

### RFF Setting the Stage for Important Climate Policy Discussions

Resources for the Future provided forums for discussion on business, politics, and climate change at two major events this fall. Sen. Jeff Bingaman (D-NM) delivered key remarks at both events, which were cohosted by CLIPORE, the climate policy research program of Sweden's Foundation for Strategic Environmental Research.

Bingaman provided the luncheon address at a conference the two organizations convened in New York on November 30 to examine European and American business views on emissions trading and climate policy. Speakers at the daylong event included industry and utilities executives, representatives from the oil and gas sectors, economists, and policymakers. According to most, the United States is moving toward a national policy mix that will inevitably include mandatory programs to control carbon dioxide emissions.

Both businesspeople and economists at the conference agreed that one key issue for a U.S. climate program would be the rules for distributing emissions allowances. Since those allowances would have substantial market value, participants noted, the allocation system would have important implications for the terms of competition among different sources of energy and among different parts of the country. One complicating fac-

tor is that electric power generators in about half of the country are deregulated, while the other half continue to operate under traditional price regulations, allowing them to pass costs forward to their customers.

Uncertainty around the timing and the structure of climate policy changes has left the electricity industry in a quandary about how to proceed on reducing greenhouse gas emissions. To move ahead, the executives agreed, business needs clear price signals on carbon dioxide emis-

sions to drive the shift to new technologies. At the same time, price signals alone cannot be the solution—national policy must include a mix of carbon pricing and technology support.

More broadly, several business leaders stressed the need for greater public understanding of climate policy and support for action. They asserted that a disproportionate responsibility for emissions control is being assigned to corporations. “The private sector can’t do it on its own,” said Kevin Fay, executive director of the International Climate Change Partnership, a business group.

Timothy J. Richards of General Electric ticked off a wide range of technologies that could contribute powerfully to reducing carbon dioxide emissions. But he also listed some of the barriers to using them: some have costs that are, at least initially, higher than those of present equipment. Some industries and governments are

Sen. Jeff Bingaman of New Mexico (left) is greeted by RFF Senior Fellow Ray Kopp before briefing a standing-room audience on U.S. climate policy. The event, sponsored by RFF and CLIPORE, was held at the first UN Conference on Climate Change since the implementation of the Kyoto Protocol. Bingaman's address was the only public appearance by a member of Congress at the Montreal conference.



# Weatherwane: A Guide to Global Climate Policy

**From regional initiatives to national actions to international treaties, climate policy captures the attention of policymakers, business and environmental leaders, and citizens of countries throughout the world. RFF scholars continue to be at the forefront of research on the environmental and economic aspects of climate change and on efforts to develop climate policy.**

**RFF is pleased to announce Weatherwane, a new website highlighting the work of RFF scholars. Signaling developments and directions in climate policy in the United States and around the world, Weatherwane provides direct, online access to the most up-to-date findings from RFF's research.**



[www.weatherwane.rff.org](http://www.weatherwane.rff.org)

not aware of what is available. Some technologies need modification for use in developing countries. And some technologies face regulatory and policy barriers, such as tariffs on imported equipment.

Technology is actually available, and not really that expensive, so what is needed are a few focused efforts to make it happen, he observed.

"I believe the world is getting warmer," said James E. Rogers, chairman and chief executive of Cinergy Corp., who praised the British government for setting targets for the year 2050. He advocated what he termed "cathedral thinking," likening climate change policies to the plans of architects and builders of great European cathedrals. "They didn't know if the designs or the construction techniques would work—and they knew they wouldn't live to see the final product—but they went ahead for the sake of future generations," Rogers said.

Meanwhile, he noted, many utility executives expect that Americans will be living in a "carbon-constrained" world in the near future. He added, "I

personally believe that mandatory caps is where we'll end up."

A tipping point may have come last June, when the U.S. Senate approved a resolution calling for legislation to impose mandatory, market-based limits on greenhouse gas emissions.

Bingaman told conference attendees that he considered it possible to achieve that legislation within the next two years. But other speakers pointed out that the Bush administration adamantly opposes mandatory controls, and the House of Representatives is likely to be guided by the White House.

## **RFF at COP-11**

Bingaman reiterated his position at a side event hosted by RFF and CLIPORE at the United Nations Conference on Climate Change in Montreal the following week. That event, titled "Engaging the U.S. in Climate Policy: Recent Developments and Prospects for the Future," followed the New York conference, and provided a forum for the only public remarks by any member of the U.S. Congress at the meetings.

To a room overflowing with those eager to hear more about climate change policy developments in the United States, Bingaman discussed the evolution of thinking within the Senate regarding the development of federal greenhouse gas policy and reiterated his belief in a mandatory, economywide policy to limit greenhouse gas emissions.

Until now, the McCain-Lieberman bill has been the leading legislative proposal, but the Senate has defeated it twice. The alternative, Bingaman said, is the concept put forward by the National Commission on Energy Policy (NCEP). He outlined the three important differences between them: the NCEP concept would set less ambitious goals, establish a maximum price for allowances to limit the cost of emissions reduction, and provide for periodic congressional review.

The senator's talk was followed by remarks from Fay; Christopher Walker, managing director, Greenhouse Gas Risk Solutions, SwissRe; and Ambassador Bo Kjellén, leader of the Swedish delegation to the Kyoto Protocol negotiations.

Fay called for governments of all nations to provide more certainty regarding long-term emissions reduction goals and paths for achieving those goals. “For most industries, we are already into the product planning period for 2012,” he noted, as the Kyoto Protocol’s limits on emissions end in 2012, and what happens thereafter has not yet been negotiated.

Walker offered an insurance company perspective, stating that the sector is likely to be affected by the adverse impacts of climate change before other sectors of the economy. “We do believe the climate is changing,” said Walker. “Unusual events are accumulating,” including weather patterns, and that, he noted, is creating concern in the insurance industry.

Ambassador Kjellén concluded the session, providing a European response to the senator’s remarks and the commentaries given by the industry representatives. Citing the international leadership the United States provided in the early 1990s as discussions of global action were beginning, he expressed the need and hope for renewed engagement by the United States.

While in Montreal, RFF also co-hosted an official United Nations side event, with World Resources Institute and the Northeast States for Coordinated Air Use Management, on the Regional Greenhouse Gas Initiative being put forward by a network of states in the Northeast. That event, titled “The RGGI Model: Allocations, Offsets, and Linkages,” was moderated by RFF President Phil Sharp and featured RFF Senior Fellow Dallas Burtraw as a panelist. The two side events illustrated the breadth of RFF’s contributions to ongoing discussions on climate policy at all levels. ■

## Taking the Measure of U.S. Energy Policy

The Energy Policy Act of 2005, signed into law in August, is the first major piece of energy legislation passed in a decade. Last November, RFF, GLOBE USA, and the Henry M. Jackson Foundation presented a daylong seminar to examine the act and assess how well it addresses the key drivers of contemporary energy policy: national security, climate change, and technology development and deployment.

This seminar was the culmination of the Energy 2050 series of Congressional briefings that explored policy options and strategies to address America’s future energy needs.

### National Security

Frank Gaffney, president and CEO of the Center for Security Policy, warned about the dangers of dependence on unstable or unfriendly foreign sources of oil. He argued that this situation places the U.S. economy in a perilous position and pumps millions of dollars into unreliable countries daily.

A frequently cited possible insulator from global oil market shocks is the Strategic Petroleum Reserve (SPR). The Energy Policy Act calls for the SPR to be increased from 700 million barrels of oil to one billion barrels but does not address criteria for tapping into the reserve. “Should there be more explicit use criteria? What is the optimal size?” asked

Joseph Aldy, an RFF fellow. He noted that it took nearly two months for oil released from the reserve following Hurricane Katrina to reach the market—indicating that the SPR does not insulate the U.S. economy from the volatile international oil market.

Joel Darmstadter, an RFF senior fellow, argued that “a dramatic switch to oil self-sufficiency wouldn’t keep the U.S. from feeling shocks. The key to insulating ourselves is simply using less oil.” Unfortunately, initiatives laid out in the new energy bill, he said, offer no quick fixes.

Rob Weiner, Gilbert F. White Post-doctoral Fellow at RFF, concluded the discussion, noting, “Uncertainty and volatility—not high or low prices—determine energy security.”

### Climate Change

Although the Energy Policy Act did yield a title addressing greenhouse gas (GHG)-reducing technology development and deployment, it took no action on limiting GHG emissions. However, according to Nikki Roy, congressional affairs director at the Pew Center on Global Climate Change, “Whenever you’re writing an energy bill, you’re also writing a climate change bill, whether you intend to or not. The issues of energy supply, energy security, and climate change are almost inextricably linked.”

Panelist Richard Morgenstern, an RFF senior fellow, went on to highlight the impact economics has had on climate policies, making reduction targets more realistic and acting as a driving force in domestic climate policy.

William Pizer, an RFF fellow, pointed out that recent policy discussion—including the Sense of the Senate resolution on climate change—indicates “something like a consensus on a climate change approach is emerging.” With the resolution, he ex-

plained, policymakers for the first time called for action that might cause some harm to the U.S. economy.

#### **Technology Development and Deployment**

Opening a discussion on the strengths and limitations of technology policy in addressing projected energy demand, Brian Castelli, executive vice president of the Alliance to Save Energy, noted that the Energy Policy Act of 2005 will help spur technical developments by providing tax incentives for fuel-efficient appliances and tax credits for energy-saving building design. However, Castelli said, "It does virtually nothing to promote conservation technologies in cars and trucks or in manufacturing."

Other panelists reviewed factors that have limited innovation in energy technologies in recent years. Linda Cohen, economics professor at the University of California, Irvine, said indirect costs of research, lack of incentives, poor patent policies, and outsourcing of new product development were to blame.

Karen Palmer, Darius Gaskins Senior Fellow at RFF, enumerated prospects for such processes as clean coal technology, coal gasification, and renewable energy sources. "Higher energy prices and greenhouse gas emission standards may spur these technologies into marketable products," she noted.

RFF Visiting Scholar Robert Fri looked at the problems facing a revived U.S. nuclear power industry and pointed to provisions in the new energy act designed to encourage building of the first new nuclear power plant in the United States since the 1970s. However, even a restored nuclear power industry won't dramatically change the U.S. energy picture for the better, he predicted. ■

## **Heating Subsidies Make a Difference in Offsetting Winter Mortality Rates among the Poor and Elderly**

*by Joseph E. Aldy*

Some households could pay up to 38 percent more to heat their homes this winter than last year, according to the U.S. Department of Energy (DOE). This energy price shock, coupled with the possibility of occasional cold-weather spells during the winter, can adversely affect the health of households, especially those living on tight budgets and the elderly. People will pay more to heat their homes and spend less on food and prescription drugs, and some who can't pay their energy bills will have their heat turned off.

Higher mortality rates, especially for cardiovascular and respiratory causes of death, are associated with colder winter temperatures, according to extensive epidemiological literature. In recent research, I have extended the standard epidemiological framework to assess the effects of energy prices and energy subsidies on low-income households, in addition to the effect of temperature on winter mortality risk. To complement this work, I have also estimated the effects of higher wintertime energy bills on elderly individuals' prescription drug expenditures.



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Between 1983 and 2000, December, January, and February had the highest average national mortality rates, with even rates higher in colder-than-average years. Consistent with prior epidemiological research, I found that winter temperatures, and colder-than-average winter temperatures, were associated with higher mortality rates. But even after accounting for these temperature effects, higher energy prices were also found to be associated with higher wintertime mortality.

Cold weather can severely stress the health of the old and frail, and this can be exacerbated by high energy prices, which are effectively the cost to a household of mitigating its exposure to cold temperatures. If gas or heating oil prices are low, then even low-income households can respond to a winter cold spell by turning up their radiators or maintaining a comfortable temperature on their thermostats. High energy prices, however, appear to force low-income households to consider substantial trade-offs that may impair their health.

So given this basic premise, that the poor and the old suffer more when temperatures fall, how well have government policies worked to insulate them from weather and energy price shocks? To address this question, I looked at the Low Income Home Energy Assistance Program (LIHEAP), which has provided subsidies to U.S. households for home heating during cold winter months (and in some states, for cooling in hot summer months) since the 1980s. The program, funded primarily by block grants from the federal government to all 50 states, provides a check, voucher, or direct utility payment once during the heating season for households below a percentage of

the poverty line, which varies among states and over time.

In my analysis of LIHEAP, I focus on the mortality risk reduction benefits for the low-income elderly. I find that states with more generous LIHEAP programs that cover a greater share of their 60-and-over population have lower mortality rates during the months of December, January, and February, after accounting for the effects of temperature, energy

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prices, and socio-economic characteristics. These energy subsidies generate greater mortality risk reduction benefits in states experiencing colder-than-average months relative to those with typical winter temperatures. The mortality reduction benefits are also much greater for “cold” winter states, such as North Dakota, than for “warm” winter states, like Florida. The program also provides some assistance for cooling in the summer, but this does not have a significant impact on summertime mortality rates.

Through a variety of analyses, I esti-

mate that the LIHEAP program reduces winter premature deaths by 2,400 to 3,800 among the 60-and-over population annually.

Energy subsidies may reduce wintertime mortality for two reasons. First, such subsidies help low-income households keep their heat on. DOE surveys show that utilities turn off the heat for some 1.5 million households at some point during a typical winter. Extremely cold indoor temperatures can cause hypothermia and further stress weakened cardiovascular and respiratory conditions. Second, energy subsidies can mitigate the stark trade-offs some low-income households face regarding consumption of basic goods.

Prior research has shown that some low-income households reduce their food intake in response to cold winter temperatures. To complement this prior “heat or eat” research, I focused on the trade-off between wintertime heating bills and prescription drug expenditures. Every dollar a household living below the poverty line with a 60-and-over member pays for higher energy bills reduces its prescription drug expenditures by some 40 cents. In contrast, there is no significant impact of higher energy bills on the prescription drug expenditures of households living above the poverty line.

These findings indicate that heating subsidies to the low-income elderly can partially offset the mortality effects of cold weather and energy price shocks by mitigating the tough choices low-income households face among heating, eating, and buying prescription drugs. Future research will further explore the design and implementation of the LIHEAP program to determine how best to target the program to maximize its benefits. ■