risk estimates in a case study of the projected consequences of sea level rise and coastal storm damage on the economy of the state's most vulnerable area, York County's coastal communities.

Charles S. Colgan, Samuel B. Merrill..... 66

Workforce Investment in Maine's New Energy Economy

Robert Brown and Clifford Ginn discuss how Maine can be in an excellent position to take advantage of "green economy" workforce funds and programs if the state develops the needed policies, institutions, industry partnerships and practices that have been successful elsewhere.

Robert E. Brown II, Clifford M. Ginn 80

EFFICIENCY

Energy efficiency is cheaper than any current sources of power or fuel. Dylan Voorhees addresses barriers that need to be overcome and the needed expanded strategy if Maine is to tap its energy-efficiency potential. Tim Vrabel provides an overview of the Efficiency Maine program.

Tapping the Potential of Energy Efficiency to Create Greater Economic Security for Maine

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Efficiency Maine: Investing in Energy Savings and Knowledge

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NEW TECHNOLOGIES AND ALTERNATIVE FUEL INITIATIVES

Maine needs to develop both new sources of energy and new technologies to extract energy. These include, but are not limited to, large-scale wind power generation (Jackson Parker); generating electricity from gas produced by landfills (Sam Zaitlin); expanding and developing bioenergy from wood (Thor Olesen); and developing tidal power (John Ferland).

Maine's Wind Resource: A Source of Energy and Economic Engine

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Landfill: Gas to Energy

Sam Zaitlin 105

BioEnergy and the Forest Products Industry in the Atlantica Region

Thor Olesen 107

Tidal Energy Development

John Ferland 111

TRANSPORTATION AND RESIDENTIAL SECTORS

Transportation and residential sectors in Maine use a large proportion of fossil fuels and are a major contributor to greenhouse gas emissions. Jonathan Rubin reviews mechanisms by which transportation petroleum demand and greenhouse gas emissions can be reduced. Dale McCormick and Lucy Van Hook describe MaineHousing's carbon market project, noting that energy use in buildings is the "next frontier" for emissions reductions. Richard Renner presents architectural design principles that should be employed to minimize buildings' energy and resource demands and to maximize efficiency.

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Connecting Residential Energy Efficiency and Carbon Emissions Reductions: MaineHousing's Carbon Market Project

Dale McCormick, Lucy Van Hook 120

Size Matters: Notes on Green Design Process and Goals

Richard K. Renner 127

COMMERCIAL AND INDUSTRIAL SECTORS

Maine is home to an increasing number of innovative and imaginative businesses and manufacturers that are seeking to use less energy, reduce greenhouse gas emissions, explore alternative types of energy, and operate more efficiently. We feature here articles describing efforts by four of these companies: Poland Spring Bottling, Prime Tanning, Fairchild Semiconductor, and Oakhurst Dairy.

Poland Spring Bottling/NWNA's Efforts to Reduce Energy Use and Cut Back on Carbon Dioxide

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The 90/10 Rule: Energy Use Improvements at Prime Tanning

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Fairchild Semiconductor's Efforts to Reduce Greenhouse Gas Emissions

Joel H. Rouillard 136

Oakhurst Dairy: Taking on the Carbon Challenge

Stanley T. Bennett II. 139

REGIONAL AND LOCAL APPROACHES

In the absence of federal leadership, states and communities have taken action about energy and climate. Sondra Bogdonoff discusses the 10-state Regional Greenhouse Gas Initiative, the first U.S. regional program to address climate change. Travis Peaslee describes the comprehensive energy efforts of the city of Saco. Samuel Merrill, Robert Sanford, and Mark Lapping discuss the planner's role in helping communities prepare for climate change. Martha Kirkpatrick urges a focus on the sense of community in facing the challenges of energy instability and environmental harm brought about by human activity.

The Regional Greenhouse Gas Initiative: What It Means for Maine

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What One Municipality Has Accomplished: The City of Saco and Its Energy Committee

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Planners and Climate Change Action: An Approach for Communities

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Finding Grace and Hope in Community

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