Goings On

Rep. Mark Udall Says "Hyperpartisanship" to Blame for Failure to Pass Energy Bill

Congress's ongoing struggle to pass a comprehensive energy bill is caused, in no small part, by "hyperpartisanship," said Rep. Mark Udall (D-CO), who spoke at an RFF Policy Leadership Forum in early September.

Both sides are deadlocked over the bill because of numerous amendments over controversial issues like opening up the Arctic National Wildlife Reserve for drilling. If this provision alone were taken off the table, Udall suggested, many more Democrats would work for the bill's passage.

While critical of the Bush administration's activism on the bill, Udall said, "We all share some of the blame." The process of bringing the bill to fruition, which has gone on for many years, has been encumbered by constant shifts in political priorities. "Not everyone has been at the table and fully involved," he said, and that has prompted many legislators and special interest groups, Democrat and Republican, to introduce language to meet their needs.

Udall said he was deeply disappointed by the fact that the current version of the bill fails to address two key problems: the reliability of the nation's power generation grid, despite last summer's widespread blackout; and extension of the renewable energy production tax credit, which is now buried in the current tax reform proposal. Utilities need more time and predictability as they move toward greater use of renewable sources, he said.

While the administration and Congress are at a standoff over energy policy, the states are forging ahead anyway, Udall said. Sixteen states have passed renewable energy portfolio standards, requiring utilities to generate some percentage of their power from renewable sources. And Colorado may become number 17, Udall said proudly. A state ballot initiative, which he helped drive with support from the Republican state treasurer, has a good chance of passage this fall, he said.

"We told the voters that it would bring economic development in rural communities, help diversify our energy sources, and bring new jobs to Colorado, ones that would be tough to send offshore," he said. "We want to see if we can become the Saudi Arabia of wind and solar power generation," he joked.

Udall's commitment to making renewable energy a much greater priority extends back to Congress, where he serves as the co-chair of the Renewable Energy and Energy Efficiency Caucus, which has 224 members spread across the political and geographical landscape. He is also a member of the House Resources, Science, and Small Business Committees and the Science Subcommittee on Environment, Technology, and Standards as well as the Subcommittee on Space. ■

We told the voters that the state ballot initiative would bring economic development in rural communities, help diversify our energy sources, and bring new jobs to Colorado. We want to see if we can become the Saudi Arabia of wind and solar power generation.

Amory Lovins at RFF: "Our Energy Future Is Based on Choice, Not Fate"

Our dependence on oil can be eliminated by proven and attractive technologies that create wealth, enhance choice, and strengthen national security, according to Rocky Mountain Institute CEO Amory Lovins, who spoke at an RFF Policy Leadership Forum in September. The revolutionary thinking of the "consultant physicist" has earned him international recognition, including a MacArthur Fellowship, an award from the Heinz Family Foundation, and eight honorary doctorates.

America's consumption of oil risks both the nation's competitive strength and its security, Lovins noted, and he outlined strategies for dramatically reducing U.S. oil usage through better efficiency, competitive biofuels, and saved natural gas. His presentation focused on the automotive industry and drew from *Winning the Oil Endgame: Innovation for Profits, Jobs, and Security,* his new study that was supported in part by the Department of Defense.

Lovins believes that unless key changes are made in the U.S. auto industry soon, Japan and the EU will "eat Detroit's jobs for lunch." Foreign auto competitors are researching lighter, more fuel-efficient cars, and American manufacturers cannot afford to be left behind, he said. In addition, U.S. overdependence on oil contributes to energy insecurity, geopolitical rivalries, price volatility, and climate concerns.

Avoiding these consequences—and an energy future dictated by OPEC or marred by sizable cost-benefit tradeoffs—is possible, Lovins asserted, declaring that "the United States has more market power than OPEC." While OPEC may control the supply, the United States controls the demand. U.S. manufacturers and consumers proved this during the 1970s oil crisis by curbing demand enough to essentially break the OPEC cartel, he said.

A Superefficient Future?

By 2025, Lovins projected that cars and light trucks, such as SUVs, pickups, and vans, will account for half of U.S. oil use, a situation that is essentially untenable. The way out, he said, will come from ultralight materials like carbon-fiber composites that can halve vehicle weight, increase safety, and boost efficiency to about 85 miles per gallon for a midsize car or 66 m.p.g. for a midsize SUV. Much of these energy savings comes from the ultralight materials because, according to Lovins, currently three-quarters of fuel use is accounted for by the weight of the vehicle.

Lovins faulted consumers and automakers alike for limiting their views on what is possible. Basic auto industry and policy assumptions are that tradeoffs are inevitable and that superefficient cars will only sell with government intervention. Lovins wondered, however, "what if superefficiency makes a *better* car?" A breakthrough in successfully manufacturing these improved vehicles, he noted, would create a car consumers would want to buy anyway.

Traditional objections that lightweight vehicles would be too expensive and unsafe are no longer valid, Lovins argued. Carbon-fiber vehicles are simpler and cheaper to manufacture, he said, citing an SUV prototype made up of 14 body parts that snap together.

Ease of manufacturing doesn't mean unsafe, however. Though light, carbon fiber is strong, absorbing 6 to 12 times as much energy per pound as steel.

Rocky Mountain Institute's new report identifies four integrated steps to this new future for energy and the automotive industry:

- double the efficiency of using oil,
- apply creative business models and public policies,
- provide one-fourth of U.S. oil needs by spurring the development of a major domestic biofuels industry, and
- save half the projected 2025 use of natural gas.

To achieve this, Lovins calls for investments of $180 billion over 10 years, with $90 billion earmarked for transportation equipment and the other $90 billion allocated to build an advanced biofuel industry. Considering the United States currently spends $120 billion per year on oil imports, these investments would generate $150 billion per year in societal value by 2025—including one million new American jobs, the majority of them in rural areas.

The auto industry once switched, in six years, from open-wood bodied cars to 70 percent closed-steel ones, Lovins said. "With the right steps taken now, we can win the oil endgame within a decade." ■

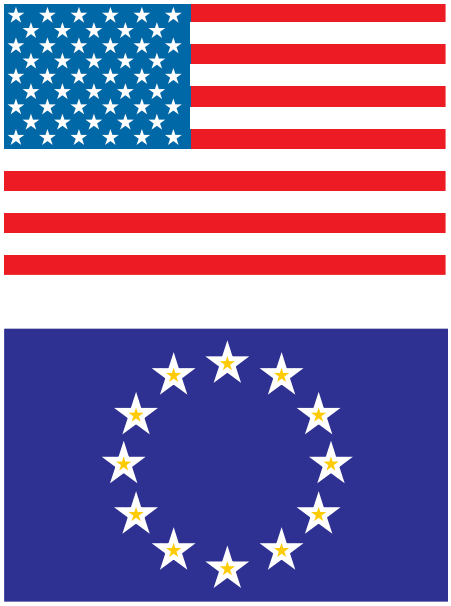
Who Has the Best Ways to Shape Environmental Policy, the United States or Europe?

Policymakers in the United States often assert that economic carrots on sticks can produce better—and voluntary—environmental improvements, while Europeans usually lean toward more punitive governmental regulation. Although they are contrasting strategies, they can both lead to similar outcomes and have a place in the regulatory arsenal.

That was the consensus of a panel of administrators and scholars who commented at a June seminar on a new RFF Press book, *Choosing Environmental Policy: Comparing Instruments and Outcomes in the United State and Europe,* edited by RFF Fellows Winston Harrington and Richard Morgenstern and Thomas Sterner of the University of Gothenburg.

In reviewing the impact of market-based economic incentives and direct regulation, the authors find that neither alternative is clearly superior in every circumstance. In fact, says, Josephine Cooper, vice president of government and industry affairs for Toyota, practice varies from one country to another because of different cultures.

"So much environmental regulation both here and abroad is based on hypothesis rather than real-world experience," said Cooper. "This book looks at the actual success rates of policies implemented over several years under market conditions. It provides valuable practical lessons to both the regulators and the regulated."



The book focuses on genuine outcomes in an area of policy that has been left largely to theoretical modeling. In general, Morgenstern said, economic incentives have resulted in greater reductions of emissions than they were originally designed to produce, while what is commonly called command-and-control regulation has resulted in less. One reason, Harrington noted, is that under a system of tradable permits a violator's competitors have a direct incentive to insist on compliance.

John Graham, administrator of OMB's Office of Information and Regulatory Affairs, pointed out that actual practice reflects a lot of mixes between the two alternatives. He warned against the assumption that economic incentives are widely accepted in American politics, citing Congress's recent refusal even to give serious consideration to trading schemes for fuel economy standards on the automobile industry.

In discussing questions for future research, Albert McGartland, director of the National Center for Environmental Economics at EPA said that it would be worth knowing the relative effectiveness of the various methods of encouraging technological development to combat pollution. Cooper observed that command-and-control works better in implementing safety regulations in the auto industry, while it has a dampening effect on technological innovations to aid the environment.

Joseph Goffman, former senior attorney with Environmental Defense, advocated a broader look at the shift in American policy to economic incentives. This shift was partly a reaction, he said, to a crisis of confidence in the late 1980s regarding air quality and the difficulties of achieving further progress. "EPA bureaucrats' feet were stuck in cement, and we are seeing that cement begin to dissolve" because regulators are perceiving the value of using marketable permit-based approaches to emissions control.

Miranda Schreurs of the University of Maryland asked how the American and European experience might apply to developing countries. Does it matter, she asked, what kind of pollution is the target—air or water pollution, for example? Further research, she said, might also look at voluntary agreements between government and industry, an instrument that has sometimes proved useful. ■

What Goes Up Must Come Down– Controlling Mercury Emissions

The fierce debate between the Bush administration and the environmental community about mercury pollution and what to do about it shows no signs of letting up. To facilitate discussion on this important issue, RFF held a forum in June to bring all sides together. Participants included Michael Miller, vice president for environment, Electric Power Research Institute; Pauline Middleton, president of the consulting firm Panorama Pathways; and Michael Murray, staff scientist at the National Wildlife Federation.

Mercury is a heavy metal that gets into waterways after it is released in medical and municipal waste or, more commonly, emitted when coal is burned to produce electric power. If consumed, the chemical is an acute neurotoxin. Mercury emissions caused by humans have declined by 50 percent since 1990, but the chemical accumulates in soil and in bodies of water over time, so it is still a cause for concern.

Currently more than 40 states have issued advisories about mercury contamination in a wide variety of fish species. The FDA and EPA recently issued warnings that pregnant women and small children should limit their consumption of some fish and avoid others altogether that come from more than 800,000 miles of rivers and 14 million acres of lakes, including Lake Champlain and Walden Pond.

Most of the mercury deposited in the United States blows in from sources overseas, mainly in Asia, according to Miller. Similarly, two-thirds of mercury emissions from American power plants are deposited outside this country. Miller was optimistic that a cap-and-trade system, along with maximum achievable control technology, more commonly known as MACT, would reduce emissions by 5 percent nationwide and even more in the eastern half of the country.

Middleton emphasized the global nature of the problem. "Whatever goes up, must come down, and in the case of mercury, it comes back up again," she said. Closer to home, coal-fired electricity generating plants produce about 40 percent of the mercury emissions in the United States and, Middleton said, are the only source not currently in dramatic decline. But she was also hopeful because field studies in Florida show that reducing emissions from local sources can result in sharply reduced contamination nearby.

Humans are not the only life form affected by mercury, Murray reminded the audience. Loons, otters, and egrets are other animals potentially harmed by consuming fish containing mercury. The widely forecast rise in the use of coal to generate power, he noted, will mean more mercury in the water unless emissions are curbed.

Both the Bush administration and its critics agree that emissions must be reduced, but there is no consensus whatsoever over how far, how fast, and by what means. The administration favors a cap-and-trade program, under which it would establish a nationwide ceiling for emissions but would allow utilities to trade emissions permits among themselves to ensure that they made the reductions at the lowest possible cost. Most environmental organizations believe, to the contrary, that the Clean Air Act requires the application of maximum achievable control technology to each source. One reason is the fear that trading would inadvertently result in hot spots, or areas with concentrations of very high emissions.

Here again the panelists differed. Cap-and-trade does not create hot spots, Miller said. But Middleton responded that emissions can have effects locally as well as globally. "We have to pay attention to where those hot spots are," she said. ■

RFF Senior Fellows Dallas Burtraw and Karen Palmer have examined the mercury debate in depth; to learn more, visit www.rff.org/mercury.

Cutting Hunger and Poverty in Africa

The human costs of hunger, poverty, and disease in Africa are staggering. It is estimated that fully a third of sub-Saharan Africans go to bed hungry, and 31 million children under five there are malnourished. Experts and political leaders worldwide agree that agriculture can lead to economic growth and help cut hunger and poverty in Africa. However, a dramatic improvement in the level and quality of public investment in African agriculture—through more bilateral and multilateral assistance as well as increased budgets of individual countries—is needed to achieve this goal.

At present, there is a void of information on current public investment activity in African agriculture, including the levels and effectiveness of U.S. agricultural development assistance. RFF Senior Fellow Michael R. Taylor and Research Associate Jody S. Tick are collaborating with The Partnership to Cut Hunger and Poverty in Africa on an analysis of the U.S. assistance program. This marks a first step toward providing policymakers with the analytical tools and information they need to construct enhanced and more effective public investment strategies.

The Partnership to Cut Hunger and Poverty in Africa was formed in early 2000 out of concern that the U.S. response to rising hunger and poverty in Africa was increasingly inadequate. The executive board includes current and former African presidents, former U.S. government officials, university presidents, and representatives from the NGO community and the private sector.

The Partnership-RFF report will describe current U.S. programs, with particular emphasis on four countries—Mali, Mozambique, Ghana, and Uganda. It will examine the governance of the U.S. programs and document aid flows from all sources and over time, comparing them to the agricultural development programs of other developing countries and international development institutions, such as the World Bank. The authors will make specific recommendations about how to improve the U.S. program. A March 2005 release date is expected.

Taylor's interest in food-related policy issues dates back nearly 30 years, and he has served in senior policy positions at both FDA and USDA. He is focusing his attention on African agriculture and food security because, according to Taylor, "Africa remains the one region in the world where, without significant change, poverty and hunger will worsen in coming years. African agriculture, with adequate public investment of the kind on which all successful agriculture systems are built, can lead the way toward a better future for Africa's people." In 2003, he and Jerry Cayford co-wrote an RFF report, *American Patent Policy, Biotechnology, and African Agriculture: The Case for Policy Change,* available at www.rff.org/Documents/RFF-RPT-Patent.pdf. In 2001, he and Tick co-authored the RFF report, *Fulfilling the Promise: A Governance Analysis of the U.S. Response to the World Food Summit Goal of Cutting Hunger in Half by 2015*, available at www.rff.org/Documents/RFF-RPT-foodsafety.pdf. ■

Improving Public Participation along the Danube River

Being aware of what environmental problems exist and what steps are being taken to ameliorate them is becoming a basic right in many countries. In parts of Central and Eastern Europe, ready access to this kind of information is still quite new as governments begin to institute programs similar to the U.S. Freedom of Information Act for environmental data and information. But making these commitments real can be hard in places where, for many years, even something as simple as a city map was not easy to find, much less information about factories and which pollutants they produced.

RFF Resident Scholar Ruth Greenspan Bell is working on these issues as they pertain to cleanup of the Danube River in Europe. Her current work builds on a previous partnership with the Regional Environmental Center for Central and Eastern Europe (REC) and New York University School of Law. Together, the three institutions conducted a pilot program that helped two EU accession countries, Slovenia and Hungary, build policies, legislation, and institutions that would support their commitments to provide public access to environmental information. More details about that project and its results can be found on the RFF website, at www.rff.org/danube environmentalparticipation.

Now Bell and her colleagues will expand the program to five other Danube-basin countries: Romania, Bulgaria, Croatia, Serbia and Montenegro, and Bosnia and Herzegovina, as part of the Danube Regional Project.

The research team will start by evaluating the state of information access in each country and their policy options. In the course of the project, country participants will have the opportunity to examine models for information access from Western Europe, other countries of Central and Eastern Europe, and the United States, from which they can select specific elements and approaches that can be adapted to their particular circumstances. Special attention will be given to information access about reducing pollution "hot spots." Ideas will be "road-tested" through demonstration projects in each of the countries.

The end products of this effort will include handbooks, manuals, and other aids for governments and stakeholders. These materials will show how to make, process, and respond to information requests; how actively to make information available even before it is requested; and other techniques of environmental public participation. As with the pilot project, these products will be widely disseminated to reach as broad an audience as possible.

The Danube Regional Project, which is funding this effort, works in close partnership with the International Commission for the Protection of the Danube River, and both are based in Vienna. The project receives its support from the UN Development Programme and the Global Environment Fund. ■

Could Prize Money Promote Innovations in Space Technology?

The Ascender by Bristol Spaceplanes

Spurred in part by the success of prizes offered in the early 1900s to reward entrepreneurs like Charles Lindbergh for developing the airline industry, the National Aeronautics and Space Administration (NASA) is considering adding "inducement prizes" to its portfolio of ways to fund innovation in space technology. RFF Senior Fellow Molly K. Macauley recently testified before the House Subcommittee on Space and Aeronautics on the potential benefits and drawbacks of prizes as an addition to the current system of peer-reviewed grants and procurement contracts.

"For years, we have searched for the 'magic bullet' that would propel our nation back into space by way of the shuttle and space station for the multiple pursuits of scientific exploration on the one hand and a vibrant commercial space industry on the other," Macauley said. There is no lack of ingenuity in ideas for both of these goals. But critics of NASA's plans—regardless of the scientific details involved—assert that they take resources away from pressing societal needs, she said. And critics of commercial space activities assert that such projects carry unique risks, take too much time to develop, and take too much time before they earn any money.

Obviously, priorities determine the allocation of budgets in both the private and government sectors of the economy, Macauley said. In other words, risk, long lead times, and long payback periods cannot themselves be blamed as a death knell for space efforts because significant investment takes place in other high-risk, highly uncertain industries, including pharmaceutical development, information technology hardware and software, and hybrid autos.

Prizes are not the only solution for invigorating enthusiasm for space or elevating its priority in spending decisions, Macauley said. Nonetheless they could complement the federal government's existing approaches to inducing innovation. Traditional R&D methods have their advantages and disadvantages, Macauley said. Research grants and many government contracts provide up-front money for researchers. But the current system does not necessarily encourage out-of-the-box thinking.

Another weakness from a broad, societal perspective is that taxpayers are, in effect, paying in advance for a project that may not even work. Under a system of prizes, awards are made only when the project succeeds. Macauley also noted that even if a prize goes unawarded because innovators fail, the lack of success generates important information for government. The failure to bestow a prize may mean that the specific technology has not yet passed the required threshold for advancement.

The history of the success of prizes—they were commonplace in the first decades of the 20th century—is attractive enough to warrant experimenting with their use in NASA activities, Macauley said. Further review of the structure of previous contests (their guidelines, funding, and results) and in particular, their assignment of intellectual property rights would provide helpful lessons learned as NASA continues its deliberations. But prizes cannot fully substitute for peer-reviewed grants and procurement contracts, she said. Taken together, all of these forms of financial support make up a portfolio of tools for encouraging innovation. ■