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Testimony of  
**Lisa Heinzerling**  
**Professor of Law**  
**Georgetown University Law Center**

**Before the**  
**SUBCOMMITTEE ON ENERGY POLICY,**  
**NATURAL RESOURCES**  
**AND REGULATORY AFFAIRS**  
**Committee on Government Reform**  
**U.S. House of Representatives**

Hearing on  
Regulatory Accounting

March 12, 2002

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**MARCH 12, 2002**

My name is Lisa Heinzerling. I am a Professor of Law at the Georgetown University Law Center. I have also taught at the Harvard and Yale Law Schools. I am a graduate of the University of Chicago Law School, where I served as editor-in-chief of the University of Chicago Law Review. After law school I clerked for Judge Richard Posner on the U.S. Court of Appeals for the Seventh Circuit, and then for Justice William Brennan of the U.S. Supreme Court. I was an Assistant Attorney General in the Environmental Protection Division of the Massachusetts Attorney General's Office for several years before coming to Georgetown in 1993. My expertise is in environmental and administrative law.

In December 2001, the Office of Management and Budget (OMB) issued a report entitled "Making Sense of Regulation: 2001 Report to Congress on the Costs and Benefits of Regulations and Unfunded Mandates on State, Local, and Tribal Entities" [hereinafter 2001 OMB Report]. At the request of the Office of Information and Regulatory Affairs (OIRA), I served as a peer reviewer of the 2001 OMB Report. In January 2002, OMB issued a document entitled "Analytical Perspectives," accompanying the White House's budget for fiscal year 2002 [hereinafter Analytical Perspectives].

Together, these documents provide troubling insights into OIRA's deregulatory agenda.

There are five large problems with the 2001 OMB Report and Analytical Perspectives document:

1. The 2001 OMB Report contains a regulatory “hit list” which appears to reflect nothing other than an unprincipled response to the behind-the-scenes lobbying efforts of politically powerful industries.
2. The Report reveals OIRA’s intention to intrude upon the decision-making prerogatives of the administrative agencies in such a way as to promote unwarranted delay of and meddling with the agencies’ work.
3. The Report contains highly misleading, outdated, and inaccurate estimates of the costs and benefits of federal regulation, particularly environmental regulation.
4. The Report and Analytical Perspectives document together threaten to increase the executive branch’s problematic reliance on cost-benefit analysis as a way of evaluating the wisdom of regulatory policy.
5. The Analytical Perspectives document serves notice that OIRA also intends to evaluate agency decision making through use of a methodology, cost-effectiveness analysis, which in OIRA’s hands will treat health, safety, and environmental measures that protect future generations, the elderly, and the sick as less worthwhile than those that protect the present generation, the young, and the healthy.

My testimony is divided into five parts, corresponding to the five problems noted above. In brief, my testimony shall suggest that OIRA’s newly aggressive posture with respect to the administrative agencies, coupled with its growing use of cost-benefit and cost-effectiveness analysis to criticize agency decisions, threatens to delay or to undermine a good deal of important federal regulation, especially health, safety, and environmental regulation. Especially where this office is headed, as it now is, by someone who regards the precautionary principle underlying many of our health, safety, and environmental protections as “a mythical concept, perhaps like a unicorn” (John D. Graham, “The Role of Precaution in Risk Assessment and Management: An American’s View” (Jan. 11-12, 2002), available at [http://www.whitehouse.gov/omb/inforeg/eu\\_speech.html](http://www.whitehouse.gov/omb/inforeg/eu_speech.html)), OIRA’s new assertiveness may presage a rocky time for health, safety, and environmental protection in this country.

## **I. THE REGULATORY HIT LIST**

This year, OIRA has turned the report on the costs and benefits of federal regulation into an opportunity for regulated industry to roll back regulations it does not like, in the guise of promoting neutral principles like good science and economic efficiency.

In Appendix A to the 2001 OMB Report, OIRA lists suggestions from the “public” for reform of 71 federal regulations. These suggestions were offered by entities directly regulated by the rules in question and by groups funded by such entities. For example, the Mercatus Center at George Mason University – historically funded by, among others, Enron, International Paper, the American Chemistry Council, and David Koch, Executive Vice-President and member of the board of directors of Koch Industries, a company with interests in refining, asphalt, natural gas, gas liquids, chemicals, plastics, chemical technology equipment, minerals, fertilizers, ranching, and financial businesses (see <http://www.kochind.com>) – submitted 44 of the 71 proposals for reform.

In response to these self-interested suggestions, OIRA prioritized the proposals by giving them a ranking of 1, 2, or 3, with 1 reflecting the highest-priority items. Twenty-three regulations were ranked 1, “high priority” (2001 OMB Report at p. 62). Following its consideration of the high-priority proposals, OIRA stated, “a ‘prompt letter’ may be crafted and sent to the responsible agency for deliberation and response” (2001 OMB Report at p. 62).

Thus has OMB’s report on the costs and benefits of federal regulation been turned into a backdoor channel for regulated entities to try to rid themselves of regulations they do not like. In its report, OIRA did not mention that, as a peer reviewer of the report, I had encouraged OIRA to explain how it had arrived at the rankings of rules presented in Appendix A; much less did it respond to this suggestion by actually explaining how the priorities were set. This silence, combined with contemporaneous news accounts reporting that OIRA’s director, John Graham, had asked a staff member of this Subcommittee “‘to convene key lobbyists to identify and rank’ regulations that business groups found overly burdensome” (Washington Post, Dec. 4, 2001, “Business Lobbyists Asked To Discuss

Onerous Rules”), leaves the unmistakable and troubling impression that the “high priority” items reflect nothing other than power politics.

Consideration of a sampling of OIRA’s choices in developing its hit list confirms this impression. For example, the Environmental Protection Agency’s decision to strengthen the standard for arsenic in drinking water was given a priority of 1 on OIRA’s list (2001 OMB Report, Table 7, pp. 63-64). Only two months before, President Bush’s EPA had decided, with great fanfare, to retain the Clinton-era standard for arsenic in drinking water. EPA had done so after eight months of inquiry into the science and economics of the standard, including consideration of new reports by three different expert panels, including a report prepared by the National Academy of Sciences. In response to this expert assistance, EPA chose to retain the Clinton-era standard. Less than two months later, by labeling the arsenic standard priority “1,” OIRA signaled an intent to revisit the standard once again – with no explanation as to its reasons for deeming this rule high priority. Although OIRA now has apparently decided not to challenge EPA’s new arsenic rule (OIRA’s web page indicates that its review of the standard is now complete), its willingness to revisit the rule, which was fresh from a resource-intensive, in-depth review by three expert panels, suggests that the reform priorities set by the 2001 OMB Report were based on something other than the best science or sound economics.

Similarly, OIRA has labeled review of the Clean Air Act’s “New Source Review” program “high priority” without explaining why this program merits review and possibly reform (2001 OMB Report at p. 102). Other programs targeted by industry or industry-backed commentators – such as EPA’s “Tier 2” program for new automobiles and its heavy-duty diesel engine rule – were not given high priority status by OIRA even though they embody the same basic kind of regulatory regime (based on a requirement that new sources of air pollution use the best available pollution control technology) as New Source Review. This is not to say that OIRA should have revisited the programs regulating automobiles and trucks. It is to say, however, that no principled basis for distinguishing the programs on OIRA’s hit list from the programs not included there emerges from the 2001 OMB Report. Once again, it is tempting to conclude that lobbying power, not neutral principles, guided OIRA’s priority-setting process.

For further evidence of this possibility, note that EPA’s “CAFO Rule” (pertaining to regulation of water pollution from concentrated animal

feeding operations) made it onto OIRA's regulatory hit list (see 2001 OMB Report at 64) one month after representatives of the agricultural industry met with top-level OIRA officials. (See meeting record available at <http://www.whitehouse.gov/omb/oira/2040/meetings/81.html>.) In the absence of any explanation for the priorities reflected on OIRA's hit list, an interested member of the public might be excused for interpreting this sequence of events as evidence of the lobbying prowess of agricultural interests.

In sum, OIRA has begun to use its report on the costs and benefits of federal regulation as a vehicle for undoing or at least revisiting agency decisions, without providing the interested citizen with any basis for predicting which agency rules will make the hit list and which will not. Thus the report – which, ironically, has been required in the name of the public's "right to know" – threatens to become a backdoor channel to deregulation.

## **II. DELAY AND MEDDLING: THE RETURN OF THE RETURN LETTER**

In the 2001 OMB Report, OIRA announces the "return of the 'return letter'" (p. 39). OIRA asserts that it may issue a "return letter," seeking further justification for or modification of an agency proposal, in the following circumstances (pp. 39-40):

- inadequate analysis;
- the "regulatory standards adopted are not justified by the analyses";
- the rule is not consistent with the principles announced in E.O. 12866 or with "the President's policies and priorities"; or
- the rule is "not compatible with other Executive Orders or statutes."

There are several problems with OIRA's assertion of authority over agency decision-making. First, many statutes establish standard-setting principles that are themselves "not consistent with the principles announced in E.O. 12866." For example, the Clean Air Act's National Ambient Air Quality Standards are to be set without regard to economic costs. See *Whitman v. American Trucking Assns.*, 531 U.S. 457 (2001). In its report, OIRA concedes that it "should not return a rule to an agency for reasons that

would compel an agency to act in ways that are inconsistent or incompatible with the statute under which the agency is operating” (2001 OMB Report at p. 40). However, OIRA’s actual behavior gives reason to fear that the return letter may be used as a way to undermine statutory requirements OIRA does not like.

For example, as noted above, OIRA has given “high priority” status to EPA’s New Source Review program, in response to the Mercatus Center’s proposal that EPA “use the settlement process [in ongoing litigation against pollution sources accused of violating the law] to alter its NSR policy” (2001 OMB Report at p. 102). The Mercatus Center also criticized “EPA’s aggressive application” of the New Source Review program (*ibid.*). However, the Department of Justice has concluded, after a thorough study of the matter, that “EPA may reasonably conclude that the enforcement actions are consistent with the Clean Air Act and its regulations.” (See United States Department of Justice, Office of Legal Policy, “New Source Review: An Analysis of the Consistency of Enforcement Actions with the Clean Air Act and Implementing Regulations,” at iv (Jan. 2002).) It is hard to square OIRA’s announced intention to review the New Source Review program and pending enforcement efforts undertaken pursuant to it with OIRA’s assertion that it will respect existing statutory requirements in reviewing regulatory programs.

A second basic problem with OIRA’s announced intentions concerning return letters is that OIRA has no legal power to announce authoritative constructions of statutes; that is, instead, the job of regulatory agencies where their statutory commands are ambiguous. In reviewing agency decisions for consistency with E.O. 12866, with the President’s “policies and priorities,” and with other statutes and Executive Orders, OIRA may not tell an agency charged with implementing a particular statute how to construe that statute. OIRA’s description of the grounds for return letters remains ambiguous as to whether OIRA intends to return regulatory proposals to agencies on the basis of disputes over statutory interpretation; OIRA does not explicitly say that it will respect agencies’ interpretations of the statutes they are charged with administering.

A third problem with OIRA’s policy on return letters is that agencies are bound to follow the instructions of Congress even where these instructions may collide with the President’s current “policies and priorities.” OIRA may not interfere with agency action that is consistent

with the statute under which the agency operates simply on the ground that the President does not like the policies embodied in Congressional instructions.

It may well be, for example, that this Administration considers energy conservation to be only “a sign of personal virtue” rather than a requirement of law, but the Administration nevertheless has a duty to execute laws instructing agencies to set standards for energy efficiency. Once again, the 2001 OMB Report does not instill hope in this regard: the Department of Energy’s energy conservation standards for central air conditioners and heat pumps are on OIRA’s hit list (2001 OMB Report at p. 68).

A fourth problem with OIRA’s aggressive use of return letters is that the office’s traditional emphasis on conventional economic analysis and the predominantly economic training and experience of its staff might lead OIRA to disapprove of an agency decision simply because that decision departs from a tenet of conventional economics. But this would not demonstrate that the agency’s actions were unjustified by its analysis; it would only prove that the agency’s analysis rests on a different intellectual framework (a framework often based on an explicit charge from Congress). Although OIRA concedes that it “should be careful not to intrude too far into the agency’s sphere of expertise and outside of our area of expertise” and that “it will not always be feasible for any agency to fully quantify and monetize benefits and costs” (2001 OMB Report at p. 40), its actual behavior again belies its expressions of deference to expert agencies. Indeed, it appears that OIRA is insisting upon quantification and monetization of regulatory benefits even where the relevant agency has concluded that quantification and monetization are either not possible or not necessary. This insistence on waiting for “the numbers” will, at the least, inappropriately delay agency action, and it may even stop many good rules in their tracks.

Three examples serve to justify this concern. First, OIRA has responded to a proposal by EPA to regulate “non-road” engines (such as boats, snowmobiles, fork lifts, and the like) by questioning EPA’s conclusion that the savings in fuel costs alone that would be inspired by the rule justified the rule’s costs. In so questioning EPA’s conclusion, OIRA expressed skepticism that regulation could produce consumer savings where the market had not. (See [http://www.whitehouse.gov/omb/inforeg/spark\\_engines\\_epa\\_sep2001.html](http://www.whitehouse.gov/omb/inforeg/spark_engines_epa_sep2001.html).)

Yet EPA had amply documented the fuel efficiency gains (and thus fuel cost savings) that its rule would produce. (See EPA, Control of Emissions from Nonroad Large Spark Ignition Engines and Recreational Engines (Marine and Land-Based); Proposed Rule, 66 Fed. Reg. 51098, 51169-51171 (Oct. 2001).) In this case, it appears that OIRA's pre-analytic faith in market processes caused it to question the empirical analysis of an expert administrative agency. OIRA's response to EPA's claims of cost savings resembles nothing so much as the old joke about the economist who, upon seeing a 10-dollar bill in the street, refuses to pick it up on the ground that if it were really a 10-dollar bill, someone else already would have taken it.

Moreover, in the same post-review letter regarding the regulation of non-road engines, OIRA directs EPA to "make every effort to quantify and monetize all the benefits of the proposed rules." (See [http://www.whitehouse.gov/omb/inforeg/spark\\_engines\\_epa\\_sep2001.html](http://www.whitehouse.gov/omb/inforeg/spark_engines_epa_sep2001.html).) However, the task of quantifying – let alone monetizing – the kinds of health effects caused by the air pollution at issue in this proposal is staggering. If OIRA intends to try to hold up environmentally protective rules until quantification and monetization are both possible and plausible, such rules may not be issued for many years.

In a second example of OIRA's meddling with agency decision making, OIRA has presumed to tell EPA how it should review and develop national air quality standards under the Clean Air Act. Although, as noted above, the Clean Air Act forbids EPA to take costs into account in setting these standards (*Whitman v. American Trucking Assns.*, 531 U.S. 457 (2001)), OIRA has nevertheless seen fit to direct EPA to conduct its scientific analysis of the health and welfare effects of air pollution in such a way as to facilitate OIRA's economic analysis of air pollution regulations. (See prompt letter available at [http://www.whitehouse.gov/omb/inforeg/epa\\_pm\\_research\\_prompt120401.html](http://www.whitehouse.gov/omb/inforeg/epa_pm_research_prompt120401.html).) This directive to EPA not only threatens to distort the statutory framework under which EPA operates, but also inappropriately threatens to put EPA's scientists in the position of handmaidens to OIRA's economists.

A third and final cautionary example comes from a return letter to EPA dated October 2, 2001, discussing EPA's proposal to set federal water quality standards for Indian country. In this letter, OIRA criticizes EPA for failing to quantify costs and benefits. (See [http://www.whitehouse.gov/omb/inforeg/epa\\_water\\_quality\\_rtnltr.html](http://www.whitehouse.gov/omb/inforeg/epa_water_quality_rtnltr.html).) But

the Clean Water Act, pursuant to which EPA's proposal was made, does not require this kind of quantification in establishing water quality standards. (See 33 U.S.C. § 1313(c)(2)(A) (discussing criteria for setting water quality standards).) Moreover, a fundamental premise of the Clean Water Act was that water pollution control ought not await quantification of the costs and benefits of such control. Here again, OIRA's insistence on quantification both threatens to delay important agency rules and to undermine the statutory frameworks under which the agencies operate.

It is too early to tell exactly what effect OIRA's new assertiveness in judging agency action will have on the shape and scope of federal regulations designed to protect health, safety, and the environment. The early evidence, however, is not reassuring.

### **III. OIRA'S MISTAKEN ESTIMATES OF THE COSTS AND BENEFITS OF ENVIRONMENTAL REGULATION**

In the 2001 OMB Report, OMB estimates both the aggregate costs and benefits of federal regulations (Tables 1 and 2, p. 11) and the costs and benefits for specific rules issued in 1999-2000 (Table 4, pp. 22-29).

OIRA's aggregate estimates of the costs and benefits of environmental regulation are based on obsolete, inaccurate, and conflicting data. In particular, lower-bound estimates of benefits are drawn from a 1991 study, which in turn relied on analyses published in 1978 and 1979 for key categories of benefits. Thus, OIRA's estimates inevitably overlook the benefits of regulations adopted in the last 20 years, as well as the substantial advances in the measurement and analysis of regulatory benefits that have occurred in those years.

To be specific, Table 2 unreasonably credits the possibility that, as of 1999, environmental regulation had produced *no net benefits* and, indeed, had produced substantial net costs on the order of \$73 billion.

In presenting this striking and implausible finding, OIRA relies heavily on a 1991 study by Robert Hahn and John Hird. (See Robert W. Hahn & John A. Hird, *The Costs and Benefits of Regulation: Review and Synthesis*, 8 *Yale J. on Reg.* 233 (1990) [hereinafter "Hahn & Hird"]. Previous OMB reports provide citations for the estimates found in this year's report.) The Hahn and Hird study is too outdated to be of present utility:

most of the data on which the Hahn and Hird study was based are two decades old. For air pollution, the lower-bound benefits incorporated in Table 2 are from a *single year, more than twenty years ago* – 1978. (See Paul R. Portney, Air Pollution Policy, in *Public Policies for Environmental Protection*, at 57 Table 3-5 (Paul R. Portney ed., 1990) [hereinafter “Portney”].) Thus they do not reflect the enormous amount of information that has been developed in the last two decades concerning the adverse effects of air pollution on human health and the environment. They do not reflect the scientific literature finding an association between exposure to particulate matter and mortality – the very literature on which EPA has relied, in a retrospective study on the costs and benefits of the Clean Air Act, in finding enormous benefits in air pollution control. They also do not reflect findings over the last two decades on the adverse human and ecological effects of acid rain, ozone, and lead. The data regarding water pollution control benefits are also obsolete. The basic data come from a study performed by Myrick Freeman in 1979. (See Myrick Freeman III, Water Pollution Policy, in *Public Policies for Environmental Protection*, at 147 n. 28 (Paul R. Portney ed., 1990) [hereinafter “Freeman”].)

In addition, there is good reason to believe that the lower-bound estimate of benefits provided in the Hahn and Hird study, and implicitly incorporated in Table 2 of this report, dramatically understates the benefits of environmental regulation. Yet that lower-bound estimate is the only estimate that makes it possible for OIRA to speculate that environmental regulation might have produced negative net benefits as of 1999. Hahn and Hird’s underlying data on the benefits of air pollution control reflect a value of a statistical life of \$1 million, a value that is exceedingly low by current standards. (See Portney at 56.) This value had a significant effect on the results: three-quarters of the benefits reported in the study on which Hahn and Hird relied were human health benefits. (See Hahn & Hird at 273.) Moreover, OIRA’s lower-bound estimate of the benefits of environmental regulation (again, incorporated implicitly in Table 2 of this year’s report) reflects one researcher’s own lower-bound estimate of the benefits of air pollution control. (See Portney at 55.) This estimate generally reflected studies finding “*little or no pollution damage to health, vegetation, and the like.*” (Ibid.) OIRA’s lower-bound benefits estimate, in other words, embodies an assumption that air pollution causes little or no damage to humans and the environment. In estimating the benefits of air pollution control, this researcher also considered only actual improvements in air quality between 1970 and 1978, and thus he did not account for benefits

from preventing the degradation of air quality (nor, of course, for changes since 1978). As for the benefits of water pollution control, OIRA again chooses to rely (implicitly, again, in Table 2) on this same researcher's outdated lower-bound estimate.

Turning to the cost side of the ledger, OIRA continues to rely on Hahn and Hird, although no longer tilting so strongly toward their lower-bound estimates. Hahn and Hird's cost estimates are also problematic. Hahn and Hird obtained these estimates from a 1990 study by Michael Hazilla and Raymond Kopp. (See Hahn & Hird at 272, citing Michael Hazilla & Raymond J. Kopp, *Social Cost of Environmental Quality Regulations: A General Equilibrium Analysis*, 98 J. Polit. Econ. 853 (1990).) OIRA implicitly relies upon the *higher* of Hazilla and Kopp's pairs of estimates for both 1981 and 1985, although these estimates relied on different methodologies. In Table 2, OIRA also implicitly relies upon an EPA cost estimate of \$54 billion. (This estimate is presented in Table 1 of the 2000 Report, one of the three sources for Table 2 in this year's report.) This estimate is obtained from EPA's 1990 report, "Environmental Investments: The Cost of a Clean Environment" ("Cost of Clean"), and EPA's Section 812 Retrospective on the costs and benefits of the Clean Air Act. OIRA did not make sure that the *costs* of water pollution control programs were not included in Table 2 unless their *benefits* were also reflected therein. Hahn and Hird's data on the benefits of water pollution control, for example, do not include the benefits of control of toxic water pollutants, whereas the costs of this program are provided in "Cost of Clean."

In short, for all of these reasons, OIRA was wrong to continue to rely on the Hahn and Hird study in preparing this report. It is important to incorporate the wealth of newer information and analyses that have become available since that study was published. In addition, because OIRA did not, in the 2001 OMB Report, repeat all of the criticisms and caveats contained in its previous reports regarding the Hahn and Hird study, readers of the 2001 OMB Report may fail to understand how completely implausible OIRA's no-net-benefits scenario for environmental protection is.

#### **IV. COST-BENEFIT ANALYSIS**

In revealing its plan to return rules to agencies when it does not believe the rules are justified by the cost-benefit analysis required by Executive Order 12866 (2001 OMB Report at p. 40), OIRA appears to

signal an intention to increase the role of cost-benefit analysis in federal regulatory policy. This development is unfortunate. Cost-benefit analysis is resource-intensive and time-consuming, and at the very least requiring agencies to jump through every analytical hoop presented by OIRA threatens to delay many important agency rules. Even more problematic, however, is the fact that cost-benefit analysis is systematically biased against the very health, safety, and environmental protections that OIRA has expressed a special interest in reviewing (and perhaps undoing). (See Analytical Perspectives at 419-21 (singling out health-protective regulation for special attention and criticism).)

In order to compare the pros and cons of any particular regulatory standard, cost-benefit analysis seeks to translate all relevant considerations into monetary terms. In cost-benefit analysis, therefore, both the costs of, say, putting a scrubber on a power plant to reduce air pollution and the benefits of doing so, including the saving of human lives and the prevention of debilitating and painful diseases, are presented in terms of dollars. The costs and (particularly) the benefits of regulation often will be realized in the future; in such cases they are also “discounted,” i.e. treated as equivalent to smaller amounts of money today.

I have attached to this testimony a monograph on cost-benefit analysis, written by Frank Ackerman and me, which describes in detail the ways in which cost-benefit analysis is inherently unreliable and biased as a method for evaluating environmental regulation. (See attachment, Lisa Heinzerling and Frank Ackerman, “Pricing the Priceless: Cost-Benefit Analysis of Environmental Protection” (Georgetown Environmental Law and Policy Institute 2002).) Here, I briefly review our critique of cost-benefit analysis.

First, the process of reducing life, health, and the natural world to monetary values is inherently flawed. Efforts to value life illustrate the basic problems. Cost-benefit analysis implicitly equates the risk of death with death itself, when in fact they are quite different and should be accounted for separately in considering the benefits of regulatory actions. Cost-benefit analysis also ignores the fact that citizens are concerned about risks to their families and others as well as themselves, ignores the fact that market decisions are often very different from political decisions, and ignores the incomparability of many different types of risks to human life. The same

kinds of problems arise in attempting to define in monetary terms the benefits of protecting human health and the environment.

Second, the use of discounting systematically and improperly downgrades the importance of environmental regulation. While discounting makes sense in comparing alternative *financial* investments, it cannot reasonably be used to make a choice between preventing harms to present generations and preventing similar harms to future generations. Nor can discounting reasonably be used even to make a choice between harms to the current generation; choosing between preventing an automobile fatality and a cancer death does not turn on prevailing rates of return on financial investments. In addition, discounting tends to trivialize long-term environmental risks, minimizing the very real threat our society faces from potential catastrophes and irreversible environmental harms, such as those posed by global warming and nuclear waste.

Third, cost-benefit analysis ignores the question of *who* suffers as a result of environmental problems and, therefore, threatens to reinforce existing patterns of economic and social inequality. Cost-benefit analysis treats questions about equity as, at best, side issues, contradicting the widely shared view that equity should count in public policy. In fact, poor countries, communities, and individuals are likely to express less “willingness to pay” to avoid environmental harms, simply because they have fewer resources. Therefore, cost-benefit analysis would justify imposing greater environmental burdens on them than on their wealthier counterparts. With this kind of analysis, the poor get poorer.

Finally, cost-benefit analysis fails to produce the greater objectivity and transparency promised by its proponents. Cost-benefit analysis rests on a series of assumptions and value judgments that cannot remotely be described as objective. Moreover, the highly complex, resource-intensive, and expert-driven nature of this method makes it extremely difficult for the public to understand and participate in the process. Thus, in practice, cost-benefit analysis is anything but transparent.

Beyond these inherent flaws, cost-benefit analysis suffers from serious defects in practical implementation. Many benefits of public health and environmental protection have not been quantified and cannot easily be quantified given the limits on time and resources; thus, in practice, cost-benefit analysis is often akin to shooting in the dark. Even when the data

gaps are supposedly acknowledged, public discussion tends to focus on the misleading numeric values produced by cost-benefit analysis while relevant but non-monetized factors are simply ignored. Finally, the cost side of cost-benefit analysis is frequently exaggerated, because analysts routinely fail to account for the economies that can be achieved through innovative efforts to meet new environmental standards.

Real-world examples of cost-benefit analysis demonstrate the strange lengths to which this flawed method can be taken. For example, the consulting group Arthur D. Little, in a study for the Czech Republic, concluded that encouraging smoking among Czech citizens was beneficial to the government because it caused citizens to die earlier and thus reduced government expenditures on pensions, housing, and health care. In another study, analysts calculated the value of children's lives saved by car seats, by estimating the amount of time required to fasten the seats correctly and then assigning a value to the time based on the mothers' actual or imputed hourly wage. These studies are not the work of some lunatic fringe; on the contrary, they apply methodologies that are perfectly conventional within the cost-benefit framework.

Fortunately, there are many good alternatives to the use of cost-benefit analysis. In fact, virtually all of the environmental protections adopted in the United States over the last several decades were developed without the use of cost-benefit analysis. Technology-based regulation, market-based regulation such as pollution trading, and environmental right-to-know programs all have reduced pollution and protected the environment without relying on the problematic method of cost-benefit analysis.

Given the deep and varied flaws in cost-benefit analysis, given the fact that a lot of time and money are required to generate cost-benefit studies, and given that superior, time-tested regulatory alternatives are available, OIRA's apparent plan to increase reliance on cost-benefit analysis in evaluating environmentally protective regulation is misguided.

## **V. COST-EFFECTIVENESS ANALYSIS**

The Analytical Perspectives document accompanying the budget unveils OIRA's plan to evaluate regulations that protect public health through use of cost-effectiveness analysis. As OIRA puts it, its goal is to "deploy risk-management resources in a way that achieves the greatest

public health improvement for the resources available – that is the most ‘cost-effective’ allocation of risk-management resources” (Analytical Perspectives at p. 419).

To this end, OIRA proposes greater reliance on what it calls “league tables” – tables used “to rank programs, technologies, regulations and therapies aimed at saving lives and improving public health” (Analytical Perspectives at p. 419). By way of example, OIRA provides a table purporting to show the cost per life-year-saved for ten regulations. The reported costs range from \$0 to \$1265 million (Id. at Table 24-1, p. 419).

League tables are among the most abused props in the literature criticizing health, safety, and environmental protection. Because the current head of OIRA, John D. Graham, misused such tables in the work he did as the director of Harvard’s Center for Risk Analysis prior to coming to OIRA, there is good reason to be wary of OIRA’s proposal to increase the role of these tables in evaluating programs aimed at protecting public health.

I critique Dr. Graham’s previous work on costs per life saved in detail in a forthcoming article in the journal RISK. I attach the penultimate draft of that article, entitled “Five-Hundred Life-Saving Interventions and Their Misuse in the Debate Over Regulatory Reform,” to this testimony. Briefly, the following are the major problems with both Dr. Graham’s previous work and OIRA’s current proposal to attach more significance to costs per life saved in evaluating life-saving regulation.

First, tables showing costs per life saved, including the table presented in the Analytical Perspectives document, employ the technique of discounting life-saving benefits. As noted above in Part IV, this technique, common to both cost-benefit and cost-effectiveness analysis as practiced by Dr. Graham and OIRA, misguidedly treats the welfare of future generations as trivial. Discounting also vastly understates the benefits of reducing diseases that have a long latency period, such as cancer. By employing discounting, league tables systematically favor health measures over safety measures because long-latency diseases such as cancer are often the only quantifiable benefits of health regulation. Thus, in most cases, the only health benefits included in these tables are also benefits that are discounted. It is no surprise, then, that OIRA concludes that safety rules tend to be more cost-effective than health rules (Analytical Perspectives at 420). This is a conclusion built into the assumptions underlying these league tables.

Second, tables showing costs per life (or life-year) saved fixate on only one benefit of programs that save lives – that is, lives saved. However, many life-saving programs do more than save lives. Environmental programs, in particular, have multiple benefits, only one of which is to save lives. Environmental programs prevent nonfatal illnesses, fatal illnesses that cannot be quantified (and that therefore do not figure in league tables), ecological harm, and the intangible but real harms to individuals and communities that result from involuntary, insidious, cumulatively harmful exposure to toxic chemicals. League tables reflect none of these important benefits. Although OIRA notes that many life-saving programs have benefits other than saving lives (Analytical Perspectives at 420-21), in practice, reliance on league tables has invariably led to a fixation on lives saved to the exclusion of all other benefits.

Third, OIRA's proposal to use quality-adjusted life-years saved as the measure of the effectiveness of life-saving programs is also problematic (Analytical Perspectives at 421). The upshot of this criterion is that regulatory programs that save the lives of the elderly will be deemed less effective than those that save the lives of the middle-aged or young, and that programs saving the lives of the ill or disabled will be deemed less effective than those saving the lives of the healthy and non-disabled. The criterion of quality-adjusted life-years is at odds with the concept of equality that underlies our constitutional system. What is more, the introduction of this controversial measuring rod through the obscure and opaque vehicle of league tables almost guarantees that there will be no public discussion of this important policy issue. It seems reasonable to suppose that if the ordinary citizen were aware of OIRA's proposal, she would not like it; imagine putting to a vote the question whether age and health status should be a basis for rationing environmental protection.

Fourth, OIRA's construction of the league table in the Analytical Perspective document combined discounting and life-years in a way that is truly bizarre. Take OIRA's calculation of the benefits of a regulation on child restraints as an example. In that case, OIRA assumed that the average age of the people whose lives would be saved by this rule was 3 years old. This child has a remaining life expectancy, OIRA calculated, of 75 years. After discounting, OIRA concluded that a child whose life was saved by this rule would lose, not 75 years of life, but only 14.3. (Analytical Perspectives at p. A-2.) How was this stunning reduction in regulatory benefits made

possible? Although OIRA does not explain its methodology in any detail, it seems reasonable to conclude that OIRA proceeded by taking each life-year saved by the rule separately and discounting it from the year in which it will be lived. (This would be consistent with the methodology Dr. Graham used before coming to OIRA. See attachment, Lisa Heinzerling, “Five-Hundred Life-Saving Interventions and Their Misuse in the Debate Over Regulatory Reform,” RISK (forthcoming 2002).) Using this approach, a 3-year-old child’s last year of life would be discounted for 75 years, the second-to-last year of life would be discounted for 74 years, and so on. The upshot of this strange approach to discounting is that *no one ever loses a whole life*. Moreover, given that the life-years of the young will be discounted over a longer period than the life-years of the old, it turns out, in OIRA’s analysis, that the old are valued pretty much like the young after all; notice that the 3-year-old with 75 years left to live magically becomes a person with only 14.3 years left to live. (As another illustration of the same basic problem, note that the Occupational Safety and Health Administration’s rule limiting exposures to methylene chloride in the workplace was transformed from a rule saving 21.5 life-years for every life saved, to one saving only 2.83 life-years, through the perverse magic of discounting. (Analytical Perspectives at p. A-4.)) OIRA’s proposed use of league tables to evaluate the wisdom of life-saving programs threatens to undermine many such programs while at the same time remaining completely opaque to the average citizen.

League tables are, in short, a biased, inaccurate, and non-transparent way of expressing the effectiveness of life-saving regulations, particularly environmental regulations. As the head of Harvard’s Center for Risk Analysis, Dr. Graham frequently invoked league tables as a way of criticizing health and environmental regulation, yet his criticisms reflected a misinterpretation of his own research. (See attachment, Lisa Heinzerling, “Five-Hundred Life-Saving Interventions and Their Misuse in the Debate Over Regulatory Reform,” RISK (forthcoming 2002).) The anti-environmental slant of Dr. Graham’s previous work bodes ill for environmental regulations reviewed by this administration.

## CONCLUSION

Let me conclude on a (mostly) positive note. OIRA has, in this administration, done more to increase the transparency of its work than any previous administration. One can now find, on OIRA’s web page, return letters, prompt letters, and other documents relevant to OIRA’s work. One

can also find reports of meetings with OIRA stakeholders. In some cases, however, these disclosures can be more frustrating than informative. To learn, for example, that top OIRA officials met with agricultural interests about EPA's CAFO rule a month before OIRA put that rule on its hit list (see report of meeting on OIRA's web page) is to be given a reason for suspicion about the motives for placing this rule on the hit list without being given enough information to confirm or reject that suspicion. In order to overcome its history as an office shrouded in secrecy and steeped in anti-regulatory bias, OIRA should make every effort to broaden and deepen its disclosures of the bases for its decisions.