

Draft Report to Congress on the Costs and Benefits of Federal Regulations¹

I. Executive Summary

OMB's second annual report to Congress on the costs and benefits of federal regulation offers some improvements over its 1997 report. Nevertheless, its compliance with OMB's statutory mandate is still somewhat uneven. These comments make recommendations for ways that OMB can improve this 1998 report, as well as recommendations for longer-term analysis and reporting to enhance the government's accountability for federal regulation.

OMB estimates that existing social regulations provide net benefits (that is, benefits in excess of costs) ranging from \$34 billion to \$3.38 trillion each year. The dramatic increase in net benefit estimates from OMB's previous report (which estimated a net benefit of \$9 billion per year) stems largely from OMB's incorporation of estimates from a 1997 report by the Environmental Protection Agency on the costs and benefits of the Clean Air Act.² The upper end of this range would imply that the net benefits of federal regulations are almost half of the 1997 U.S. gross domestic product. Despite OMB's careful caveats that uncertainties and methodological problems "reduce the likelihood that these findings are robust,"³ this range, particularly the upper end of it, is already being reported as fact. In addition to a range, OMB should report a best estimate (e.g., expected value) of costs, benefits, and net benefits of regulation based on the information it has reviewed. OMB should also provide its own best estimate, based on an independent, careful, and balanced evaluation of the available analysis. This is key to improving the public's understanding of the role social regulation plays in our lives.

Responding to comments it received last year, OMB relies more heavily on its own review of regulatory actions than it did in its 1997 report, having completed an evaluation of regulatory impact analyses for all major rules issued since April 1, 1995. This is a significant undertaking, and we look forward to future reports for which OMB expects to conduct continued reviews of the historic rulemaking record. Although OMB identified in the course of its review significant variation in the methodologies used by agencies to estimate benefits and costs, and recognizes that that variability limits the comparability of

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² U.S. Environmental Protection Agency, *The Benefits and Costs of the Clean Air Act, 1970 to 1990*. October 1997.

³ OMB Draft, p. 44040.

the resulting estimates, it merely reports agencies' estimates of the costs and benefits of regulations without any objective discussion. This is disappointing, because OMB is in a unique position to provide some useful analysis; it has access to agency analyses, interagency discussions, and public comments on individual rules. At a minimum, this report should provide more detailed information about the assumptions underlying the benefit and cost estimates of the individual regulations that comprise these aggregate figures. This would be a starting point for encouraging agencies to follow OMB's sound "Best Practices" in future regulatory analyses.⁴

⁴ U.S. Office of Management and Budget, *Economic Analysis of Federal Regulations Under Executive Order 12866*, January 11, 1996.

II. Introduction

Section 625(a) of the Treasury and Government Appropriations Act, 1998 (P.L. 105-61) directs the Director of the Office of Management and Budget to submit to Congress, by September 30, 1998, a report that provides:

“(1) estimates of the total annual costs and benefits of Federal Regulatory programs, including quantitative and nonquantitative measures of regulatory costs and benefits;

“(2) estimates of the costs and benefits (including quantitative and nonquantitative measures) of each rule that is likely to have a gross annual effect on the economy of \$100,000,000 or more in increased costs;

“(3) an assessment of the direct and indirect impacts of Federal rules on the private sector, State and local government, and the Federal Government; and

“(4) recommendations from the Director and a description of significant public comments to reform or eliminate any Federal regulatory program or program element that is inefficient, ineffective, or is not a sound use of the Nation's resources.”

The draft report, published in the Federal Register on August 17, 1998 for public comment, is OMB's second annual regulatory accounting report to Congress. The 1998 draft offers several improvements over OMB's first report (September 30, 1997). Its estimates of the aggregate benefits and costs of regulation (in response to section 625(a)(1)) cover a broader range of regulatory actions, and OMB relies more heavily on information from the rulemaking record to develop these aggregate estimates. The estimates of the costs and benefits of individual rules in response to section 625(a)(2) also cover more regulations. In response to section 625(a)(3), this report also provides more information on some of the indirect impacts of federal regulation. In these important respects, OMB has furthered the development of a regulatory accounting system for the federal government.

Despite these important improvements, OMB's compliance with its Congressional mandates is still somewhat uneven. The report presents agency estimates of costs and benefits with little, if any, independent analysis or commentary. The report also offers no assessment of the direct and indirect impacts of regulation on government entities, as required under 625(a)(3). Finally, while the report makes valuable procedural recommendations, it does not comply with the statutory requirement of 625(a)(4) to recommend reforms to inefficient or ineffective programs.

These comments address the report's response to each of OMB's statutory mandates under Section 625. Section III below discusses OMB's estimates of the aggregate costs and benefits of regulation, as required under 625(a)(1). Section IV examines OMB's analysis of the costs of benefits of significant rules (defined by section 625(a)(2) as having an annual cost impact of \$100,000,000). This mandate is covered in Chapters 2 and 3 of OMB's report. Section V of these comments addresses possible ways to respond to Congress' mandate (625(a)(3)) regarding the direct and indirect effects of regulation on the private and public sectors. Section VI discusses the report's recommendations for reform. Section VII offers suggestions for improving the final version of OMB's 1998 report to Congress, as well as some longer-term recommendations to OMB for improving federal accountability for regulation.

III. Aggregate Estimates of the Costs and Benefits of Federal Regulation

OMB estimates that existing social regulations provide net benefits ranging from \$34 billion to \$3.38 trillion each year. These estimated net benefits are significantly higher than last year's estimated net benefits of \$9 billion per year. The dramatic increase in net benefit estimates from OMB's previous report stems largely from OMB's incorporation of benefit estimates from a 1997 report by the Environmental Protection Agency on the costs and benefits of the Clean Air Act ("Section 812 Report").⁵ The upper end of this range is 43 percent of the U.S. gross domestic product in 1997. Despite OMB's careful caveats that uncertainties and methodological problems "reduce the likelihood that these findings are robust,"⁶ this range, particularly the upper end of it, has been cited as fact by the press and others. OMB should report a best estimate (e.g., expected value) of costs, benefits, and net benefits of regulation based on the information it has reviewed. In addition, OMB should provide its own best estimate, based on an independent, careful, and balanced evaluation of the available analysis. This is key to improving the public's understanding of the role social regulation plays in our lives.

A. OMB's Estimates of the Costs and Benefits of Federal Regulation

OMB estimates the aggregate costs and benefits of all federal regulation issued through March 31, 1998 in three steps. First, Hahn and Hird,⁷ supplemented with an EPA study, provides estimates of the costs and benefits of all social regulation in effect up to 1988. For the cost of regulations issued between then and 1994, OMB relies on its own review

⁵ U.S. Environmental Protection Agency, *The Benefits and Costs of the Clean Air Act, 1970 to 1990*. October 1997

⁶ OMB Draft, p. 44040.

⁷ Hahn, Robert W. and John A. Hird. "The Costs and Benefits of Regulation: Review and Synthesis." *Yale Journal on Regulation*. (Vol. 8, No. 1, Winter 1991).

of agency RIAs.⁸ The benefits of regulations issued during this later period are based on benefit/cost ratios from Hahn.⁹ The benefits and costs of regulations issued from 1995 to the present are based on a review of regulatory analysis of major regulations.

There are three major differences in OMB's approach this year compared to the 1997 report:

- **For estimates of both costs and benefits of rules issued between April 1995 and March 1998, OMB has conducted its own review of agency economic analyses.** OMB recognizes that its use of a benefit-cost ratio to estimate the benefits of regulations issued since 1987 is crude. Thus, it has made progress toward developing its own estimates of benefits based on a review of the economic analyses supporting regulations promulgated over the last 3 years. OMB suggests it will continue its historic review of agency analyses to compile a more accurate accounting system. This is a positive step. As recommended in Sections IV and VII below, OMB can further improve these estimates by applying consistent methodologies to the individual agency estimates, as described in the Best Practices document, and the Interagency Technical Working Group recommendations described in the draft report.
- **OMB presents, but does not include in its aggregate cost and benefit estimates, the impacts of more categories of regulation.** The draft's coverage of a broader range of regulatory activities than last year's report is consistent with its statutory mandate. However, OMB could present a more comprehensive estimate of benefits and costs by including these impacts, when appropriate, in its total estimates.
- **OMB supplements the pre-1988 estimates of Hahn and Hird with estimates presented in an EPA's report under Section 118 of the Clean Air Act ("The Section 812 report").**¹⁰ The upper bound benefit estimates from the EPA's Section 812 report dwarf the estimates of the benefits for all other regulation. These estimates are based on questionable assumptions and methodologies, many of which OMB discusses in this report.

A discussion of OMB's evaluation of the benefits and costs of individual rules issued over the last 3 years is presented below in section IV of these comments. This section discusses the broader scope of OMB's review, and its reliance on the CAA retrospective.

⁸ U.S. Office of Management and Budget. *More Benefits Fewer Burdens: Creating a Regulatory System That Works for the American People* (December 1996).

⁹ Hahn, Robert W. "Regulatory Reform: What do the Numbers Tell Us?" in Hahn, Robert W., ed., *Risks, Costs, and Lives Saved: Getting Better Results From Regulation*. (New York: Oxford University Press and AEI Press, 1996.)

¹⁰ U.S. Environmental Protection Agency, *The Benefits and Costs of the Clean Air Act, 1970 to 1990*. October 1997.

1. The draft report covers more categories of regulations, but fails to aggregate their costs.

OMB presents an interesting discussion of the impacts of non-social (“other”) regulations, including a thoughtful discussion of the efficiency losses from economic regulation. OMB’s inclusion of a broader range of regulatory activities is an improvement over its 1997 report. In addition to the efficiency losses associated with economic regulations, the 1998 draft presents the costs associated with disclosure requirements, transfer costs, tax compliance costs and federal expenditures associated with social and economic regulations. It asserts that the benefits of disclosure regulation are significantly greater than costs. This may be true, but it is not as obvious as the report suggests. More support of that assertion, particularly with respect to the individual rules that comprise the cost estimate, is necessary before that conclusion can be reached.

OMB estimates that the welfare impacts of environmental regulations are twice the direct costs, yet suggests that the indirect benefits are great because a healthy population will generate more wealth. However, as OMB notes elsewhere in this draft, there are opportunity costs associated with every action. In previous publications, OMB has recognized that a wealthier population tends to be healthier, and imposing unnecessary costs on individuals reduces their ability to invest in healthy activities:

“Regulations have . . . unintended risk-increasing effects because families and other entities spend less on such items as health care, nutritious diets, and home and auto safety devices when their incomes decline.”¹¹

The draft report includes a category for “tax compliance costs,” which are largely paperwork burdens, in its discussion of the costs and benefits of other regulatory activities, and this is an improvement over the last report. To be comprehensive, OMB should also include the costs associated with other information collection activities reported under the Paperwork Reduction Act.

While OMB offers a table listing the costs and benefits of other types of regulation, it does not add these to its estimate of the costs and benefits of social regulation. For some regulatory categories, that is justified. For example, regulations that transfer wealth from some citizens to others (transfer regulations) should not be tallied as social costs. (Although they certainly should be reported, as OMB has done, as they are still important regulatory costs.) However, other costs presented in Table 4 of OMB’s draft do reflect costs to society at large, and it is appropriate to include them in OMB’s comprehensive estimate of the net benefits of federal regulation. Inclusion of these costs

¹¹ U.S. Office of Management and Budget, *Regulatory Program of the United States Government, 1992-1993*, p. 19.

almost triples OMB's cost estimates, increasing the ranges of costs to between \$524 billion and \$623 billion. (See Table 1 of these comments.)

OMB notes that its estimates of the aggregate costs and benefits of regulations issued between 1995 and 1998 are based on review of regulations that make up less than one percent of the final rule documents published in the Federal Register. It suggests that, "because of their greater scale and scope, . . . they represent the vast majority of the costs and benefits of new federal regulations during this period." We would be interested in a quantitative estimate of the contribution this large number of presumably less significant regulations has on total benefits and costs.

2. The dramatic increase in net benefit estimates from OMB's previous report stems largely from OMB's incorporation of benefit estimates from a 1997 report by the Environmental Protection Agency on the costs and benefits of the Clean Air Act.

OMB notes that:

The magnitude of EPA's benefit estimate, \$22 trillion over the 1970 to 1990 period is very large. The expected value of the estimated monetized benefit for 1990 is \$1.25 trillion per year. This represents approximately 20 percent of total 1990 Gross Domestic Product and is comparable in magnitude to total 1990 U.S. expenditures on nondurable goods.¹²

The OMB draft also observes that the Section 812 Retrospective reflects EPA's estimates and not a consensus within the administration. OMB highlights several key assumptions that are likely to overstate benefits. However, it does not take the next step of adjusting the estimates to reflect more reasonable assumptions.

a) Unrealistic Baseline

OMB observes that "considerable uncertainty necessarily surrounds 'what would have happened' over [the period from 1970 to 1990], rendering all attempts to construct aggregate benefit and cost estimates somewhat speculative."¹³ However, OMB's discussion also makes clear that the baseline selected by EPA serves to attribute benefits to federal regulation which, in fact, were due to state and local government and private initiatives. OMB also observes that a large portion of the alleged benefits is due, not to

¹² OMB Draft Report, p. 44043.

¹³ OMB Draft Report, p. 44043.

improvements in air quality, but the model's assumptions about how air quality might have degraded between 1970 and 1990.¹⁴

Thus, EPA's choice of a baseline apparently overstates by a large amount the true social benefits of federal air regulation over the 20-year period. The draft report suggests that OMB has done the analysis to estimate the degree to which EPA's baseline serves to overstate benefits.¹⁵ At a minimum, OMB should present the results of its analysis to aid Congress and the public in understanding the cost and benefit figures presented in this report.

b) Uncertainties in magnitude and causation of effects

The OMB draft observes that 90 percent of the total benefits estimated in the Section 812 Report are associated with reducing exposure to fine particulate matter (PM). However, a causal relationship between PM and mortality has not been established, and there are significant uncertainties regarding the epidemiological studies that suggest a correlation between PM and mortality. As discussed in detail in the Regulatory Studies Program's comments on EPA's recent national ambient air quality standard for PM, the scientific community, including those represented on EPA's Science Advisory Committee, have serious doubts about the causal connection between health effects and PM and the nature of the dose-response function.¹⁶ Some analysis of the sensitivity of these estimated PM benefits to EPA's assumed mortality dose-response relationship would aid readers in understanding the total estimates. For example, does the wide range EPA and OMB present reflect different assumptions regarding the mortality effects of PM? What assumptions are inherent in the upper and lower bound estimates? What consensus exists as to a best estimate of mortality effects?

c) Improper accounting for latency of effects

The OMB draft observes that the Section 812 Report's assumption of a zero lag in the mortality and chronic health risks associated with chronic exposure to PM "represents

¹⁴ "A substantial fraction of the estimated benefits are attributable to the degradation in modeled air quality from 1970 levels, rather than the result of an improvement in air quality from the levels that existed in the United States in 1970." OMB Draft Report, p. 44043.

¹⁵ OMB's draft report states "While there is no direct sensitivity analysis of alternative baselines, the available documentation for the 'no control' scenario suggests that a substantial fraction of the estimated benefits are attributable to the degradation in modeled air quality from 1970 levels, rather than the result of an improvement in air quality from the levels that existed in the United States in 1970." p. 44043.

¹⁶ Our March 1997 comments stated: "No generally accepted medical explanation exists of how current PM concentration levels could harm health. In the CASAC Chair's words: 'There is no biologically plausible mechanism that could explain the apparent relationship between acute mortality and PM at concentrations that are a fraction of the present PM 10 NAAQS.' Some studies question the significance of reported correlations between PM and respiratory-related deaths, and in any event correlation and causation are quite different concepts. The strength of the causal connection between health effects and particulates remains in doubt."

only one end of a range of possibilities.” OMB estimates that a more reasonable assumption of a 15-year latency “would reduce the present value of the mortality benefits by a factor of two...”¹⁷ This is useful information. OMB should present such estimates for all the questionable assumptions it discusses, and develop its own best estimate or expected value of benefits and costs based on more realistic assumptions.

d) Exaggerated valuation of health benefits

OMB makes two interesting observations regarding EPA’s selection of a value of \$4.8 million per statistical life. First, OMB notes that the standard deviation surrounding EPA’s estimate was \$3.2 million. In other words, significant uncertainty surrounds this estimate. Second, EPA’s value is based on a review of studies, which suggest a willingness-to-pay of \$5 for a one-in-a-million reduction in mortality risk. However, application of the \$5 estimate, which is based on studies of risks that are much smaller than those EPA attributes to PM exposure (between 1/10th to 1/100th the size), suggests a willingness-to-pay to reduce PM exposure that is a large portion of a household’s budget. Thus, these values are likely to overstate the actual willingness-to-pay for reducing the health risks of PM.

OMB’s discussion of these key assumptions underlying the Section 812 report are important first steps in helping readers understand the benefit estimates presented here. OMB could expand this discussion to include other issues raised by reviewers of the Section 812 report, including EPA’s Clean Air Scientific Advisory Committee (CASAC) and other agencies. For example, CASAC was concerned that EPA’s use of a statistical-life-saved metric, rather than additional years-of-life-saved, tends to overstate benefits for regulatory actions, such as particulate matter controls, which prolong lives by a few years (or less).¹⁸ Also, EPA’s estimates do not reflect offsetting health risks, such as the increased exposure to ultraviolet radiation that would result from a reduction in particulate matter and ground level ozone.

Furthermore, the caveats OMB presents are not sufficient to balance the presentation of Section 812 Report estimates. The numbers OMB presents will be reported and repeated, while the discussion of the apparent bias and uncertainty inherent in those numbers will be lost in subsequent discourse. At a minimum, OMB should present EPA’s best estimates, in addition to the ranges. The public would be better served if OMB also adjusted EPA’s estimates to reflect an interagency consensus of the appropriate assumptions and methodologies. As EPA noted in the Section 812 Report, due to a statutory deadline, the agency was unable to respond to concerns raised by other agencies, and the resulting estimates do not reflect the best judgment of the

¹⁷ OMB Draft Report, p. 44043.

¹⁸ As noted in Section VI below, an interagency working group last year recommended that OMB report mortality benefits in terms of life-years saved, as well as lives saved.

administration. OMB should take the opportunity this report offers to adjust EPA's estimates along the lines suggested by the interagency review and its own analysis.

B. General issues involved in developing aggregate estimates

OMB presents a thoughtful discussion of the problems with estimating aggregate benefits and costs. Yet, as many commenters noted in response to last year's report,¹⁹ and as OMB has noted in previous publications,^{20,21} estimates do not have to be precisely correct to be useful. OMB's discussion of estimation problems implies that the burden of proof should be higher for estimating aggregate regulatory costs and benefits than for imposing new requirements. This is counter-intuitive. Good public policy should require an understanding of the prospective costs and benefits of proposed actions that is as comprehensive, if not more comprehensive, than that required for an after-the-fact accounting exercise. If we do not have the information necessary to evaluate a program or programs after-the-fact, then how can we have had enough information before implementation to determine whether it would enhance social welfare or even whether it would achieve narrower goals?

OMB presents a good discussion of the relative merits of prospective, retrospective and "hybrid" analyses of regulatory impacts, and highlights the value of objective, independent, retrospective studies of existing regulations. It also summarizes some recent retrospective studies conducted by agencies and the Office of Technology Assessment.

In these summaries, OMB presents a careful, unbiased review of these retrospectives, including the EPA report that forms the basis for the upper end of OMB's benefit estimates. As noted above, despite numerous caveats regarding the robustness of the EPA estimates, however, OMB leaves the reader to draw conclusions about the validity of OMB's own reported results.

The National Highway Transportation and Safety Administration and OTA should be commended for conducting careful studies on the costs and benefits of regulations after they were implemented. NHTSA examined, retrospectively, the costs and benefits of its rule requiring center high-mounted stop lamps in passenger vehicles, and compared those with prospective estimates developed in the regulatory impact analysis (RIA) supporting the rule. It found that the RIA had underestimated costs by more than a factor of two and overstated effectiveness by a factor of more than seven. NHTSA noted that auto manufacturers' prospective estimates of the costs were more accurate than NHTSA's.

¹⁹ See, for example, comments of Dudley & Antonelli, and Hopkins.

²⁰ U.S. Office of Management and Budget, *Regulatory Program of the United States Government*, April 1, 1991-March 31, 1992, p. 6.

²¹ See U.S. Office of Management and Budget, *OMB Mid-Session Review: The President's Budget and Economic Growth Agenda*, July 24, 1992, pp. 396-401; and OMB, *Budget Baselines, Historical Data, and Alternatives for the Future*, January 1993, pp. 114-115.

Despite the revealed inaccuracies in prospective estimates, NHTSA concluded that the regulation still provided net benefits, they just were not as large as had been anticipated. This reveals that even careful RIAs, such as the one prepared by NHTSA, may not predict actual effects because they do not take into consideration behavioral responses to regulations. It also reinforces the importance of identifying a market failure before taking a regulatory action, as called for in OMB's Best Practices guidance. Even policies supported by the best benefit-cost analysis are not likely to be socially optimal substitutes for market forces unless they correct a market failure.

OTA's retrospective review of eight OSHA regulations also offers interesting insights. For example, it is often argued that prospective regulatory costs are generally overestimated. However, OMB reports that OTA's retrospective shows that OSHA has both underestimated and overestimated costs. It also notes that the agency has generally overestimated the benefits of its actions.²²

The principle articulated in OMB's Best Practices that "performance standards are generally to be preferred to engineering or design standards because performance standards provide the regulated parties the flexibility to achieve the regulatory objective in a more cost-effective way"²³ is also confirmed by the OTA review.

The engineering controls required by OSHA's secondary lead smelters rule were economically infeasible (costs had been underestimated), however, smelters found less expensive and more effective ways to achieve the rule's goal of reducing blood-lead levels. For its ethylene oxide regulation of hospitals, OSHA estimated costs were on target, but serendipitously. Hospitals complied using means other than the ventilation equipment that had been anticipated in the rule, and actually brought exposure levels much below what OSHA had expected. Similarly, metal foundries' use of low-formaldehyde resins instead of the ventilation requirements designated by OSHA resulted in lower costs than OSHA had predicted.

From its review of eight OSHA regulations, OTA concluded "regulation-induced innovation" was desirable. But, OMB correctly rejects that argument:

However, there is an opportunity cost to forcing innovation that is being neglected. The resources that are directed at reducing compliance costs by developing new technologies have to be pulled from other projects, which presumably the company thought had a larger potential for payoff. Since adding another constraint to the economic system is not likely to increase the overall rate

²² OMB Draft Report, p. 44047.

²³ U.S. Office of Management and Budget, *Economic Analysis of Federal Regulations Under Executive Order 12866*, January 11, 1996.

of technological progress for the economy, “regulation-induced innovation” is not likely to be the “win-win” situation that the report suggests (p. 53).²⁴

OMB’s review of these retrospective studies is nicely done, and offers valuable insights for policy makers and others regarding the analysis of benefits and costs of regulatory actions. We would like to see more retrospective studies along these lines, and we encourage agencies to conduct, and OMB to continue to review, in an unbiased manner, prospective and retrospective studies of regulatory costs and benefits in future reports.

C. Recommendations to improve OMB’s aggregate estimates

The development of aggregate estimates is an ongoing process, and OMB has made important strides since its last report. OMB should consider the following further improvements as it continues to refine its estimates:

1. OMB should present its best estimate of the aggregate costs and benefits of federal regulation.

The 1998 report provides a range for the costs and benefits of federal regulation. Ranges are generally a useful way to illustrate the uncertainty surrounding estimates, however, presentation of upper and lower bound estimates alone is not sufficient. If data are available to aggregate upper and lower bound estimates, sufficient data must be available to aggregate a best estimate. This is particularly important because the upper and lower bound estimates of net benefits presented in this report vary by a factor of 100. OMB should report a best estimate (i.e., expected value) of costs and benefits, in addition to the ranges.

Ideally, OMB’s best estimate would be based on an application of consistent approaches to estimating and valuing costs and benefits. OMB recognizes an “apples and oranges” problem in aggregating different estimates, but apparently is not comfortable modifying agencies’ estimates to make them more consistent with its Best Practices. For example, OMB notes that agencies use a wide range of methodologies to quantify and value small risks of premature death, yet it does not make any attempt to make those estimates more comparable. Furthermore, the draft report raises serious questions about the validity of the analysis underlying the Section 812 Retrospective estimates of the benefits and cost of the Clean Air Act, yet OMB incorporates those estimates into its own report to Congress without adjustment.

As discussed below in the context of OMB’s review of recent regulatory actions, OMB has begun to improve the consistency of agency estimates by valuing quantified benefits when possible, but much more could be done. If OMB is not in a position to present its

²⁴ OMB Draft Report, p. 44047.

own estimates based on consistent, accepted methodologies, it should identify in a systematic way the assumptions and methods underlying agency estimates. Section VII of these comments recommends that OMB prepare a report card for major regulatory analyses, similar to the evaluation it presented in the Regulatory Program of United States in 1988.²⁵

2. OMB should report cost and benefit information in useful ways, e.g., by household, by socioeconomic class (environmental equity issues), by sector of the economy, by type of regulation (health vs. safety) etc.

OMB stresses, correctly, that “aggregate estimates of the costs and benefits of regulation offer little guidance on how to improve the efficiency, effectiveness, or soundness of the existing body of regulations.”²⁶ However, a similar statement could be made about aggregating fiscal costs. This should not suggest that information on total regulatory costs and benefits is not valuable. Though knowing total federal budget expenditures doesn’t help evaluate individual budgetary decisions, one would be hard pressed to argue against keeping track of the size of Federal budget. As Congress observed in enacting this amendment, “the public has the right to know the benefits of Federal regulatory programs, as well as their costs.”²⁷

OMB’s classifications of its aggregate estimates are interesting, and provide useful insights. For example, its estimates of the efficiency losses associated with economic regulation supports the widely accepted notion that economic regulation imposes net costs on society.

We would like to see OMB’s total cost and benefit estimates expanded to include more information and other classifications of interest. For example, the sheer growth in regulatory burden would be informative, as would estimates of the costs and benefits of regulation as a percent of GDP. OMB could distinguish regulations according to their goal, (i.e. protection of public health, safety, the natural environment, etc.). Earlier OMB reports²⁸ provide a solid example of the type of information that can be gleaned from aggregate data on costs and benefits. OMB noted that disaggregation “of these data reveal several interesting and provocative features that are missing from the aggregate estimates...” including variations in the cost-effectiveness of rules issued by regulatory agency.

²⁵ U.S. Office of Management and Budget, *Regulatory Program of the United States Government*, April 1, 1987-March 31, 1988, pp. xv-xxii

²⁶ OMB Draft, p. 44035.

²⁷ See statements of Senators Stevens and Roth.

²⁸ U.S. Office of Management and Budget, *Fiscal 1992 Budget*, table C-2, and *Regulatory Program of the United States Government*, April 1, 1991 – March 31, 1992, pp. 8-13.

Safety regulations promulgated by the major Department of Transportation regulatory agencies ... have remained consistently below \$5 million per premature death prevented. In addition, there is no apparent trend in the cost-effectiveness of rules from these agencies over the past 20 years.

In contrast, regulations promulgated by the EPA and the health standards division of the Occupational Safety and Health Administration (OSHA) are considerably more costly per unit of social benefit obtained. Many of these regulations have cost-effectiveness ratios in the tens of millions per premature death prevented; some have cost-effectiveness ratios that are well into the billions. Furthermore, for both agencies, the trend is clearly upward.²⁹

The same report also separated regulatory actions into health and safety categories to illustrate the disparity in cost-effectiveness between actions aimed at reducing safety hazards (which consistently avoided premature deaths at less than \$10 million) and those aimed at reducing environmental and occupational health risks (which avoided premature deaths at costs reaching into the billions and trillions per case). OMB concluded:

From these data, it appears that safety regulation is far more cost-effective at reducing threats to life than regulations directed toward health-related mortality risks—especially cancer risks plausibly attributed to occupational or environmental exposure. If these regulations are representative, aggregate mortality risk would be substantially reduced at considerably less cost by shifting the Federal Government’s regulatory focus away from relatively small occupational and environmental cancer threats toward other health risks and causes of injury.³⁰

A recent study conducted at the Harvard Center for Risk Analysis reached similar conclusions. It found that a reallocation of current spending from lower risk to higher risk problems could more than double the life-saving results of regulations designed to reduce health and safety risks³¹ even if each agency continued to impose the same total regulatory cost but merely targeted its efforts more efficiently. By using its collected data to focus attention on such risk comparisons, OMB could improve regulatory accountability, and contribute valuable gains to social welfare, the environment and public health.

²⁹ U.S. Office of Management and Budget, *Regulatory Program of the United States Government*, April 1, 1991 – March 31, 1992, p. 11.

³⁰ *Ibid.*, p. 11

³¹ Tammy O. Tengs and John D. Graham, “The Opportunity Cost of Haphazard Social Investments in Life-Saving,” in R. Hahn (editor), *Risks, Costs, and Lives Saved: Getting Better Results from Regulation* (New York: Oxford University Press, 1996).

The public also would benefit from information on the relative impacts (both benefits and costs) on different sectors of the economy. For example, it would be valuable to get a sense of the relative benefits and costs of regulations on different socioeconomic classes. With the growing interest in environmental equity, quantitative estimates of who bears the costs, and gains the benefits of regulatory activity would enlighten policy decisions. We recognize that information to support such disaggregation may not be robust. However, since both Executive Order 12866 and OMB's Best Practices guidance encourage agencies to evaluate the "distribution of the net effects of a regulatory alternative across the population and economy, divided in various ways (e.g., income groups, race, sex, industrial sector),"³² more data should be available on which to base such analysis in future reports.

In the mean time, OMB should present more information along the lines of that provide by Hopkins,³³ who measures regulatory costs over time, and the incidence of those costs on households, and by type, and size of business. Since OMB has estimated total benefits, as well as costs, it could contribute valuable information on the distribution of those benefits.

3. OMB should include in its tables the social costs and benefits associated with the paperwork burden inherent in many regulatory activities.

Each year, OMB estimates the number of hours individuals, businesses, and State and local governments must spend preparing or maintaining Federally mandated forms, reports, and records. As OMB noted in its December 1996 report on achievements under Executive Order 12866, "When people speak of regulatory burden, they are usually referring to recordkeeping or reporting requirements -i.e., paperwork."³⁴ The draft report does include a category for "tax compliance costs," which are largely paperwork burdens, in its discussion of the costs and benefits of other regulatory activities, and this is an improvement over the last report. OMB could further enhance its estimate with information on the "burden-hours" of other regulation as reported under the Paperwork Reduction Act. For FY 1997, OMB estimated the total burden at 7.0 billion hours.³⁵ Using the \$26.50 opportunity cost of time that OMB uses in its draft, this suggests costs of \$185.5 billion. Approximately 75 percent of these costs are related to tax compliance, which OMB does discuss in its report.

To some extent, the costs (and benefits) associated with reporting requirements and other paperwork burdens may be included in OMB's estimates of the social costs and benefits

³² OMB, *Economic Analysis of Federal Regulations Under Executive Order 12866*, January 1996, p. 2.

³³ Hopkins, Thomas D. *Regulatory Costs in Profile*, Center for the Study of American Business Policy Study Number 132, August 1996.

³⁴ More Benefits, Fewer Burden, *op. cit.*, p. 28.

³⁵ U.S. Office of Management and Budget, *Information Collection Budget*, FY 1998.

of regulatory activities. As the agency responsible for reviewing both regulatory impact analyses under E.O. 12866 and information collection requests under the Paperwork Reduction Act, OMB is in the best position to provide a total estimate of paperwork costs and an informed judgment as to the fraction of those costs that are not included in its social cost estimate.

IV. Benefits and Costs of Individual Rules

Chapter II of OMB's draft report summarizes the economically significant rules issued over the last year. Chapter III compiles the benefits and costs of major regulations issued between April 1995 and March 1998. This information responds to Congress' request that OMB provide "estimates of the costs and benefits (including quantitative and non-quantitative measures) of each rule that is likely to have a gross annual effect on the economy of \$100,000,000 or more in increased costs." As noted above, OMB also uses this information to supplement its aggregate estimates of the benefits and costs of Federal Regulation.

This analysis is an improvement over last year's report in two respects: (1) it covers more significant regulations, and (2) it begins to put agency estimates of costs and benefits in a comparable format, by assigning values to agencies' quantified estimates when possible. OMB also reviewed independent agency rules based on GAO submissions under the Small Business Regulatory Enforcement Fairness Act of 1996, however, OMB concluded that the analyses by independent agencies were inadequate for inclusion in its aggregate estimates.

OMB's evaluation of regulatory impact analyses for all major rules issued since April 1, 1995 is a significant undertaking and an improvement over the 1997 report, and we look forward to future reports for which OMB expects to conduct continued reviews of the historic rulemaking record. In the course of these reviews, OMB analysts identify the methodologies agencies use to estimate benefits and costs. However, as it did in its 1997 report, OMB presents agency estimates of the costs and benefits of significant rules without ensuring that they are based on consistent assumptions or methodologies. OMB offers no independent assessment of the quality or usefulness of agency analyses, although the draft does comment that agencies' compliance with OMB's Best Practices guidance is variable.

The majority of regulatory analyses supporting rules issued over the last year appear to have deviated from the guidelines in important ways. The listing of agency rules, and OMB's discussion reveals that agencies are still not following OMB's sound "Best Practices" guidance. Of the 22 non-transfer rules OMB reviewed during the last year, agencies quantified and valued benefits in only eight cases. In six cases, agencies did not even quantify the expected benefits of rules that are expected to cost more than \$100

million per year. Agencies were generally better at estimating the costs of their actions – 19 of 22 rules were accompanied by cost estimates.

OMB’s review of significant rules issued by independent agencies revealed even less rigorous analysis. Of the 41 significant rules issued between April 1, 1996 and March 31, 1998, only one contained information on the value of expected benefits, and only 4 contained information on costs.

OMB recognizes that:

Serious deviations from Best Practices on any one criterion can dramatically diminish the usefulness of the analysis, or worse, lead to analytical results that distort the facts and ultimately result in regulatory decisions that are far from optimal.

“Because of the importance of ‘getting it right,’” OMB discusses key criteria from its Best Practices guidance and highlights examples of when agencies properly applied those principles in their regulatory analyses. While it is worthwhile to reinforce good analysis, more informative than this anecdotal approach would be a comprehensive discussion of the analysis supporting each of the 33 significant rules issued over the year and how they measure up to key criteria. In its draft report, OMB identifies five key criteria from its Best Practices guidance:

- Quantification and monetization of estimates and treatment of qualitative estimates
- Determination of a consistent and reasonable baseline
- Evaluation of regulatory options
- Treatment of bias and uncertainty
- Treatment of future streams of benefits and costs.³⁶

Interestingly, these criteria are almost the same criteria OMB selected for a review of regulatory analyses conducted in 1988.³⁷ In that effort, however, OMB did not shy away from reporting inadequacies as well as strengths in agency analyses. OMB’s 1988 Regulatory Program presented a table that briefly evaluated nine agency actions against each of the five criteria. For example, under the criterion “evaluation of suitable alternatives to selected option, the table reveals that one rule evaluated six options while

³⁶ OMB Draft, p. 44050.

³⁷U.S. Office of Management and Budget, *Regulatory Program of the United States Government*, April 1, 1987-March 31, 1989, pp. xv-xvii.

another failed to consider any viable alternatives. As a result, OMB's 1988 report provided much more useful information than the current draft.

In the course of its review of regulations issued since 1995, OMB has put considerable effort into understanding the assumptions and methodologies underlying benefit and cost estimates. It should include those observations in this report in the form of a "report card" that highlights strengths and weakness of each analysis. At a minimum, OMB should present a table, along the lines of that produced in its 1988 Regulatory Program, which summarizes how each regulatory analysis addressed key criteria.

In addition to disclosing the strengths and weaknesses in agency analysis, as suggested by the report card approach, OMB would contribute more to an understanding of the true social impact of federal regulations if it offered its own best estimates of the costs and benefits of individual rules. OMB has begun to address the aggregation problem that results from "different approaches in the quantification and monetization of ... effects across agencies" by assigning dollar values to effects agencies have quantified, but not valued. It can do more. It notes that the "aggregate benefit and cost estimates are relatively insensitive to the values [OMB] assigned ... because the aggregate estimates are dominated by the FDA tobacco rule and EPA's rules revising the ozone and PM primary NAAQS."

As the Regulatory Studies Program's comments on the NAAQS rules describe in detail, EPA appears to have seriously understated the costs, and overstated the benefits.³⁸ We estimated that the combined full costs of implementing these rules would be well over \$100 billion per year. Furthermore, we found that the rules will result in negligible health benefits, at best. They are more likely actually to harm public health by diverting resources from health-saving activities and increasing other environmental dangers. The reason our estimates are so different from EPA's is that the analyses supporting the NAAQS rules fell short of OMB's Best Practices in several respects, including choice of baseline; approach to quantifying and valuing health effects, especially mortality; discounting of future streams of costs and benefits; and treatment of uncertainty. In addition, the analyses failed to consider all likely health effects, including the offsetting negative health effects associated with the increased penetration of ultraviolet radiation that will result from implementation of these two rules. Though Congressional inquiries turned up internal Administration documents that revealed OMB to be a vocal and active critic of EPA's analyses, this report merely offers EPA's estimates at face value. OMB should present its own best estimates of the costs and benefits of these major rules as well as others. This would not require new analysis, as the interagency review conducted

³⁸ Comments of the Regulatory Studies Program on EPA's National Ambient Air Quality Standards for ozone and particulate matter, Center for Study of Public Choice, George Mason University, March 12, 1997. (available at www.ei.com)

during the development of those rules has already contributed more realistic estimates of benefits and costs than those put forth by EPA.

V. Impacts on Private Sector and Governments

Congress asked OMB to provide “an assessment of the direct and indirect impacts of Federal rules on the private sector, State and local government, and the Federal Government.” OMB does not respond directly to this requirement, though this year’s draft does note that the indirect impacts of environmental regulation are likely to be twice direct costs. OMB observes that much of the social cost estimates actually reflect direct compliance costs on the private sector. While this may be true, it is interesting and useful to break out the impacts of regulation in different ways, and good benefit-cost analyses should permit that type of parsing.

Perhaps the most interesting aspect of this statutory section relates to the impact of Federal regulation on state and local governments—an issue this draft report does not address. Agencies are required to provide information on the impacts of regulation on state and local governments under the Unfunded Mandates Reform Act. OMB should discuss the information that is available from agencies, and, to the extent it is inadequate for offering an assessment, recommend ways to improve the quality of data. OMB could also present other information from the rulemaking record, such as comments from state and local governments. For example, many states commented that EPA’s 1997 NAAQS rules would have negative impacts on government resources, and local economies.

VI. OMB Recommendations

Congress asked OMB to make recommendations “to reform or eliminate any Federal regulatory program or program element that is inefficient, ineffective, or is not a sound use of the Nation's resources.” As it did in its report to Congress last year, OMB declines to make specific recommendations based on its review, but seeks public comment on regulations that could be reformed or eliminated. OMB argues that aggregate information on costs and benefits does not reveal sufficient detail to make recommendations for reform. However, OMB’s review of major rules issued between 1995 and 1998 does suggest areas for improvement. For example, according to OMB’s Table 9, EPA’s optimistic final estimates of the impact of the ozone NAAQS suggest that net benefits will be negative, perhaps by as much as \$9.3 billion per year. Even without considering the increased health risks associated with that rule, it is clearly an expensive, ineffective solution to the health problems it seeks to address, and a candidate for elimination.

On a procedural level, another recommendation indicated by OMB’s review is that more rigorous analysis should be required of independent agencies before they promulgate new regulations.

While this report does not acknowledge that OMB's review reveals any programs that are inefficient, it does recommend legislation drafted by the Administration to reform how electricity markets are regulated. It also reports on progress toward implementing the procedural recommendations made in last year's draft.

A. Electricity restructuring

OMB's major recommendation for eliminating unnecessary or burdensome regulations is to endorse the administration's electricity restructuring bill. Removal of economic regulation on the electricity sector is consistent with OMB's conclusion that economic regulation tends to impose costs in excess of benefits. Yet, OMB's endorsement appears not to be supported by the type of analysis called for in its own Best Practices guidance. The discussion of the expected benefits of the administration proposal suffers from the baseline problem OMB identifies elsewhere in the draft report. Some have argued that the benefits due to a competitive electricity market are imminent, even in the absence of passage of the administration's bill. Furthermore, the draft does not provide a full discussion of viable alternatives to the proposed approach to restructuring.

OMB should not limit its recommendations to electricity reform. It should consider other forms of economic regulation, such as the regulation of financial markets, that could be reformed or eliminated.

B. Further methodological progress

OMB restates the methodological recommendations made in last year's draft report, and reports on its progress toward improving the quality of agency analysis of federal regulations. Particularly interesting are the efforts of an Interagency Technical Working Group (ITWG) convened to examine the issues raised in the 1997 report. The working group made the following recommendations to OMB for preparing reports to Congress on regulatory costs and benefits:

- (1) That OMB complete agency estimates of reductions in mortality risk by estimating the additional longevity, e.g., years of life gained, to complement conventional estimates of statistical lives saved, in instances where supportable methods exist.
- (2) That OMB complete agency estimates of small reductions in mortality risk by estimating the value of these changes using appropriate unit values from the literature on willingness-to-pay.
- (3) That OMB complete agency estimates of the value of reductions in morbidity, taking into account lags, e.g., "latency" periods, if any, in the realization of harm due to disease or injury, using a range of appropriate discount rates.

(4) That OMB complete agency estimates of reductions in morbidity by estimating (1) the value of cases of disease or injury averted, where there are independent estimates of willingness-to-pay to reduce the risks of such disease or injury, and (2) where appropriate willingness-to-pay estimates are not available, an index of loss in function relative to death, such as a quality adjusted life-year approach.

(5) OMB not generally assign values to agency estimates of changes in the quantity or quality of wetlands, without specific information justifying the appropriateness of the unit values to the wetlands affected, given the wide variety of wetlands.³⁹

We strongly support these recommendations; however, OMB does not appear to have followed them in this report. Future reports would greatly benefit from OMB's adherence to these recommendations.

VII. Recommendations for Improving the Report

As discussed throughout these comments, OMB has made an admirable attempt at compiling the costs and benefits of federal regulation, and this report reflects several improvements over its 1997 report. We offer the following recommendations to further improve this draft as well as future drafts to Congress. We expect that many of these can be accomplished in a relative short time frame, with information and resources currently available to OMB.

A. OMB should report best (i.e., expected value) estimates of aggregate benefits and costs, as well as ranges.

The draft report provides ranges for the costs and benefits of federal regulation. Ranges are generally a useful way to illustrate the uncertainty surrounding estimates, however, presentation of upper and lower bound estimates alone is not sufficient. OMB should report its best estimates (i.e., expected values) of costs and benefits, in addition to the ranges. This is particularly important because the upper and lower bound estimates of net benefits presented in this report differ by a factor of 100.

OMB notes that its aggregate costs and benefits of regulations issued between 1995 and 1998 are based on review of regulations that make up less than one percent of the final rule documents published in the Federal Register. It suggests that, "because of their greater scale and scope, . . . they represent the vast majority of the costs and benefits of new federal regulations during this period." We would be interested in a quantitative

³⁹ OMB Draft Report, p. 44057.

estimate of the contribution this large number of presumably less significant regulations has on total benefits and costs.

B. OMB should adjust its aggregate estimates to correct for identified problems in the EPA Section 812 retrospective.

OMB recognizes that the Section 812 retrospective report, on which its cost and benefit estimates are based, contains numerous questionable assumptions that are likely to overstate benefits. However, the caveats OMB presents are not sufficient to balance the presentation of the Section 812 Report estimates. The numbers OMB presents will be reported and repeated, while the discussion of the apparent bias and uncertainty inherent in those numbers will be lost in subsequent discourse. At a minimum, OMB should present EPA's best estimates, in addition to the ranges. The public would be better served if OMB adjusted EPA's estimates to reflect an interagency consensus of the appropriate assumptions and methodologies. As EPA noted in the Section 812 Report, due to a statutory deadline, the agency was unable to respond to concerns raised by other agencies, and the resulting estimates do not reflect the best judgment of the administration. OMB should take the opportunity this report offers to adjust EPA's estimates along the lines suggested by the interagency review committee.

C. OMB should identify in a concise but comprehensive manner variations in agency methodologies used to estimate benefits and costs of individual regulations.

In the course of its review of regulations issued since 1995, OMB has put considerable effort into understanding the assumptions and methodologies underlying benefit and cost estimates. It should include those observations in this report in the form of a "report card" that highlights the strengths and weakness of each analysis. This report card could be an extension of table 9 of OMB's draft, and include comments on how each analysis treated the five key criteria OMB identifies in Chapter 2, section A.3.

D. OMB should present objective estimates of the benefits and costs of individual regulatory actions.

In addition to disclosing the strengths and weaknesses in agency analysis, as suggested by the report card approach, OMB would contribute more to an understanding of the true social impact of federal regulations if it offered its own estimates of the costs and benefits of individual rules. OMB has begun this task by assigning dollar values to effects agencies have quantified, but not valued, however, it can do more. By following the recommendations of the ITWG, OMB would offer significant improvements in its estimates of benefits and costs. Applying greater consistency to estimated impacts would not only enlighten OMB's discussion of individual significant rules, but also its aggregate cost and benefit estimates.

E. OMB should present information on the effects of federal regulation on state and local entities.

Agencies are required to provide information on the impacts of regulation on state and local governments under the Unfunded Mandates Reform Act. OMB should evaluate what information is available from agencies, and, to the extent it is inadequate for offering an assessment, recommend ways to improve the quality of data. OMB could also begin to compile information from the rulemaking record, such as comments from state and local governments. For example, many states commented that EPA's 1997 NAAQS rules would have negative impacts on government resources, and local economies.

F. OMB should report aggregate costs and benefits in useful ways, e.g., by household, by type of regulation, by growth in burden, etc.

We would like to see OMB's total cost and benefit estimates expanded to include more information and other classifications of interest. For example, the sheer growth in regulatory burden would be informative, as would estimates of the costs and benefits of regulation as a percent of GDP. OMB could distinguish regulations according to their goal, (i.e. protection of public health, safety, the natural environment, etc.). OMB could also present information along the lines of that provided by Hopkins,⁴⁰ who measures regulatory costs over time, and the incidence of those costs on households, and by type, and size of business. Since OMB has estimated total benefits, as well as costs, it could contribute valuable information on the distribution of those benefits.

G. OMB should expand its coverage of aggregate impacts to include all costs related to paperwork requirements.

The draft report includes a category for "tax compliance costs," which are largely paperwork burdens, in its discussion of the costs and benefits of other regulatory activities, and this is an improvement over the last report. OMB could further enhance its estimates with information on the "burden-hours" of other regulation as reported under the Paperwork Reduction Act.

H. Agencies should follow the OMB's Best Practices when preparing regulatory analyses under Executive Order 12866.

As OMB's estimates of net benefits in this draft report illustrate, compilation of agency estimates is not very meaningful unless those estimates are based on consistent, realistic assumptions and methodologies. For example, an obvious conclusion from the result that

⁴⁰ Hopkins, Thomas D. *Regulatory Costs in Profile*, Center for the Study of American Business Policy Study Number 132, August 1996.

benefits attributed to regulations under the Clean Air Act dwarf the benefits from all other federal regulations would be that our regulatory resources should all be focused on air quality issues, yet no one would make that recommendation because the numbers are not reliable.

As many reviewers have observed,⁴¹ agency analyses under Executive Order 12866 do not comply with the solid guidance developed by OMB and an interagency group. Agency adherence to the Administration's guidance would aid OMB in developing aggregate benefit and cost estimates. More importantly, though, compliance with the Best Practices guidelines would be a positive first step toward ensuring that federal regulations actually provide benefits that outweigh their costs.

⁴¹ See, for example, U.S. General Accounting Office, *Regulatory Reform: Agencies Could Improve Development, Documentation, and Clarity of Regulatory Analyses*, May 1998 (GAO/RCED-98-142) and Dudley and Antonelli, "Congress and the Clinton OMB: Unwilling Partners in Regulatory Oversight," *Regulation* (Fall 1997).

Table 1
Total Costs and Benefits of Regulation
(Aggregate costs of social and “other” regulation from OMB’s tables)

	Benefits		Costs		Net Benefits	
	low	high	low	high	low	high
Environmental (direct & indirect)	\$ 93	\$ 3,353	\$240	\$330	\$ (237)	\$ 3,023
Transportation	\$ 84	\$ 110	\$ 15	\$ 18	\$ 66	\$ 92
Labor	\$ 28	\$ 30	\$ 18	\$ 19	\$ 9	\$ 11
Other	\$ 53	\$ 38	\$ 17	\$ 22	\$ 31	\$ 16
Economic (efficiency loss)	Small	Small	\$ 71	\$ 71	\$(71)	\$(71)
Disclosure	NA	NA	\$ 7	\$ 7	\$ (7)	\$ (7)
Tax compliance	NA	NA	\$140	\$140	\$ (140)	\$ (140)
Federal expenditures (social)	included above		\$ 13	\$ 13	\$(13)	\$(13)
Federal expenditures (economic)	NA	NA	\$ 3	\$ 3	\$ (3)	\$ (3)
Total	\$258	\$ 3,531	\$524	\$623	\$ (365)	\$ 2,908