Senator Lieberman Gives Energy Policy Speech at RFF

John Anderson

Sen. Joseph Lieberman (D-CT)

Sen. Joseph Lieberman, speaking at the RFF Policy Leadership Forum on May 7, outlined his goals for cutting both the country's oil imports and its emissions of greenhouse gases.

His goal, he said, is to "reduce our dependence on foreign oil by nearly two-thirds within 10 years." That, he declared, would "put us on the path to the day when we won't have to use one drop of foreign oil."

Sen. Lieberman, a Democrat from Connecticut, is a candidate for his party's nomination to the presidency. He argued that his plan would reconcile energy security and economic growth with greater protection for the environment.

Legislation he has co-authored with Sen. John McCain (R-AZ) would impose a mandatory reduction, he noted, on the amounts of carbon dioxide and other greenhouse gases emitted into the atmosphere by American vehicles, industries, commerce, and homes. These gases are widely thought to be the principal cause of global warming. The Clinton administration helped negotiate a worldwide treaty, the Kyoto Protocol, which would have imposed emissions limits on all the industrialized countries. President Bush rejected the treaty two years ago on grounds that it was too costly and didn't include significant participation by developing countries and, instead, has adopted a program relying on voluntary cooperation by industry to slow down the rising trend in American emissions.

Lieberman did not endorse the Kyoto Protocol, pointing out that the emissions limits in the McCain-Lieberman bill are less drastic than those in Kyoto.

"The important point is we're going to rejoin the world," he said. He called for an end to quibbling about the science, which, in his view, is not in doubt, and getting to work as other governments are doing in response to a threat to the stability of the world's climate.

To reduce American oil imports, the senator said, he would set car and truck fuel-efficiency standards at

RFF Fellow Richard Newell.

A capacity crowd came to hear Sen. Lieberman speak and there was a lively question-and-answer session afterward

whatever level is needed to save 2 million barrels a day, nearly one-fifth of current highway consumption. He would require electric utilities to generate 20% of their power from renewable sources like wind and solar energy. And he would subsidize new technologies, particularly in the use of coal. Hydrogen can be extracted from coal, he said, with the waste gases injected into underground reservoirs rather than being released to the atmosphere.

Lieberman pledged to protect sensitive areas—specifically including the Arctic National Wildlife Refuge—from drilling for oil and gas. The Bush administration favors exploration in the refuge, and that difference has acquired great symbolic importance in the struggles over the administration's energy bill as it moves through Congress.

As president, Lieberman said, he would "work to unleash a spirit of national purpose" in meeting the country's energy needs in ways consistent with environmental values.

In introducing Lieberman, RFF President Paul Portney noted that throughout its history RFF has provided a public forum for open debate about important resource issues facing our country. Speakers have ranged from President Dwight D. Eisenhower in 1953, shortly after RFF was founded, to Christie Todd Whitman, the current head of the Environmental Protection Agency, at RFF's 50th anniversary celebration last year. ■

John Anderson is journalist-in-residence at RFF.

Valuing Risks to Life and Health

Alternative Approaches to Valuing the Health Benefits of New Government Regulations

The Office of Management and Budget (OMB) has proposed new draft guidelines for federal agencies that could change how regulators weigh the benefits, costs, and risks involved in creating new regulations. They are part of a larger Bush administration effort to move toward more performance-based budgeting and a greater focus on cost-effectiveness and net benefits. Public debate has centered on whether the assessment methods outlined in the guidelines potentially favor certain sub-groups of the population over others.

RFF was asked by OMB and the Environmental Protection Agency's (EPA) National Center for Environmental Economics to convene a conference to discuss the draft guidelines and their implications for policy analysis. Speaking at the conference, held in February, John Graham, OMB head of information and regulatory affairs, called the questions being addressed "central to the quest for more efficiency and fairness in the health and safety policies of the federal government."

The conference, which was organized by RFF Senior Fellows Alan Krupnick and Michael Taylor, was held in conjunction with the Department of Agriculture, Food and Drug Administration (FDA), Agency for Healthcare Research and Quality, Department of Transportation, Occupational Safety and Health Administration, and National Institutes of Health.

Government agencies are required to evaluate the benefits and costs of major regulations, defined as those likely to cost $100 million or more. The draft guidelines, which were created to improve analysis of proposed regulations and promote harmonization of methods, call for agencies to perform both BCA (benefit-cost analysis) and CEA (cost-effectiveness analysis). Traditionally agencies have relied on one or the other, and sometimes different parts of an agency rely on different approaches.

Right Tool for the Job

Graham suggested that both CEA and BCA have something to contribute to policy decisions. He characterized CEA as a "bang-for-the-buck exercise" that provides information about which regulatory alternatives will produce the most health gains per unit of resource investment." However, he said," since CEA only provides relative comparisons, we need BCA to determine whether the benefits of any particular alternative justify the costs."

For regulations that reduce mortality risk, OMB calls for BCA using both the value of a statistical life and the value of a statistical life-year. The latter is used in the "life-expectancy" approach, which quantifies life-years

Does the choice of valuation method lead to significantly different results?

MICHAEL TAYLOR

Above: OMB Head of Information and Regulatory Affairs John Graham.

Top, from left: RFF Senior Fellow Michael Taylor, FDA Commissioner Mark McClellan, and EPA Chief of Staff Tom Gibson. | Above: RFF Senior Fellow Alan Krupnick.

gained under a policy rather than just mortality avoided, and typically leads to lower benefits estimates than traditional mortality valuation and is thus considered controversial. While this practice was included in earlier versions of the guidelines and included in regulatory analyses that were conducted under the Clinton administration, it has resurfaced as a point of contention between environmentalists and the current administration, which critics fear could use results generated with the approach to justify less stringent environmental regulations.

The conference explored in detail two approaches to valuing health outcomes that frequently underlie BCA and CEA—willingness-to-pay (WTP), which is commonly used in BCA, and quality-adjusted life years (QALYs), which are often used in CEA. WTP measures and CBA are used in many applications, particularly by EPA. QALYs and CEA have been used widely in medical applications. As the line between environmental and public health policy becomes increasingly blurred, however, the need for greater harmonization becomes apparent.

"As a policymaker I want to know why an analyst may choose one or another of the methods," says RFF's Michael Taylor. "Is one more accurate or reliable than the other? Do they differ in the assumptions or values on which they are based? Is one easier to use than the other? Does the choice of valuation method lead to significantly different results?"

The answers to these questions, panelists agreed, do not come easily. Each approach is underscored by varying philosophies and different disciplines, and beyond the highly technical jargon is an added complication: poor communication and understanding across disciplinary lines. RFF's Alan Krupnick is developing a report, for submission to OMB that would compare both methodologies on the assumptions each method makes about human preferences and equity concerns.

Policymakers also stressed the need for improved information on valuation. EPA Chief of Staff Tom Gibson told participants that inconsistency and inaccurate information—as well as pressing deadlines—make valuation and rulemaking very difficult. "We're not economists but we're confronted with all the jargon of economists. We've got to grapple with things like willingness-to-pay, value of statistical life, QALYs, children's

health, health of the aged, social welfare, social costs, and impacts on small business."

FDA Commissioner Mark McClellan said his agency had a complex mission with many new regulatory challenges relating to a growing diversity of individualized medical products, imports, and biotech foods. "If our regulations are not efficient, if they create unnecessary delays or additional costs in bringing safe and effective products to market, then consumers end up paying more than they need to, both in terms of dollars and, more importantly, in terms of health outcomes," he said. "Carrying out a changing mission requires the effective use, day in day out, of the science of risk assessment and cost-benefit analysis."

Question of Age

Graham admits that ongoing research into assessment methodologies raises as many questions as answers. He said research efforts led by RFF's Krupnick show that reducing the daily risks of life at age 40 is valued no more strongly by consumers than reducing similar risks of life at age 60. "Yet actuaries tell us that the typical 40-year-old stands to lose maybe twice as many expected life years as the 60-year-old," he said. "Is it possible that life years are important, but seniors value highly the precious few life years they have remaining? Could it be that people at age 60 are often wealthier than people at age 40, and maybe their superior ability to pay is influencing these results? Are people at age 40 undervaluing their safety and their market behavior because they perceive they cannot borrow effectively against their future income stream? In order to perform high-quality BCAs, we need to get better answers to these kinds of questions."

Indeed, the question of age is particularly controversial. OMB has been under fire by environmentalists and the elderly for its use of a "senior discount factor" which valued the lives of those over 70 at 37% less than the rest of the population, based on a study conducted in England and RFF work in Canada. However, this approach was not used in the most recent EPA analysis (of the Non-Road Diesel Engine rule), which was based, in part, on new RFF research in the United States, and EPA Administrator Christie Todd Whitman has made a point of saying that the agency will not use age-adjusted analysis in decisionmaking.

Graham complimented and thanked RFF for its efforts to produce knowledge and insight about how federal agencies can improve their regulatory analysis and their decisions. "I could think of no better organization than RFF to prepare this conference. Serious problems deserve the attention of talented and serious people, and that's exactly what RFF has provided."

RFF's efforts in this area have continued since the February conference. In April, Krupnick and Taylor reconvened with representatives of the federal agencies that participated in the prior meeting and other experts in a workshop to discuss Krupnick's draft report comparing methodologies for valuing health outcomes. RFF will also be submitting comments to OMB on the new guidelines.

For more information on the February conference, visit www.rff.org/valuinghealthoutcomes.htm. ■

The event drew a broad range of participants. Here, Phaedra Corso, Centers for Disease Control, catches up with Ted Miller, Pacific Institute for Research and Evaluation.

Voluntary Versus Mandatory Approaches to Climate Change Mitigation

Thomas P. Lyon

Despite the U.S. rejection of the Kyoto Protocol on Climate Change, pressure for action continues. Ratification of Kyoto is one (Russian) vote away from creating enforceable mandatory controls on carbon dioxide, methane, and other greenhouse gases in many nations. In anticipation, multinational companies are pressing forward with programs to reduce their greenhouse gas (GHG) emissions, and Ford, Dupont, BP America, and 25 other large companies have created the Chicago Climate Exchange for trading GHG reductions.

But another approach to environmental improvement, one that avoids mandatory controls, is also gaining currency, particularly in the United States. Public voluntary agreements (PVAs) typically involve government provision of technical assistance in meeting environmental goals, government-sponsored publicity for firms with outstanding environmental records, and information sharing among participating firms. The U.S. Environmental Protection Agency's (EPA) Energy Star program is perhaps the best-known agreement.

How does a mandatory system compare against the performance of a PVA? For simplicity, let us focus on the production and use of electricity, which is the single largest source of GHG emissions. Consider three types of organizations that might be affected by climate policies:

Existing Coal-Fired Electric Generating Units. These units have little ability to reduce GHG emissions except by reducing production. Older, inefficient plants might be shut down altogether under a strict GHG control policy.

Future Electric Generating Units. Plants at the planning stage can use either coal or natural gas as fuel sources. As the likelihood or stringency of GHG control policy increases, gas is increasingly favored over coal, due to its lower GHG emissions.

Electricity End-Users. Increased energy-efficiency can enable many end-users to significantly reduce their impact on the environment, often at a modest (or perhaps even negative) net economic cost to themselves.

A mandatory cap-and-trade program defines a maximum level of emissions and issues permits (according to some allocation rule) to firms. Both generators and consumers of electricity must then incorporate the environmental consequences of their emissions into their economic decisions. If the impact of global warming is factored into fuel costs, many existing coal-fired generating units will reduce production or shut down. New generating units will have strong incentives to opt for natural gas. Many electricity end-users will install new, energy-efficient equipment, reducing overall GHG emissions.

Public Voluntary Agreements

Under a public voluntary agreement with government information and technical assistance, existing coal-burning generating units are unaffected; even with assistance, these plants can only reduce emissions by selling less power, and a PVA provides no reward for doing so. New generating units may be encouraged to choose natural gas if EPA will offer favorable publicity for doing so.

The primary impact of a PVA, however, will be on electricity end-users, who are encouraged to adopt new abatement technologies. The need to raise government funds to finance the program, however, means that the assistance probably will be insufficient to achieve all desirable environmental improvements. Furthermore, fewer end-users are likely to adopt new abatement technologies than under a tradable permit system, which does not rely on public funds and which affects decisionmaking directly through the pocketbook.

The bottom line is that a cap-and-trade system is inherently a more powerful regulatory instrument, in which the price system serves as both stick and carrot and affects all three groups

of market participants. However, a mandatory system of regulations that significantly reduces emissions by imposing costs upon all generating units will face political resistance. Indeed, the higher the costs imposed, the greater the political resistance. For this reason, the Clinton administration's carbon tax proposal was scuttled in favor of voluntary programs.

The Bush administration has also abandoned talk of a mandatory program. Its proposed voluntary program aims for an 18% improvement in emissions intensity (emissions per unit of output) by 2012. Early reduction credits (ERCs) would be awarded for projects that reduce emissions and would be exchangeable for permits if a mandatory cap-and-trade program were created. ERCs would be defined against a "business-as-usual" baseline. Firms that reduced their emissions below the baseline would receive ERCs. Direct sources, like generators, would obtain credits for improvements in energy efficiency; indirect sources, such as electricity users, would obtain credits for reductions in energy consumption.

Determining baselines involves forecasting, and firms might project greater energy use than would really have been expected, or claim ERCs for "anyway" reductions that would have occurred regardless. Such gaming would inflate the volume of credits issued.

The benefit of ERCs is that they encourage emissions reductions earlier rather than later, which is valuable since GHGs accumulate in the atmosphere over time. However, ERCs promise to be less effective and more costly to operate than an immediate cap-and-trade system with a generous initial cap.

McCain-Lieberman

Early in 2003, Senators John McCain (R-AZ) and Joseph Lieberman (D-CT) proposed a mandatory cap-and-trade system whose permits would be allocated at no cost, plus ERCs, which could be converted into allowances after 2010. The bill would be more lenient than the Kyoto Protocol but more rigorous than the Bush administration's goal. Since the program starts with ERCs and then moves to mandatory controls, it would incur the transaction costs of creating two separate systems. The ERC component might also induce industry to produce short-term reductions at the expense of greater long-term efficiencies. Nevertheless, by lowering the net cost to industry of taking action to limit GHG emissions, this system may ease the transition to a mandatory system.

In the United States, political resistance to climate change legislation may still be overwhelming. Yet the increase in self-regulatory actions by multinational companies raises the ironic possibility that it will be corporate America that drags the U.S. government into the international system of greenhouse gas controls. ■

Thomas P. Lyon is a visiting scholar at RFF. This analysis of the two approaches to pollution abatement is based on a forthcoming model by Lyon and John W. Maxwell, "Self-Regulation, Emission Taxes, and Public Voluntary Environmental Programs," to be published later this year in Journal of Public Economics.

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