

**2012 Report to Congress
on the Benefits and Costs of
Federal Regulations
and Unfunded Mandates on
State, Local, and Tribal Entities**



2012

**Office of Management and Budget
Office of Information and Regulatory Affairs**

**2012 REPORT TO CONGRESS
ON THE BENEFITS AND COSTS OF FEDERAL REGULATIONS AND
UNFUNDED MANDATES ON STATE, LOCAL, AND TRIBAL ENTITIES**

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EXECUTIVE SUMMARY

In accordance with the Regulatory-Right-to-Know Act,¹ the Office of Management and Budget (OMB) prepared this Report to Congress on the Benefits and Costs of Federal Regulations (Report). This is the fifteenth annual Report since OMB began issuing this Report in 1997. The Report summarizes estimates by Federal regulatory agencies of the quantified and monetized benefits and costs of major Federal regulations reviewed by OMB over the last ten years (see page 11, below, for the criteria for identifying “major” regulations for this report).

The principal findings are as follows.

- The estimated annual benefits of major Federal regulations reviewed by OMB from October 1, 2001, to September 30, 2011, for which agencies estimated and monetized both benefits and costs, are in the aggregate between \$141 billion and \$691 billion, while the estimated annual costs are in the aggregate between \$42.4 billion and \$66.3 billion. These ranges are reported in 2001 dollars and reflect uncertainty in the benefits and costs of each rule at the time that it was evaluated.
- Some rules are anticipated to produce far higher net benefits than others. Moreover, there is substantial variation across agencies in the total net benefits produced by rules. The overwhelming majority of rules have net benefits, but over the last decade, a few rules have net costs, typically as a result of legal requirements.
- During fiscal year 2011, executive agencies promulgated 53 major rules, of which the majority (30) were budgetary transfer rules.
 - For the 30 budgetary transfer rules, the issuing agencies quantified and monetized the budgetary transfer amounts. (The budgetary amounts reflect the principal economic consequences of such rules.)
 - For 12 rules, representing the strong majority of the benefits and costs of rules issued in fiscal year 2011, the issuing agencies quantified and monetized both benefits and costs. Those 12 rules were estimated to result in a total of \$34.3 billion to \$89.5 billion in annual benefits and \$5.0 billion to \$10.1 billion in annual costs.
 - For three rules, the issuing agencies (the Department of Treasury and the Department of the Interior) were able to quantify and monetize only benefits. For these three rules, the agencies estimated annual benefits of about \$600 million to \$700 million.
 - For six rules, the issuing agencies were able to quantify and monetize only costs. For these rules, the agencies estimated total annual costs of about \$400 million to \$1.1 billion.

¹ Section 624 of the Treasury and General Government Appropriations Act of 2001, Pub. L. No. 106-554, 31 U.S.C. § 1105 note.

- For two rules, the issuing agencies were able to quantify and monetize neither benefits nor costs.
- The independent regulatory agencies, whose regulations are not subject to OMB review under Executive Order 12866, issued 17 major final rules. The majority of rules were issued to regulate the financial sector.

It is important to emphasize that the figures here have significant limitations. In some cases, quantification or monetization is not feasible. When agencies have not quantified or monetized the benefits or costs of regulations, or have not quantified or monetized important variables, it is generally because of conceptual and empirical challenges, including an absence of relevant information. Many rules have benefits or costs that cannot be quantified or monetized in light of existing information, and the aggregate estimates presented here do not capture those non-monetized benefits and costs. In some cases, quantification of various effects is highly speculative. For example, it may not be possible to quantify the benefits of certain disclosure requirements, even if those benefits are likely to be large, simply because the impact of some such requirements cannot be specified in advance. In other cases, monetization of particular categories of benefits (such as protection of homeland security or personal privacy) can present significant challenges. As Executive Order 13563 recognizes, some rules produce benefits (such as reductions in discrimination on the basis of disability or prevention of rape) that cannot be adequately captured in monetary equivalents. In fulfilling their statutory mandates, agencies must sometimes act in the face of substantial uncertainty about the likely consequences.

In addition, and significantly, prospective estimates may contain erroneous assumptions, producing inaccurate predictions; retrospective analysis, required by Executive Order 13563 and institutionalized by Executive Order 13610, can be an important way of increasing accuracy. While the estimates in this Report provide valuable information about the effects of regulations, they should not be taken to be either precise or complete. The increasing interest in retrospective analysis (inside and outside of government) fueled by Executive Orders 13563 and 13610, should produce improvements on this count, above all by ensuring careful evaluation of the estimated *ex post* effects of rules. (Note that section 6 of Executive Order 13563 is called “Retrospective Analysis of Existing Rules” and calls for such analysis.) This process should improve understanding not only of those effects, but also of the accuracy of prospective analyses, in a way that can be brought to bear on such analyses when they are originally written. In short, retrospective analysis can and should inform prospective analysis.

OMB emphasizes that careful consideration of costs and benefits is best understood as a pragmatic way of ensuring that regulations will improve social welfare, above all by informing the design and consideration of various options so as (1) to help in the assessment whether it is worth proceeding at all and (2) to identify the opportunities for minimizing the costs of achieving a social goal (cost-effectiveness) and maximizing net social benefits (efficiency). Executive Order 13563 states that to the extent permitted by law, each agency must “propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify)”. (It should be emphasized that this requirement, like all others in the Executive Order, applies only to the extent permitted by law; many regulations are issued as a result of statutory requirements or court order, which may

sharply limit and even eliminate agency discretion.) Improvements in social welfare are the goal; consideration of costs and benefits (both quantitative and qualitative) is an instrument for helping to achieve that goal. While recognizing the potential importance of nonquantifiable factors (such as human dignity, as recognized in Executive Order 13563), OMB and agencies continue to take steps to improve both quantification and monetization.

Consistent with this effort and in compliance with the Regulatory Right-to-Know Act, this Report also offers six recommendations for reform. There are two unifying themes, both of which have clear roots in Executive Order 13563. The first is the importance of ensuring that regulation (including protection of public health, safety, and the environment) is undertaken in a way that is compatible with the goal of promoting economic growth, innovation, competitiveness, and job creation. By promoting these goals, agencies will be in a better position to avoid excessive regulation, to eliminate unnecessary burdens, and to choose appropriate responses. Well-designed regulations may, for example, increase safety on the highways without having significant adverse effects on growth and competitiveness. Conversely, poorly designed regulations may have adverse effects on real people, by, for example, increasing prices, discouraging innovation, or decreasing employment.

The second unifying theme is the importance of ensuring that regulation is evidence-based and data-driven, and hence based on the best available work in both science and social science with full respect for scientific integrity. Public transparency, revealing relevant choices and assumptions (including the analysis of costs and benefits), can be extremely helpful in this regard, in part because it subjects choices, assumptions, and analysis to scrutiny and review. A central goal is to maximize net benefits, and consideration of evidence is indispensable to that endeavor; it can help to reduce costs, increase benefits, or both. Consideration of flexible, low-cost approaches, preserving freedom of choice, is often important, both as a means of reducing costs and as a reflection of respect for heterogeneity and the fact that often one size does not fit all. (See the emphasis on flexible approaches and freedom of choice in Executive Order 13563, section 4.)

In Chapter II, this Report briefly outlines recent steps and best practices that are consistent with OMB's recent recommendations for flexible, empirically-informed approaches; increased openness about costs and benefits; and the use of simplification and disclosure as regulatory tools. For the future, the Report recommends, among other things, that:

1. Consistent with Executive Order 13563 and statutory authority, regulatory decisions and priority-setting should be made in a way that is attentive to the importance of promoting economic growth, innovation, job creation, and competitiveness.
2. Consistent with Executive Order 13563 and Executive Order 13610, agencies should promote retrospective analysis of existing significant rules, with careful exploration of those rules' actual effects and, when appropriate, consideration of steps to streamline, modify, improve, or repeal them.
3. Agencies should carefully consider how best to obtain good data about the likely effects of regulation; experimentation, including randomized controlled trials, can

complement and inform prospective analysis, and perhaps reduce the need for retrospective analysis.

4. Consistent with Executive Order 13563, agencies should make serious efforts to increase simplicity in the regulatory process by considering, among other things, the use of automatic enrollment and sensible default rules; simpler, clearer, and pre-populated forms; plain, jargon-free language; and greater use of the Internet and electronic reporting. One way to promote simplicity is to reduce reporting and paperwork requirements, especially when they impose high cumulative burdens.
5. Agencies should give careful consideration to promoting “smart disclosure,” understood as the timely release of complex information and data in standardized, machine-readable formats in ways that enable consumers to make informed decisions, often as a result of creative work, including the design of “apps,” by the private sector. Smart disclosure often helps consumers to see the nature and effects of their own past choices, thus promoting better choices in the future.
6. Consistent with the recently launched Open Government Partnership, agencies should promote transparency and consider initiatives to promote more transparent, effective, and accountable institutions.

Consistent with Executive Order 13563, OMB also invites public suggestions on how best to identify and consider the employment effects, positive or negative, of regulations.

Pursuant to a statutory direction to OMB in the Consolidated Appropriations Act, 2012 (Public Law 112-74),² Chapter II of this Report also provides information on efforts to implement Executive Order 13563 and in particular on efforts:

- to increase public participation in the rulemaking process and to reduce uncertainty;
- to improve coordination across Federal agencies to eliminate redundant, inconsistent, and overlapping regulations; and
- to identify existing regulations that have been reviewed and determined to be outmoded, ineffective, and excessively burdensome.

In each of these domains, efforts are continuing, and public comments and input continue to be sought about appropriate initiatives and reforms.

Chapter III provides an update on agency implementation of the Information Quality Act (IQA) (Section 515 of the Treasury and General Government Appropriations Act, 2001 (Pub. L. No. 106-554, 31 U.S.C. § 3516 note)). The chapter summarizes (a) the current status of correction requests that were received by agencies in FY 2011, along with an update on the

² The reporting requirement is Section 202 of the Executive Office of the President Appropriations Act, 2012 (125 Stat. 897), which is Title II of Financial Services and General Government Appropriations Act, 2012, which is Division C of the Consolidated Appropriations Act, 2012.

status of requests received during prior years and (b) agency annual reports for the Information Quality Bulletin for Peer Review for FY 2011. In FY 2011, Federal agencies received 16 correction requests and completed 216 peer reviews, 14 of which were highly influential scientific assessments.

This Report is being issued along with OMB's Seventeenth Annual Report to Congress on Agency Compliance with the Unfunded Mandates Reform Act (UMRA) (Pub. L. No. 104-4, 2 U.S.C. § 1538). OMB reports on agency compliance with Title II of UMRA, which requires that each agency conduct a cost-benefit analysis and select the least costly, most cost-effective, or least burdensome alternative before promulgating any proposed or final rule that may result in expenditures of more than \$100 million (adjusted for inflation) in any one year by State, local, and tribal governments, or by the private sector. Each agency must also seek input from State, local, and tribal governments.

PART I: 2012 REPORT TO CONGRESS ON THE BENEFITS AND COSTS OF FEDERAL REGULATIONS

CHAPTER I: THE BENEFITS AND COSTS OF FEDERAL REGULATIONS

This chapter consists of two parts: (A) the accounting statement and (B) a brief report on regulatory impacts on State, local, and tribal governments, small business, and wages. Part A revises the benefit-cost estimates in last year's Report by updating the estimates to the end of fiscal year 2011 (September 30, 2011). As in previous Reports, this chapter uses a ten-year lookback. Estimates are based on the major regulations reviewed by OMB from October 1, 2001 to September 30, 2011.³ For this reason, twelve rules reviewed from October 1, 2000 to September 30, 2001 (fiscal year 2001) were included in the totals for the 2011 Report but are not included in this Report. A list of these fiscal year 2001 rules can be found in Appendix B (see Table B-1). The removal of the twelve fiscal year 2001 rules from the ten-year window is accompanied by the addition of twelve fiscal year 2011 rules.

As has been the practice for many years, all estimates presented in this chapter are agency estimates of benefits and costs or transparent modifications of agency information performed by OMB.⁴ This chapter also includes a discussion of major rules issued by independent regulatory agencies, although OMB does not review these rules under Executive Orders 13563 and 12866.⁵ This discussion is based solely on data provided by these agencies to the Government Accountability Office (GAO) under the Congressional Review Act.

Aggregating benefit and cost estimates of individual regulations—to the extent they can be combined—provides potentially valuable information about the effects of regulations. But the resulting estimates are neither precise nor complete. Four points deserve emphasis.

1. Individual regulatory impact analyses vary in rigor and may rely on different assumptions, including baseline scenarios, methods, and data. To take just one example, all agencies draw on the existing economic literature for valuation of reductions in mortality and morbidity, but the technical literature has not converged on uniform figures, and consistent with the lack of uniformity in that literature, such valuations vary somewhat (though not dramatically) across agencies. Summing across estimates involves the aggregation of analytical results that are not strictly

³All previous Reports are available at: http://www.whitehouse.gov/omb/inforeg_regpol_reports_congress/.

⁴OMB used agency estimates where available. We note that those estimates were typically subject to internal review (through the process required by Executive Order 12866) and external review (through the public comment process). The benefit and cost ranges represent lowest and highest agency estimates using both 3 and 7 percent discount rates. If an agency quantified but did not monetize estimates, we used standard assumptions to monetize them, as explained in Appendix A. We adjusted estimates to 2001 dollars, the requested format in OMB Circular A-4, using the latest available Gross Domestic Product (GDP) deflator and all amortizations are performed using a discount rate of 7 percent, unless the agency has already presented annualized, monetized results using a different explicit discount rate. OMB did not independently estimate benefits or costs when agencies did not provide quantified estimates. The estimates presented here rely on the state of the science at the time the Regulatory Impact Analyses (RIAs) were published. We do not update or recalculate benefit and cost numbers based on current understanding of science and economics.

⁵Section 3(b) of Executive Order 12866 excludes "independent regulatory agencies as defined in 44 U.S.C. 3502(10)" from OMB's regulatory review purview.

comparable. While important inconsistencies across agencies have been reduced over time, OMB continues to investigate possible inconsistencies and seeks to identify and to promote best practices. Executive Order 13563 emphasizes the importance of such practices and of quantification, directing agencies to “use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible.”

2. As we have noted, it is not always possible to quantify or to monetize relevant benefits or costs of rules in light of limits in existing information. For purposes of policy, non-monetized benefits and costs may be important. Some regulations have significant non-quantified or non-monetized benefits (such as protection of privacy, human dignity, and equity) and costs that are relevant under governing statutes and that may serve as a key factor in an agency’s decision to promulgate a particular rule.
3. Prospective analyses may turn out to overestimate or underestimate both benefits and costs; retrospective analysis can be important as a corrective mechanism.⁶ Executive Orders 13563 and 13610 specifically call for such analysis, with the goal of improving relevant regulations through modification, streamlining, expansion, or repeal. The result should be a greatly improved understanding of the accuracy of prospective analyses, as well as corrections to rules as a result of ex post evaluations. A large priority is the development of methods (perhaps including not merely before-and-after accounts but also randomized trials, to the extent feasible and consistent with law) to obtain a clear sense of the effects of rules. In addition, and importantly, rules should be written and designed, in advance, so as to facilitate retrospective analysis of their effects.
4. While emphasizing the importance of quantification, Executive Order 13563 also refers to “values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts.” As Executive Order 13563 recognizes, such values may be appropriately considered under relevant law. If, for example, a rule would reduce the incidence of rape, or allow wheelchair-bound workers to have access to bathrooms, a consideration of dignity is involved, and relevant law may require or authorize agencies to take that consideration into account. If a regulation would disproportionately help or hurt those at the bottom of the economic ladder, or those who are suffering from some kind of acute condition or extreme deprivation, relevant law may require or authorize agencies to take that fact into account. (In the recent past, agencies have referred to human dignity, equity, or distributional impacts in the context of proposed or final regulations reducing the risk of prison rape; increasing access by wheelchair-bound people to bathrooms; eliminating the ban on entry into the United States of those who are HIV-positive; barring lifetime limits on health insurance payments; and preventing denial of health insurance to children with preexisting conditions.) So far as we are aware, there is only limited analysis of the distributional effects of regulation in general or in significant domains;⁷ such analysis could prove illuminating.

⁶ See Greenstone (2009).

⁷ See, e.g., Kahn (2001); Adler (2011) offers relevant theoretical discussion.

A. Estimates of the Aggregated Annual Benefits and Costs of Regulations Reviewed by OMB over the Last Ten Years

1. In General

From fiscal year 2002 through fiscal year 2011, Federal agencies published about 38,000 final rules in the *Federal Register*.⁸ OMB reviewed 3,262 of these final rules under Executive Orders 12866 and 13563.⁹ Of these OMB-reviewed rules, 531 are considered major rules, primarily as a result of their anticipated impact on the economy (i.e., an impact of \$100 million, or more, in at least one year). It is important to emphasize that many major rules are budgetary transfer rules, and may not impose significant regulatory costs on the private sector. The class of “economically significant” rules is far broader than the class of rules that impose \$100 million or more in costs on the private sector (as reflected, for example, by the fact that the majority of economically significant rules in fiscal year 2011 were budgetary transfer rules).

We include in our 10-year aggregate of annualized benefits and costs of regulations rules that meet two conditions:¹⁰ (1) each rule was estimated to generate benefits or costs of approximately \$100 million in any one year; and (2) a substantial portion of its benefits and costs were quantified and monetized by the agency or, in some cases, monetized by OMB. The estimates are therefore not a complete accounting of all the benefits and costs of all regulations issued by the Federal Government during this period.¹¹ Table 1-1 presents estimates of the total annualized benefits and costs of 103 regulations reviewed by OMB over the ten-year period from October 1, 2001, to September 30, 2011, broken down by issuing agency.

As discussed in previous Reports, OMB chose a ten-year period for aggregation because pre-regulation estimates prepared for rules adopted more than ten years ago are of questionable relevance today. The estimates of the benefits and costs of Federal regulations over the period October 1, 2001, to September 30, 2011, are based on agency analyses conducted prior to issuance of the regulation and subjected to public notice, comments, and OMB review under Executive Order 12866.

⁸ This count includes all final and interim final rules from all Federal agencies (including Independent agencies).

⁹ Counts of OMB reviewed rules are available through the “review counts” and “search” tools on OIRA’s regulatory information website (www.reginfo.gov). In addition, the underlying data for these counts are available for download in XML format on the website.

¹⁰ OMB discusses, in this Report and in previous Reports, the difficulty of estimating and aggregating the benefits and costs of different regulations over long time periods and across many agencies using different methodologies. Any aggregation involves the assemblage of benefit and cost estimates that are not strictly comparable. In part to address this issue, the 2003 Report included OMB’s new regulatory analysis guidance, OMB Circular A-4, that took effect on January 1, 2004 for proposed rules and January 1, 2005 for final rules. The guidance recommends what OMB defines as “best practices” in regulatory analysis, with a goal of strengthening the role of science, engineering, and economics in rulemaking. The overall goal of this guidance is a more transparent, accountable, and credible regulatory process and a more consistent regulatory environment. OMB expects that as more agencies adopt our recommended best practices, the benefits and costs we present in future reports will become more comparable across agencies and programs. OMB continues to work with the agencies to ensure that their impact analyses follow the guidance.

¹¹ In many instances, agencies were unable to quantify all benefits and costs. We have conveyed the essence of these unquantified effects on a rule-by-rule basis in the columns titled “Other Information” in Appendix A of this report. The monetized estimates we present necessarily exclude these unquantified effects.

In assembling these tables of estimated benefits and costs, OMB applied a uniform format for the presentation to make agency estimates more closely comparable with each other (for example, annualizing benefit and cost estimates). OMB monetized quantitative estimates where the agency did not do so. For example, for a few rulemakings within the ten-year window of this Report, we have converted agency projections of quantified benefits, such as estimated injuries avoided per year or tons of pollutant reductions per year, to dollars using the valuation estimates discussed in Appendix B of our 2006 Report.¹²

Table 1-1: Estimates of the Total Annual Benefits and Costs of Major Federal Rules by Agency, October 1, 2001 - September 30, 2011 (billions of 2001 dollars)

Agency	Number of Rules	Benefits	Costs
Department of Agriculture	5	0.9 to 1.3	0.8 to 1.2
Department of Energy	10	6.5 to 12.0	3.3 to 4.7
Department of Health and Human Services ¹³	16	15.8 to 38.5	2.2 to 4.1
Department of Homeland Security	1	< 0.1	0 to 0.1
Department of Housing and Urban Development	1	2.3	0.9
Department of Justice	4	1.8 to 4.0	0.8 to 1.0
Department of Labor	7	6.8 to 19.8	2.1 to 5.0
Department of Transportation (DOT) ¹⁴	27	16.1 to 27.9	7.9 to 15.7
Environmental Protection Agency (EPA) ¹⁵	30	84.8 to 565.0	22.3 to 28.5

¹² The 2006 Report is available at: http://www.whitehouse.gov/omb/inforeg_regpol_reports_congress/. We note that there are ongoing discussions regarding the scientific assumptions underlying the benefits per ton numbers that we use to monetize benefits that were not monetized. If, for instance, assumptions similar to those described at <http://www.epa.gov/air/benmap/bpt.html> were used, these estimates would be somewhat higher.

¹³ The draft version of this Report included HHS's Cigarette Warning Label Statements rule. On August 24, 2012, however, a divided panel of the U.S. Court of Appeals for the District of Columbia Circuit vacated the graphic labeling requirements of this rule. On December 5, 2012, the D.C. Circuit denied FDA's petition for rehearing en banc, and FDA has not sought further review. Accordingly, we have excluded the rule from the total costs and benefits presented in Chapter 1 of this Report.

¹⁴ This total excludes FMCSA's 2010 Electronic On-Board Recorders for Hours-of-Service Compliance rule. The rule was vacated on August 26, 2011, by the Court of Appeals. To avoid double counting, this total also excludes FMCSA's 2009 Hours of Service rule, which finalized the provisions of the 2005 final rule included in the final count of rules.

¹⁵ This total includes the impacts of EPA's 2005 Clean Air Interstate Rule (CAIR). CAIR was initially vacated by the U.S. Court of Appeals for the District of Columbia Circuit, see *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008) (per curiam), but in a later decision on rehearing the court modified the remedy to remand without vacatur,

Agency	Number of Rules	Benefits	Costs
Joint DOT and EPA	2	6.1 to 20.7	2.0 to 5.2
Total	103	141.0 to 691.5	42.4 to 66.3

The aggregate benefits reported in Table 1-1 are comparable to those presented in the 2011 Report. As with previous Reports, the reported monetized benefits continue to be significantly higher than the monetized costs. (In 2009, 2010, and 2011, the monetized benefits

thus allowing EPA to continue to administer CAIR pending further rulemaking, see *North Carolina v. EPA*, 550 F.3d 1176 (D.C. Cir. 2008) (per curiam). On July 6, 2011, EPA finalized the Cross-State Air Pollution Rule (CSAPR), which responded to the remand in *North Carolina* and was designed to replace CAIR. On August 21, 2012, a divided panel of the D.C. Circuit vacated CSAPR while again keeping CAIR in place pending further EPA action. See *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012). On January 24, 2013, the D.C. Circuit denied EPA’s petition for rehearing en banc. EPA has filed a petition for certiorari in the Supreme Court. Once the status of the final CSAPR has been resolved, OMB will consider changes to our method of attributing and accounting for the benefits and costs of the two rulemakings.

We recognize that the attribution and accounting raises some complex questions, and that on one view, not taken here, our approach greatly understates the net benefits of CSAPR – on that view, it does so by tens of billions of dollars. For the purposes of this final Report, we have attributed the benefits and costs of the two rules on an incremental basis. A certain amount of equipment has been installed under CAIR, and we assigned both the costs and benefits due to those controls to CAIR, since it is a rule still on the books. For CSAPR, which is about 30% more stringent than CAIR, we assigned its costs and benefits only due to the additional equipment required over and above the requirements of CAIR. If CSAPR is upheld in its entirety and CAIR is officially withdrawn, another method we may consider is to assign to CSAPR all of the costs and benefits originally due to both rules. Until the court rules, however, we have chosen to maintain the distinction between the two rules.

These totals also include EPA's September 2010 final "NESHAP: Portland Cement Notice of Reconsideration." On December 9, 2011, the D.C. Circuit remanded the rule without vacatur, which keeps it in effect while EPA undertakes further proceedings consistent with the court's opinion.

This total excludes EPA’s 2004 "National Emission Standards for Hazardous Air Pollutants: Industrial/Commercial/Institutional Boilers and Process Heaters." On June 19, 2007, the United States Court of Appeals for the District of Columbia Circuit vacated and remanded this rule to EPA. EPA finalized the 2011 National Emission Standards for Hazardous Air Pollutants for Major and Area Sources of Industrial, Commercial, and Institutional Boilers and Process Heaters and the Commercial and Industrial Solid Waste Incineration Units, but announced a delay notice, staying the effective date of these rules. In January 9, 2012, the United States District Court for the District of Columbia vacated the delay notice and remanded the notice for further proceedings. The current 10-year aggregate estimates do not include the benefits and costs of these rules. In the future, the costs and benefits may be added to the 10-year aggregate estimates when the agency finalizes proceedings on these rules.

This total excludes EPA’s 2005 "Clean Air Mercury Rule. On February 8, 2008, the D.C. Circuit vacated EPA's rule removing power plants from the Clean Air Act list of sources of hazardous air pollutants. At the same time, the Court vacated the Clean Air Mercury Rule.

This total also excludes EPA’s 2004 rule—"Establishing Location, Design, Construction, and Capacity Standards for Cooling Water Intake Structures at Large Existing Power Plants." On January 25, 2007 the Second Circuit remanded this rule back to EPA for revisions and EPA suspended the provisions of the rule. On April 1, 2009, the Supreme Court reversed one part of the Second Circuit ruling related to the use of cost-benefit analysis and remanded the rule to the lower court, which returned the rule to EPA for further consideration at the agency’s request.

are also far higher than the monetized costs, as detailed below.) Three agencies (the Department of Health and Human Services, the Department of Transportation, and the Environmental Protection Agency) issued a strong majority of total rules — 75 of 103. In addition, the Environmental Protection Agency and the Department of Transportation are responsible for a strong majority of both total benefits and total costs.

Table 1-2 provides additional information on aggregate benefits and costs for specific agency program offices. In order for a program to be included in Table 1-2, the program office must have finalized three or more major rules in the last ten years with monetized benefits and costs. Two of the program offices included (Department of Transportation’s National Highway Traffic Safety Administration and the Environmental Protection Agency’s Office of Air) finalized two overlapping sets of rules pertaining to vehicle fuel efficiency, and these are listed separately.

Table 1-2: Estimates of Annual Benefits and Costs of Major Federal Rules: Selected Program Offices and Agencies, October 1, 2001 - September 30, 2011 (billions of 2001 dollars)

Agency	Number of Rules	Benefits	Costs
Department of Agriculture			
Animal and Plant Health Inspection Service	3	0.9 to 1.2	0.7 to 0.9
Department of Energy			
Energy Efficiency and Renewable Energy	10	6.5 to 12.0	3.3 to 4.7
Department of Health and Human Services			
Food and Drug Administration	8	2.1 to 21.9	0.8 to 1.2
Center for Medicare and Medicaid Services	7	13.6 to 16.5	1.3 to 2.8
Department of Labor			
Occupational Safety and Health Administration	4	0.2 to 1.4	0.4
Employee Benefits Security Administration	3	6.6 to 18.4	1.7 to 4.5
Department of Transportation			
National Highway Traffic Safety Administration	12	13.3 to 23.9	5.6 to 12.1
Federal Aviation Administration	6	0.3 to 1.2	0 to 0.4
Federal Motor Carriers Safety Administration	3	1.2 to 1.3	1.1 to 1.2
Environmental Protection Agency			
Office of Air	19	82.2 to 556.5	21.3 to 27.2
Office of Water	5	1.1 to 3.6	0.7 to 0.8
Office of Solid Waste and Emergency	4	0 to 0.3	-0.3

Agency	Number of Rules	Benefits	Costs
Response			
Department of Transportation/Environmental Protection Agency			
National Highway Traffic Safety Administration/Office of Air	2	6.1 to 20.7	2.0 to 5.2

The ranges of benefits and costs reported in Tables 1-1 and 1-2 were calculated by adding the lower bounds of agencies' estimates for each of the underlying rules to generate an aggregate lower bound, and similarly adding the upper bounds of agencies' estimates to generate an aggregate upper bound.¹⁶ The range reported by the agency for each rule reflects the agency's uncertainty about the likely impact of the rule. In some cases, this range is a confidence interval based on a formal uncertainty analysis. In most cases, however, the ranges are generated using an informal sensitivity analysis in which input parameters are varied across a plausible range.

The benefits and costs presented in Tables 1-1 and 1-2 are not necessarily correlated. In other words, when interpreting the meaning of these ranges, the reader should not assume that when benefits are in fact on the low end of their range, costs will also tend to be on the low end of their range. This is because, for some rules, there are factors that affect costs that have little correlation with factors that affect benefits (and vice-versa). Accordingly, to calculate the range of net benefits (i.e., benefits minus costs), one should not simply subtract the lower bound of the benefits range from the lower bound of the cost range and similarly for the upper bound. It is possible that the true benefits are at the higher bound and that the true costs are at the lower bound, as well as vice-versa. Thus, for example, it is possible that the net benefits of Department of Labor rules taken together could range from about \$1.8 billion to \$17.7 billion per year.

2. EPA Air Rules

It should be clear that the rules with the highest benefits and the highest costs, by far, come from the Environmental Protection Agency and in particular its Office of Air. More specifically, EPA rules account for 60 to 82 percent of the monetized benefits and 43 to 53 percent of the monetized costs.¹⁷ The rules that aim to improve air quality account for 97 to 98 percent of the benefits of EPA rules.

It is important to emphasize that the large estimated benefits of EPA rules are mostly attributable to the reduction in public exposure to a single air pollutant: fine particulate matter. Of the EPA's 19 air rules, the rule with the highest estimated benefit is the Clean Air Fine Particle Implementation Rule, issued in 2007, with benefits ranging from \$19 billion to \$167 billion per year. While the benefits of this rule far exceed the costs, the cost estimate for the

¹⁶ The approach of adding ranges likely overstates the uncertainty in the total benefits and costs for each agency. The actual ranges may be somewhat tighter than our estimates.

¹⁷ These estimates do not include the joint EPA/DOT Greenhouse Gas and Fuel Economy rule as an "EPA" rule.

2007 Clean Air Fine Particle Implementation Rule is also the highest at \$7.3 billion per year. In addition, the Cross-State Air Pollution Rule (CAIR Replacement Rule (2060-AP50)) has benefits ranging from \$20.5 to \$59.7 billion and costs of approximately \$0.7 billion.¹⁸

Because the estimated benefits and costs associated with the clean air rules provide a majority of the total benefits and costs across the Federal Government and because some of the scientific and economic questions are not resolved, we provide additional information.

With respect to many of these rules, there remains room for continuing research and analysis to resolve uncertainties in benefits estimates; further scientific work is important in this domain. We note that EPA has invested substantial resources to reducing some aspects of that uncertainty over the last few years. EPA continues to improve methods to quantify the degree of technical uncertainty in benefits estimates and to make other improvements to EPA's Regulatory Impact Analyses.¹⁹ Even so, significant uncertainty remains. More generally, the ranges of benefits and costs presented in Tables 1-1 and 1-2 should be treated with some caution. If the reasons for uncertainty differ across individual rules, aggregating high and low-end estimates can result in totals that may be misleading. In the case of the EPA rules reported here, however, a substantial portion of the uncertainty is similar across several rules, including (1) the uncertainty in the reduction of premature deaths associated with reduction in particulate matter and (2) the uncertainty in the monetary value of reducing mortality risk.

More research remains to be done on several key questions, including analysis of the health benefits associated with reduction of particulate matter, which, as noted, drive a large percentage of aggregate benefits from air pollution controls. Midway through FY 2009, EPA made changes to some underlying assumptions as well as updates to some of the model inputs. These changes are reflected in EPA's more recent Regulatory Impact Analyses. With respect to particulate matter, additional research would be exceedingly valuable to clarify and resolve relevant scientific issues and to make further progress on the relationship between particulate matter and health improvements. We continue to investigate the underlying questions. (We also note that consideration of co-benefits, including the co-benefits associated with reduction of particulate matter, is consistent with standard accounting practices and has long been required under OMB Circular A-4.)

We note in addition that EPA's 2006 National Ambient Air Quality Standards (NAAQS) for particulate matter (PM), with estimated benefits ranging from \$4 billion to \$40 billion per

¹⁸ This report includes benefit and cost estimates for both the CAIR and Cross-State Air Pollution Rule (CSAPR), which was designed to replace CAIR. Because of the difficulty in establishing an appropriate baseline, in the CSAPR Regulatory Impacts Analysis, the agency invoked a simplifying assumption that, in the baseline, the regulated entities incurred the pollution abatement cost associated with CAIR but did not operate the purchased equipment, thereby accruing no benefits. Recognizing that the majority of the cost associated with CAIR is associated with equipment purchase, and the duplicative nature of CAIR and CSAPR, we invoke a simplifying assumption for the purposes of this report that the benefits of CAIR and CSAPR should be apportioned relative to the costs of CAIR and CSAPR. As discussed above, the CSAPR has been recently vacated, but EPA has filed a petition for certiorari in the Supreme Court.

¹⁹ See Section 4 below, titled "Qualifications and a brief discussion of uncertainties" for more discussion.

year and estimated costs of \$3 billion per year, is excluded from the 10-year aggregate estimates or the year-by-year estimates. The reason for the exclusion is to prevent double-counting: EPA finalized implementing rules, such as the Cross-State Air Pollution Rule, that will achieve emission reductions and impose costs that account for a major portion of the benefit and cost estimates associated with this NAAQS rule. The benefit and cost estimates for lead NAAQS, SO₂ NAAQS, and 2008 Ozone NAAQS may also be dropped in the future reports to avoid double counting to the extent that EPA publishes implementing regulations that would be designed to achieve the emissions reductions required by these NAAQS.

3. Rules that Decrease Compliance Costs

It is important to note as well that a number of regulatory actions resulted in a *decrease* in compliance costs. Executive Orders 13563 and 13610, with their emphasis on retrospective analysis and streamlining burdensome regulations, are designed in part to promote decreases in compliance costs, where appropriate. A significant number of recently proposed and finalized rules produce such decreases (see the discussion in chapter II), with total savings in the billions of dollars. Coming reductions in compliance costs will be reflected in future Reports.

The net cost savings generated by the relevant actions are included as “negative costs” for those years. In 2011, for example, EPA issued a rule that amended its Spill Prevention, Control, and Countermeasure (SPCC) regulations conditionally to exempt milk containers and associated equipment. This amendment produced significant cost savings. Similarly, EPA revised its SPCC regulations in 2009, among other things, to tailor requirements to particular industry sectors, and to streamline certain rule requirements, thus producing net cost savings. In 2004, DOT issued a rule that reduced minimum vertical separation for airspace, also producing net cost savings. (See chapter II for further details.)

4. Qualifications and a brief discussion of uncertainties

In order for comparisons or aggregations to be meaningful, benefit and cost estimates should correctly account for all substantial effects of regulatory actions, some of which may not be reflected in the available data. Any comparison or aggregation across rules should also consider a number of factors that our presentation is not yet able to take into account. While practice is rooted in empirical research and is not widely variable, agencies have adopted somewhat different methodologies—for example, different monetized values for effects (such as mortality²⁰ and morbidity), different baselines in terms of the regulations and controls already in

²⁰ Agencies often design health and safety regulation to reduce risks to life, and valuation of the resulting benefits can be an important part of the analysis. What is sometimes called the “value of a statistical life” (VSL) is best understood not as the “valuation of life,” but as the valuation of *statistical mortality risks*. For example, the average person in a population of 50,000 may value a reduction in mortality risk of 1/50,000 at \$150. The value of reducing the risk of 1 *statistical* (as opposed to known or identified) fatality in this population would be \$7.5 million, representing the aggregation of the willingness to pay values held by everyone in the population. Building on an extensive and growing literature, OMB Circular A-4 provides background and discussion of the theory and practice of calculating VSL. It concludes that a substantial majority of the studies of VSL indicate a value that varies “from roughly \$1 million to \$10 million per statistical life.” Circular A-4 generally reports values in 2001 dollars; if we update these values to 2010 dollars the range would be \$1.2-\$12.2 million. In practice, agencies have tended to use a value above the mid-point of this range (i.e., greater than \$6.7 million in 2010 dollars).

place, different rates of time preference, and different treatments of uncertainty. These differences are reflected in the estimates provided in Tables 1-1 and 1-2. And while we have generally relied on agency estimates in monetizing benefits and costs, and while those estimates have generally been subject both to public and to interagency review, our reliance on those estimates in this Report should not necessarily be taken as an OMB endorsement of all the varied methodologies used by agencies to estimate benefits and costs.

In addition, the agency estimates of benefits and costs naturally reflect the uncertainties associated with the agency's assumptions and other analytic choices. Noting some such uncertainties, a committee of the National Research Council (NRC)/National Academy of Sciences released a study titled *Estimating the Public Health Benefits of Proposed Air Pollution Regulations* (2002), which recommends improvements to EPA benefits estimates. In addition, we continue to work with EPA to consider recommendations from recent NRC reports, Miller, et al (2006) and National Research Council (2008). See also Environmental Protection Agency

Two agencies, EPA and DOT, have developed official guidance on VSL. In its 2011 update, DOT adopts a value of \$6.2 million (\$2010), and requires all the components of the Department to use that value in their RIAs. EPA recently changed its VSL to an older value of \$6.3 million (\$2000) and adjusts this value for real income growth to later years. In its final rule setting a new primary standard for nitrogen dioxide, for example, EPA adjusted this VSL to account for a different currency year (\$2006) and for income growth to 2020, which yields a VSL of \$8.9 million. EPA stated in this RIA, however, that it is continuing its efforts to update this guidance, and that it anticipated presenting results from this effort to its Science Advisory Board, with draft guidance following soon thereafter. EPA has also published a white paper "to highlight some key topics related to the valuation of mortality risks, and to describe several possible approaches for synthesizing the empirical estimates for mortality risk reductions from existing hedonic wage and stated preference studies for the purpose of valuing mortality risk reductions associated with future EPA policies." Some of these issues include the possibilities of reporting value estimates in terms of risk changes, rather than "statistical lives"; adding a "cancer differential" to the standard estimates of mortality risk reduction values for policies expected to reduce carcinogenic pollutants; examining the role of altruism in valuing risk reductions; and, finally, incorporating alternative approaches to benefit transfer techniques. See Environmental Protection Agency (2010).

For the agencies that have not developed binding internal guidelines, we have done a brief review of RIAs and other materials to understand how VSLs have been used in practice. Although the Department of Homeland Security has no official policy on VSL, it recently sponsored a report through its U.S. Customs and Border Protection, and has used the recommendations of this report to inform VSL values for several recent rulemakings. This report recommends \$6.3 million (\$2008) and also recommends that DHS adjust this value upward over time for real income growth (in a manner similar to EPA's adjustment approach).

Other regulatory agencies that have used a VSL in individual rulemakings include DOL's Occupational Safety and Health Administration (OSHA) and HHS' Food and Drug Administration (FDA). In OSHA's rulemaking setting a Permissible Exposure Limit for Hexavalent Chromium, OSHA specifically referred to EPA guidance to justify a VSL of \$7.0 million (\$2003), as the types of air exposure risks regulated in this rulemaking were similar to those in EPA rulemakings. The FDA has consistently used values of \$5.0 and \$6.5 million (\$2002) in several of its rulemakings to monetize mortality risks, but it also uses a monetary value of the remaining life-years saved by alternative policies. This is sometimes referred to as a "Value of a Statistical Life Year" or VSLY. (See Circular A-4 for discussion.)

Our review suggests that in recent years, actual agency practice has avoided significant inconsistencies. We have not found recent values below \$5 million or above \$10 million, and hence agency practice suggests a narrower band than that found in the literature review in Circular A-4. For a recent overview by the Congressional Research Service, see Copeland (2010).

(2010).

For example, the wide range of benefits estimates for particle control does not capture the full extent of the scientific uncertainty in measuring the health effects associated with exposure to fine particulate matter and its constituent elements. Continuing research is important in this domain. The six key assumptions in the benefits estimates are as follows:

1. Inhalation of fine particles is causally associated with premature death at concentrations near those experienced by most Americans on a daily basis. EPA has determined that the weight of available epidemiological evidence supports a determination of causality. Potential biological mechanisms for this effect while not completely understood, are supportive of this determination.
2. All fine particles, regardless of their chemical composition, are equally potent in causing premature mortality. This is an important assumption, because particulate matter produced via transported precursors emitted from electrical generating utilities (EGUs) tends to differ significantly from direct PM released from diesel engines and other industrial sources. Fine particles vary considerably in composition across sources, but EPA has concluded that the scientific evidence is not yet sufficient to allow differentiation of benefits estimates by particle type.
3. The impact function for fine particles is approximately linear within the range of ambient concentrations under consideration, which includes concentrations below the National Ambient Air Quality Standard. Indeed, a significant portion of the benefits associated with more recent rules are from potential health benefits in regions that are in attainment with the fine particle standard.
4. The forecasts for future emissions and associated air quality modeling are valid. These analyses are based on up-to-date assessment tools and scientific literature that has been peer-reviewed. Although we recognize the difficulties, assumptions, and inherent uncertainties in the overall enterprise, we believe the results are highly useful in assessing the benefits of air quality regulations.
5. Some rules apply a national dollar benefit-per-ton estimate of the benefits of reducing directly emitted fine particulates from specific source categories. Because these benefit-per-ton estimates are based on national-level analysis that may not reflect local variability in population density, meteorology, exposure, baseline health incidence rates, or other local factors, depending on the analysis and the location, they may over-estimate or under-estimate the actual benefits of controlling directly emitted fine particulates.
6. The value of mortality risk reduction is taken largely from studies of the willingness to accept risk in the labor market and might not necessarily apply to people in different stages of life or health status.

We have also noted that many of these major rules have important non-quantified benefits and costs that may have been a key factor in an agency's decision to select a particular approach. In important cases, agencies have been unable to quantify the benefits of rules, simply because existing information does not permit reliable estimates. These qualitative issues are discussed in Table A-1 of Appendix A, agency rulemaking documents, and previous editions of this Report.

Finally, because these estimates exclude non-major rules and rules adopted more than ten years ago, the total benefits and costs of all Federal rules now in effect are likely to be significantly larger than the sum of the benefits and costs reported in Table 1-1. More research would be necessary to produce comprehensive estimates of total benefits and costs for all agencies and programs, though some agencies have developed valuable comprehensive assessments of the benefits and costs of their programs. And as noted, it is important to consider retrospective, as opposed to *ex ante*, estimates of both benefits and costs; this topic is a continuing theme of this report.

B. Trends in Annual Benefits and Costs of Regulations Reviewed by OMB over the Last Ten Years

Table 1-3 reports the total benefits and costs of rules issued from October 1, 2001 to September 30, 2011 by fiscal year for which reasonably complete monetized estimates of both benefits and costs are available.²¹ For the purposes of showing general trends by fiscal year, Figure 1-1 reports the midpoints of the ranges reported in Table 1-3. As the figure shows, the monetized additional costs of private mandates tend to be around or below \$10 billion per year.

Table 1-3: Total Annual Benefits and Costs of Major Rules by Fiscal Year, (billions of 2001 dollars)

Fiscal Year	Number of Rules	Benefits	Costs
2002	2	1.5 to 6.4	0.6 to 2.2
2003	6	1.6 to 4.5	1.9 to 2.0
2004	9 ²²	8.8 to 69.7	2.6 to 2.8
2005	12 ²³	27.9 to 178.1	3.8 to 6.1
2006	6 ²⁴	2.5 to 5.0	1.1 to 1.4
2007	12	28.6 to 184.2	9.4 to 10.7
2008	12	8.6 to 39.4	7.9 to 9.2
2009	15 ²⁵	8.6 to 28.9	3.7 to 9.5

²¹ This table includes all rules reported in Table 1-1. The ranges will not necessarily match previously reported estimates for a fiscal year in past reports as rules have been dropped over time as described in this and past reports. See Appendix A for a complete list of rules included in these totals.

²² This total excludes the impacts of EPA's 2004 "National Emission Standards for Hazardous Air Pollutants: Industrial/Commercial/Institutional Boilers and Process Heaters," included in our 10-year aggregate until last year's report. On June 19, 2007, the United States Court of Appeals for the District of Columbia Circuit vacated and remanded the national emission standards for hazardous air pollutants for industrial/commercial/institutional boilers and process heaters. It also excludes EPA's 2004 "Establishing Location, Design, Construction, and Capacity Standards for Cooling Water Intake Structures at Large Existing Power Plants" rule. On January 25, 2007 the Second Circuit remanded this rule back to EPA for revisions and EPA suspended the provisions of the rule. On April 1, 2009 the Supreme Court reversed one part of the Second Circuit ruling related to the use of cost-benefit analysis and remanded the rule to the lower court, which returned the rule to EPA for further consideration at the agency's request.

²³ This total does not include EPA's 2005 Clean Air Mercury Rule, which was vacated in 2008.

²⁴ This total does not include the impacts of EPA's 2006 PM NAAQS. Consistent with past practices, the benefit and cost estimates of the NAAQS rulemaking was only included until the implementing regulations were finalized.

Fiscal Year	Number of Rules	Benefits	Costs
2010	17 ²⁶	18.6 to 85.9	6.4 to 12.4
2011	12	34.3 to 89.5	5.0 to 10.1

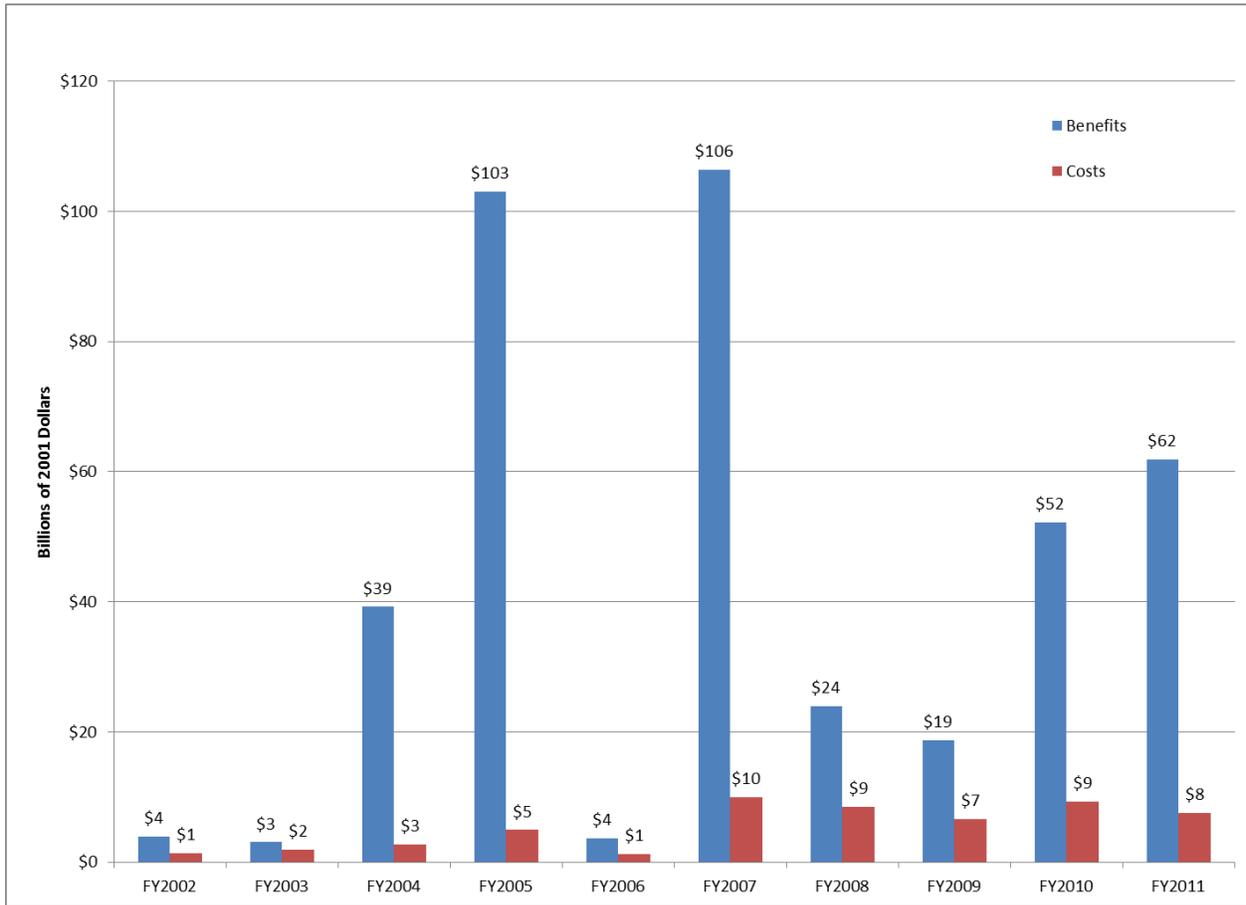
Variability in benefit estimates appears greater than in cost estimates. Note that the three highest years for benefits (2005, 2007, and 2011) are mostly explained by just three EPA regulations: the 2005 interstate air quality rule, the 2007 clean air fine particulate implementation rule, and the 2011 Cross-State Air Pollution rule.²⁷ Note also that the benefits exceed the costs in every fiscal year; that the highest benefit year, in terms of point estimates, was 2007; that 2007 was also the highest cost year, in those terms; and that the highest net benefit years, in those terms, were 2005, 2007, and 2011.

²⁵ This total excludes DOT's 2008 Hours of Service rule which finalized provisions included for an interim final rule included in the 2005 totals.

²⁶ This total excludes the impacts of DOT's 2010 Electronic On-Board Recorders for Hours-of-Service Compliance rule. This rule was vacated by the U.S. Court of Appeals for the Seventh Circuit on August 26, 2011.

²⁷ This chart includes the impacts of EPA's 2005 Clean Air Interstate Rule.. CAIR was initially vacated by the U.S. Court of Appeals for the District of Columbia Circuit, see *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008) (per curiam), but in a later decision on rehearing the court modified the remedy to remand without vacatur, thus allowing EPA to continue to administer CAIR pending further rulemaking, see *North Carolina v. EPA*, 550 F.3d 1176 (D.C. Cir. 2008) (per curiam). On July 6, 2011, EPA finalized the Cross-State Air Pollution Rule (CSAPR), which responded to the remand in *North Carolina* and was designed to replace CAIR. On August 21, 2012, a divided panel of the D.C. Circuit vacated CSAPR while again keeping CAIR in place pending further EPA action. See *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012). On January 24, 2013, the D.C. Circuit denied EPA's petition for rehearing en banc. EPA has filed a petition for certiorari in the Supreme Court.

Figure 1-1: Total Annual Benefits and Costs of Major Rules by Fiscal Year²⁸



The estimates we report here are prospective estimates made by agencies during the rulemaking process. As we have emphasized, it is possible that retrospective studies will show (as they sometimes have) that the benefits and costs were either overestimated or underestimated. As discussed elsewhere in this Report (see Appendix A) as well as previous Reports, the aggregate estimates of benefits and costs derived from estimates by different agencies and over different time periods are subject to some methodological variations and differing assumptions.²⁹ In addition, the groundwork for the regulations issued by one administration is often begun in a

²⁸ Based on the mid-point of high and low estimates of annualized costs.

²⁹ This is particularly true for EPA's air pollution regulations. Caution should be used in comparing benefits and costs over time in light of several factors, including new scientific evidence regarding the relationship between pollutants and health endpoints; changes in the EPA's choice of assumptions when uncertainty remains (e.g., regarding the shape of the concentration – response function at low levels); and differences in techniques for monetizing benefits (including changes to the value assigned to a statistical life). Aggregate estimates in the report reflect differences in approaches and assumptions over time. Summing across time does not reflect how EPA would calculate the benefits of prior rules today.

previous administration.³⁰ Nonetheless, the methodological variations and differing assumptions are usually not dramatic, and we believe that comparative information remains meaningful.

C. Estimates of the Benefits and Costs of Major Rules Issued in Fiscal Year 2011

1. Major Rules Issued by Executive Agencies and Departments

In this section, we examine in more detail the estimated benefits and costs of the 53 major final rules for which OMB concluded review during the 12-month period beginning October 1, 2010, and ending September 30, 2011.³¹ (Note that 30 of the 53 rules – a majority – are budgetary transfer rules.) These major rules represent approximately 16 percent of the 337 final rules reviewed by OMB.³² OMB believes, however, that the benefits and costs of major rules, which have the largest economic effects, account for the strong majority of the total benefits and costs of all rules subject to OMB review.³³

The monetized costs and benefits estimates, aggregated by agency in Table 1-4 and listed in Table 1-5(a), are included in the ten-year aggregates in Tables 1-1, 1-2, and 1-3.

³⁰For example, FDA's trans fat rule was proposed by the Clinton administration and issued by the Bush Administration, while the groundwork for EPA's 2004 non-road diesel engine rule was set by the NAAQS rules issued in 1997.

³¹ This count excludes rules that were withdrawn from OMB review or rules that were rescinded, stayed, or vacated after publication. It also counts joint rules as a single rule, even if they were submitted to OMB separately for review.

³² Counts of OMB-reviewed rules are available through the "review counts" and "search" tools on OIRA's regulatory information website (www.reginfo.gov).

³³ We discussed the relative contribution of major rules to the total impact of Federal regulation in detail in the "response-to-comments" section on pages 26-27 of the 2004 Report. In summary, our evaluation of a few representative agencies found that major rules represented the vast majority of the benefits and costs of all rules promulgated by these agencies and reviewed by OMB.

**Table 1-4: Estimates, by Agency, of the Total Annual Benefits and Costs of Major Rules:
October 1, 2010 - September 30, 2011 (billions of 2001 dollars)**

Agency	Number of Rules	Benefits	Costs
Department of Energy	3	2.5 to 5.1	1.4 to 2.2
Department of Health and Human Services	1	0.9 to 1.1	0.3 to 0.6
Department of Labor	2	6.6 to 18.4	1.8 to 4.6
Department of Transportation	2	1.7 to 2.5	0.6 to 1.5
Environmental Protection Agency	3	20.5 to 59.7	0.7
Joint DOT and EPA	1	2.2 to 2.6	0.3 to 0.5
Total	12	34.3 to 89.5	5.0 to 10.1

Thirty of the rules implement Federal budgetary programs as required or authorized by Congress; these primarily caused income transfers, usually from taxpayers to program beneficiaries. For example, the Department of Treasury issued a rule implementing the Small Business Lending Fund Refinance Program, and also issued a rule implementing the Crop Assistance Program. Rules of this kind are promulgated in response to statutes that authorize and often require them. Although rules that affect Federal budget programs are subject to Executive Orders 12866 and 13563 and OMB Circular A-4, and are reviewed by OMB, past Reports have focused primarily on regulations that have effects largely through private sector mandates. (For transfer rules, agencies typically report the estimated budgetary impacts.)

We recognize that markets embed distortions and that the transfers are not lump-sum. Hence, transfer rules may create social benefits or costs; for example, they may impose real costs on society to the extent that they cause people to change behavior, either by directly prohibiting or mandating certain activities, or, more often, by altering prices and costs. The costs resulting from these behavior changes are referred to as the “deadweight losses” associated with the transfer. The Regulatory Right-to-Know Act requires OMB to report the social costs and benefits of these rules, and OMB encourages agencies to report these costs and benefits for transfer rules; OMB will consider incorporating any such estimates into future Reports.

Table 1-5(a-c) lists each of the 23 “non-budget” rules and, where available, provides information on their monetized benefits, costs, and transfers. It is worth noting that the aggregate benefits far exceed the aggregate costs and that with only one exception, the estimated monetized benefits of individual rules exceeded the expected monetized costs in every case. (The single exception, Water Quality Standards (Numeric Nutrient Criteria) for Florida's Lakes and Flowing Waters, was required by a consent decree.)

Table 1-6 lists each of 30 “budget” rules and provides information on the estimated income transfers. Unless otherwise noted, OMB simply converts to 2001 dollars agencies’ own estimates of annualized impacts. For all 53 budget and non-budget rules, we summarize the available information on the non-monetized impacts, where available, for these regulations in the “other information” column of Table A-1.

Overall, HHS promulgated the largest number of rules (seventeen). Fifteen of these largely transfer income from one group of entities to another without imposing significant costs on the private sector, while the other two do impose significant costs on the private sector.

Table 1-5 (a): Major Rules Reviewed with Estimates of Both Annual Benefits and Costs, October 1, 2010 - September 30, 2011 (billions of 2001 dollars)³⁴

Agency	RIN ³⁵	Title	Benefits	Costs
HHS	0938-AQ12	Administrative Simplification: Adoption of Authoring Organizations for Operating Rules and Adoption of Operating Rules for Eligibility and Claims Status (CMS-0032-IFC)	1.0 Range: 0.9-1.1	0.4 Range: 0.3-0.6
DOL	1210-AB07	Improved Fee Disclosure for Pension Plan Participants	1.6 Range: 0.8-3.3	0.3 Range: 0.2-0.4
DOL	1210-AB35	Statutory Exemption for Provision of Investment Advice	10.9 Range: 5.8-15.1	3.0 Range: 1.6-4.2
DOE	1904-AA89	Energy Efficiency Standards for Clothes Dryers and Room Air Conditioners	0.2 Range: 0.2-0.3	0.1 Range: 0.1-0.2
DOE	1904-AB79	Energy Efficiency Standards for Residential Refrigerators, Refrigerator-Freezers, and Freezers	1.8 Range: 1.7-3.0	0.8 Range: 0.8-1.3
DOE	1904-AC06	Energy Efficiency Standards for Residential Furnaces, Central Air Conditioners and Heat Pumps	0.9 Range: 0.7-1.8	0.5 Range: 0.5-0.7
EPA	2040-AF11	Water Quality Standards (Numeric Nutrient Criteria) for Florida's Lakes and Flowing Waters	<0.1	0.1 Range: 0.1-0.2
EPA	2050-AG50	Oil Pollution Prevention: Spill Prevention, Control, and Countermeasure Rule Requirements - Amendments for Milk Containers	0	(0.1)
EPA	2060-AP50	Cross-State Air Pollution Rule (CAIR Replacement Rule) ³⁶	Range: 20.5-59.7	0.7

³⁴ The draft version of this Report included HHS's Cigarette Warning Label Statements rule. On August 24, 2012, however, a divided panel of the U.S. Court of Appeals for the District of Columbia Circuit vacated the graphic labeling requirements of this rule. On December 5, 2012, the D.C. Circuit denied FDA's petition for rehearing en banc, and FDA has not sought further review. Accordingly, we have excluded the rule from the total costs and benefits presented in Chapter 1 of this Report.

³⁵ In 2010, OMB issued a memorandum on "Increasing Openness in the Rulemaking Process – Use of the Regulation Identifier Number (RIN)" (available at: http://www.whitehouse.gov/sites/default/files/omb/assets/inforg/IncreasingOpenness_04072010.pdf). The memorandum provides that agencies should use the RIN on all relevant documents throughout the entire "lifecycle" of a rule. We believe that this requirement is helping members of the public to find regulatory information at each stage of the process and is promoting informed participation.

³⁶ On August 21, 2012, the Cross-State Rule was vacated; however, EPA has filed a petition for certiorari in the Supreme Court.

Agency	RIN³⁵	Title	Benefits	Costs
DOT	2125-AF19	Real-Time System Management Information Program	0.2	0.1
DOT	2127-AK23	Ejection Mitigation	1.5 Range: 1.5-2.4	0.4 Range: 0.4-1.4
DOT & EPA	2127-AK74; 2060-AP61	Commercial Medium- and Heavy-Duty On-Highway Vehicles and Work Truck Fuel Efficiency Standards	2.6 Range: 2.2-2.6	0.5 Range: 0.3-0.5

() indicates negative.

Nine rules partially monetized either benefits or costs and are listed in Table 1-5(b). Three such rules, DOI’s Migratory Bird Hunting regulations and Treasury’s Management of Federal Agency Disbursements regulation, assessed only benefits. Six rules reported only monetized costs and relevant transfers, without monetizing benefits. The potential transfer effects and non-quantified effects of rules are described in “other information” column of Table A-1.³⁷

We continue to work with agencies to improve the quantification of the benefits and costs of these types of regulations and to make progress toward quantifying variables that have thus far been discussed only qualitatively. Executive Order 13563 notes that agencies “may consider (and discuss qualitatively) values that are difficult or impossible to quantify,” but firmly states that “each agency is directed to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible.”

³⁷ In some instances, agencies have been unable to quantify the benefits and costs of rules because existing information does not permit reliable estimates. In these cases, agencies generally have followed the guidance of Circular A-4 and have provided detailed discussions of the nonquantified benefits and costs in their analysis of rules in order to help decision-makers understand the significance of these factors. For example, DOI promulgates annual Migratory Bird Hunting regulations, which permit hunting of migratory birds. The two potential societal costs are (1) any long-run effect on the bird populations and (2) the cost associated with administering and enforcing the permit program. Evaluating the long-term population effect of annual hunting permits is difficult. Also, State governments administer and enforce the permit program; gathering this information is difficult. In addition, Treasury was unable to monetize the costs of the Management of Federal Agency Disbursements regulation. The major cost of the regulation is the inconvenience to those who did not want to receive federal benefit payments in debit cards and who would prefer to continue to receive these payments in checks; this cost is not easily monetized. DOI could not quantify the benefits of the additional protection provided by the rule involving Increased Safety Measures for Oil and Gas Operations on the Outer Continental Shelf. Instead the agency examined a scenario of avoiding both private and social costs in the event of a catastrophic spill.

Table 1-5(b): Major Rules Reviewed with Partial Estimates of Annual Benefits or Costs, October 1, 2010 - September 30, 2011 (billions of 2001 dollars)³⁸

Agency	RIN	Title	Benefits	Costs
HHS	0950-AA06	Medical Loss Ratios	Not Estimated	<0.1
DOI	1010-AD68	Increased Safety Measures for Oil and Gas Operations on the Outer Continental Shelf (OCS)	Not Estimated	0.1
DOI	1018-AX34	Migratory Bird Hunting; 2011-12 Migratory Game Bird Hunting Regulations: Early Season	Range: 0.2-0.3	Not estimated
DOI	1018-AX34	Migratory Bird Hunting; 2011-12 Migratory Game Bird Hunting Regulations: Late Season	Range: 0.2-0.3	Not estimated
ED	1840-AD02	Institutional Eligibility Under the Higher Education Act of 1965; Student Assistance General Provisions	Not Estimated	0.1
ED	1840-AD06	Program Integrity: Gainful Employment-Measures	Not Estimated	0.1 ³⁹
EEOC	3046-AA85	Regulations To Implement the Equal Employment Provisions of the Americans With Disabilities Act Amendments Act	Not Estimated	0.1-0.2
HUD	2502-A170	SAFE Mortgage Licensing Act: Minimum Licensing Standards and Oversight Responsibilities (FR-5271-F-03)	Not Estimated	Range: 0.1-0.6
TREAS	1510-AB26	Management of Federal Agency Disbursements	0.1	Not Estimated

The regulatory analyses of two of the 23 “non-budget” rules did not provide an estimate of the incremental benefits or costs of the rule. These rules are provided in Table 1-5(c). The potential transfer effects and non-monetized effects are described in “other information” column of Table A-1.

³⁸ This table excludes TSA’s Air Cargo Screening final rule (RIN 1652-AA64). Although the overall annualized cost of the regulation was estimated to be about \$178 million at a discount rate of 7% (and \$180 million at a rate of 3%) relative to a pre-IFR baseline, the costs of the IFR were already included in the 2010 Report to Congress (Table 1-4). Relative to a post-IFR baseline, the final rule has annual economic cost savings of less than \$100 million per year, due to some minor reductions in the rule’s requirements. Therefore, the rule was not designated as economically significant at the final rule stage.

³⁹ The rule may result in additional compliance costs from enhanced career or debt management counseling or other efforts to improve a program's performance on the debt measures included in the regulation. These have not been quantified.

Table 1-5(c): Additional Non-Budget Major Rules Reviewed, October 1, 2010 - September 30, 2011 (billions of 2001 dollars)

Agency	RIN	Title
DOL	1205-AB61	Wage Methodology for the Temporary Non-Agricultural Employment H-2B program ⁴⁰
TREAS	1545-BH01	Regulations Governing Practice Before the Internal Revenue Service

Table 1-6 Major Rules Implementing or Adjusting Federal Budgetary Programs, October 1, 2010 - September 30, 2011 (billions of 2001 dollars)

Agency	RIN	Title	Transfers
USDA	0560-AH92	Biomass Crop Assistance Program	<0.1
USDA	0560-AI11	Crop Assistance Program	0.1-0.4
USDA	0570-AA73	Biorefinery Assistance Program--Section 9003	0.1
USDA	0570-AA75	Rural Business Contracts for Payments for the Bioenergy Program for Advanced Biofuels--Section 9005	0.1
USDA	0572-AC06	Rural Broadband Access Loans and Loan Guarantees	0.3-0.6
USDA	0584-AD60	Direct Certification of Children in Food Stamp Households and Certification of Homeless, Migrant, and Runaway Children for Free Meals in the NSLP, SBP, and SMP	0.1
USDA	0584-AE11	National School Lunch and School Breakfast Programs: School Food Service Account Revenue Amendments Related to the Healthy, Hunger-Free Kids Act of 2010	1.2-1.3
DOD	0720-AB45	Civilian Health and Medical Program of the Uniformed Services (CHAMPUS)/TRICARE: Inclusion of TRICARE Retail Pharmacy Program in Federal Procurement of Pharmaceuticals	0.6-0.9
DOD	0790-AI58	Homeowners Assistance Program (HAP)	0.4
HHS	0920-AA44	Implementation of Title I of the James Zadroga 9/11 Health and Compensation Act: WTC Health Program Requirements for Enrollment, Appeals, Certification of Health Conditions, and Reimbursement	0.1

⁴⁰ The RIA provides estimates of the transfers between employers and workers. The Department of Labor is delaying the effective date of this rule to October 1, 2013, in response to recently enacted legislation that prohibits any funds from being used to implement, administer, or enforce the Wage Rule for the remainder of fiscal year (FY) 2013.

Agency	RIN	Title	Transfers
HHS	0938-AP53	Children's Health Insurance Program (CHIP); Allotment Methodology and States' Fiscal Year 2009 CHIP Allotments (CMS-2291-F)	10.9
HHS	0938-AP79	Revisions to Payment Policies Under the Physician Fee Schedule and Part B for CY 2011 (CMS-1503-F)	12.8
HHS	0938-AP82	Changes to the Hospital Outpatient Prospective Payment System and Ambulatory Surgical Center Payment System for CY 2011 (CMS-1504-F)	0.6
HHS	0938-AP88	Home Health Prospective Payment System Refinements and Rate Update for CY 2011 (CMS-1510-F)	0.8
HHS	0938-AQ00	Revisions to the Medicare Advantage and Medicare Prescription Drug Benefit Programs for Contract Year 2012(CMS-4144-F)	9.9-10.1
HHS	0938-AQ19	Medicaid Recovery Audit Contractors (CMS-6034-F)	0.3
HHS	0938-AQ20	Additional Screening, Application Fees, and Temporary Moratoria for Providers and Suppliers (CMS-6028-F)	<0.1
HHS	0938-AQ23	Inpatient Psychiatric Facilities Prospective Payment System--Update for Rate Year and Fiscal Year Beginning July 1, 2011 (CMS-1346-F)	0.1
HHS	0938-AQ24	Final Changes to the Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals and FY 2012 Rates and to the Long-Term Care Hospital PPS and FY 2012 Rates (CMS-1518-F)	1.2
HHS	0938-AQ28	Prospective Payment System for Inpatient Rehabilitation Facilities for FY 2012 (CMS-1349-P)	0.1
HHS	0938-AQ29	Prospective Payment System and Consolidated Billing for Skilled Nursing Facilities--Update for FY 2012 (CMS-1351-P)	3.1
HHS	0938-AQ53	Enhanced Federal Funding for Medicaid Eligibility Determination and Enrollment Activities (CMS-2346-F)	0.3-0.5
HHS	0938-AQ55	Hospital Value-Based Purchasing Program (CMS-3239-F)	0
HHS	0938-AQ60	Revisions to Medicare Advantage and Part D Prescription Drug Programs; MIPPA-Related Marketing Revisions and Agent/Broker	0.1

Agency	RIN	Title	Transfers
		Compensation Plan (CMS-4138-F)	
DOJ	1105-AB39	James Zadroga 9/11 Health and Compensation Act of 2010	0.3-0.4
TREAS	1505-AC34	Small Business Lending Fund Refinance	2.3
HUD	2502-AI97	Emergency Homeowners' Loan Program	0.6-1.3
VA	2900-AN37	Payment for Inpatient and Outpatient Health Care Professional Services at Non-Departmental Facilities and Other Medical Charges Associated with Non-VA Outpatient Care	0.3
VA	2900-AN94	Caregivers Program	0.1
VA	2900-AO10	Vocational Rehabilitation and Employment Program—Changes to Subsistence Allowance	0.1

For regulations intended to reduce mortality risks, an important analytic tool that can be used to assess regulations, and to help avoid unjustified burdens, is cost-effectiveness analysis. Some agencies develop estimates of the “net cost per life saved” for regulations intended to improve public health and safety. To calculate this figure, the costs of the rule minus any monetized benefits other than mortality reduction are placed in the numerator, and the expected reduction in mortality in terms of total number of lives saved is placed in the denominator. This measure avoids any assignment of monetary values to reductions in mortality risk. It still reflects, however, a concern for economic efficiency, insofar as choosing a regulatory option that reduces a particular mortality risk at a lower net cost to society would conserve scarce resources compared to choosing an option that would reduce the same risk at greater net cost.

Table 1-7 presents the net cost per life saved for ten recent health and safety rules for which calculation is possible. The net cost per life saved is calculated using a 3 percent discount rate and using the agencies' best estimates for costs and expected mortality reduction. As is apparent, there is substantial variation in the net cost per life saved by these rules.

Table 1-7: Estimates of the Net Costs per Life Saved of Selected Health and Safety Rules Reviewed by OMB in Fiscal Years 2010-2011 (millions of 2001 dollars)

Agency	Rule	Net Cost per Life Saved	Notes
DOL/OSHA	Cranes and Derricks in Construction	\$4.9	The agency estimates that the rule will prevent 22 fatalities and 175 nonfatal injuries annually. Total costs associated with the rule are \$150 million annually at 3%. The monetized value of the injuries prevented is \$11 million and the property damage prevented is valued at \$7 million. If we subtract the injury and property benefits from costs, the net cost per life saved is thus approximately \$6 million (2010 dollars). Adjusting to 2001 dollars yields roughly \$5 million.
DOT/FRA	Positive Train Control	\$235.1	The agency estimates the present value of fatality reduction benefits is \$267 million over 20 years using a VSL of \$6 million, implying the prevention of approximately 3 fatalities per year. The agency also estimates the total non-fatality related benefits over 20 years of \$407 million implying annual value of \$27.3 million. Total costs associated with the rule are \$880 million annually. If we subtract the non-fatality related benefits from costs, the net cost per life saved is roughly \$284.2 million in 2009 dollars. Adjusting to 2001 dollars yields \$235.1 million per life saved.
DOT/NHTSA	Ejection Mitigation	\$0.2	The agency estimates that the rule will prevent 374 equivalent lives (using a 3% discount rate). This breaks down into about 304 fatalities and 69 equivalent lives from accidents. Using a VSL of \$6.1 million, the value of the equivalent lives at a 3% discount rate is \$421 million. If we subtract the non-fatality related benefits from costs, the net cost per life is about \$0.3 million per life. Adjusting to 2001 dollars yields about \$0.2 per life saved.
DOT/PHMSA	Pipeline Safety: Distribution Integrity Management	Negative	Benefits from reduced injuries, reduced property damages, and reduced lost gas exceeds costs.
EPA/AR	National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants	Negative	Morbidity benefits exceed costs.

Agency	Rule	Net Cost per Life Saved	Notes
EPA/AR	Review of the National Ambient Air Quality Standards for Sulfur Dioxide	Negative	Morbidity benefits exceed costs.
EPA/AR	National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (Diesel)	\$0.9 to \$2.2	The agency estimates that the rule will prevent 110 to 270 fatalities annually. Total costs associated with the rule are \$355 million annually at 3%. The monetized value of the morbidity benefits is \$66 million. If we subtract the morbidity benefits from costs, the net cost per life saved is approximately \$1.1-\$2.2 million (2008 dollars). Adjusting to 2001 dollars yields roughly \$0.9 million to \$2.2 million.
EPA/AR	National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines--Existing Stationary Spark Ignition (Gas-Fired) ⁴¹	\$1.2 to \$3.1	The agency estimates that the rule will prevent 56 to 140 fatalities in 2013. Total costs associated with the rule are \$244 million annually at 3%. The monetized value of the morbidity benefits is \$36 million. If we subtract the morbidity benefits from costs, the net cost per life saved is approximately \$1.5-\$3.7 million (2008 dollars). Adjusting to 2001 dollars yields roughly \$1.2 million to \$3.1 million.
EPA/AR	Cross State Air Pollution Rule (CAIR Replacement Rule)	Negative	Morbidity and visibility benefits exceed costs.
EPA/OPPTS	Lead; Amendment to the Opt-out and Recordkeeping Provisions in the Renovation, Repair, and Painting Program	Negative	Morbidity benefits exceed costs.

This table is designed to be illustrative rather than definitive, and continuing work must be done to ensure that estimates of this kind are complete and not misleading. For example, some mortality-reducing rules have a range of other benefits, including reductions in morbidity, and it is important to include these benefits in cost-effectiveness analysis. Other rules have benefits that are exceedingly difficult to quantify but nonetheless essential to consider—for example, rules that improve water quality or have aesthetic benefits. Nonetheless, it is clear that some rules are far more cost-effective than others, and it is valuable to make note of variations in order to increase the likelihood that scarce resources will be used as effectively as possible.

⁴¹ Last year's report contained a typographic error when reporting the net cost per life saved for this rule.

2. Major Rules Issued by Independent Agencies

The Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA)⁴² requires the Government Accountability Office (GAO) to submit to Congress reports on major rules, including rules issued by agencies not subject to Executive Orders 13563 and 12866. In preparing this Report, we reviewed the information contained in GAO reports on benefits and costs of major rules issued by independent agencies for the period of October 1, 2010 to September 30, 2011.⁴³ GAO reported that five independent agencies issued a total of 17 major rules during this period. (Rules by independent agencies are not subject to OMB review under Executive Order 13563 and Executive Order 12866.)

Table 1-8 lists each of these major rules and the extent to which GAO reported benefit and cost estimates for the rule. The majority of rules were issued to regulate the financial sector. Five of the nine rules promulgated by the Securities and Exchange Commission provided monetized cost estimates but did not attempt to monetize benefits. The Federal Reserve System promulgated rules on electronic fund transfer and truth-in-lending along with two rules on debit card fees and routing. These rules generally did not provide information on benefits and costs. Both the Commodity Futures Trading Commission and the Securities and Exchange Commission issued major rules that addressed Whistleblower Incentives and Protection. In light of the limited information provided to and by the GAO, the Office of Management and Budget does not know whether the rigor of the analyses conducted by these agencies is similar to that of the analyses performed by agencies subject to OMB review.

The agencies in question are independent under the law, and under existing Executive Orders, OMB generally does not have authority to review their regulations formally or to require analysis of costs and benefits. We emphasize, however, that for the purposes of informing the public and obtaining a full accounting, it would be highly desirable to obtain better information on the benefits and costs of the rules issued by independent regulatory agencies. The absence of such information is a continued obstacle to transparency, and it might also have adverse effects on public policy. Recall that consideration of costs and benefits is a pragmatic instrument for ensuring that regulations will improve social welfare; an absence of information on costs and benefits can lead to inferior decisions.

Executive Order 13563 emphasizes the importance of agency use of “the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible.” While that Executive Order applies only to executive agencies, independent agencies may wish to consider the use of such techniques. In Executive Order 13573, the President explicitly said that the independent agencies should follow the central principles of Executive Order 13563. In its February 2, 2011, guidance on Executive Order 13563, OMB also

⁴² Pub. L. No. 104-121.

⁴³ Section 1.A.1 above, states the criteria for including rules in the report. In practice, a rule was considered “major” for the purposes of the report if (a) it was estimated to have either annual costs or benefits of \$100 million or more or (b) it was likely to have a significant impact on the economy.

encouraged the independent agencies to follow the principles and requirements of the order.⁴⁴

OMB provides in Appendix C of this Report a summary of the information available on the regulatory analyses for major rules by the independent agencies over the past ten years. This summary is similar to the ten-year lookback for regulation included in recent Reports. It examines the number of major rules promulgated by independent agencies as reported to the GAO from 2002 through 2011, which are presented in Table C-1.⁴⁵ Information is also presented on the extent to which the independent agencies reported benefit and cost information for these rules in Tables C-2 through C-4.

Table 1-8: Major Rules Issued by Independent Regulatory Agencies, October 1, 2010 - September 30, 2011

Agency	Rule	Information on Benefits or Costs	Monetized Benefits	Monetized Costs
Commodity Futures Trading Commission (CFTC)	Whistleblower Incentives and Protection (76 FR 53172)	Yes	No	No
Consumer Product Safety Commission (CPSC)	Safety Standards for Full-Size Baby Cribs and Non-Full Sized Baby Cribs; Final Rule (75 FR 81766)	No	No	No
Federal Reserve System (FRS)	Debit Card Interchange Fees and Routing (76 FR 43394)	No	No	No
Federal Reserve System (FRS)	Debit card Interchange Fees and Routing (76 FR 43478)	No	No	No

⁴⁴ Memorandum for the Heads of Executive Departments and Agencies, and of Independent Regulatory Agencies, M-11-10, "Executive Order 13563, 'Improving Regulation and Regulatory Review,'" p. 6, available at: <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2011/m11-10.pdf>

⁴⁵ OMB did not finalize a Report in 1999; OMB reconstructed the estimates for this period based on GAO reports. Prior to the 2003 Report, OMB did not report on independent agency major rules on a fiscal year basis, but rather on an April-March cycle. Similar to last year, OMB is reporting all of the rules from 2002 through 2011 on a fiscal year basis (see Table C-1). The number of rules presented in earlier Reports may therefore not match the number of rules presented here.

Agency	Rule	Information on Benefits or Costs	Monetized Benefits	Monetized Costs
Federal Reserve System (FRS)	Electronic Fund Transfers (75 FR 50683)	No	No	No
Federal Reserve System (FRS)	Truth In Lending (76 FR 22948)	No	No	No
Nuclear Regulatory Commission (NRC)	Revision of Fee Schedules; Fee Recovery for Fiscal Year 2011 (76 FR 36780)	Yes	No	Yes
Securities and Exchange Commission (SEC)	Disclosure for Asset Backed-Securities Require by Section 943 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (76 FR 4489)	Yes	No	No
Securities and Exchange Commission (SEC)	Family Offices (76 FR 37983)	Yes	No	Yes
Securities and Exchange Commission (SEC)	Issuer Review of Assets in Offerings of Asset-Backed Securities (76 FR 4231)	Yes	No	No
Securities and Exchange Commission (SEC)	Large Trader Reporting (76 FR 46960)	Yes	No	Yes
Securities and Exchange Commission (SEC)	Regulation SHO (75 FR 68702)	No	No	No
Securities and Exchange Commission (SEC)	Reporting of Security-Based Swap Transaction Data (75 FR 64643)	Yes	No	Yes

Agency	Rule	Information on Benefits or Costs	Monetized Benefits	Monetized Costs
Securities and Exchange Commission (SEC)	Risk Management Controls for Brokers or Dealers with Market Access (75 FR 69792)	Yes	No	Yes
Securities and Exchange Commission (SEC)	Rules Implementing Amendments to the Investment Advisers Act of 1940 (76 FR 42950)	Yes	No	No
Securities and Exchange Commission (SEC)	Shareholder Approval Compensation and Golden Parachute Compensation (76 FR 6010)	Yes	No	Yes
Securities and Exchange Commission (SEC)	Whistleblowers Incentives and Protections (76 FR 34300)	Yes	No	No

D. The Impact of Federal Regulation on State, Local, and Tribal Governments, Small Business, Wages, and Economic Growth

Section 624 (a)(2) of the Regulatory Right-to-Know Act requires OMB to present an analysis of the impacts of Federal regulation on State, local, and tribal governments, small business, wages, and economic growth. In addition, the 2011 Presidential Memorandum: Administrative Flexibility calls for a series of measures to promote flexibility for State, local, and tribal governments; these measures include reduced reporting burdens and streamlined regulation.⁴⁶

1. Impacts on State, Local, and Tribal Governments

Over the past ten years, only three rules (and none issued in the last three years covered by this Report) have imposed costs of more than \$100 million per year (\$2001 adjusted for inflation) on State, local, and tribal governments that have been classified as public sector mandates under the Unfunded Mandates Reform Act of 1995 (UMRA).⁴⁷

⁴⁶ President Barack Obama, Memorandum for the Heads of Executive Departments and Agencies, “Presidential Memorandum – Administrative Flexibility,” available at: <http://www.whitehouse.gov/the-press-office/2011/02/28/presidential-memorandum-administrative-flexibility>.

⁴⁷ We note that EPA’s rules setting air quality standards for ozone and particulate matter may ultimately lead to expenditures by State, local, or tribal governments of \$100 million or more. However, Title II of the Unfunded Mandates Reform Act provides that agency statements of compliance with Section 202 must be conducted “unless

- *EPA’s National Primary Drinking Water Regulations: Long Term 2 Enhanced Surface Water Treatment (2005)*: The rule protects against illness due to cryptosporidium and other microbial pathogens in drinking water and addresses risk-risk trade-offs with the control of disinfection byproducts. It requires the use of treatment techniques, along with monitoring, reporting, and public notification requirements, for all public water systems that use surface water sources. The monetized benefits of the rule range from approximately \$260 million to \$1.8 billion. The monetized costs of the rule range from approximately \$80 million to \$130 million.
- *EPA’s National Primary Drinking Water Regulations: Stage 2 Disinfection Byproducts Rule (2006)*: The rule protects against illness due to drinking water disinfectants and disinfection byproducts (DBPs).⁴⁸ The rule effectively tightens the existing standards by making them applicable to each point in the drinking water distribution system individually, rather than only on an average basis to the system as a whole. EPA has determined that this rule may contain a Federal mandate that results in expenditures by State, local, and tribal governments, and the private sector, of \$100 million or more in any one year. While the annualized costs fall below the \$100 million threshold, the costs in some future years may be above the \$100 million mark as public drinking water systems make capital investments and finance these through bonds, loans, and other means.
- *DHS’s Chemical Facility Anti-Terrorism Standards Rule (2007)*: This rule establishes risk-based performance standards for the security of our nation’s chemical facilities. It requires covered chemical facilities to prepare Security Vulnerability Assessments (SVAs), which identify facility security vulnerabilities, and to develop and implement Site Security Plans (SSPs), which include measures that satisfy the identified risk-based performance standards. The rule also provides DHS with the authority to seek compliance through the issuance of Orders, including Orders Assessing Civil Penalty and Orders for the Cessation of Operations. DHS has determined that this rule constitutes an unfunded mandate on the private sector. In the regulatory impact assessment published with this rule, DHS estimates that there are 1,500 to 6,500 covered chemical facilities. DHS also assumes that this rule may require certain municipalities that own and/or operate power generating facilities to purchase security enhancements. Although DHS is unable to determine if this rule will impose an enforceable duty upon State, local, and tribal governments of \$100 million (adjusted annually for inflation) or more in any one year, it has been included in this list for the sake of completeness.

otherwise prohibited by law.” 2 U.S.C. § 1532 (a). The conference report to this legislation indicates that this language means that the section “does not require the preparation of any estimate or analysis if the agency is prohibited by law from considering the estimate or analysis in adopting the rule.” H.R. Conf. Rep. No. 104-76 at 39 (1995). EPA has stated, and the courts have affirmed, that under the Clean Air Act, the criteria air pollutant ambient air quality standards are health-based and EPA is not to consider costs in setting the standards.

⁴⁸ While causal links have not been definitively established, a growing body of evidence has found associations between exposure to DBPs and various forms of cancer, as well as several adverse reproductive endpoints (e.g., spontaneous abortion).

Although these three rules were the only ones over the past ten years to require public sector mandates under UMRA by State, local, and tribal governments exceeding \$100 million (adjusted for inflation), they were not the only rules with impacts on other levels of governments. For example, many rules have monetary impacts lower than the \$100 million threshold, and agencies are also required to consider the federalism implications of rulemakings under Executive Order 13132.

2. Impact on Small Business

The Regulatory Right-to-Know Act calls for an analysis of the effects of regulations on small business. Consistent with that direction, Executive Order 12866, “Regulatory Planning and Review,” recognizes the need to consider such effects and to minimize costs on small business. That Executive Order, reaffirmed by and incorporated in Executive Order 13563, “Improving Regulation and Regulatory Review,” directs agencies to tailor their regulations by business size in order to impose the least burden on society, consistent with the achievement of regulatory objectives. It also calls for the development of short forms and other efficient regulatory approaches for small businesses and other entities.

In the findings section of SBREFA, Congress states that “small businesses bear a disproportionate share of regulatory costs and burdens.”⁴⁹ When relevant regulations are issued, each firm must determine whether a regulation applies, how to comply, and whether it is in compliance. For small business, making that determination may impose significant costs. As firms increase in size, fixed costs of regulatory compliance are spread over a larger revenue and employee base, which often results in lower regulatory costs per unit of output.

In recognition of these principles, many statutes and regulations explicitly attempt to reduce burdens on small businesses, in part to promote economic growth and in part to ensure against unnecessary or unjustified costs and adverse effects on employment and wages. For example, agencies frequently tailor regulations to limit the costs imposed on small business and to offer regulatory relief, including explicit exemptions for small businesses and slower phase-in schedules, allowing adequate periods of transition. Moreover, the Regulatory Flexibility Act (RFA) requires agencies to assess the effect of regulations on small businesses.⁵⁰ Under the RFA, whenever an agency concludes that a particular regulation will have a significant economic effect on a substantial number of small entities, the agency must conduct both an initial and final regulatory flexibility analysis. This analysis must include (among other things) an assessment of the likely burden of the rule on small entities and an analysis of alternatives that may afford relief to small entities while achieving the regulatory goals. OMB works closely with agencies to promote compliance with RFA and to tailor regulations to reduce unjustified costs and to create appropriate flexibility.

On January 18, 2011, President Obama issued a memorandum to underline the requirements of the RFA and to direct agencies to offer an explanation of any failure to provide flexibility to small businesses in proposed or final rules. Such flexibility may include delayed

⁴⁹ Section 202(2) of Pub. L. No. 104-121.

⁵⁰ 5 U.S.C. §§ 601-612.

compliance dates, simplified reporting requirements, and partial or total exemptions. The President's memorandum emphasizes the relationship between small and new businesses and economic growth and job creation; he directed agencies to ensure, to the extent feasible and consistent with law, that regulatory initiatives contain flexibility for small businesses.⁵¹

The empirical evidence of the effects of regulation on small business remains less than clear. We have cited in previous Reports research by the Small Business Administration (SBA) Office of Advocacy, suggesting that small entities disproportionately shoulder regulatory and paperwork burdens. The Office of Advocacy has sponsored at least four studies that estimate the burden of regulation on small businesses.⁵² A study sponsored by SBA (and cited in our 2010 Report), by Dean, et al., concludes that environmental regulations act as barriers to entry for small firms.⁵³

Becker offers a more complex view, focusing on the effect of air pollution regulation on small business.⁵⁴ He finds that although "progressively larger facilities had progressively higher unit abatement costs, ceteris paribus,"⁵⁵ the relationship between firm size and pollution abatement costs varies depending on the regulated pollutant. For troposphere ozone, the regulatory burden seems to fall substantially on the smallest three quartiles of plants. For SO_x, the relationship between regulatory burden and the firm size seems to be U-shaped. For total suspended particles, new multi-unit emitting plants in the smallest size class had \$265 more capital expenditure (per \$10,000 of value added) in non-attainment counties than similar plants in attainment counties, while "those in the larger size classes had an additional \$511-687 in expenditure...though the rise was not monotonic."⁵⁶

The evidence in the literature, while suggestive, remains preliminary, inconclusive, and mixed. OMB continues to investigate the evolving literature on the relevant questions in order to obtain a more precise picture. It is clear, however, that some regulations have significant adverse effects on small business and that it is appropriate to take steps to create flexibility in the event that those adverse effects cannot be justified by commensurate benefits. As the President's 2011 memorandum directs, agencies should specifically explain any refusal to take such steps, especially in light of the importance of small businesses and startups for economic growth and job creation.

3. Impact on Wages and Employment

Regulations of many different markets and areas of activity can ultimately affect labor markets, producing changes in wages and employment levels. Some regulations can have adverse effects on both dimensions, especially if they significantly increase costs; other

⁵¹ Barack Obama, Memorandum for the Heads of Executive Departments and Agencies, "Presidential Memoranda – Regulatory Flexibility, Small Business, and Job Creation," available at: <http://www.whitehouse.gov/the-press-office/2011/01/18/presidential-memoranda-regulatory-flexibility-small-business-and-job-cre>.

⁵² See Hopkins (1995); Dean, et al. (2000); Crain and Hopkins (2001); Crain (2005).

⁵³ Dean, et al. (2000).

⁵⁴ Becker (2005).

⁵⁵ *Id.*, p. 163.

⁵⁶ *Id.*, p. 165.

regulations might produce benefits, especially if they significantly decrease costs. The relevant effects can be quite complex, since in general equilibrium, regulation in one market can have ripple effects across many markets, making it difficult to produce aggregate figures. In addition, some regulations require or promote activities that may have beneficial effects on job creation.

We discuss here the effect of labor market regulations, environmental regulations, and economic regulations on wages and employment. OMB continues to investigate the possibility that certain kinds of regulations can have adverse effects on job creation in particular, and is interested both in empirical work and in taking steps to reduce or eliminate such adverse effects. Under Executive Order 13563, job creation is an important consideration in regulatory review. (“Our regulatory system must promote public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation.”). In light of Executive Order 13563, a number of recent Regulatory Impact Analyses attempt to identify the likely employment effects of regulation (whether positive or negative).

a. Labor market regulations.

It is perhaps simplest to analyze the effects of direct regulation of labor markets, as they can be plausibly analyzed using a relatively simple partial equilibrium framework—i.e., one that focuses exclusively on the labor market, ignoring the effects through other markets. There are many different types of labor market regulations. Perhaps the most obvious are direct price controls, such as minimum wage laws.⁵⁷ Another form of labor market regulation consists of regulations that mandate particular employer-provided benefits, such as the requirement under the Family and Medical Leave Act (FMLA) to provide unpaid leave to care for a new child; in the same category are rules that affect working conditions, such as workplace safety regulations under the Occupational Safety and Health Act. Another category of labor market regulation is anti-discrimination law, which protects certain classes of workers from discrimination in hiring and wage-setting decisions. Yet another form of labor market regulation governs the ability of workers and firms to bargain collectively; in general, U.S. competition law prohibits collusion among employers and allows collective bargaining by workers.

The effects of these approaches must be analyzed separately. Here we outline the theory and evidence on the effect of mandated benefits regulations on wages and employment levels. To be concrete, consider a workplace safety regulation. Summers provides the standard price-theoretic treatment of such regulations.⁵⁸ Such a regulation will shift the labor supply curve down by the amount that workers value the increase in safety, so that workers are willing to supply more labor for a given wage than in the absence of the regulation. Because it imposes compliance costs on employers, the regulation also shifts the labor demand curve down by the amount of the compliance cost.

If workers value the mandated benefit at more than it costs employers to provide the benefit, then both the employment level and net wages (i.e., monetary compensation plus the value of non-monetary benefits such as safety) will rise. Under standard assumptions, employers

⁵⁷ Neumark & Wascher (2008).

⁵⁸ Summers (1989).

have incentives to provide such benefits, but various market failures may result in suboptimal provision of such benefits. Conversely, if workers value the mandated benefit at less than its cost, then the employment level and net wages will fall. This simple model assumes that wages can indeed perfectly adjust downwards in response to the mandated benefits—but if wages are sticky, then the regulation could result in a decrease in employment levels and an increase in net wages.

In the case of group-specific mandated benefits, which are targeted at identifiable groups of workers in the population, the theoretical analysis is more complicated. Jolls provides the leading account and emphasizes that the interaction of group-specific mandated benefits regulation with anti-discrimination law determines its consequences for labor markets.⁵⁹ Consider, for instance, regulations under the Americans with Disabilities Act (ADA) that require that employers accommodate the special needs of disabled employees—a group-specific mandated benefit. The law also forbids employers from discriminating against disabled workers in hiring and compensation decisions. To the extent that it is easier to enforce the prohibition of discrimination in wage setting than in hiring decisions, Jolls argues that the law will result in no reduction in wages for disabled workers but a reduction in their employment level, because employers will prefer to hire (cheaper) non-disabled workers.

In contrast, group-specific mandates that target women, such as maternity leave mandates, are more likely to have an effect on wages because women are disproportionately represented in a few occupations, and hence their wages can more easily be adjusted downward without triggering anti-discrimination enforcement. These mandates can be analyzed in the standard framework provided by Summers described above, and because wages adjust down, are less likely to have a negative effect on employment.

The empirical literature does not offer unambiguous conclusions, but some studies provide support for the predictions of these simple partial equilibrium models. Acemoglu and Angrist find that the ADA resulted in no decrease in relative wages of disabled people but a decrease in employment levels.⁶⁰ In contrast, Gruber finds that regulations that require employers to provide comprehensive coverage for childbirth in health insurance plans result in a decrease in women's wages but have no effect on their employment levels.⁶¹ Studies examining the effect of the FMLA in the U.S., however, find little effect on either relative employment levels or wages of women, perhaps because the mandated leave is short and unpaid, and many employers provided maternity leave prior to the law.⁶² Bartik reviews labor market literature and offers recommendations on how to improve employment benefits using adjusted reservation wage gains and adjusted earnings gains.⁶³ OMB continues to investigate the growing literature on these topics. The references here are meant to be illustrative rather than exhaustive.

⁵⁹ Jolls (2000).

⁶⁰ Acemoglu and Angrist (2001).

⁶¹ Gruber (1994).

⁶² Waldfogel (1999) and Baum (2003). Ruhm (1998) examines parental leave mandates in Europe and finds that they are associated with increases in women's relative employment levels and reductions in their relative wages.

⁶³ Bartik (2012).

b. Environmental regulation.

The effects of environmental regulation on the labor market can be difficult to assess, in part because those effects are not easy to disentangle from the effects of other economic changes over time and across industries. The underlying questions require careful and continuing conceptual analysis and empirical study, and OMB is following new developments, both conceptual and empirical. In this section we summarize some of the leading articles that are often cited in the academic literature.

Surveying the early studies, Goodstein (1994) finds that seven of nine relevant studies showed increases in employment as a result of environmental regulation, one showed a decrease, and one was inconclusive. He states that “on balance, the available studies indicate that environmental spending ... has probably led to a net increase in the number of jobs in the U.S. economy ... although if it exists, this effect is not large.” A more recent discussion finds that the research thus far has “yielded mixed results” with respect to “the over-all employment effects of environmental regulation” in the short- or medium-term.⁶⁴

In an influential treatment, Morgenstern, Pizer, and Shih (2002) explore four highly polluting, regulated industries to examine the effect of higher abatement costs from regulation on employment.⁶⁵ The authors conclude that increased abatement expenditures generally do not cause a significant change in employment. In reaching this conclusion, they provide a general framework, identifying three sources of potential beneficial and adverse effects that regulation could have on employment:

- *Demand effect:* higher production costs raise market prices and hence reduce consumption (and production), thus reducing demand for output, with potentially negative effects on employment; in the authors’ words, the “extent of this effect depends on the cost increase passed on to consumers as well as the demand elasticity of industry output.”
- *Cost effect:* As costs go up, plants add more capital and labor (holding other factors constant), with potentially positive effects on employment; in the authors’ words, as “production costs rise, more inputs, including labor, are used to produce the same amount of output.”
- *Factor-shift effect:* Post-regulation production technologies may be more or less labor intensive (i.e., more/less labor is required per dollar of output); in the authors’ words, “environmental activities may be more labor intensive than conventional production,” meaning that “the amount of labor per dollar of output will rise,” though it is also possible that “cleaner operations could involve automation and less employment, for example.”

Isolating these elements, the authors expect, and find, *positive* employment effects in industries (such as petroleum and plastics) where environmental activities are labor-intensive and

⁶⁴ Berman and Bui (2001b).

⁶⁵ Data includes information from 1979, 1980, 1981, 1985, 1988 and 1991.

demand is relatively inelastic. Where the pollution abatement activities required or encouraged by regulation are not labor-intensive, and where demand is elastic, positive employment effects would not be expected and negative effects should be anticipated to occur; in such cases, the demand effect will dominate the outcome. But the authors find that in those industries where labor already represents a large share of production costs and where demand is relatively more elastic (such as steel and pulp and paper), there is nonetheless little evidence of any statistically significant employment consequence. They also state that “increased environmental spending generally does *not* cause a significant change in industry-level employment. Our average across all four industries is a net gain of 1.5 jobs per \$1 million in additional environmental spending, with a standard error of 2.2 jobs—an insignificant effect.”

In another study, Berman and Bui (2001) use direct measures of regulation and plant data to estimate the employment effects of sharply increased air quality regulation in Los Angeles. They compare changes in employment in affected plants to those in other plants in the same industries but in regions not subject to the local regulations. The authors find that “while regulations do impose large costs, they have a limited effect on employment” – even when exit and dissuaded entry effects are considered.⁶⁶ Their conclusion is that local air quality regulation “probably increased labor demand slightly.” In their view, the limited effects likely arose because (1) the regulations applied disproportionately to capital-intensive plants with relatively little employment; (2) the plants sold to local markets where competitors were subject to the same regulations (so that sales were relatively unaffected); and (3) abatement inputs served as complements to employment.

In a related paper, Cole and Elliott (2007) study the impact of UK environmental regulations on sectoral employment using panel data spanning 27 different industries over 5 years. They find that environmental regulation costs did not have a statistically significant effect on employment, regardless of whether such costs were treated as exogenous or endogenous. The authors suggest that regulation costs could generate “competing effects on employment and cancel each other out” or simply have no discernible impact at all. By contrast, other sectoral studies – focusing on the manufacturing sector – have found negative effects on employment.⁶⁷

The 2010 Report states that OMB is also exploring the risk that domestic regulation might lead companies to do business abroad as a result of domestic regulation in the environmental area, resulting in depressed wages and employment. The economic literature has for some time examined firms’ decisions to locate new plants or relocate existing plants in response to environmental regulations.

In this context, the evidence is both suggestive and mixed. In their review of the literature on the effect of environmental regulation on the manufacturing sector, Jaffe et al. find that “although the long-run social costs of environmental regulation may be significant, including adverse effects on productivity, studies attempting to measure the effect of environmental regulation on net exports, overall trade flows, and plant-location decisions have

⁶⁶ Berman and Bui (2001).

⁶⁷ See, e.g., Greenstone (2002); Kahn (1997). See also Walker (2011), for a recent finding of negative effects on employment as a result of environmental regulation.

produced estimates that are either small, statistically insignificant, or not robust to tests of model specification.”⁶⁸

Using 17-year panel data, Keller and Levinson (2002) find the stringency of environmental regulation (expressed in pollution abatement costs) has “small deterrent effects” on states competing for foreign direct investment.⁶⁹ Xing and Kolstad find “using instruments for the unobserved variables, the statistical results show that the laxity of environmental regulations in a host country is a significant determinant of F[oreign] D[irect] I[nvestment] from the US for heavily polluting industries and is insignificant for less polluting industries.”⁷⁰

A recent study by Hanna (2010) measured the response of US-based multinationals foreign direct investment decisions to the Clean Air Act Amendments using a panel of firm-level data over the period 1966-1999. Consistent with the theory that regulation causes firms to substitute foreign for domestic production, the authors find that in the environmental area, domestic regulation has led US-based multinational companies “to increase their foreign assets in polluting industries by 5.3 percent and their foreign output by 9 percent.”⁷¹ The authors also find that these results are more robust for firms that manufactured within an industry for which imports had historically accounted for a large percentage of US consumption (see also Greenstone (2002) discussed below). Like Hanna (2010), Brunnermeier and Levinson (2004), using panel data, also find “statistically significant pollution haven effects of reasonable magnitude.”⁷² Levinson and Taylor’s (2008) results in examining trade flows and environmental regulation are consistent with these other studies.⁷³

c. Economic regulation.

Rate regulations and restrictions on entry in product markets—commonly referred to as “economic regulation”—can have important effects on labor markets. As emphasized by Peoples,⁷⁴ restrictions on entry into an industry can make unionization of the industry easier because as a result the industry is dominated by a few large firms, which lowers the cost of organizing workers. The resulting high unionization rates give unions in the regulated industries substantial bargaining power, and as a result wages in regulated industries, which historically include trucking, electricity, and airlines, are higher. Moreover, rate regulations that allow firms in these industries to pass costs on to customers may make it easier for unions to bargain for relatively high wages.

To the extent that economic regulation also results in higher prices in the product market, consumers, including workers, will of course have to pay those prices. Blanchard and Giavazzi show in theoretical terms that the increased markups in the product market caused by widespread economic regulation can result in both lower real wages of workers, measured in terms of

⁶⁸ Jaffe et al (1995), pp. 157-8.

⁶⁹ Keller and Levinson (2002), p. 691.

⁷⁰ Xing and Kolstad (2002), p. 1.

⁷¹ Hanna (2010), p. 160.

⁷² Brunnermeier and Levinson (2004), p. 6.

⁷³ Levinson and Taylor (2008).

⁷⁴ Peoples (1998).

purchasing power, and lower employment levels.⁷⁵ The theoretical negative effect of entry regulation on employment was supported empirically by Bertrand and Kramarz,⁷⁶ who examine entry restrictions in the French retail industry and find that they have reduced employment growth in France.

4. *Impact on Economic Growth*

Measuring the effects of regulation on economic growth is a complex task. The category of “regulation” is of course very large. Criminal law, property law, and contract law are not always characterized as “regulation,” but they do have regulatory functions, and if well-designed, they can promote and even be indispensable to economic growth. A system of freedom of private property and freedom of contract promotes such growth, and it cannot exist without regulation (including that form of regulation that occurs through the common law). Some forms of national regulation may have a positive effect on growth, perhaps by promoting stable and efficient operation of financial markets, by improving educational outcomes, by promoting innovation, or by upgrading the operation of the transportation system. An absence of regulation, or poorly designed deregulatory initiatives, may have significant adverse effects on growth – if, for example, they undermine the stability and efficiency of financial markets.

Excessive and unnecessary regulations, on the other hand, can place undue burdens on companies, consumers, and workers, and may cause growth and overall productivity to slow. While the evidence remains less than entirely clear, some evidence suggests that domestic environmental regulation has led some U.S.-based multinationals to invest in other nations (especially in the domain of manufacturing), and in that sense, such regulation may have an adverse effect on domestic growth. It is generally agreed that predictability and certainty are highly desirable features of a regulatory system. (We note parenthetically that Executive Order 13563 emphasizes that our regulatory system “must promote predictability and reduce uncertainty”; in certain recent actions and decisions, including the decision not to finalize the EPA’s proposed ozone rule in 2011, the Administration has emphasized the importance of predictability and certainty.) At the same time, the direct impacts of particular regulations, or categories of regulations, on the overall economy may be difficult to establish because causal chains are uncertain and because it is hard to control relevant variables.

a. *Some conceptual challenges and the nature of growth.*

One difficulty with measuring the relationship between regulation and economic growth is identifying the appropriate measure of output. Economists frequently look at Gross Domestic Product (GDP), which is also our principal emphasis here (see below), but as a growing technical literature suggests, GDP may not adequately account for the effects of some regulations. For example, GDP does not capture directly relevant benefits of regulation, such as environmental protection, that do not result in increases in goods or services produced.⁷⁷ Efforts to expand the

⁷⁵ Blanchard and Giavazzi (2003).

⁷⁶ Bertrand and Kramarz (2002).

⁷⁷ See Sen (1999a, 1999b), Krueger (2009), Kahneman, et al. (2004), and Stiglitz, et al. (2010).

national accounts to incorporate omitted factors – such as improvements in environmental quality in satellite accounts – suggest the incompleteness of existing measures.⁷⁸

A detailed literature explores some of the potentially deeper limitations of national income and product accounting. There is a complex and not fully understood relationship between GDP growth and subjective well-being (insofar as a rapidly growing literature suggests that the latter may be measured).⁷⁹ Two of the most important contributors to this literature are Nobel Prize winner Daniel Kahneman and current Council of Economic Advisers Chairman Alan Krueger. Some studies, for example, conclude that, on average, increases in subjective well-being are clearly and consistently associated with rising levels of GDP across different countries.⁸⁰ Such studies find that this positive relationship is even stronger when comparing the subjective well-being of richer and poorer members within the same country at a single point in time.⁸¹ Other studies point to cross-country data suggesting that as income per capita increases, subjective well-being increases steeply but only up to a certain threshold. Afterwards, levels of happiness are only weakly correlated with further increases in income per capita; that is, above some threshold level of GDP, income has little effect on subjective well-being.⁸² The precise relationship between GDP growth and subjective well-being has yet to be settled.

A more general observation is that there may be a significant difference between self-reported life satisfaction and self-reported day-to-day experience; the measure of “life satisfaction” evidently captures judgments that are not captured in day-to-day experience, and vice-versa.⁸³ Some studies, for example, find that life satisfaction generally increases with income but that experienced well-being does not.⁸⁴

In this vein, Krueger, et al, offer an alternative measure of well-being—National Time Accounting—that proposes to measure and analyze how people spend and experience their time.⁸⁵ One claim is that such measures provide important information that is not fully or adequately captured in GDP or other existing measures. This approach provides an extension to regular time use surveys and uses what the authors call the Day Reconstruction Method (DRM) to ask respondents what they were doing and how they felt at different times during the day.

Federal statistical initiatives are currently underway that are influenced by and build upon

⁷⁸ Nordhaus & Kokkelenberg (1999); Nordhaus (2004).

⁷⁹ See Krueger (2009) for a discussion of subjective well-being and its measurement. See also Stevenson and Wolfers (2008b) showing movements in happiness inequality that do not parallel movements in income inequality.

⁸⁰ See Deaton (2008); Hagerty & Veenhoven (2003); Stevenson & Wolfers (2008a); Inglehart, et al (2008). For a finding of “a clear positive link between average levels of subjective well-being and GDP per capita across countries,” see Stevenson and Wolfers (2008a).

⁸¹ Stevenson and Wolfers (2008a) characterize this conclusion as one that has garnered a “clear consensus in the literature.”

⁸² See Inglehart et al. (2008). Lane (2001) claims that once an individual rises above a basic “subsistence level,” the major sources of well-being are not income but rather friends and family life.

⁸³ Diener et al. (2010); Kahneman (1999).

⁸⁴ Krueger & Schkade (2008); Diener et al. (2010).

⁸⁵ Krueger, et al (2009). Krueger and Schkade (2008) also have examined the reliability of subjective well-being measures. For a general account, see Diener, et al. (2009). See also Kahneman et al (2004), Kahneman & Krueger (2006), Krueger, ed. (2009).

this approach. The National Institute on Aging (NIA) is supporting the inclusion of well-being measures in a number of large population-based surveys, both nationally and internationally. Specifically, a module of questions, designed by Krueger with funding from NIA, was fielded in the 2010 American Time Use Survey (ATUS). The ATUS, which is conducted by the U.S. Census Bureau for the Bureau of Labor Statistics (BLS), is a continuous survey about how individuals age 15 and over spend their time doing various activities, such as work, childcare, housework, watching television, volunteering, and socializing. In the module, up to three activities that a respondent reports are randomly selected, and respondents are asked how happy, tired, sad, stressed, and in pain they felt during each of those activities. Data from this module will become available mid-2011. NIA currently intends to fund this module again in 2012, and OIRA continues to support these efforts.

In November 2010, the NIA and the U.K. Economic and Social Research Council also sponsored a workshop that was held at the National Academy of Sciences on the role of well-being measures in public policy. This meeting brought together leading academic and policy experts from the U.S. and U.K. to explore research needs and practical challenges surrounding the integration of subjective well-being measures into policy planning and evaluation process of local and national governments and agencies. The NIA has further commissioned a National Academy of Sciences panel on development of nonmarket satellite National Accounts of Well-being. In addition, NIA, along with the National Center for Complementary and Alternative Medicine, is funding a series of research grants on both experienced and evaluative well-being.

Meanwhile, a rapidly developing literature continues to explore the relationship between economic growth and well-being, and it is possible that this literature may turn out to have implications for regulatory policy and uses of cost-benefit analysis.⁸⁶ It is possible, for example, that a regulatory initiative may have effects on subjective well-being, or actual experience, that cost-benefit analysis does not fully capture. Consider, just for purposes of illustration, a few of many examples from the relevant literature:

- Contributing to the extensive literature on the relevance of relative (as opposed to absolute) economic position, Luttmer reports that higher earnings of neighbors are associated with lower levels of self-reported happiness, suggesting that subjective well-being may be partly a function of relative income.⁸⁷ Another study suggests that the impact of relative income levels matters more at higher levels of income.⁸⁸
- Testing for the differences between experienced well-being and life satisfaction, Kahneman and Deaton analyze more than 450,000 responses to the Gallup-Healthways Well-Being Index, a daily survey of 1,000 US residents conducted by the Gallup Organization. They find that income and education are more closely related to life satisfaction, but health, care-giving, loneliness, and smoking are relatively stronger predictors of day-to-day emotions.⁸⁹

⁸⁶ See, e.g., Vitarelli (2010); Adler and Posner (2008).

⁸⁷ Luttmer (2005).

⁸⁸ See Dynan & Ravina (2007).

⁸⁹ Kahneman & Deaton (2010).

- Biswas-Diener et al. compare subjective well-being measures from the U.S. and Denmark. They find that although the Danish claim higher life satisfaction, Americans are higher in both positive and negative affect; they are more “emotional.” Their study also suggests that poor Danes are happier than their American counterparts.⁹⁰
- Kahneman et al. use the Day Reconstruction Method in a study of women conducted concurrently during one day in Columbus, Ohio and Renne, France. The authors find that the specific sources from which the women draw happiness vary between the two cities, “reflecting differing cultural norms and social arrangements.”⁹¹
- Examining changes over time in the United States and Britain, Blanchflower and Oswald find that in the last quarter-century, reported levels of well-being have declined in the United States and remained flat in Britain and are affected by such factors as relative income and age. They estimate the monetary values of events such as unemployment and divorce and find that both impose the welfare equivalent of large losses in monetary terms.⁹²
- Expanding their investigation to 31 European countries, Blanchflower and Oswald examine data from the 2007 European Quality of Life Survey and find that the statistical structure of well-being in European nations looks “almost exactly the same as in the United States.”⁹³ That is, the “same variables enter, and in almost identical ways.” They conclude that, across nations, “[h]appy people are disproportionately the young and old (not middle-aged), rich, educated, married, in work, healthy, exercise-takers, with high fruit-and-vegetable diets, and slim.”
- Responding to critics who claim that subjective well-being measures fail to provide valid measures of well-being, Oswald and Wu examine reported life satisfaction among a recent random sample of 1.3 million U.S. inhabitants. They observe a high (0.6) correlation across states between these measures of subjective well-being and objective quality-of-life rankings (calculated from, among other things, state indicators such as crime, air quality, taxes, and cost-of-living).⁹⁴ Oswald and Wu conclude that “subjective well-being data contain genuine information about the quality of human lives.”
- Using African data collected from the Gallup World Poll and African Demographic and Healthy Surveys, Deaton et al. show that the death of an immediate family member has little effect on life evaluation, but a sizeable impact on measures of emotion, such as depression or sadness. They suggest that the amount of money necessary to compensate for the emotional effects of a death is larger than that

⁹⁰ Biswas-Diener, et al (2010).

⁹¹ Kahneman, et al (2010).

⁹² See Branchflower & Oswald (2004).

⁹³ See Blanchflower & Oswald (2010).

⁹⁴ Oswald & Wu (2010). In more technical terms, their paper claims to “offer a crosscheck on the spatial compensating-differentials theory of economics and regional science.”

required to compensate one's resulting life evaluation.⁹⁵

- Harter and Arora investigate the relationship between hours worked and perceived job fit and their impact on both life satisfaction and experienced measures of well-being.⁹⁶ Using data drawn from the Gallup World Poll, they find that perceived job fit was a robust predictor of life satisfaction across various regions and increased in importance as the hours worked increased. This conclusion adds to prior studies they cite, which show meaningful relationships between the subjective experience of work and objective outcomes, such as employee productivity and turnover.⁹⁷
- Krueger and Mueller examine individual job search activities using a longitudinal data set of weekly surveys from unemployed workers in New Jersey in 2009. They provide the following important conclusions: “job search declines steeply over the spell of unemployment for a given set of individuals; (2) after a period of rapidly rising unemployment, workers who lost their jobs at different times are strikingly different, and comparisons across cohorts that lost their jobs at different times are prone to bias (another source of heterogeneity bias); (3) unemployed workers express much dissatisfaction with their lives, and their self-reported mood worsens the longer they are unemployed while life satisfaction stays relatively constant; (4) the unemployed appear to be particularly sad during the time they spend searching for a job, and, if anything, they find job search more emotionally onerous as the duration of unemployment increases; (5) in the Great Recession the exit rate from unemployment was low at all durations of unemployment, and declined gradually over the spell of unemployment; (6) the choice of job search activities and amount of search time do not bear a straightforward relationship with the likelihood of receiving a job offer but job search time and the reported reservation wage do predict early exits from U[nemployment] I[nurance], although unmeasured characteristics of workers could distort the estimated relationships; and (7) we find little evidence that exhaustion of extended U[nemployment] I[nurance] benefits is associated with an increase in job search activity or in job offers.”⁹⁸
- Though a random-assignment experiment (supported by General Social Survey data), Ifcher and Zarghamee find that individuals in a happier mood are less likely to prefer present over future utility. In other words, compared to neutral effect, mild positive effect significantly decreases time preference over money.⁹⁹ According to the authors, one practical implication is that individuals may benefit from awareness that their mood affects their behavior. For example, a new employee may want to postpone pension plan contribution decisions until he or she is in a happy mood.
- Examining data collected from fifty-eight countries, Engelbrecht finds that natural capital per capita across those countries is correlated with subjective life-satisfaction

⁹⁵ Deaton et al (2010).

⁹⁶ Harter and Arora (2010).

⁹⁷ Isen (1987); Warr (2003).

⁹⁸ Krueger and Mueller (2011), pp. 3-4.

⁹⁹ Ifcher & Zarghamee (2011).

measures, especially in high-income nations.¹⁰⁰ He concludes that debates about sustainable development – which often seek to ensure that future generations will have a similar level of wealth per capita available to them as current generations do – should incorporate subjective well-being measures.

The relevant literature, and its potential implications, remain in early stages, OMB continues to investigate the relevant literature and to explore its possible implications for improving regulatory review and regulatory policy.

b. Regulation and economic activity.

While identifying the appropriate measure of output is a difficult task, debate also continues about how to evaluate the impact of regulations on the standard indicators of economic activity. Exploration of that impact continues to be centrally important, as Executive Order 13563 makes clear with its clear reference to “economic growth, innovation, competitiveness, and job creation.” At the same time, regulatory impacts on economic growth may be difficult to demonstrate because of other simultaneous changes in the economy. For example, economic growth may be strong while regulatory activity is increasing; even if so, the strength of economic growth may not be caused by such activity.

Many regulations affect economic growth indirectly through their effects on intermediate factors. There is a growing consensus specifying these intermediate drivers of growth, including increased human capital, capital investment, research and development, economic competition, physical infrastructure, and good governance (including good institutions).¹⁰¹ Some evidence strongly suggests that regulations promoting educational attainment may improve human capital accumulation, thereby increasing economic growth.¹⁰² Ashenfelter and Krueger study the economic returns of schooling using survey data of identical twins and conclude that “each year of school completed increases a worker’s wage rate by 12-16 percent.”¹⁰³ Other studies show a positive link between increased life expectancy and growth.¹⁰⁴

If they are not carefully designed, regulations can also impose significant costs on businesses, potentially dampening economic competition and capital investment. Djankov et. al. (2002) find that increased regulations on entry into markets—such as licensing and fees—create higher costs of entry and thus adversely affect economic outcomes.¹⁰⁵ By contrast, van Stel et.

¹⁰⁰ Englebrecht (2009).

¹⁰¹ See, e.g., Temple (1999).

¹⁰² For a recent empirical analysis using new OECD data to find a strong positive impact of increased education on economic output, see Cohen & Soto (2007).

¹⁰³ Ashenfelter and Krueger (1994), p. 1157. Krueger and Lindahl (2001) provide an overview of two literatures: (1) labor literature on monetary return to schooling and (2) the macro growth literature that investigates the relationship between education in different countries and their subsequent economic growth.

¹⁰⁴ See, e.g., Bloom et al (2004). Bloom et al. survey the existing literature on health and economic outcomes, and find in their own cross-country analysis that a one year increase in life expectancy generates a 4 percent increase in economic output, controlling for other variables.

¹⁰⁵ Djankov et al (2002).

al. (2007) find that entry regulations actually have little impact on entrepreneurship, but that regulations creating greater labor rigidity have a discernible negative impact.¹⁰⁶

Relatively few studies attempt to measure the economic impact of regulations in the aggregate; the literature focuses instead on particular regulatory arenas.¹⁰⁷ The literature examining the economic impact of environmental regulations in particular is extensive. Here are a few examples:¹⁰⁸

- Jorgenson and Wilcoxon modeled dynamic simulations with and without environmental regulation on long-term growth in the U.S. to assess the effects and reported that the long-term cost of regulation is a 2.59% reduction in Gross National Product.¹⁰⁹
- Berman and Bui find that during a period of aggressive environmental regulation, productivity *increased* among the petroleum refineries located in the Los Angeles from 1987 to 1992, suggesting that “[a]batement costs may severely overstate the true cost of environmental regulation”¹¹⁰ and that “abatement associated with the SCAQMD regulations was productivity enhancing.”¹¹¹
- Greenstone, List, and Syverson (2011) analyze plant-level production data to estimate the effects of environmental regulations on manufacturing plants’ total factor productivity (TFP) levels. Using the Clean Air Act Amendments’ division of counties into pollutant-specific nonattainment and attainment categories, they find that among surviving polluting plants, a nonattainment designation is associated with a roughly 2.6 percent decline in TFP.
- Gray and Shadbegian examine the investment activity of paper mills from 1979 to 1990,¹¹² and they find that “plants with relatively high pollution abatement capital expenditures over the period invest less in productive capital. The reduction in productive investment is greater than the increase in abatement investment, leading to lower total investment at high abatement cost plants. The magnitude of this impact is quite large, suggesting that a dollar of pollution abatement investment reduces productive investment by \$1.88 at that plant. This seems to reflect both environmental investment crowding out productive investment within a plant and firms

¹⁰⁶ van Stel et al (2007). They also find that regulations improving access to credit have a positive impact on entrepreneurship.

¹⁰⁷ One of the few such studies is an analysis by Hahn and Hird (1991), which estimates the net costs of regulations on the economy to be \$46 billion, with aggregate annual transfer payments between \$172.1 and \$209.5 billion. But the authors note that their estimates have a wide range of uncertainty due to difficulties in estimation methods and available data. Further, this study is likely to be outdated due to major policy and economic developments in the years since its publication.

¹⁰⁸ Berman and Bui (2001b) provide a helpful summary of some of this literature. It should be recalled that many environmental regulations affect provision of non-market goods that are not explicitly reflected in standard measures of economic activity. Thus, in addition to the direct economic costs imposed by environmental regulations, these same regulations have social welfare and other non-market impacts that are not captured in these studies.

¹⁰⁹ Jorgensen and Wilcoxon (1990).

¹¹⁰ Berman and Bui (2001b)p. 509.

¹¹¹ *Id.*, p. 499. SCAQMD is South Coast Air Quality Management District.

¹¹² Gray & Shadbegian (1998).

shifting investment towards plants facing less stringent abatement requirements. Estimates placing less weight on within-firm reallocation of investment indicate approximate dollar-for-dollar (\$0.99) crowding out of productive investment.”¹¹³

- Becker and Henderson¹¹⁴ find that in response to ground-level ozone regulation, in polluting industries “birth [of plants] fall dramatically in nonattainment counties, compared to attainment counties... This shift in birth patterns induces a reallocation of stocks of plants toward attainment areas. Depending on the interpretation of reduced-form coefficients, net present value for a typical new plant in a nonattainment area could fall by 13-22 percent.”¹¹⁵
- Greenstone¹¹⁶ finds that “in the first 15 years after the [Clean Air Act Amendments] became law (1972-1987, nonattainment counties (relative to attainment ones) lost approximately 590,000 jobs, \$37 billion in capital stock and \$75 billion (1987 dollars) of output in polluting industries).”¹¹⁷ However, Greenstone notes that these impacts remain modest in comparison to the size of the national manufacturing sector. Further, these results indicate statistically significant economic costs associated with carbon monoxide regulations but not with ozone or sulfur dioxide regulations.
- List, et al., examined the effects of air quality regulation stringency and location decisions of new plants in New York State from 1980 to 1990, and found that regulatory stringency and the decision to locate is negatively correlated, and the current parametric estimates of this negative correlation may be understated.¹¹⁸
- As noted above, Hanna¹¹⁹ finds that domestic environmental regulation has had an effect in increasing the outbound foreign direct investment of U.S.-based multinational firms. The results include an increase in foreign investments in polluting industries by 5.3 percent and in foreign output by 9 percent; the results are concentrated in manufacturing.
- Jaffe and Palmer¹²⁰ find that increases in compliance costs generated by environmental regulations lead to a lagged effect of increases in research and development expenditures, as measured by patents of new environmental technologies. This corroborates other studies¹²¹ with similar findings. These studies suggest that there may be positive economic effects related to technological innovation in the years following increased environmental regulatory compliance costs. As Jaffe and Palmer argue, “in the aggregate, the disincentives for R&D attributed to a command-and-control approach to environmental regulation may be

¹¹³ *Id.*, at 254-255.

¹¹⁴ Becker & Henderson (2000).

¹¹⁵ *Id.*, at 414-415.

¹¹⁶ Greenstone (2002).

¹¹⁷ *Id.*, at 1213.

¹¹⁸ List, et al. (2003).

¹¹⁹ Hanna (2010).

¹²⁰ Jaffe and Palmer (1997).

¹²¹ See Lanoie et al (2008).

overcome by the high returns that regulation creates for new pollution-control technology.”¹²² These results, however, are noted to be sensitive to the definitions of time lag and difficulties in specifying research and development models, coding patent types, and linking research and development to overall economic growth.

- Chay and Greenstone¹²³ find that improvements in air quality induced by Clean Air Act regulations resulted in increased housing values at the county level between 1970 and 1980. This finding suggests possible economic gains in asset values resulting from improved environmental conditions, which may have had longer-term impacts on economic growth. Again, these overall impacts are difficult to quantify.
- Kahn examines census and state data and finds that better educated, wealthier populations experienced cleaner air, but that poorer, less educated populations experienced a greater overall improvement in air quality between 1980 and 1998 in California. During this time period, the exposure of the Hispanic population to pollution also fell sharply along with exposure differentials between richer and poorer people. The author concludes that, “[g]iven the overall trend in improvements for certain demographic groups, it appears that regulation under the Clean Air Act has helped, and not economically harmed, the ‘have nots.’”¹²⁴

Outside of the context of environmental regulation, a number of studies find that some regulations have promoted economic growth and otherwise had desirable economic effects. For example, Carpenter (2009) finds that certain approaches to entry regulation – such as the discretionary approval regimes used by the Food and Drug Administration – can actually increase economic activity by establishing credible expectations of fairness and product safety.¹²⁵ Similarly, Greenstone et al. (2006) find that disclosure rules in the securities industry can reduce the adverse effects of informational asymmetries and increase market confidence. Their study finds that the 1964 Securities Act Amendments generated \$3-6 billion of asset value for shareholders as a result of increased investment activity. According to their evidence, higher levels of investor protection and disclosure requirements are associated with the higher valuation of equities.¹²⁶

Another body of work focuses more specifically on behaviorally informed approaches to regulation—including setting appropriate default rules, reducing complexity, using disclosure as a regulatory tool, and presenting information so as to promote clarity and salience. The relevant

¹²² Jaffe & Palmer(1997), p. 618.

¹²³ Chay & Greenstone (2005). Fullerton (2011) uses a carbon permit system – specifically, the cap-and-trade legislation that passed the U.S. House of Representatives in 2009 (which then stalled in the Senate) – to illustrate six different types of distributional effects: (1) the higher prices of carbon-intensive products, (2) changes in relative returns to factors like labor, capital, and resources, (3) allocation of scarcity rents from a restricted number of permits, (4) distribution of the benefits from improvements in environmental quality, (5) temporary effects during the transition, and (6) capitalization of all those effects into prices of land, corporate stock, or house values. He concludes that, in this particular case, many or all effects may be regressive – that is, the net burden as a fraction of income is higher for the poor than for the rich.

¹²⁴ Kahn (2001).

¹²⁵ Carpenter (2009). For more historical and formal modeling approaches to this same argument, see, e.g., Carpenter (2004) and Carpenter & Ting (2007).

¹²⁶ Greenstone, et al (2006). See also La Porta et al (1999).

work explores how such approaches might help improve market functioning or reduce economic costs associated with more aggressive regulatory efforts. Regulations aimed at managing risks can also have significant economic benefits by increasing the willingness of market actors to participate in market transactions.¹²⁷ These studies suggest that when examining the economic effects of regulation, analysts should be mindful of the importance of considering alternative regulatory approaches, in addition to deregulatory options, as the baseline for comparison.

Executive Order 13563 refers in particular to the importance of flexible approaches, stating that with relevant qualifications, “each agency shall identify and consider regulatory approaches that reduce burdens and that maintain flexibility and freedom of choice for the public.” In some cases, carefully chosen forms of regulation, increasing flexibility, may yield the same social welfare benefits as existing regulatory approaches while imposing significantly lower costs. In other cases, alternative regulatory approaches may actually improve market function, increase economic activity, and promote economic growth.¹²⁸

OMB continues to investigate the underlying questions; no clear consensus has emerged on all of the answers. Further work of the sort outlined here might ultimately make it possible to connect regulatory initiatives to changes in GDP and also to changes in subjective well-being under various measures.

¹²⁷ On the possible welfare and economic gains from employing alternative regulatory approaches, see generally Moss & Cisternino (2009).

¹²⁸ *Id.* See also Balleisen and Moss, eds. (2009).

CHAPTER II: RECOMMENDATIONS FOR REFORM AND REPORT ON IMPLEMENTATION OF EXECUTIVE ORDER 13563

The Consolidated Appropriations Act, 2012 (Public Law 112-74),¹²⁹ requires OMB to “submit to the Committees on Appropriations of the House and the Senate a report on the implementation of Executive Order No. 13563.” In particular, the report “shall include information on –

- (a) increasing public participation in the rulemaking process and reducing uncertainty;
- (b) improving coordination across Federal agencies to eliminate redundant, inconsistent, and overlapping regulations; and
- (c) identifying existing regulations that have been reviewed and determined to be outmoded, ineffective, and excessively burdensome.”

This chapter consists of that report, along with recommendations for reform, many of which are designed to promote successful implementation of Executive Order 13563.

In recent years, a great deal has been learned about regulation – about what works and what does not. Far more is known than during the New Deal period and the Great Society; indeed, far more is known than in the 1980s and 1990s.

Consider, for example, the following:

1. State-of-the-art techniques are available for anticipating, cataloguing, quantifying, and monetizing the consequences of regulation, including both benefits and costs. Though significant challenges remain, new tools are available for estimating the likely effects of regulation, and relevant tools continue to improve.
2. Risks are understood to be part of systems. Efforts to reduce a certain risk may increase other risks, perhaps even deadly ones, thus producing ancillary harms (sometimes creating “risk-risk tradeoffs”). At the same time, efforts to reduce a certain risk may reduce other risks, perhaps even deadly ones, thus producing ancillary benefits (sometimes labeled as “co-benefits”).
3. Flexible, choice-preserving approaches, respecting heterogeneity and acknowledging that one size may not fit all, are often desirable, both because they preserve liberty and because they cost less (sometimes a great deal less).
4. Large benefits can come from seemingly modest and small steps – including significant simplification of regulatory requirements, provision of information (in plain language), electronic rather than paper reporting, and sensible default rules, such as automatic enrollment for retirement savings.

¹²⁹ The reporting requirement is Section 202 of the Executive Office of the President Appropriations Act, 2012 (125 Stat. 897), which is Title II of Financial Services and General Government Appropriations Act, 2012, which is Division C of the Consolidated Appropriations Act, 2012.

5. It is important to promote public participation in the design of rules, because members of the public will often have valuable and dispersed information about likely effects, existing problems, creative solutions, and possible unintended consequences.
6. If carefully designed, disclosure policies can promote informed choices and save both money and lives. Consider, for example, the substitution of the clear Food Plate for the confusing Food Pyramid and the recently redesigned fuel economy label (drawing attention to the concrete economic consequences of differences in miles per gallon).
7. Intuitions and anecdotes, however compelling they may seem, are often unreliable, and advance testing of the effects of rules, as through pilot programs or randomized controlled experiments, can be highly illuminating.
8. It is exceedingly important to engage in retrospective analysis to explore the effects of regulation in the real world, to learn whether rules are having beneficial consequences or producing unintended harm. In short, careful assessments are necessary before rules are issued, and continuing scrutiny is needed afterwards – sometimes even in the short-term.
9. Some sectors and industries are faced with redundant, conflicting, or overlapping requirements, and unnecessary costs and burdens can be eliminated by eliminating redundancy, conflict, and overlaps. Cumulative burdens can be quite challenging, especially for small businesses and startups, and steps should be taken to reduce those burdens.

On January 18, 2011, President Obama established an approach to Federal regulation that reflects all of the previous points. The very first paragraph of Executive Order 13563 emphasizes the importance of “economic growth, innovation, competitiveness, and job creation.” It states that our regulatory system “must promote predictability and reduce uncertainty.” In a key sentence, it adds that our regulatory system “must measure, and seek to improve, the actual results of regulatory requirements.”

Among other things, the President called for an unprecedentedly public, and an unprecedentedly ambitious, government-wide “lookback” at Federal regulation. This lookback requires all executive agencies to reexamine their significant rules and to streamline, reduce, improve, or eliminate them on the basis of that examination. Continuing efforts are being made to ensure that reassessment of rules becomes a routine part of Federal regulatory activity. We discuss the lookback in more detail below.

The Executive Order also provides a series of new directives to govern future rulemaking. Those directives are consistent with, and informed by, what has been learned about regulation in recent years.

Five points are especially noteworthy:

1. **Quantification.** The Executive Order firmly stresses the importance of quantification. It directs agencies “to use the best available techniques to quantify anticipated present and future benefits as accurately as possible” – and to proceed only on the basis of a reasoned determination that the benefits justify the costs.

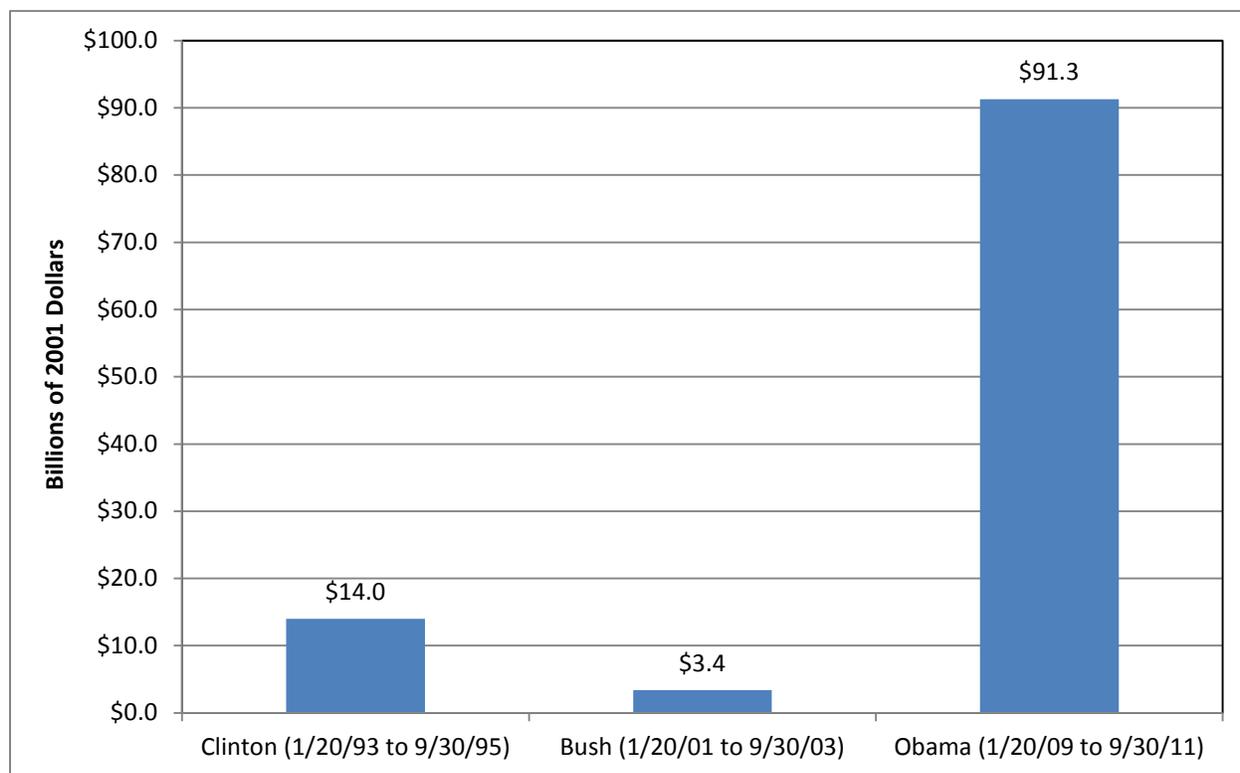
2. **Public participation.** The President made an unprecedented commitment to promoting public participation in the rulemaking process – with a central goal of ensuring that rules will be informed, and improved, by the dispersed knowledge of the public. Agencies are not merely required to provide the public with an opportunity to comment on their rules; they must also provide timely online access to relevant scientific and technical findings (including economic findings), thus allowing them to be scrutinized and improved. We provide a number of details below on recent developments.
3. **Advance consultation.** The Executive Order directs agencies to act, even in advance of rulemaking, to seek the views of those who are likely to be affected. This group explicitly includes “those who are likely to benefit from and those who are potentially subject to such rulemaking.” Among other things, this emphasis on early involvement is an effort to acquire relevant information and to avoid unintended harmful consequences (including unnecessary cumulative burdens). Such involvement might be provided through informal consultation or through more formal methods, such as advanced notices of proposed rulemaking and requests for information. For unusually complex or costly rules, formal methods of this kind are often especially helpful.
4. **Simplification, coordination, and harmonization.** The Executive Order specifically directs agencies to take steps to harmonize, simplify, and coordinate rules. It emphasizes that some sectors and industries face redundant, inconsistent, or overlapping requirements. In order to reduce costs and to promote simplicity, it requires greater coordination. The order explicitly connects the goal of harmonization with the interest in innovation, directing agencies to achieve regulatory goals in ways that promote that interest.
5. **Flexibility.** The Executive Order directs agencies to identify and to consider flexible approaches that reduce burdens and maintain freedom of choice for the public. Such approaches may include, for example, public warnings, appropriate default rules, or provision of information “in a form that is clear and intelligible.” As noted, simplification of existing requirements can often promote compliance and participation, and complexity can have serious unintended consequences. Sensible default rules, making certain outcomes automatic rather than difficult and time-consuming, can be a valuable tool. Similarly, flexible performance objectives are often better than rigid design standards, because performance objectives allow the private sector to use its own creativity to identify the best means of achieving social goals. In many domains, it is a priority to design regulatory requirements and to achieve regulatory goals in a way that maximizes freedom of choice for the private sector.

The goal of Executive Order 13563 is not modest. It is to change the regulatory culture, first by requiring careful analysis of anticipated consequences, including unintended ones, and second by constantly exploring what is working and what is not, with careful attention to the importance of growth, innovation, competitiveness, and job creation. The relevant analysis and exploration are meant to include consideration of appropriate tools, including those that retain flexibility and promote freedom of choice.

The first step in promoting the goals of Executive Order 13563 is to continue to engage in careful analysis of both costs and benefits, with reference to the points outlined above and, as a general rule and to the extent permitted by law, to proceed only if the benefits justify the costs. It is important both to ensure careful analysis in advance and also to explore the actual effects of rules now on the books, to see if their benefits justify their costs, and to explore whether they might be simplified, streamlined, or otherwise improved.

In the past three years, agencies and OMB have worked together to issue a number of rules for which the benefits exceeded the costs and by a large margin. Consider the following figure and tables (see Appendix D for more detailed information):

Figure 2-1: Total Net Benefits of Major Rules Through the Third Fiscal Year of an Administration¹³⁰



¹³⁰ For the purposes of showing general trends by Administration, totals are computed by summing annualized net benefits for rules from the first three years of an Administration. Net benefits are based on primary estimates of costs and benefits, or on the midpoints of high and low cost and benefit estimates if only ranges are reported. Totals include rules that were later vacated. Because of the small number of vacated rules in the comparison periods, to date this inclusion has had a relatively small effect on the totals or trends. We may revisit this decision in later reports if inclusion of vacated rules has a more substantial impact. To avoid double counting, the 1994 Acid Rain NOX Regulation rule (which was vacated and replaced by an IFR in 1995) was excluded. As noted in chapter 1, there are differences in methodologies across agencies and across time, but we do not have reason to believe that these differences are significant contributors to the general conclusions offered in the figures and tables in this chapter.

Table 2-1: Annual Benefits and Costs of Major Rules through the Third Fiscal Year of an Administration (billions of 2001 dollars)¹³¹

Administration	Benefits	Costs
Obama (1/20/09-09/30/11)	\$56.9 to \$200.7	\$13.2 to \$26.7
Bush (1/20/01-09/30/03)	\$3.5 to \$11.9	\$3.3 to \$5.3
Clinton (1/20/93-09/30/95)	\$10.0 to \$32.6	\$6.9 to \$7.6

Table 2-2: Major Rules with the Highest Net Benefits through the Third Fiscal Year of the Obama Administration (billions of 2001 dollars)¹³²

Agency	Rule	Net Benefits
EPA/AR	Cross-State Air Pollution Rule (CAIR Replacement Rule)	\$39.4
EPA/AR	National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants	\$10.3 ¹³³
EPA/AR	Review of the National Ambient Air Quality Standards for Sulfur Dioxide	\$9.9
DOT/NHTSA & EPA/AR	Passenger Car and Light Truck Corporate Average Fuel Economy Standards MYs 2012 to 2016	\$8.6
DOL/EBSA	Statutory Exemption for Provision of Investment Advice	\$7.9

¹³¹ Estimates are based on a range of values reported in previous Reports. See Appendix D for a list of rules included in the totals.

¹³² Table 2-2 reports the top five rules with highest net benefits – benefits minus costs – based on the primary agency estimates, or midpoints if only ranges are reported. The relevant benefits include economic savings, lives saved, and more. For example, the Passenger Car and Light Truck Corporate Average Fuel Economy Standards MYs 2012 to 2016 Rule is estimated to save about 61 billion gallons of gas over the lifetimes of the vehicles covered by the rule, saving consumers about \$112 billion in fuel costs, as well as a reduction of 655 million metric tons of CO₂. EPA estimates that the Cross-State Pollution Rule will result in a reduction of 13,000 to 34,000 particulate-matter and ozone-related premature mortalities, 15,000 non-fatal heart attacks, 19,000 cases of acute bronchitis, 400,000 cases of aggravated asthma, 51,000 school absences, and 1.7 million lost work days.

¹³³ This value was reported incorrectly in the 2011 report.

Table 2-3: Major Rules with the Highest Benefits through the Third Fiscal Year of the Obama Administration (billions of 2001 dollars)¹³⁴

Agency	Rule	Benefits
EPA/AR	Cross-State Air Pollution Rule (CAIR Replacement Rule)	\$40.1
DOT/NHTSA & EPA/AR	Passenger Car and Light Truck Corporate Average Fuel Economy Standards MYs 2012 to 2016	\$11.9
EPA/ AR	National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants	\$11.2 ¹³⁵
DOL/EBSA	Statutory Exemption for Provision of Investment Advice	\$10.9
EPA/AR	Review of the National Ambient Air Quality Standards for Sulfur Dioxide	\$10.5

Table 2-4: Major Rules with the Highest Costs through the Third Fiscal Year of the Obama Administration (billions of 2001 dollars)¹³⁶

Agency	Rule	Costs
DOT/NHTSA & EPA/AR	Passenger Car and Light Truck Corporate Average Fuel Economy Standards MYs 2012 to 2016	\$3.3
DOL/EBSA	Statutory Exemption for Provision of Investment Advice	\$3.1
DOE/EE	Energy Efficiency Standards for Pool Heaters and Direct Heating Equipment and Water Heaters	\$1.1
DOT/NHTSA	Passenger Car and Light Truck Corporate Average Fuel Economy Model (2011)	\$1.0
DOT/NHTSA	Roof Crush Resistance	\$0.9

¹³⁴ Table 2-3 reports the top five rules with highest benefits based on the primary agency estimates, or midpoints if only ranges are reported.

¹³⁵ This value was reported incorrectly in the 2011 report.

¹³⁶ Table 2-4 reports the top five rules with highest costs based on the primary agency estimates, or midpoints if only ranges are reported.

The Regulatory Right-to-Know Act charges OMB with making “recommendations for reform.” In its 2009 Report, OMB made three principal recommendations.

First, OMB recommended careful consideration of behaviorally informed approaches to regulation – approaches that are informed by an understanding of human behavior and choice. For example, properly designed disclosure policies, appropriate default rules (as in the context of savings), and simplification (as in the context of the Free Application for Federal Student Aid) may have significant and beneficial results. Recent social science research, including work in behavioral economics, provides valuable insight into the design of effective, low-cost methods for achieving regulatory goals. In some contexts, small, inexpensive, seemingly modest steps can produce significant benefits.¹³⁷ Simplification of regulatory requirements has important potential on this count, including simplification of requirements imposed on small businesses.

Second, OMB recommended that significant regulations should be accompanied with clear, tabular presentations of both benefits and costs, including both quantifiable and nonquantifiable variables; that the analysis should take account, where relevant, of the effects of the regulation on future generations and the least well-off; and that continuing efforts should be made to meet some difficult challenges posed by regulatory impact analysis, including treatment of variables that are difficult to quantify and monetize. These recommendations are designed both to promote transparency and to produce better choices, including elimination of unjustified costs.

Third, OMB recommended that regulatory impact analysis should be seen and used as a central part of open government. If the analysis of both qualitative and quantitative effects is subject to public scrutiny and review, it can be improved by reference to the dispersed knowledge of the public. The relevant improvements can help, in turn, to improve the content of rules.

In its 2010 Report, OMB recommended four additional reforms that might improve regulatory policy and analysis. *First*, OMB identified several measures designed to meet analytical challenges, largely involving increased transparency. *Second*, OMB offered a brief discussion of disclosure as a regulatory tool, with particular emphasis on the need to attend to how people process information and on the importance of empirical testing of disclosure strategies.¹³⁸ *Third*, and with an emphasis on disclosure, OMB recommended exploration of certain low-cost approaches to the problem of childhood obesity; those approaches offer potential lessons for other programs and problems. *Fourth*, OMB drew on principles of open government to invite public suggestions about improvements in existing regulations, with particular reference to economic growth. With each of these recommendations, OMB offered concrete suggestions for possible improvements.

OMB’s 2011 Report expanded on many of the previous themes and provided six recommendations, drawing directly from Executive Order 13563. A central goal of these recommendations was to ensure that regulatory choices are compatible with the economic recovery and do not compromise growth and job creation. In brief:

¹³⁷ See, e.g., Banerjee and Duflo (2011).

¹³⁸ For recent discussion, see Kamenica et al. (2011).

1. Most generally, regulatory decisions and priority-setting should be made in a way that is attentive to the importance of promoting economic growth, innovation, job creation, and competitiveness.
2. Agencies should promote retrospective analysis of existing significant rules, with careful exploration of their actual effects and, when appropriate, consideration of steps to streamline, modify, expand, or revoke them.
3. In order to promote transparency, agencies should, as stated in previous Reports, accompany all economically significant regulations with (1) a tabular presentation, placed prominently and offering a clear statement of qualitative and quantitative benefits and costs of the proposed or planned action, together with (2) a presentation of uncertainties and (3) similar information for reasonable alternatives to the proposed or planned action.
4. Agencies should carefully explore how best to treat nonquantifiable variables and should continue to use “breakeven analysis” when quantification is not possible, with such analysis defined as the specification of how high the unquantified or unmonetized benefits would have to be in order for the benefits to justify the costs.
5. Agencies should consider the use of cost-effectiveness analysis for regulations intended to reduce mortality risks and should specifically consider the development of estimates for the “net cost per life saved.” Such estimates can provide instructive comparisons and encourage the use of public resources in domains in which they will do the most good.
6. Agencies should bring rulemaking into the twenty-first century by promoting public participation and transparency through the use of Regulations.gov and other technological means.
7. In order to promote trade and exports, and thus to increase job creation, agencies should promote regulatory cooperation initiatives with key trading partners.

OMB continues to support the recommendations from its 2009, 2010, and 2011 reports (on OMB’s website at http://www.whitehouse.gov/omb/inforeg_regpol_reports_congress/). In recent years, significant progress has been made with respect to each of them. (See, for example, chapter II of the 2010 report for a preliminary catalogue.) Indeed, Executive Order 13609, on international regulatory cooperation, elevates some of the central ideas reflected in recommendation (7) above.

In the remainder of this Chapter, and consistent with the reporting requirement in the Consolidated Appropriations Act, 2012 (Public Law 112-74),¹³⁹ our main emphasis is on implementation of Executive Order 13563, which is designed to reconcile regulatory goals with objectives associated with economic growth and job creation in general and the economic recovery in particular. We also offer brief discussions of (1) the importance of promoting a genuine culture of retrospective review (as opposed to a particular exercise; (see Executive Order

¹³⁹ The reporting requirement is Section 202 of the Executive Office of the President Appropriations Act, 2012 (125 Stat. 897), which is Title II of Financial Services and General Government Appropriations Act, 2012, which is Division C of the Consolidated Appropriations Act, 2012.

13610); (2) simplification of regulatory requirements, including the need to simplify paperwork requirements and language; (3) “smart disclosure”; and (4) the Open Government Partnership and National Action Plan, as well as other international efforts to promote transparency, participation, and collaboration.

A. A Culture of Retrospective Review: Recent Achievements and Future Progress

Prospective analysis of costs and benefits is an indispensable means of obtaining an understanding of the likely consequences of regulation. At the same time, that analysis, even if done carefully and subject to public scrutiny, may rest on speculative assumptions. To be empirically informed, regulations should be revisited and reviewed retrospectively, to ensure that they are promoting their intended functions and are not producing excessive costs or unintended adverse side effects. Executive Order 13563 expressly recognizes this point in requiring “retrospective analysis” of existing significant rules and in requiring agencies to produce preliminary plans for such analysis. In this section, we outline the rationale for that requirement, institutionalized by Executive Order 13610, and provide a report on progress to date in its implementation.

There are several independent reasons why retrospective analysis is important. Sometimes the analysis can show that the rule was flawed, in whole or in part, at the inception. Sometimes the analysis can show that a rule that was well-designed at the inception is now excessive, redundant, or producing unintended harm (perhaps as a result of changed circumstances, such as new technologies or new regulations). Sometimes private adaptation or improvements in private behavior will mean that the rule is in need of streamlining or even repeal. Sometimes the analysis can reveal a need for reform several decades after the rule was originally promulgated; sometimes it can reveal, within a short period after promulgation, that a change would be desirable. Retrospective review is most naturally understood as a way of assessing rules that have been in operation and on the books for a sufficient period to allow careful study. But in some cases, such review can and should occur relatively promptly, to test whether unanticipated problems have arisen.

Executive Order 13563, issued on January 18, 2011, required executive agencies to develop preliminary plans, and to submit them to OIRA, within 120 days. Over two dozen agencies produced such plans. In those plans, often informed by public input and in some cases by meetings held nationwide,¹⁴⁰ agencies identified hundreds of reforms, candidate rules for review, and initiatives already underway. In clear recognition of the emphasis in Executive Order 13563 on public participation in the rulemaking process, agencies made these preliminary plans publicly available and requested public comments and suggestions.

¹⁴⁰ See, for example, Environmental Protection Agency, *Improving Our Regulations: A Preliminary Plan for Periodic Retrospective Reviews of Existing Regulations* 34 (May 24, 2011), online at <http://www.whitehouse.gov/files/documents/2011-regulatory-action-plans/EnvironmentalProtectionAgencyPreliminaryRegulatoryReformPlan.pdf> (“Verbal comments were solicited at a series of twenty public meetings. . . . Additionally, EPA held nineteen more town halls and listening sessions targeting specific program areas (e.g. solid waste and emergency response) and EPA Regions.”).

The final agency plans, released under that Executive Order, span more than 800 pages and highlight over 500 initiatives. A small fraction of those initiatives, already finalized or formally proposed to the public, promise to produce billions of dollars of annual savings and millions of hours of reductions in annual paperwork and reporting requirements. All of the final plans can be viewed on the White House's website, and those plans provide the most detailed account of progress to date.¹⁴¹ As the plans are implemented, far larger savings are expected.

To offer just a few of many examples:

- The Department of Health and Human Services (HHS) has finalized three rules that will remove unnecessary regulatory and reporting requirements now imposed on hospitals and other healthcare providers, saving about \$5 billion over the next five years.¹⁴²
- One of these final rules reduces costs and improves access to care in rural areas by permitting hospitals to use telemedicine to obtain services from a practitioner credentialed at a distant hospital (so long as that hospital is also a Medicare-participating entity and there is a written telemedicine agreement in place between the hospitals). This rule is anticipated to save \$65 million over the next five years.
- The Department of Labor (DOL) has finalized a rule eliminating 1.9 million burden hours formerly imposed on employers; in monetary terms, that rule is expected to save over \$200 million in the next five years.
- DOL has also finalized a rule to simplify and to improve hazard warnings for workers, with estimated net annualized benefits of approximately \$550 million.¹⁴³ (This rule harmonizes the Hazard Communication Standard with the Globally Harmonized System of Classification and Labeling of Chemicals as established by the United Nations. In addition to significant health and safety benefits of preventing an estimated 43 fatalities and 521 injuries annually, OSHA anticipates that the rule will generate savings from simplified hazard communication training and expanded opportunities for international trade due to reductions in trade barriers.)
- The Department of Transportation finalized a rule that will eliminate unnecessary regulation of the railroad industry, saving up to \$340 million in the near future, and avoiding the risk that regulatory costs will be passed on to consumers.¹⁴⁴

¹⁴¹ The White House, Regulation Reform, online at <http://www.whitehouse.gov/21stcenturygov/actions/21st-century-regulatory-system>.

¹⁴² Department of Health and Human Services, Plan for Retrospective Review of Existing Rules 3, 8–17 (Aug 22, 2011), online at <http://www.whitehouse.gov/sites/default/files/other/2011-regulatory-action-plans/healthandhumanservicesregulatoryreformplanaugust2011.pdf>.

¹⁴³ Department of Labor, Plan for Retrospective Analysis of Existing Rules 10–11 (Aug 2011), online at <http://www.whitehouse.gov/files/documents/2011-regulatory-action-plans/DepartmentofLaborPreliminaryRegulatoryReformPlan.pdf>.

¹⁴⁴ The plan to propose this rule is described in Department of Transportation, Plan for Implementation of Executive Order 13563: Retrospective Review and Analysis of Existing Rules 2, 21 (Aug 2011), online at <http://www.whitehouse.gov/sites/default/files/other/2011-regulatory-action-plans/departmentoftransportationregulatoryreformplanaugust2011.pdf>. For the announcement of the proposed rule,

- The EPA plans to propose a rule to reduce burdens on hazardous waste generators by moving from paper-based to electronic reporting, saving up to \$124 million annually.¹⁴⁵
- Since the 1970s, milk has been defined as an “oil” and subject to costly rules designed to prevent oil spills. As part of its implementation of the Executive Order, and in response to objections from the agriculture community, EPA concluded that the rules placed unjustifiable burdens on dairy farmers and, for this reason, EPA exempted dairy farmers from these rules. The projected five year savings are over \$600 million.¹⁴⁶
- The EPA has eliminated the obligation for many states to require air pollution vapor recovery systems at local gas stations, on the ground that modern vehicles already have effective air pollution control technologies. The anticipated annual savings are about \$87 million.¹⁴⁷
- The Departments of Commerce and State are undertaking a series of steps to eliminate unnecessary barriers to exports, including duplicative and unnecessary regulatory requirements, thus reducing the cumulative burden and uncertainty faced by American companies and their trading partners.¹⁴⁸
- To reduce administrative burdens and increase certainty, the Department of the Interior is reviewing regulations under the Endangered Species Act of 1973¹⁴⁹ to streamline the process, to reduce requirements for written descriptions, and to clarify and expedite procedures for approval of conservation agreements.¹⁵⁰

As a follow-up to his issuance of Executive Order 13563, President Obama on July 11, 2011, issued Executive Order 13579¹⁵¹, which asked the independent regulatory agencies (including the Consumer Product Safety Commission, the Federal Trade Commission, and the Federal Communications Commission) to produce plans to reassess and to streamline their existing regulations, and to disclose those plans for public scrutiny. In addition, the President asked the independent agencies to follow the general regulatory principles in Executive Order 13563. Nearly all independent agencies prepared plans consistent with Executive Order 13579

with an emphasis on the commitment to regulatory streamlining, see http://www.fra.dot.gov/roa/press_releases/fp_FRA%2019-11.shtml

¹⁴⁵ Environmental Protection Agency, Improving Our Regulations: Final Plan for Periodic Retrospective Reviews of Existing Regulations 35–36 (Aug 2011), online at <http://www.whitehouse.gov/sites/default/files/other/2011-regulatory-action-plans/environmentalprotectionagencyregulatoryreformplanaugust2011.pdf>.

¹⁴⁶ Environmental Protection Agency, Improving Our Regulations at 5, 14.

¹⁴⁷ *Id.* at 32–33.

¹⁴⁸ Department of Commerce, Plan for Retrospective Analysis of Existing Rules 3–6 (Aug 18, 2011), online at <http://www.whitehouse.gov/sites/default/files/other/2011-regulatory-action-plans/departmentofcommerceregulatoryreformplanaugust2011a.pdf>.

¹⁴⁹ Pub L No 93-205, 87 Stat 884, codified as amended at 16 USC § 1531 et seq.

¹⁵⁰ Department of the Interior, Plan for Retrospective Regulatory Review 11–12 (Aug 19, 2011), online at <http://www.whitehouse.gov/sites/default/files/other/2011-regulatory-action-plans/departmentoftheinteriorregulatoryreformplanaugust2011.pdf>.

¹⁵¹ Executive Order 13579, 76 FR 41587 (July 14, 2011), available at: <http://www.gpo.gov/fdsys/pkg/FR-2011-07-14/pdf/2011-17953.pdf>.

and many asked for public comments on them, including the Federal Communications Commission, the Federal Trade Commission, and the Consumer Product Safety Commission.¹⁵² Sixteen plans have been released. For example, the Federal Communications Commission (FCC) announced a plan that included the following highlights:

- Since the issuance of the Executive Order, the FCC had eliminated over 120 overly burdensome or unnecessary regulations as well as a number that reflect changes in technology – thereby promoting greater competition, investment, and job creation.
- As a result of its Data Innovation Initiative and consistent with the President’s Executive Order, the FCC identified 25 data collections for potential elimination. It had already taken steps to eliminate seven of them and was evaluating the remaining 18 with the goal of reducing unjustified burdens.
- The FCC proposed to reduce regulatory burdens and streamline the foreign ownership review process for U.S. companies with common carrier radio licenses (e.g., wireless phone companies) and certain aeronautical radio licenses. The proposals would ensure that the Commission continues to receive the information it needs to serve the public interest while reducing the number of required filings by more than 70%.
- The FCC approved a historic overhaul of the Universal Service Fund and intercarrier compensation system – a system of subsidies to bring basic telephone service to areas where private companies have found it difficult to profitably invest in network infrastructure. These reforms will likely eliminate billions of dollars in hidden subsidies on consumers’ wireless and phone bills, promote more robust wireless

¹⁵² As of publication, other agencies that published plans or requested public comment on them include: Commodity Futures Trading Commission (CFTC), available at: <http://www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/oirastatusreport110711.pdf>; Consumer Financial Protection Bureau, available at: http://www.consumerfinance.gov/wp-content/uploads/2011/11/Streamlining_Notice_1129.pdf; Consumer Product Safety Commission (CPSC), available at: <http://www.cpsc.gov/PageFiles/103257/regreview.pdf>; Federal Trade Commission (FTC), available at <http://www.ftc.gov/ftc/regreview/index.shtml>; Federal Maritime Commission (FMC), available at: http://www.fmc.gov/assets/1/News/Retrospective%20Review_Plan_Public_Announcement_11_4_2011.pdf; Federal Reserve, available at: <http://www.federalreserve.gov/generalinfo/foia/regulatory-burden-reduction-111115.pdf>; National Labor Relations Board (NLRB), available at: https://nlrb.gov/sites/default/files/documents/2901/nlrb_plan_for_retrospective_analysis_of_existing_rules.pdf; Farm Credit Administration, available at: <http://www.fca.gov/Download/RetrospectiveAnalysisOfExistingRules.pdf>; Federal Energy Regulatory Commission (FERC), available at: <http://www.ferc.gov/legal/maj-ord-reg/retro-analysis/ferc-eo-13579.pdf>; Federal Communications Commission (FCC), available at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-310874A1.doc; Federal Deposit Insurance Corporation (FDIC), available at: <http://www.fdic.gov/regulations/laws/plans/index.html>; Federal Housing Finance Agency, available at: <http://www.gpo.gov/fdsys/pkg/FR-2011-09-23/html/2011-24405.htm>; National Credit Union Administration (NCUA), available at: <http://www.ncua.gov/News/Documents/NW20111110EO-13579.pdf>; Nuclear Regulatory Commission (NRC), available at: <http://www.nrc.gov/about-nrc/plans-performance/initial-plan-for-retrospective-analysis-of-existing-rules-ml112690277.pdf>; Railroad Retirement Board, available at: <http://www.rrb.gov/pdf/blaw/EO13579.pdf>; Surface Transportation Board (STB), available at: <http://www.stb.dot.gov/decisions/ReadingRoom.nsf/WEBUNID/6C0D4C27C150D6D28525792100534402?OpenDocument>.

service and cheaper long-distance calling, and remove obstacles to modern, digital, efficient networks and the increased innovation they enable.

As noted, Executive Order 13610¹⁵³ institutionalizes the lookback process. It does so by requiring engagement with the public; priority-setting, with an emphasis on large quantitative savings; and accountability, produced through regular reporting to the American people. In June 2012, the Office of Information and Regulatory Affairs issued guidance¹⁵⁴ calling for significant reductions in paperwork and reporting burdens; this requirement is explicitly connected to the lookback process.

Retrospective analysis has long been recommended by those interested in empirical assessment of regulations, including Michael Greenstone, former chief economist at the Council of Economic Advisers: “The single greatest problem with the current system is that most regulations are subject to a cost–benefit analysis only in advance of their implementation. This is the point when the least is known and any analysis must rest on many unverifiable and potentially controversial assumptions.”¹⁵⁵ To address this problem, retrospective analysis can help show what works and what does not, and in the process can promote the streamlining or elimination of less effective rules as well as the strengthening or expansion of those rules that are more effective. Greenstone thus urges a series of reforms designed to “instill a culture of experimentation and evaluation.”¹⁵⁶ One of Greenstone’s principal themes is the importance of experimentation with respect to the likely effects of regulation.

There has been a great deal of recent interest in the use of randomized controlled trials as a means of learning the effects of policy initiatives.¹⁵⁷ In the regulatory area, the use of such trials remains in a preliminary state, but it is easy to imagine projects that would test the effects of potential rules. Such projects might, for example, explore the effects of disclosure requirements and efforts to reduce distracted driving.¹⁵⁸ More generally, experimentation might take the form of advance testing of regulatory alternatives, followed by study of their consequences.¹⁵⁹

Of course there can be constraints (e.g., of a legal nature, or involving resources and feasibility) that would restrict the use of randomized control trials in the regulatory context, but in some cases, they might be both appropriate and highly useful. The plans released under Executive Order 13563 offer relevant discussions. For example, the Department of Treasury states that it will work to “develop and incorporate experimental designs into retrospective

¹⁵³ Executive Order 13610, 77 FR 28469 (May 14, 2012), available at: http://www.whitehouse.gov/sites/default/files/docs/microsites/omb/eo_13610_identifying_and_reducing_regulatory_burdens.pdf.

¹⁵⁴ This guidance is available at: <http://www.whitehouse.gov/sites/default/files/omb/inforeg/memos/reducing-reporting-and-paperwork-burdens.pdf>.

¹⁵⁵ See Greenstone (2009), p. 113.

¹⁵⁶ *Id.*, p. 14.

¹⁵⁷ See generally Banerjee and Duflo (2009). See also Ludwig, et. al (2011).

¹⁵⁸ See, e.g., U.S. Department of Transportation, “Traffic Safety Facts: Research Note, High Visibility Enforcement Demonstration Programs in Connecticut and New York Reduce Hand-Held Phone Use,” available at: <http://www.distraction.gov/download/research-pdf/high-visibility-enforcement-demo.pdf>

¹⁵⁹ See Greenstone (2009), p. 113 and, in other contexts, Banerjee and Duflo (2009).

analysis, when appropriate.”¹⁶⁰ The Department of Labor states that it “is contemplating how to incorporate the use of experimental designs to determine the impact of various regulations.”¹⁶¹ The Department of Interior states that it “will consider” the use of “experimental or quasi-experimental designs, including randomized controlled trials.”¹⁶²

In 2011, a great deal was done to promote retrospective review of regulations, and it is important to ensure that this process is not a one-time endeavor. All of the plans state that agencies will continue to seek suggestions about potential reforms. In the future, it will be important to add initiatives to the lists included on the existing plans. In addition, it is important to ensure continued reporting, both to OIRA and to the public, about implementation, including recent achievements and coming initiatives. To that end, OIRA issued guidance in October 2011 calling for regular reporting and priority-setting and offering a suggested template for agency use.¹⁶³ Initial reports were received from agencies in January 2012. OIRA has also called for public participation in continuing efforts to review existing regulations.

In this way, and consistent with Executive Order 13610, OIRA seeks to create a culture of retrospective analysis, in which existing rules (whether issued in the very recent past or decades ago) are subject to assessment and continuing evaluation, with public input. Following the direction of Executive Order 13610, we recommend, in short, that retrospective analysis should become a routine part of agency rulemaking and that formal mechanisms should be maintained regularly to reevaluate rules that may be unjustified, excessive, insufficient, or unduly complex. We emphasize that such reevaluation should be applied both to rules long on the books and also to recently issued rules when experience reveals that improvements can be made. It is not unusual for agencies to issue rules with at least a degree of uncertainty about one or another provision. In some cases, that uncertainty might be informed in the short-run by experience, or relevant reactions, and in such cases, changes might turn out to be desirable.

B. Simplification, Coordination, and Reduction of Uncertainty

The Consolidated Appropriations Act, 2012 (Public Law 112-74)¹⁶⁴ requires reporting on efforts to reduce uncertainty and on coordination across agencies. In the recent past, a number of steps have been taken to achieve these goals, above all through greater clarity and transparency, which reduces uncertainty. A longstanding complaint about Federal regulation is that many rules are too complicated and hard to understand. The concern is expressed by small and large

¹⁶⁰ Department of the Treasury, Plan for Retrospective Analysis of Existing Rules at 20.

¹⁶¹ Department of Labor, Plan for Retrospective Analysis of Existing Rules at 22.

¹⁶² Department of the Interior, Plan for Retrospective Regulatory Review at 20. See also US Department of Agriculture, Final Plan for Retrospective Analysis Pursuant to Executive Order 13563 23 (Aug 18, 2011), available at: <http://www.whitehouse.gov/sites/default/files/other/2011-regulatory-action-plans/departmentofagricultureregulatoryreformplanaugust2011.pdf> (“[The USDA] may consider the use of experimental or quasi-experimental designs, including randomized controlled trials, when promoting the empirical testing of the effects of rules.”).

¹⁶³ This guidance can be found at: <http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/implementation-of-retrospective-review-plans.pdf>.

¹⁶⁴ The reporting requirement is Section 202 of the Executive Office of the President Appropriations Act, 2012 (125 Stat. 897), which is Title II of Financial Services and General Government Appropriations Act, 2012, which is Division C of the Consolidated Appropriations Act, 2012.

businesses, public interest groups, State and local governments, and countless individual citizens. Significant recent efforts have been made to address that concern.

1. Accessibility, Clarity, and Certainty

Executive Order 13563 requires rules to be “accessible, consistent, written in plain language, and easy to understand.” The order also states that regulations “shall be adopted through a process that involves public participation,” including an “open exchange of information and perspectives.” That open exchange cannot occur if proposed rules, presented for public comment, are complex and obscure. And if people are being required to comply with rules, they are entitled to have a clear sense of what they are being required to do. Without such clarity, there can be undue complexity and uncertainty.

In January 2012, the Office of Information and Regulatory Affairs directed agencies to provide the public with brief, straightforward executive summaries of all complex and lengthy rules. These summaries will include separate descriptions of all key provisions and policy choices. They will explain the need for the rule and offer a succinct statement of its legal basis. The summaries will also include a table describing the costs and benefits of the rule. The use of clear, simple executive summaries will make it far easier for members of the public to understand and to scrutinize proposed rules – and thus help to improve them. And for final rules, such summaries will make it far easier for people to understand what they are being asked to do. This action is closely connected to many other administration efforts, such as requiring the use of plain language in government documents [<http://www.whitehouse.gov/sites/default/files/omb/memoranda/2011/m11-15.pdf>] and calling for simplification and reduction of red-tape [http://www.whitehouse.gov/sites/default/files/omb/inforeg/icb/2011_ICB_Data_Call.pdf].

Simplification of regulatory requirements, and in some cases dramatic change in the direction of greater simplicity, is a high priority. In some cases, rules should be shorter as well as clearer. With respect to rules in general, Executive Order 13563 directs agencies to promote “coordination, simplification, and harmonization” and to “identify and consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public.”¹⁶⁵ These approaches “include appropriate default rules.”¹⁶⁶

2. Coordination

There have been a number of recent examples of coordination and harmonization between and among agencies. As part of OIRA’s interagency review process, a high priority is placed on the need to avoid inconsistency and redundancy. Consider the following examples.

As requested by the President and in the interest of maximizing regulatory harmonization, NHTSA and EPA worked together closely and with the California Air Resource Board (CARB) and all stakeholders throughout the development of EPA and DOT’s Joint Fuel

¹⁶⁵ Executive Order 13563, available at:

http://www.whitehouse.gov/sites/default/files/omb/inforeg/eo12866/eo13563_01182011.pdf.

¹⁶⁶ *Id.*

Economy and GHG Emissions NPRM for Model Years (MYs) 2017-2025. The NPRM was published in fall of 2011. CARB plans to release a proposal for MY 2017-2025 GHG emissions standards which are consistent with the standards being proposed by EPA and NHTSA. A central goal of this coordinated effort is to reduce the risk of redundancy and inconsistency and thus to promote the harmonization goals of Executive Order 13563.

Similarly, EPA and DOT/NHTSA's joint Fuel Economy Label final rule harmonized revisions to the existing fuel economy label and incorporated greenhouse gas emissions ratings. A key goal of this rulemaking was to promote consistency and coordination and to avoid redundancy. Consistent with the emphasis in Executive Order 13563, section 4, on "provision of information to the public in a form that is clear and intelligible," the new labels will for the first time provide:

- New ways to compare energy use and cost between new-technology cars that use electricity and conventional cars that are gasoline-powered.
- Useful comparison estimates on how much consumers will save or spend on fuel over the next five years.
- Easy-to-read ratings of how a model compares to all others for smog emissions and emissions of pollution that contribute to climate change.
- An estimate of how much fuel or electricity it takes to drive 100 miles.
- Information on the driving range and charging time of an electric vehicle.
- A QR Code® that will allow users of smartphones to find online information about how various models compare on fuel economy and other environmental and energy factors. This tool will also allow consumers to enter information about their typical commutes and driving behavior in order to get a more precise estimate of fuel costs and savings.

Because this was a joint rulemaking, there was a sustained effort to square the legal authorities of DOT and EPA and to provide a harmonized label.

In addition, the United States is working with its trading partners to promote regulatory cooperation, and to reduce the risk of inconsistent and redundant regulation through increased coordination. For example, the United States has worked closely with Canada to produce a plan for increasing regulatory coordination and eliminating unnecessary and unjustified inconsistency. The Regulatory Cooperation Council Joint Action Plan can be found at: http://www.whitehouse.gov/omb/oira_irc_north_america#canada. Regulatory cooperation efforts are also ongoing with Mexico, and significant achievements have been made.

3. Simplification of Regulatory Requirements

With respect to simplification, recent reports have emphasized the potential value of reducing regulatory burdens and of using default rules, which can greatly simplify choices and reduce burdens and costs by making certain outcomes automatic. In some domains, "automaticity" can produce valuable improvements.

In the domain of savings, automatic enrollment programs have shown considerable promise. There are many other examples.

For example, the Department of Homeland Security has changed the default setting for payroll statements to electronic from paper, thus reducing costs.¹⁶⁷ In general, changes of this kind promise to save significant sums of money for both private and public sectors.

In addition, the National School Lunch Act¹⁶⁸ takes steps to allow “direct certification” of eligibility, thus reducing complexity and introducing what can be seen as a form of automatic enrollment. Under the program, children who are eligible for benefits under certain programs will be “directly eligible” for free lunches and free breakfasts, and hence will not have to fill out additional applications.¹⁶⁹ To promote direct certification, the USDA has issued an interim final rule that is expected to provide up to 270,000 children with school meals.¹⁷⁰

Even when it is not possible or best to change the default, significant benefits might still be obtained merely by simplifying and easing people’s choices. For example, recent research suggests that merely simplifying the choice presented to individuals with respect to retirement savings plans can increase plan enrollment rates by as much as 10 to 20 percentage points.¹⁷¹ Complexity can have serious unintended effects (including indifference, delay, and confusion), potentially imposing high costs and undermining regulatory goals by reducing compliance or by decreasing the likelihood that people will benefit from various policies and programs.¹⁷²

4. Simplifying Paperwork Requirements

With respect to forms and paperwork in particular, undue complexity can severely discourage applications, thus compromising important programs. Simplification can have surprisingly large benefits. For some public programs, take-up rates are relatively low even though the cost of participation is small.¹⁷³ Behavioral factors, including inertia, are contributing factors, and some form of simplification or automatic enrollment might help.

For example, a series of steps have been taken recently toward simplifying the Free Application for Federal Student Aid (FAFSA), reducing the number of questions through skip logic (a survey method that uses previous responses to determine subsequent questions) and

¹⁶⁷ Peter Orszag, Director, OMB, *SAVEings* (Mar 29, 2010), online at <http://www.whitehouse.gov/omb/blog/10/03/29/SAVEings/>.

¹⁶⁸ Healthy, Hunger-Free Kids Act of 2012, Pub L No 111-296, 124 Stat 3183.

¹⁶⁹ Healthy, Hunger-Free Kids Act of 2012 § 101, 42 USC § 1758(b)(4).

¹⁷⁰ US Department of Agriculture, Direct Certification and Certification of Homeless, Migrant and Runaway Children for Free School Meals, 76 Fed Reg 22785-02, 22793 (2011).

¹⁷¹ See Beshears et al. (2011) (evaluating “Quick Enrollment,” which gives employees a mechanism to enroll in their employer’s savings plan at an asset allocation and contribution rate pre-selected by the employer – allowing “individuals to psychologically collapse a complex, multidimensional savings and investment problem into a simpler binary choice: remain at their status quo, or accept the pre-selected alternative”).

¹⁷² See, e.g., Kling, et al (2012) (discussing insight in relation to Medicare Part D prescription drug insurance programs).

¹⁷³ See Devoto, et al. (2011); Congdon, et al. (2011), p. 11-12.

allowing electronic retrieval of information.¹⁷⁴ Use of a simpler and shorter form is accompanied by a pilot initiative to permit online users to transfer data previously supplied electronically on their tax forms directly into their FAFSA applications.¹⁷⁵ These steps are intended to simplify the application process for financial aid and thus to increase access to college. There is good reason to believe that such steps will enable many students to receive aid when they previously could not do so. Additional steps might be taken, and are being considered, in this domain. Similar initiatives might be undertaken in many other domains. Considerable thought should be given to the question of whether complexity is having unintended adverse effects and undermining programs, in part by discouraging “take-up.”

Many other efforts have been taken to simplify and eliminate reporting requirements. In 2012, for example, the Department of Transportation finalized a rule to eliminate over 38 million reports formerly required each year from truck drivers. In 2012, OSHA issued a rule eliminating 1.8 million annual hours of reporting burdens imposed on employers. In 2010, the Treasury Department took several steps to increase simplicity by moving to electronic systems. Perhaps most importantly, the Department finalized a rule to provide electronic payments to people receiving Social Security, Supplemental Security Income, Veterans, Railroad Retirement, and Office of Personnel Management benefits.¹⁷⁶

It is estimated that these steps will save over \$400 million in the first five years.¹⁷⁷ The initiatives from the Treasury Department are in line with a 2010 request from OMB asking agencies for initiatives that would: promote electronic reporting through “fillable fileable” forms, substitute electronic for paper signatures, increase administrative simplification, and reduce burdens on small business.¹⁷⁸ That OMB request yielded seventy-two initiatives from various agencies, all designed to reduce burdens and to increase simplification.¹⁷⁹ In total, those initiatives are expected to eliminate, each year, millions of hours of paperwork and reporting burdens.

¹⁷⁴ See Office of Information and Regulatory Affairs, Office of Management and Budget, Information Collection Budget of the United States Government 22, 32–33 (2010), online at http://www.whitehouse.gov/sites/default/files/omb/inforeg/icb/icb_2010.pdf.

¹⁷⁵ For discussion of the importance of such steps, see Eric P. Bettinger, et al, *The Role of Simplification and Information in College Decisions: Results from the H&R Block FAFSA Experiment* *26–29 (NBER Working Paper No 15361, Sept 2009), online at <http://www.nber.org/papers/w15361> (visited May 31, 2011); Council of Economic Advisers, National Economic Council, *Simplifying Student Aid: The Case for a Easier, Faster, and More Accurate FAFSA* (Sept 2009), online at http://www.whitehouse.gov/assets/documents/FAFSA_Report.pdf (visited Oct 23, 2011).

¹⁷⁶ 2931 CFR § 1926208.3.

¹⁷⁷ See 31 CFR § 208; Department of Treasury, Press Release, *Treasury Goes Green, Saves Green: Broad New Initiative Will Increase Electronic Transactions, Save More Than \$400 Million, 12 Million Pounds of Paper in First Five Years Alone* (Apr 19, 2010), online at <http://www.treasury.gov/press-center/press-releases/Pages/tg644.aspx> .

¹⁷⁸ See Memorandum for Chief Information Officers, *Data Call for the 2010 Information Collection Budget 1–2* (Apr 20, 2010), available at: http://www.whitehouse.gov/omb/assets/inforeg/2010_icb_datacall.pdf .

¹⁷⁹ For a list of these initiatives, see Office of Information and Regulatory Affairs, *Information Collection Budget* at 23–123 (cited in 174). For a subsequent list in the 2011 report, including reduced burdens on small businesses and simplification efforts for Federal benefits programs, see Office of Information and Regulatory Affairs, Office of Management and Budget, *Information Collection Budget of the United States Government* 16–79 (2011), online at http://www.whitehouse.gov/sites/default/files/omb/inforeg/icb/2011_icb.pdf

In 2011, OMB followed the 2010 request with a new one, also emphasizing simplification and focusing on small business and benefit programs.¹⁸⁰ The OMB request drew particular attention to the potential harms of complexity, noting that “the process of renewing or applying for benefits can be time-consuming, confusing, and unnecessarily complex, thus discouraging participation and undermining program goals. Sometimes agencies collect data that are unchanged from prior applications; in such circumstances, they might be able to use, or to give people the option to use, pre-populated electronic forms.”

In response, agencies submitted 57 new burden reduction initiatives, many of which will benefit businesses (both small and large) and beneficiaries of Federal programs.¹⁸¹ For example, an initiative from USDA would relieve small and large businesses in the livestock, meat packing, and poultry industries of over 60,000 annual paperwork burden hours. It would do so by allowing for the electronic submission of the Grain Inspection, Packers, and Stockyards Administration’s (GIPSA) fair trade reporting requirements. Another initiative from USDA would reduce 20.7 million burden hours now imposed on recipients of Supplemental Nutrition Assistance by allowing clients to certify eligibility for the program electronically or by telephone, thus reducing burdensome visits to the local program office.

There is good reason to believe that imperfect “take-up” of existing benefit programs, including those that provide income support, is partly a product of behavioral factors such as procrastination and inertia.¹⁸² It follows that efforts to increase simplicity, including automatic enrollment, greater use of the Internet and electronic reporting, and pre-populated forms may have substantial benefits and reduce unnecessary or overlapping information collection burdens.¹⁸³ OMB recommends that in many domains, such efforts should be given high priority and careful consideration. As noted, an OIRA guidance document from June 2012 requires significant further reductions and connects that requirement to the lookback process specified in Executive Order 13610.

5. *Simplifying language*

Executive Order 12866 provides that agencies “shall draft” their “regulations to be simple and easy to understand, with the goal of minimizing the potential for uncertainty and litigation arising from such uncertainty.”¹⁸⁴ As noted, Executive Order 13563 states that regulations must be “accessible, consistent, written in plain language, and easy to understand.”¹⁸⁵ In his January 21, 2009, Memorandum on Transparency and Open Government, President Obama emphasized

¹⁸⁰ See Cass R. Sunstein, Administrator, OIRA, Memorandum for Chief Information Officers, Minimizing Paperwork and Reporting Burdens 1 (Feb 23, 2011), online at http://www.whitehouse.gov/sites/default/files/omb/inforeg/icb/2011_ICB_Data_Call.pdf . For the results of this request, see generally Office of Information and Regulatory Affairs, Information Collection Budget.

¹⁸¹ See *id.*

¹⁸² See, e.g., Congdon, et al. (2011), p. 11-12, 158.

¹⁸³ *Id.* at 160 (“[M]aking it easier for individuals to qualify for and perceive the terms of benefits may have high returns in terms of take-up rates. Simplifying the application process—requiring fewer forms, using automatic or default enrollment, and so on—could have large effects on take-up.”).

¹⁸⁴ “Regulatory Planning and Review,” Section 1(b)(12)

available at: <http://www.archives.gov/federal-register/executive-orders/pdf/12866.pdf> .

¹⁸⁵ available at: <http://www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf>.

the importance of establishing “a system of transparency, public participation, and collaboration.” Plain writing is indispensable to achieving these goals.

In the domain of regulation, clear and simple communication has many benefits. Indeed, plain writing promotes the rule of law. Avoiding vagueness and unnecessary complexity makes it easier for members of the public to understand what is required and to apply for important benefits and services for which they are eligible. In addition, plain writing assists the public in complying with applicable requirements simply because people better understand what they are supposed to do. Plain writing is thus more than a mere formal requirement; it is essential to the successful achievement of legislative and administrative goals.

Experience has shown that plain writing can improve public understanding of government communications; save money and increase efficiency; reduce the need for the public to seek clarification from agency staff; improve public understanding of agency requirements and thereby assist the public in complying with them; reduce resources spent on enforcement; improve public understanding of agency forms and applications and thereby help the public in completing them; and reduce the number of errors that are made and thus the amount of time and effort that the agency and the public need to devote to correcting those errors.

The Plain Writing Act of 2010¹⁸⁶ calls for writing that is clear, concise, and well-organized. The Act should produce significant improvements in the interactions between citizens and the Federal Government. On April 13, 2011, OMB issued guidance to implement the Plain Writing Act.¹⁸⁷ Under the Act, starting October 13, 2011, agencies must use plain writing when issuing new or substantially revised documents. This requirement applies to “covered documents,” which the Act defines as those documents that:

- are necessary for obtaining any Federal Government benefit or service, or filing taxes (e.g., tax forms or benefit applications);
- Provide information about any Federal Government benefit or service (e.g., handbooks for Medicare or Social Security recipients); or
- Explain to the public how to comply with a requirement that the Federal Government administers or enforces (e.g., guidance on how to prepare required reports or comply with safety requirements).

The Act also requires agencies to use plain writing in every paper or electronic letter, publication, form, notice, or instruction. When an agency prepares a specialized or technical publication, the agency is directed to take into account the subject expertise of the intended audience. For purposes of the Act, the “public” means anticipated readers or recipients, including any external stakeholders affected by an agency’s mission or with whom an agency is seeking to communicate. While the Act exempts regulations from covered documents,

¹⁸⁶ Pub. L. 111-274.

¹⁸⁷ OMB Memorandum, M-11-15, “Final Guidance on Implementing the Plain Writing Act of 2010,” available at: <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2011/m11-15.pdf>.

rulemaking preambles are not exempted, and long-standing policies currently in effect require regulations to be written in a manner that is “simple and easy to understand.”¹⁸⁸

OIRA continues to recommend that agencies should communicate with the public in a way that is clear, simple, meaningful, and jargon-free.¹⁸⁹ It is especially important to see that plain writing is associated with both open government and regulatory reform. A lack of clarity may prevent people from becoming sufficiently aware of programs or services, and the prospect of confusing or complex forms may discourage people from applying for benefits and services for which they are eligible. Similarly, a lack of clarity may make it difficult for people to understand whether particular requirements apply to them, and if so, what they are supposed to do.

C. Smart Disclosure

Well-designed disclosure policies can significantly improve the operation of markets, helping people to make more informed decisions.¹⁹⁰ Consumers will frequently be able to make better choices when they have accurate and specific information about the economic consequences of those choices, including their own past decisions and those of others. The best product for a particular consumer, such as an insurance plan, will often depend on that consumer’s distinctive situation. For consumers to make informed decisions, they must be able to engage in comparison-shopping and evaluate a menu of options in order to identify the one that most cost-effectively matches their preferences.¹⁹¹ In some cases, consumers lack ready access to the nature or effects of their own decisions; providing that information can produce large benefits by promoting informed choices.

Simply making relevant information formally available, moreover, does not ensure that consumers will use it effectively. In some cases, consumers must take into account many details about their own current circumstances when selecting a product.¹⁹² In addition, they must often make predictions about their future circumstances. When information is available, the difficulty of making effective comparisons has been described as “comparison friction,” meaning the “wedge between the availability of comparative information and consumers’ use of it.”¹⁹³ Recent studies suggest that comparison friction can be substantial even when the initial cost of acquiring information is low.¹⁹⁴ Effective disclosure policies attempt to reduce that friction and

¹⁸⁸ Executive Order 12866, “Regulatory Planning and Review.” Section 1(b)(12) (“Each agency shall draft its regulations to be simple and easy to understand, with the goal of minimizing the potential for uncertainty and litigation arising from such uncertainty”), available at: <http://www.archives.gov/federal-register/executive-orders/pdf/12866.pdf>. More recently, Executive Order 13563, “Improving Regulation and Regulatory Review,” states that regulations must be “accessible, consistent, written in plain language, and easy to understand,” available at: <http://www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf>.

¹⁸⁹ See Memorandum for the Heads of Executive Departments and Agencies, “Disclosure and Simplification as Regulatory Tools,” available at: http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/disclosure_principles.pdf.

¹⁹⁰ See Fung et al. (2007).

¹⁹¹ See Kamenica et al. (2011), p. 1.

¹⁹² See Kling et al. (2012).

¹⁹³ See *id.* See also Hastings and Weinstein (2008); Ellison and Ellison (2009).

¹⁹⁴ See Kling et al. (2012).

thus to enable consumers to make clear comparisons. Other factors such as psychological anchors – “arbitrary and irrelevant numbers” that “bias people’s judgments” – can also adversely affect individual judgment.¹⁹⁵ In practice, it is often time-consuming and difficult for consumers to track and analyze the complex information they need to make informed decisions.

Executive Order 12866 provides that “[e]ach agency shall identify and assess available alternatives to direct regulation, including... providing information upon which choices can be made by the public.”¹⁹⁶ Executive Order 13563 also directs agencies “[w]here relevant, feasible, and consistent with regulatory objectives, and to the extent permitted by law” to “identify and consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public. These approaches include warnings, appropriate default rules, and disclosure requirements as well as provision of information to the public in a form that is clear and intelligible.”¹⁹⁷

On September 8, 2011, OIRA issued a Memorandum on Informing Consumers through Smart Disclosure¹⁹⁸. “Smart disclosure” refers to the “timely release of complex information and data in standardized, machine readable formats in ways that enable consumers to make informed decisions.” Smart disclosure can help consumers to find and use relevant data, including data about the effects of their own past choices and those of others, to make decisions that reflect their individualized needs, and to revise and improve those decisions over time or as new circumstances arise.¹⁹⁹

Such disclosures will typically take the form of providing individual consumers of goods and services with direct access to relevant information and data sets.²⁰⁰ Smart disclosure makes information not merely available but also accessible and usable, by structuring the relevant data in standardized, machine readable formats. Machine readable data are “digital information stored in a format enabling the information to be processed and analyzed by computer.”²⁰¹ These

¹⁹⁵ See, e.g., Stewart (2009). See also Tversky and Kahneman (1974); Chapman and Johnson (2002).

¹⁹⁶ Executive Order 12866, available at: <http://www.whitehouse.gov/sites/default/files/omb/inforeg/eo12866.pdf>.

¹⁹⁷ Executive Order 13563, Sec. 4., available at: <http://www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf>.

¹⁹⁸ Memorandum for the Heads of Executive Departments and Agencies, “Informing Consumers through Smart Disclosure,” available at: <http://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/informing-consumers-through-smart-disclosure.pdf>. This memorandum is built upon OIRA’s previous Memorandum on Disclosure and Simplification as Regulatory Tools, which set out guidance to “inform the use of disclosure in the regulatory context.” See Memorandum for the Heads of Executive Departments and Agencies, “Disclosure and Simplification as Regulatory Tools,” available at:

http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/disclosure_principles.pdf. Among other things, that memorandum stated that “[w]ell-designed disclosure policies attempt to convey information clearly and at the time when it is needed and note the “difference between making a merely technical disclosure — that is, making information available somewhere and in some form, regardless of its usefulness — and actually informing choices.”

¹⁹⁹ See Memorandum for the Heads of Executive Departments and Agencies, “Informing Consumers through Smart Disclosure,” available at: <http://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/informing-consumers-through-smart-disclosure.pdf>.

²⁰⁰ Such information might involve, for example, the range of costs associated with various products and services, including costs that might not otherwise be transparent.

²⁰¹ Memorandum for the Heads of Executive Departments and Agencies, “Informing Consumers through Smart Disclosure,” p. 5. available at: <http://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/informing-consumers-through-smart-disclosure.pdf>.

data should also be timely, interoperable, and adaptable to market innovation, as well as disclosed in ways that fully protect consumer privacy.²⁰²

There are two primary ways that agencies typically authorize or promote the disclosure of consumer information to members of the public. First, agencies may require or allow companies or other entities to make information (including individualized disclosures) directly available to consumers, such as when consumers log on to company websites. Second, agencies may collect the information from those entities and then make the information available, sometimes in modified form, to the public. Recent examples include:

- The “Green Button” initiative is an Administration-led effort designed to provide electricity customers with easy access to their energy usage data in a consumer-friendly and computer-friendly format via a “Green Button” on electric utilities’ websites. With this information in hand, customers can take advantage of innovative energy apps to help them understand their energy usage and find ways to reduce electricity consumption and to shrink bills, all while ensuring they retain privacy and security. As a result of early adoption by two of California’s largest electrical utilities and numerous innovative companies, several million Americans now have access to a Green Button. In the future, many more millions are expected to have access. Consumers will be able to achieve significant savings as a result.
- “Blue Button” is a web-based feature through which patients may easily download their health information and share it with health care providers, caregivers, and others they trust.²⁰³ In August 2010, the Administration announced the formal launch of Blue Button for Veterans and Medicare beneficiaries. Veterans who log onto My HealtheVet at www.myhealth.va.gov and click the Blue Button can save or print information from their own health records. Using a similar Blue Button, Medicare beneficiaries who are registered users of www.mymedicare.gov can log onto a secure site where they can save or print their Medicare claims and self-entered personal information. Data from each site can be used to create portable medical histories that will facilitate dialog with Veterans’ and beneficiaries’ health care providers, caregivers, and other trusted individuals or entities.
- The Department of Transportation (DOT) issued a rule requiring airlines to disclose to consumers the entire price they will pay for a ticket and to make immediately available on their own Web sites information on any fees for optional services (such as baggage, advance seat selection, and in-flight food and entertainment).²⁰⁴
- Each year, most private pension and many private welfare benefit plans satisfy their annual reporting requirement by filing a Form 5500 Annual Return/Report regarding their financial condition, investments, and operations with the Department of Labor, Internal Revenue Service, and the Pension Benefit Guaranty Corporation. The unedited, machine-readable data is provided through the EBSA FOIA Web page

²⁰² *Id.*

²⁰³ See <http://bluebuttondata.org/about.php>.

²⁰⁴ See Final Rule, “Enhancing Passenger Protections,” Department of Transportation (April 25, 2011), available at: <http://www.federalregister.gov/articles/2011/04/25/2011-9736/enhancing-airline-passenger-protections>

while a pension research sample and a health data set are also available for download from DOL in multiple, useable formats.

Agencies have also released data sets directly to promote informed choices by consumers. Data.gov is a government-wide platform established on May 21, 2009, as a flagship Open Government initiative, to facilitate access to Federal data from across government. The platform houses over 390,000 diverse data sets, many of them relevant to consumer markets, and these can be used to disseminate smart disclosure data sets going forward. Other examples include a website that provides consumers with up-to-date product recall information²⁰⁵ and another that releases information about automobile safety and crash ratings, along with data rating child safety seats.²⁰⁶ Posting such data sets can promote regulatory goals, often at low cost, by fostering transparency and increasing accountability. In addition to posting such data sets, agencies are encouraged to collaborate with other agencies and the public to ensure the usefulness of the data sets and to increase awareness of their availability.

Agency use of smart disclosure also promotes the goals of OMB's Open Government Directive.²⁰⁷ The Directive is intended in part to ensure that high-value government data sets are placed online. Indeed, many high-value data sets count as such because their publication helps agencies to further their statutory missions.

In some cases, agencies or third-party intermediaries may also create tools that use these data sets to provide services that support consumer decision-making.²⁰⁸ Smart disclosure enables third parties to analyze, repackage, and reuse information to build such tools. When individuals have access to their own consumer data, these tools can help them track their own information and analyze it to make better and more tailored choices and also promote well-informed comparisons. Moreover, these tools can greatly reduce the cost to consumers of seeking out relevant information from individual companies. They can also help individuals search efficiently based on very specific criteria that would be burdensome and time-consuming to extract from traditional print disclosures. Examples include comparison-shopping websites and mobile phone applications that help people to identify and compare local providers of many relevant goods and services.²⁰⁹

Smart disclosure initiatives can promote innovation, economic growth, and job creation in the market for consumer tools. Smart disclosure of consumer data yields other benefits, including allowing consumers to monitor more easily the accuracy and use of the information that companies hold on them. To the extent permitted by law, and where appropriate in light of

²⁰⁵ See, e.g., www.recalls.gov.

²⁰⁶ See, e.g., www.safercar.gov.

²⁰⁷ Office of Management and Budget, Memorandum for the Heads of Executive Departments and Agencies, "Open Government Directive," M-10-06, available at: http://www.whitehouse.gov/omb/assets/memoranda_2010/m10-06.pdf.

²⁰⁸ As noted, such decision-making might be improved, for example, by informing consumers about the nature and effects of their own past decisions (including, for example, the costs and fees they have already incurred).

²⁰⁹ See, e.g., www.kayak.com or www.mint.com.

government-wide policies,²¹⁰ including those designed to protect privacy, OIRA recommends that agencies give careful consideration to whether and how best to promote smart disclosure.

D. Public Participation, Open Government Partnership, and National Action Plan

The Consolidated Appropriations Act, 2012 (Public Law 112-74)²¹¹ requires the reporting of information on efforts to increase public participation in the rulemaking process. Such efforts have been a high priority. The 2011 Report provides a detailed discussion of recent efforts, and previous discussion in this Chapter offers relevant illustrations. We begin by drawing on, and updating, the 2011 discussion.

Under Executive Order 13563, agencies are directed to promote public participation and in particular to provide the public with “timely online access to the rulemaking docket on Regulations.gov, including relevant scientific and technical findings, in an open format that can be easily searched and downloaded.” OIRA is committed to using technology to improve transparency and to increase public participation in the regulatory process. Among other things, OIRA has issued a series of memoranda to provide agencies with practical guidance for improving access to regulatory actions and their supporting justifications. These memoranda should be seen as a beginning of more ambitious efforts, consistent with Executive Order 13563, to promote public understanding of and participation in rulemaking, with the ultimate goal of improving the substance of rules through tapping the diverse perspectives and dispersed knowledge of the American people.

- In April 2010, OMB published “Increasing Openness in the Rulemaking Process – Use of the Regulation Identifier Number (RIN),” a memorandum that promotes greater openness by requiring Federal agencies to use the Regulation Identifier Number (RIN) on all relevant documents throughout the entire “lifecycle” of a rulemaking.²¹² By using the RIN as the key identifier on all related docket materials, the government will be better able to use technology to assemble electronic dockets and will provide the public with easier and more comprehensive access to regulatory information.

²¹⁰ See, e.g., Office of Management and Budget

Circular A-130, “Management of Federal Information Resources,” available at: http://www.whitehouse.gov/omb/circulars_a130_a130trans4. See also Memorandum for the Heads of Executive Departments and Agencies, “Information Collection under the Paperwork Reduction Act,” available at: http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/PRAPrimer_04072010.pdf

²¹¹ The reporting requirement is Section 202 of the Executive Office of the President Appropriations Act, 2012 (125 Stat. 897), which is Title II of Financial Services and General Government Appropriations Act, 2012, which is Division C of the Consolidated Appropriations Act, 2012.

²¹² Available at:

http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/IncreasingOpenness_04072010.pdf. Executive Order 12866, Sec. 4(b) requires each regulatory action in the Unified Regulatory Agenda—a semiannual compendium of all regulations under development or review—to contain, among other things, a RIN.

- In May 2010, OMB published “Increasing Openness in the Rulemaking Process – Improving Electronic Dockets,” to improve public access to regulatory information by requiring Federal agencies to compile and maintain comprehensive electronic regulatory dockets on Regulations.gov.²¹³ This memorandum states that to the extent that they are part of rulemaking, supporting materials (such as notices, significant guidance documents, environmental impact statements, regulatory impact analyses, and information collections) should be made available during the notice-and-comment period by being uploaded and posted as part of the electronic docket. These materials should be in machine-readable format to enable the public to perform full-text searches of the documents and to extract information. (This memorandum is consistent with Executive Order 13563, which specifically emphasizes the importance of providing the public with relevant information, including scientific and technical findings, on Regulations.gov, with an opportunity for comment.)
- In November 2010, OIRA worked with the eRulemaking Program Management Office (PMO) and Federal agencies to publish a best practices document, titled “Improving Electronic Dockets on Regulations.gov and the Federal Docket Management System – Best Practices for Federal Agencies.” The document outlines strategic goals and best practices to improve agency use of the Federal Docket Management System (FDMS) and Regulations.gov. The document also seeks to establish a common taxonomy and adoption of data protocols for the various rulemaking and non-rulemaking docket and document types.²¹⁴

The two memoranda and the best practices document establish a commitment to improve the public’s ability to find regulatory documents and docket information—thus promoting public participation in the Federal regulatory process and collaboration between Federal agencies and the public. An ultimate goal of this emphasis on participation is to improve the content of rules by bringing diverse perspectives to bear. In his Memorandum on Open Government, President Obama noted, “Knowledge is widely dispersed in society, and public officials benefit from having access to that dispersed knowledge.” A central purpose of increased participation is to tap that widely dispersed knowledge in the rulemaking process. If, for example, a proposal would create special hardships for small business, or deliver important benefits to disadvantaged groups, it is important for officials to obtain that information.

OIRA’s work with the Regulatory Information Service Center (RISC) has also led to many recent improvements to Reginfo.gov, a website that provides information regarding the draft regulatory actions, and proposed information collections, that are currently pending at OIRA for review. In February 2010, RISC launched an OIRA “dashboard” and redesigned Reginfo.gov. The OIRA dashboard uses an interactive display to present information about

²¹³ Available at: http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/edocket_final_5-28-2010.pdf

²¹⁴ These strategic goals include 1) increasing the public’s access to regulatory content; 2) building a common taxonomy and protocols for managing dockets and regulatory documents; and 3) compiling comprehensive electronic dockets and increasing agency efficiency. The document also details plans for system enhancements to FDMS and Regulations.gov, as well as new interfaces the RISC/OIRA Consolidated Information System (ROCIS) to reduce agency burdens in managing regulatory dockets by pre-populating electronic dockets in FDMS based on existing information in the Unified Agenda.

rulemakings under review and allows the public to sort rules by agency, length of review, stage of rulemaking, and economic significance. During the 2010 calendar year, Reginfo.gov received a cumulative total of nearly one million page views; since the addition of the OIRA dashboard, the website has seen a 28 percent increase in the number of site visitors, totaling 169,549 visitors.²¹⁵

There have also been significant efforts to improve Regulations.gov. As a result of such improvements, Regulations.gov provides the public with easier access to regulatory documents and the regulatory process. The improvements include the ability to conduct searches within a docket, a regulatory topics index, and posting of public comments, as well as a link to helpful videos on the YouTube channel and other sites.²¹⁶ In May 2009, and again in January 2010, the eRulemaking Project Management Office launched Regulations.gov/Exchange, an on-line forum to promote interaction with the public and to foster open dialogue among all users, including industry, public interest groups, trade associations, and State and local governmental entities. During the 2010 calendar year, Regulations.gov received a cumulative total of 123 million page views; since the addition of these new site features and functions, the site has seen a 31 percent increase in the number of site visitors, totaling 190 million. The site also received approximately 306,000 web form comments in 2010.²¹⁷

In 2011, Regulations.gov has launched a major redesign, including innovative new search tools, social media connections, and better access to regulatory data. The result is a significantly improved website that will help members of the public to engage with agencies and ultimately to improve the content of rules. For example, users are now able to browse by categories of regulations. The ten new categories include:

1. Aerospace and Transportation
2. Agriculture, Environment, and Public Lands
3. Banking and Financial
4. Commerce and International
5. Defense, Law Enforcement, and Security
6. Education, Labor, Presidential, and Government Services
7. Energy, Natural Resources, and Utilities
8. Food Safety, Health, and Pharmaceutical
9. Housing, Development, and Real Estate
10. Technology and Telecommunications

As a result of changes in the search functionality and results page, Regulations.gov also includes more user-friendly sorting and filtering tools. Users can now sort by “Comment Due Date” and “newly posted regulations” and can filter by “Category.” A new feature called “Document Spotlight” allows users to hover their cursors over the documents listed in the search

²¹⁵ Reginfo.gov site statistics for site visitors were measured by comparing March 1-December 31, 2010 data sets to March 1-December 31, 2009 data sets.

²¹⁶ In March 2010, the U.S. Department of Agriculture was the first Federal agency to use the homepage link to host an introductory video for the “Let’s Move” Campaign, featuring First Lady Michelle Obama.

²¹⁷ Regulations.gov site statistics for site visitors were measured by comparing January 1-December 31, 2010 data sets to January 1-December 31, 2009 data sets.

result page, and view additional information about a specific document without having to go first to the docket. Information like the RIN, highlighted keyword search matches, and whether the comment period is open or closed can be viewed quickly and easily from the Search Results page. In addition, a new “Learn” section offers an interactive explanation of the regulatory process.

OMB continues to support these and other efforts to use technological advances to facilitate transparency and increase public participation in the regulatory process. We recommend continued efforts to improve them, with the central goal of improving the understanding and substance of rules.

Since the first day of his Administration, President Obama has made Open Government a high priority. OMB’s Memorandum on Transparency and Open Government was the first executive action to bear the President’s signature, and the President has pledged his Administration to work toward “an unprecedented level of openness in Government.”²¹⁸ On December 8, 2009, OMB issued an Open Government Directive requiring Federal agencies to take immediate, specific steps to achieve key milestones in transparency, participation, and collaboration. As a result, over the past three years, Federal agencies have made government more transparent and more accessible; provided people with information that they can use in their daily lives; solicited public participation in government decision-making; and collaborated with all sectors of the economy on new and innovative solutions.

In 2011, the Administration’s Open Government efforts entered a new phase, as the United States has collaborated with other countries in the global Open Government Partnership (OGP).²¹⁹ This global initiative supports efforts to promote more transparent, effective, and accountable institutions around the world. The United States and Brazil co-chaired this effort in its inaugural year.

As a part of the United States’ membership in the OGP, the President launched the U.S. Open Government National Action Plan (“National Plan”). In the process, OIRA engaged in extensive consultations with external stakeholders, including a broad range of civil society groups and members of the private sector, to gather ideas on open government. On September 20, 2011, President Obama launched the U.S. National Plan in front of more than 40 heads of state. The National Plan consists of twenty-six initiatives designed to 1) increase public integrity, by tackling corruption and enhancing citizen access to information; 2) improve the management of public resources in the United States; and 3) improve public services and spur private sector innovation.

Highlights include:

- As part of the National Plan, the United States announced its commitment to implement the Extractive Industries Transparency Initiative (EITI). EITI is a voluntary framework under which governments publicly disclose their revenues from

²¹⁸ Found at http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment/.

²¹⁹ For more information on the Open Government Partnership, see <http://www.opengovpartnership.org/>.

oil, gas, and mining assets, and companies make parallel disclosures regarding payments that they are making to obtain access to publicly owned resources.

The United States collects approximately \$10 billion in annual revenues from the development of oil, gas, and minerals on Federal lands and offshore and disburses the bulk of these revenues to the U.S. Treasury, with smaller portions disbursed to five Federal agencies, 35 States, 41 American Indian tribes, and approximately 30,000 individual Indian mineral owners. By signing on to the global standard that EITI sets, the U.S. Government will help ensure that American taxpayers are receiving every dollar due for the extraction of these valuable public resources. This will foster greater transparency and accountability in government. On October 25, 2011, the White House announced that Secretary of the Interior Ken Salazar is the Administration's senior official responsible for overseeing the implementation of EITI.²²⁰

- The White House announced its plans to publish the source code of the recently announced “We the People” petition platform so that it is available to any government around the world that seeks to solicit and respond to the concerns of the public. This step will foster greater participation in government.
- The Administration announced its intention to launch a platform called ExpertNet that will enable government officials to search for and communicate with citizens who have expertise on a pertinent topic. ExpertNet will foster greater collaboration within government.
- The Administration announced that it will continue work on a new civil service personnel category (or job series) for officials who specialize in administering FOIA and other information programs. In addition, the Administration stated its intention to expand the use of technology to achieve greater efficiencies in FOIA administration, including use of technology to assist in searching for and processing records.
- As part of the National Plan, the President has issued a memorandum to reform and improve records management practices across government.²²¹ The memorandum calls for a review of current policies and practices, which will inform a subsequent Records Management Directive that will lay out a new framework for better managing Federal records, both physical and digital, in a cost effective manner. The Directive aims to reform a decades-old framework while improving and promoting accountability and performance.

These and other Open Government efforts have advanced the President's goals of fostering public and private accountability, providing people with information that they can readily find and use, and allowing the Federal Government to benefit from the dispersed

²²⁰ See Press release at <http://www.whitehouse.gov/the-press-office/2011/10/25/white-house-announces-secretary-ken-salazar-administrations-senior-offic>

²²¹ Barack Obama, Memorandum for the Heads of Executive Departments and Agencies, “Presidential Memorandum – Managing Government Records,” available at: <http://www.whitehouse.gov/the-press-office/2011/11/28/presidential-memorandum-managing-government-records>.

knowledge of the American people. OIRA continues to support and recommend the implementation of these and other Open Government initiatives.

E. Soliciting Public Recommendations on Regulation and Employment Effects

Executive Order 13563 states that our “regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and *job creation*” (emphasis added). Executive Order 13563 and Executive Order 12866 require regulatory impact analyses to include an “assessment, including the underlying analysis, of costs anticipated from the regulatory action (such as...adverse effects on the efficient functioning of the economy [and] private markets (including productivity, *employment*, and competitiveness”) (emphasis added).

Chapter I of this report offers a summary of the empirical literature on the relationship between regulation and employment. As the summary makes clear, no simple assessment is easy to defend; any conclusions about the employment effects of a regulation depend on what, exactly, that regulation does. There is also a complex relationship between standard economic analysis of costs and benefits and assessment of employment effects. For example, a rule that effectively requires the employment of new workers (for example, to install equipment) will have positive employment effects (at least in the short term), but will for that very reason impose costs. Similarly, a rule may have benefits far in excess of costs but have a negative effect on employment – if, for example, it leads to the replacement of labor-intensive work with capital-intensive work.

Some economists believe that the best approach is to assess costs and benefits and not to focus on employment effects, on the theory that under circumstances of full employment, workers who are displaced by regulation will end up with other jobs. A finding of a negative employment effect of a particular rule may be misleading if the job loss is temporary. For this reason, some economists conclude that employment effects should not be part of the analysis of the costs and benefits of regulation. On the other hand, this view has been criticized on two grounds.²²²

First, in a period of high unemployment, it is not the case that displaced workers will necessarily find other jobs, especially if job search and retraining costs are high,²²³ or if those out of work lose relevant skills and become discouraged workers.²²⁴ This effect, of course, will depend on a number of factors, including the timing of job loss during periods of rapidly rising

²²² See Masur and Posner (2012).

²²³ *Id.*, at 21-22. See also Krueger and Mueller (2011) (finding that job search declines steeply over spells of unemployment for given set of individuals, for example, those with different levels of average earnings or education).

²²⁴ See Krueger and Mueller (2011).

unemployment,²²⁵ the availability of unemployment insurance,²²⁶ the mobility of workers' skills across industries, and more general macroeconomic conditions.²²⁷

Second, workers who lose their jobs have been found to suffer a significant long-term income loss,²²⁸ as well as declines in subjective well-being and life satisfaction (especially during job search activities).²²⁹ One explanation for the former finding is that a worker's earlier wages may have reflected firm-specific human capital, "skills that worker possesses which earn returns only at the firm at which they were acquired."²³⁰ When an industry contracts or a plant is closed, that industry- or plant-specific human capital is no longer of value, and this loss is reflected in lower subsequent wages.²³¹ This income loss can be counted as a social cost. In addition to the loss of consumption, there are losses in terms of health (increased mortality rates), and the emotional well-being of the family.

In light of these two points, it has been urged that agencies should attempt to quantify the adverse employment effects (if any) of regulations and turn those effects into monetary equivalents for purposes of cost-benefit analysis.²³² Consistent with Executive Order 13563, OIRA recommends consideration of this view. But there are cautionary notes. In some cases, it may be difficult to make the relevant empirical projections. For example, quantification of job effects may not be feasible in some cases. Moreover, there is no consensus in the technical literature on how to turn any such losses into "costs" for purposes of cost-benefit analysis.

OMB does agree that in a challenging economic period with significant unemployment, it is important for regulatory agencies to attempt, to the extent feasible, to include with their analysis of the costs and benefits of economically significant regulations an assessment of the employment effects (whether negative or positive) of those regulations, particularly in view of the potential long-term adverse consequences of reduced employment for affected workers and their families. Indeed, many recent regulatory analyses contain such assessments. Consistent with Executive Order 13563 and Executive Order 12866, OIRA requested, in the draft of this Report, public comment on whether and how agencies should provide, for economically significant regulations, a quantitative or qualitative assessment of the impacts over time of proposed and final regulations on employment. OMB will carefully consider the suggestions that it has received.

²²⁵ See *id.* (positing that "calendar time" may help explain the duration of unemployment, perhaps due to evolving seasonal or business cycle conditions).

²²⁶ *Id.*, at p. 19.

²²⁷ Masur and Posner (2012), at p. 22.

²²⁸ *Id.*, at pp. 18-19. See also Jacobson et al. (1993); von Wachter et al. (2009); Davis and von Wachter (2011) (examining longitudinal Social Security records for U.S. workers from 1974 to 2008 and finding that "[i]n present value terms, men lose an average of 1.4 years of pre-displacement earnings if displaced in mass-layoff events that occur when the national unemployment rate is below 6 percent. They lose a staggering 2.8 years of pre-displacement earnings if displaced when the unemployment rate exceeds 8 percent.").

²²⁹ See Krueger and Mueller (2011), at p. 21-22; Masur and Posner (2012), at p. 24.

²³⁰ *Id.*, at p. 18.

²³¹ See *id.*, at 18-19, 21-23.

²³² *Id.*

CHAPTER III: UPDATE ON THE IMPLEMENTATION OF OMB'S INFORMATION QUALITY INITIATIVES

Objective and high-quality analysis can improve regulatory decisions. OMB and the regulatory agencies have taken a number of steps to improve the rigor and transparency of analysis supporting public policy decisions. Of particular importance in the context of regulatory analysis is OMB's Circular A-4, "Regulatory Analysis," which was issued in 2003 after public comment, interagency review, and peer review. Circular A-4 defines good regulatory analysis and standardizes how benefits and costs of Federal regulatory actions are measured and reported.²³³

In this chapter of the Report, we highlight recent developments in OMB's continuing efforts to improve government information quality and transparency, as well as provide a brief update on the 2011 Agency reporting under the Government-Wide Information Quality Guidelines ("IQ Guidelines") and the Information Quality Bulletin for Peer Review ("Peer Review Bulletin"). The Government-Wide Information Quality Guidelines, issued in 2002 after an extensive public comment process, provide policy and procedural guidance to Federal agencies for ensuring and maximizing the quality of the information they disseminate.²³⁴ The Information Quality Bulletin for Peer Review, issued in 2004 after an extensive public comment process, provides further guidance for pre-dissemination review of influential scientific information.²³⁵

A. Continuing Commitment to Information Quality

President Obama's March 9, 2009, Memorandum on Scientific Integrity²³⁶ refers to the need for each agency to:

- Have appropriate rules and procedures to ensure the integrity of the scientific process within the agency;
- Use scientific and technological information that has been subject to well-established scientific processes such as peer review when considered in policy decisions;
- Appropriately and accurately reflect scientific and technological information in complying with and applying relevant statutory standards; and
- Make available to the public the scientific or technological findings or conclusions considered or relied upon in policy decisions.

The Director of the Executive Office's Office of Science and Technology Policy (OSTP) issued a Memorandum to the Heads of Departments and Agencies that provides further guidance to Executive Branch leaders as they implement Administration policies on scientific integrity.²³⁷ The OSTP Director's December 17, 2010, memorandum emphasizes that "the accurate

²³³ This guidance is available at: http://www.whitehouse.gov/omb/circulars_a004_a-4.

²³⁴ These guidelines are available at: <http://www.whitehouse.gov/omb/fedreg/reproducible2.pdf>.

²³⁵ This Bulletin is available at: <http://www.whitehouse.gov/omb/memoranda/fy2005/m05-03.pdf>.

²³⁶ Available at: <http://www.whitehouse.gov/the-press-office/memorandum-heads-executive-departments-and-agencies-3-9-09>.

²³⁷ Available at: <http://www.whitehouse.gov/sites/default/files/microsites/ostp/scientific-integrity-memo-12172010.pdf>.

presentation of scientific and technological information is critical to informed decision making by the public and policymakers.” Several passages in the memorandum specifically reinforce the goals of OMB’s ongoing information quality initiatives. Specifically:

- Consistent with the Bulletin on Peer Review, the OSTP Director’s Memorandum asks that agencies develop policies to ensure that data and research used to support policy decisions undergo independent peer review by qualified experts, where feasible and appropriate, and consistent with law (Sec I.2(b)).
- Consistent with the emphasis on transparency in the Information Quality Guidelines (as well Circular A-4), the OSTP Director’s Memorandum asks agencies to develop policies that:
 - Expand and promote access to scientific and technical information by making it available online in open formats. Where appropriate, this should include data and models underlying regulatory proposals and policy decisions (Sec I.3).
 - Communicate scientific findings by including a clear explication of underlying assumptions; accurate contextualization of uncertainties; and a description of the probabilities associated with both optimistic and pessimistic projections, including best-case and worst-case scenarios where appropriate (Sec I.4).

Consistent with our efforts to ensure the quality of information on which public policy is based, OMB will continue to work with executive departments and agencies over the next year to ensure that they have in place comprehensive processes for pre-dissemination review of information quality, including the independent peer review of scientific information. We note that such efforts may be especially important in agencies where staff turnover may have affected agency familiarity with the types of internal processes necessary to implement the IQ Guidelines and the Peer Review Bulletin.

B. Government-Wide Information Quality Guidelines

Section 515 of the Treasury and General Government Appropriations Act, 2001 (Pub. L. No. 106-554, 44 U.S.C. § 3516 note), commonly known as the “Information Quality Act” (IQA), requires OMB to develop government-wide standards “for ensuring and maximizing” the quality of information disseminated by Federal agencies.

To implement the IQA, OMB issued final government-wide guidelines on February 22, 2002 (67 FR 8452), and each Federal agency is charged with promulgating its own Information Quality Guidelines. OMB has facilitated the development of these agency guidelines, working with the agencies to ensure consistency with the principles set forth in the government-wide guidelines. By October 1, 2002, almost all agencies released their final guidelines, which became effective immediately. The OMB government-wide guidelines require agencies to report annually to OMB providing information on the number and nature of complaints received by the agency and how such complaints were resolved.

In August 2004, the OIRA Administrator issued a memorandum to the President's Management Council requesting that agencies post all Information Quality correspondence on agency web pages to increase the transparency of the process.²³⁸ In their FY 2004 Information Quality Reports to OMB, agencies provided OMB with the specific links to these web pages and OMB began providing this information to the public in our 2005 update on Information Quality.²³⁹ This increase in transparency allows the public to view all correction requests, appeal requests, and agency responses to these requests. The web pages also allow the public to track the status of correction requests that may be of interest. An updated list of agency web pages is provided in Appendix E of this Report.

In our 2003 Report, OMB presented a detailed discussion of the IQA and its implementation, including a discussion of perceptions and realities, legal developments, methods for improving transparency, suggestions for improving correction requests, and the release of the OMB Information Quality Bulletin for Peer Review.²⁴⁰

This section of the chapter provides a summary of the current status of correction requests received in FY 2011, as well as an update on the status of requests received in FY 2004, FY 2005, FY 2006, FY 2007, FY 2008, FY 2009 and FY 2010. A discussion of legal interpretations of the Information Quality Act is also provided. Our discussion of the individual correction requests and agency responses is minimal because all correspondence between the public and agencies regarding these requests is publicly available on the agencies' Information Quality web pages.

1. Request for Correction Process

a. New Correction Requests and Appeal Requests Received by the Agencies in FY 2011

Table 3-1 below lists the departments and agencies that received requests for correction in FY 2011. In FY 2011, a total of 16 requests for correction were sent to seven different departments and agencies. In addition, four appeals associated with these 16 requests were filed in FY 2011. One appeal was sent to the U.S. Patent and Trade Office (USPTO) within the Department of Commerce, one was sent to the Department of Education (ED), and two were sent to the Department of the Interior (DOI). Within DOI, one appeal was sent to the National Park Service (NPS) and the other appeal was sent to the Bureau of Land Management (BLM). FY 2011 was the first year that USPTO, ED and NPS received an appeal. As some of the agencies' 16 responses to initial correction requests were sent at the end of FY 2011, or were still pending at the end of FY 2011, there is a possibility that additional appeals may have since been filed or will be filed in the future.

²³⁸ See OMB, *Memorandum for the President's Management Council (2004)*

http://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/info_quality_posting_083004.pdf.

²³⁹ See OMB, *Validating Regulatory Analysis: 2005 Report to Congress on the Costs and Benefits of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities (2005)*, available at http://www.whitehouse.gov/omb/inforeg/2005_cb/final_2005_cb_report.pdf.

²⁴⁰ See OMB, *Information Quality, a Report to Congress FY 2003*, (2003) and OMB, *Validating Regulatory Analysis: 2005 Report to Congress on the Costs and Benefits of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities (2005)*, available at: http://www.whitehouse.gov/omb/inforeg/2005_cb/final_2005_cb_report.pdf.

Table 3-1: Departments and Agencies that Received Information Quality Correction Requests in FY 2011

Agency	Number of FY11 Correction Requests
Department of Commerce	4
Department of Education	1
Department of Health and Human Services	3
Department of the Interior	5
Environmental Protection Agency	1
Department of Labor	1
Federal Communication Commission	1
Total	16

Further, as shown below in Table 3-2, two additional appeals were filed in FY 2011 that related to correction requests from FY 2009 and FY 2010. One was sent to the National Toxicology Program (NTP), within the Department of Health and Human Services (HHS), regarding a background document on styrene science. HHS responded to this appeal in FY 2011. The other request was sent to the Environmental Protection Agency (EPA) regarding a website discussing coal partnerships. This response was still pending at the close of FY 2011.

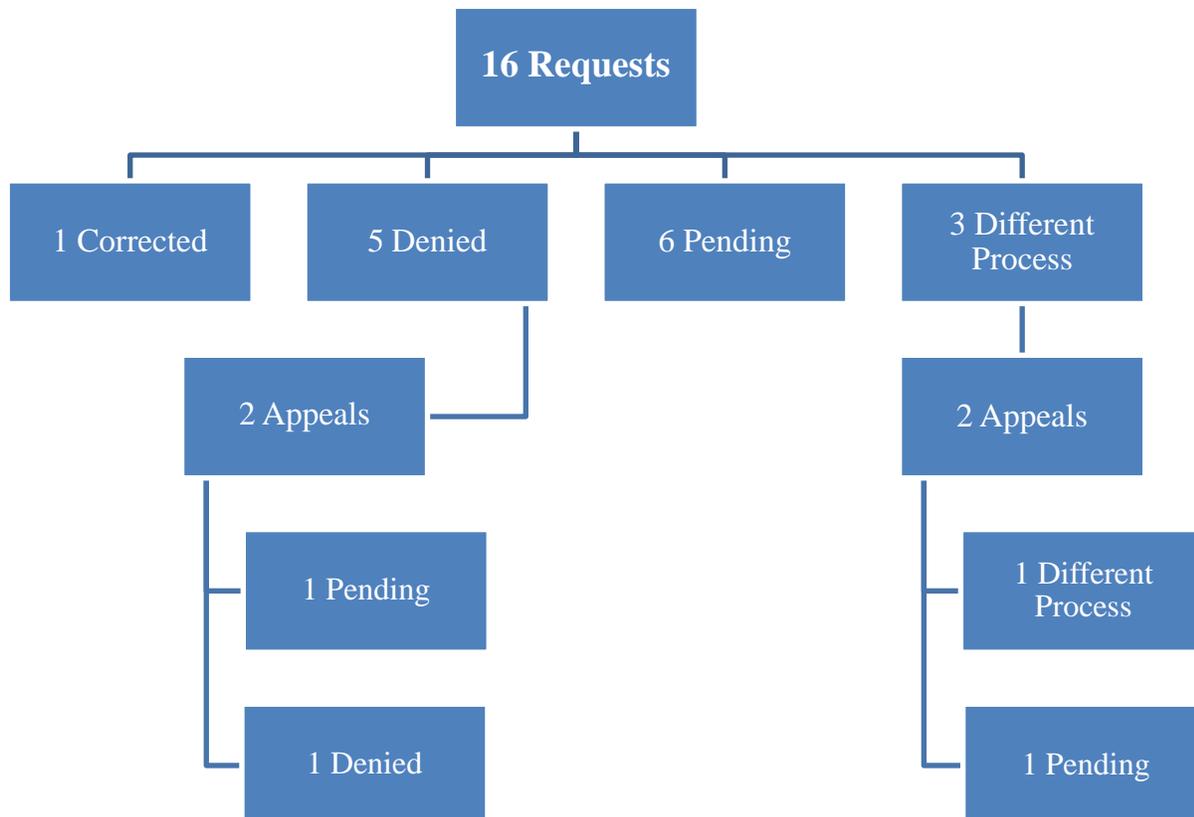
Table 3-2: Departments and Agencies that Received Information Quality Appeals Requests in FY 2011, Following Responses to Requests Initiated in FY 2009 and FY 2010

Agency	Number of FY11 Appeals
Department of Health and Human Services	1
Environmental Protection Agency	1
Total	2

The correction requests received in FY 2011 were quite diverse. For instance, the Association of Proprietary Colleges requested that ED withdraw a proposed regulation related to gainful employment due to concerns with the analysis that was presented; the International Premium Cigar and Pipe Retailers Association asked the National Institutes of Health, within HHS, to correct a fact sheet on cigar smoking and cancer; and Public Employees for Environmental Responsibility requested that the NPS rescind a 2010 Big Cypress National Preserve Addition Wilderness Eligibility Assessment or re-issue it in draft form subject to rigorous peer review in order to allow public involvement.

Figure 3-1 shows the status of the 16 FY 2011 correction requests and four appeals. For further details, links to all the correction requests, and the complete agency responses, we encourage readers to visit the agency Information Quality web pages.²⁴¹ OMB continues to use the “different processes” category to describe responses that were handled by other pre-existing processes at the agencies. For instance, comments sent to BLM regarding the SunZia Transmission Line Project were handled as public comments under another existing review process related to the preparation of a final Environmental Impact Statement.

Figure 3-1: Status of IQ Correction Requests Received in FY 2011



As noted in previous reports, OMB cautions readers against drawing any conclusions about trends or year-to-year comparisons. However, we note that in FY 2003 there were 48 correction requests; in FY 2004, 37; in FY 2005, 24; in FY 2006, 22; in FY 2007, 21; in FY 2008, 14; in FY 2009, 17; in FY 2010, 27; and in FY 2011, 16.

b. Status of Outstanding Correction Requests Received by the Agencies in FY 2003-2010

At the close of FY 2010, 26 Information Quality correction request responses and 3 appeal responses remained pending from the agencies. The pending correction requests were initiated in FY 2004 through FY 2010. Figure 3-2 shows the status of those outstanding

²⁴¹ As mentioned, a listing of webpages for Agency IQ correspondence is available in Appendix E of this report.

correction request responses at the close of FY 2011. Agencies responded to 16 of these correction requests and continued to work on responses to the remaining 10 at the end of FY 2011. Five of the pending requests are requests to the Army Corps of Engineers, within the Department of Defense, four are requests to EPA, and one of the pending requests is to the Department of Housing and Urban Development. As is shown below, two appeals were sent after agencies responded. One went to EPA and is still pending while the other appeal request, sent to NTP, was denied.

Figure 3-2: FY 2010 Status of Pending Correction Requests from FY 2004 through FY 2010

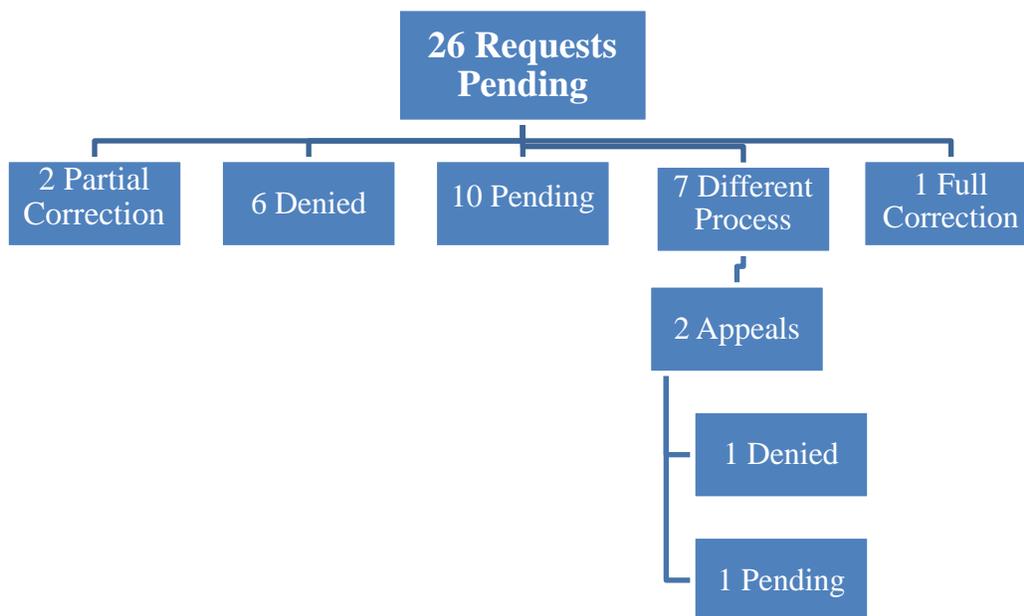
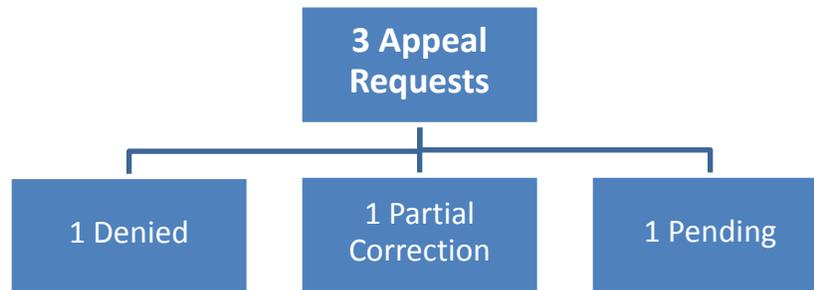


Figure 3-3 below gives the status of the three appeal requests pending at the close of FY 2010. The National Oceanic and Atmospheric Administration, within DOC, denied an appeal regarding information relating to a 2006 assessment of potential tsunami impacts for Pearl Harbor. In responding to an appeal requesting correction of information in a report relating to the biological and management profiles for nine large species of pythons, anacondas and the boa constrictor, U.S. Geological Survey provided a partial correction and made more supporting information publicly available. In addition, the Federal Communications Commission continued to work on the appeal it received in FY 2007 regarding line charges. Correspondence showing the agencies' responses to these requests is publicly available on the agencies' Information Quality web pages.

Figure 3-3: FY 2011 Status of Pending Appeal Requests from FY 2010



2. Legal Discussion

As discussed in previous reports, there has been litigation under the Information Quality Act (IQA), as well as regarding the scope of judicial review under the Administrative Procedure Act (APA) in those challenges. In 2010, the United States Court of Appeals for the Ninth Circuit affirmed the district court’s dismissal of the case for lack of jurisdiction under the APA. See *Americans for Safe Access v. United States Dep’t of Health and Human Servs.*, 399 Fed. App. 314, 316 (9th Cir. 2010) (holding that HHS’s decision was not a reviewable final agency action). Also in 2010, the United States Court of Appeals for the District of Columbia Circuit declined to find that the IQA had been violated based on its determination that OMB’s interpretation regarding “dissemination” (and, in particular, the exclusion from the definition of dissemination of documents “prepared and distributed in the context of adjudicative proceedings”) was a reasonable interpretation of the statute. *Prime Time v. Vilsack*, 599 F.3d 678, 685 (D.C. Cir. 2010). Other courts have also dismissed IQA challenges, including on other grounds. See, e.g., *Salt Institute v. Leavitt*, 440 F.3d 156, 159 (4th Cir. 2006); *Family Farm Alliance v. Salazar*, 746 F. Supp. 2d 1083 (E.D. Calif. 2010); *In re Operation of the Missouri River System Litigation*, 363 F. Supp. 2d 1145, 1174-75 (D. Minn. 2004), vacated in part and affirmed in part on other grounds, 421 F.3d 618 (8th Cir. 2005).

C. Information Quality Bulletin for Peer Review

In keeping with the goal of improving the quality of government information, on December 16, 2004, OMB issued the Final Information Quality Bulletin for Peer Review (the “Peer Review Bulletin”).²⁴² The Peer Review Bulletin requires executive agencies to ensure that all “influential scientific information” they disseminate after June 16, 2005, is peer-reviewed.

“Influential scientific information” is defined as “scientific information the agency reasonably can determine will have or does have a clear and substantial impact on important

²⁴² See OMB, Memorandum for the Heads of Departments and Agencies, M-05-03, “Issuance of OMB’s ‘Final Information Quality Bulletin for Peer Review,’” available at: <http://www.whitehouse.gov/omb/memoranda/fy2005/m05-03.pdf>.

public policies or private sector decisions.”²⁴³ The term “influential” is to be interpreted consistently with OMB’s government-wide Information Quality Guidelines and the information quality guidelines of each agency.

One type of scientific information is a scientific assessment. For the purposes of the Peer Review Bulletin, the term “scientific assessment” means an evaluation of a body of scientific or technical knowledge, which typically synthesizes multiple factual inputs, data, models, assumptions, and/or applies best professional judgment to bridge uncertainties in the available information.²⁴⁴

The Peer Review Bulletin describes the factors that should be considered in choosing an appropriate peer review mechanism and stresses that the rigor of the review should be commensurate with how the information will be used. It directs agencies to choose a peer review mechanism that is adequate, giving due consideration to the novelty and complexity of the science to be reviewed, the relevance of the information to decision making, the extent of prior peer reviews, and the expected benefits and costs of additional review. When deciding what type of peer review mechanism is appropriate for a specific information product, agencies should consider at least the following issues: individual versus panel review, timing, scope of the review, selection of reviewers, disclosure and attribution, public participation, disposition of reviewer comments, and adequacy of prior peer review.

The Peer Review Bulletin specifies the most rigorous peer review requirements for “highly influential scientific assessments,” which are a subset of “influential scientific information.” To ensure that implementation of the Peer Review Bulletin is not too costly, these requirements for more intensive peer review apply only to the more important scientific assessments disseminated by the Federal Government – those that could have a potential impact of more than \$500 million in any one year on either the public or private sector, or are novel, controversial, or precedent-setting, or have significant interagency interest.

Under the Peer Review Bulletin, agencies are granted broad discretion to weigh the benefits and costs of using a particular peer review mechanism for a specific information product. In addition to the factors noted above, agencies also have the option of employing “alternative processes” for meeting the peer review requirement (e.g., commissioning a National Academy of Sciences’ panel). Moreover, to ensure that peer review does not unduly delay the release of urgent findings, time-sensitive health and safety determinations are exempted from the requirements of the Peer Review Bulletin. There are also specific exemptions for national security, individual agency adjudication or permit proceedings, routine statistical information, and financial information. The Peer Review Bulletin does not cover information disseminated in

²⁴³ The Bulletin notes that information dissemination can have a significant economic impact even if it is not part of a rulemaking. For instance, the economic viability of a technology can be influenced by the government’s characterization of its attributes. Alternatively, the Federal Government’s assessment of risk can directly or indirectly influence the response actions of state and local agencies or international bodies.

²⁴⁴ These assessments include, but are not limited to, state-of-science reports; technology assessments; weight-of-evidence analyses; meta-analyses; health, safety, or ecological risk assessments; toxicological characterizations of substances; integrated assessment models; hazard determinations; or exposure assessments.

connection with routine rules that materially alter entitlements, grants, user fees, or loan programs, or the rights and obligations of recipients thereof.

The Peer Review Bulletin provides two mechanisms for monitoring the progress of the agencies in meeting these peer-review requirements: a transparent peer review planning process and annual reporting, described below.

The good science and good government requirements of the Peer Review Bulletin should assist in improving the accuracy and transparency of agency science. Additionally, the peer review planning process described in the Peer Review Bulletin, which includes posting of plans on agency websites, enhances the ability of the government and the public to track influential scientific disseminations made by agencies.

On June 16, 2005, the Peer Review Bulletin became effective for all influential scientific information, including highly-influential scientific assessments. The peer review planning component of the Bulletin, discussed below, became fully effective on December 16, 2005.

Peer Review Planning

The Peer Review Planning component of the Peer Review Bulletin (Section V) requires agencies to engage in a systematic process of peer review planning for influential scientific information (including highly influential scientific assessments) that the agency plans to disseminate in the foreseeable future.

A key feature of the agency's peer review plan is a web-accessible listing (an "agenda") of forthcoming influential scientific disseminations that is updated on a regular basis. These postings are designed to allow the public to participate in the peer review process by providing data and comments to the sponsoring agencies, as well as to external peer reviewers. By making these agendas publicly available, agencies increase the level of transparency in their peer review processes, and also have a mechanism to gauge the extent of public interest in their proposed peer reviews.

The agenda is designed to encourage planning for peer review early in the information-generation process. Thus, the agenda should cover all information subject to the Peer Review Bulletin that the agency plans to disseminate in the foreseeable future. For instance, once an agency has established a timeline for the generation of a scientific report, the agency should include that report in its agenda. Thus, although the Peer Review Bulletin specifies that agencies should update their peer review agendas every six months, the agenda is not a six-month forecast (i.e., it should not be limited to information (documents) that the agency plans to peer review in the next six months).

Readers are encouraged to visit the agendas for agencies of interest. OMB asks agencies to ensure that there is an easily identifiable hyperlink to the peer review agenda from the agency's Information Quality home page. For cabinet-level departments that have a central information quality page but do not have a central peer review agenda, OMB requests that a hyperlink to each agency agenda be provided. Section B in Appendix E provides the URLs for most agencies' peer review agendas.

Several agencies have determined that they do not currently produce or sponsor information subject to the Peer Review Bulletin. Most of these agencies produce primarily financial information or routine statistical information for which the Bulletin provides specific exemptions. Others primarily engage in management, oversight, or granting activities. A list of these agencies can be found in Section C in Appendix E.

Table 3-3: Peer Reviews Conducted Subject to the Bulletin in FY 2011

Department/ Agency**	Total Peer Reviews Completed	Reviews of Highly Influential Scientific Assessments	Waivers, Deferrals, or Exemptions	Potential Reviewer Conflicts
Department of Agriculture	81	3	None	None
Department of Commerce	22	0	None	None
Department of Energy	1	0	None	None
Department of Health and Human Services	16	3	None	None
Department of the Interior	63	2	4 (Waiver)	None
Department of Labor	2	2	None	None
Department of Transportation	1	0	None	None
Environmental Protection Agency	28	4	None	None
Consumer Products Safety Commission	2	0	None	None

Table Details

- The Department of Agriculture agencies reporting peer reviews in FY 2011 were the Food Safety Inspection Service, the Animal and Plant Health Inspection Service, Center for Nutrition Policy and Promotion, the Food and Nutrition Service, the Agricultural Research Service, the Economic Research Service, and the Forest Service.
- The Department of Commerce agency reporting peer reviews in this fiscal year was the National Oceanic and Atmospheric Administration.
- The Department of Energy peer review reported in this fiscal year was associated with the Energy Efficiency and Renewable Energy Biomass Program.
- The Department of Health and Human Services agencies reporting peer reviews in FY 2011 were the Centers for Disease Control and Prevention, the Food and Drug Administration, and the National Toxicology Program at the National Institute for Environmental Health Sciences.

- The Department of the Interior agencies reporting peer reviews in FY 2011 were the Fish and Wildlife Service, the Geological Survey, the National Park Service, and the Bureau of Ocean Energy Management, Regulation, and Enforcement.
- The Department of Labor agency reporting peer reviews in FY 2011 was the Occupational Health and Safety Administration.
- The Department of Transportation agency reporting peer reviews in FY 2011 was the National Highway Traffic Safety Administration.

**PART II: SIXTEENTH ANNUAL REPORT
TO CONGRESS ON AGENCY COMPLIANCE
WITH THE UNFUNDED MANDATES
REFORM ACT**

Introduction

This report represents OMB's sixteenth annual submission to Congress on agency compliance with the Unfunded Mandates Reform Act of 1995 (UMRA). This report on agency compliance with the Act covers the period of October 2010 through September 2011; the rules published before October 2010 are described in last year's report.

In recent years, this report has been included along with our final Report to Congress on the Benefits and Costs of Federal Regulations. This is done because the two reports together address many of the same issues, and both highlight the need for regulating in a responsible manner that accounts for the benefits and costs of rules and takes into consideration the interests of our intergovernmental partners. This year, OMB is again publishing the UMRA report with the Report to Congress on the Benefits and Costs of Federal Regulations.

State and local governments have a vital constitutional role in providing government services. They have the major role in providing domestic public services, such as public education, law enforcement, road building and maintenance, water supply, and sewage treatment. The Federal Government contributes to that role by promoting a healthy economy and by providing grants, loans, and tax subsidies to State and local governments. However, over the past several decades, State, local, and tribal governments increasingly have expressed concerns about the difficulty of complying with Federal mandates without additional Federal resources.

In response, Congress passed the Unfunded Mandates Reform Act of 1995 (UMRA, or "the Act"). Title I of the Act focuses on the Legislative Branch, addressing the processes Congress should follow before enactment of any statutory unfunded mandates. Title II addresses the Executive Branch. It begins with a general directive for agencies to assess, unless otherwise prohibited by law, the effects of their rules on the other levels of government and on the private sector (Section 201). Title II also describes specific analyses and consultations that agencies must undertake for rules that may result in expenditures of over \$100 million (adjusted annually for inflation) in any year by State, local, and tribal governments in the aggregate, or by the private sector.

Specifically, Section 202 requires an agency to prepare a written statement for intergovernmental mandates that describes in detail the required analyses and consultations on the unfunded mandate. Section 205 requires that for all rules subject to Section 202, agencies must identify and consider a reasonable number of regulatory alternatives, and then generally select from among them the least costly, most cost-effective, or least burdensome option that achieves the objectives of the rule. Exceptions require the agency head to explain in the final rule why such a selection was not made or why such a selection would be inconsistent with law.

Title II requires agencies to "develop an effective process" for obtaining "meaningful and timely input" from State, local and tribal governments in developing rules that contain significant intergovernmental mandates (Section 204). Title II also singles out small governments for particular attention (Section 203). OMB's guidelines assist Federal agencies in complying with the Act and are based upon the following general principles:

- Intergovernmental consultations should take place as early as possible, beginning before issuance of a proposed rule and continuing through the final rule stage, and be integrated explicitly into the rulemaking process;
- Agencies should consult with a wide variety of State, local, and tribal officials;
- To assist with these consultations, agencies should estimate direct benefits and costs associated with the mandate being considered;
- The scope of consultation should reflect the cost and significance of the mandate being considered;
- Effective consultation requires trust and significant and sustained attention so that all who participate can enjoy frank discussion and focus on key priorities; and
- Agencies should seek out State, local, and tribal views on costs, benefits, risks, and alternative methods of compliance and whether the Federal rule will harmonize with and not duplicate similar laws in other levels of government.

Federal agencies have been actively consulting with states, localities, and tribal governments in order to ensure that regulatory activities were conducted consistent with the requirements of UMRA (see Appendix F for a description of agency consultation activities).

The remainder of this report lists and briefly discusses the regulations that meet the Title II threshold and the specific requirements of Sections 202 and 205 of the Act and that were issued from October 1, 2010 to September 30, 2011.

CHAPTER IV: REVIEW OF SIGNIFICANT REGULATORY MANDATES

In FY 2011, Federal agencies issued thirteen final rules that were subject to Sections 202 and 205 of the Unfunded Mandate Reform Act of 1995 (UMRA), as they require expenditures by State, local or tribal governments, in the aggregate, or by the private sector, of at least \$100 million in any one year (adjusted annually for inflation). The Environmental Protection Agency has four, Department of Energy has three, Department of Transportation has two, Department of Education has one, Department of Health and Human Services has one, Department of Homeland Security has one, Department of the Treasury has one, and the Environmental Protection Agency and Department of Transportation issued one joint rule.²⁴⁵

OMB worked with the agencies to ensure that the selection of the regulatory options for these rules fully complied with the requirements of Title II of the Act. Descriptions of the rules in addition to agency statements regarding compliance with the Act are included in the following section.

A. Environmental Protection Agency

Cross-State Air Pollution Rule (CAIR Replacement Rule)

This final rule limits emissions of nitrogen oxides and sulfur dioxide from electricity generators in 27 Eastern and Midwestern states to reduce the transport of those emissions to downwind states.

EPA estimates \$810 million in annual costs. This final rule does not contain mandates under UMRA on State, local, and tribal governments. The overall impact on the private sector does exceed the \$100 million threshold in the aggregate. Consequently, the provisions of this rule constitute a private sector mandate under the UMRA.

B. Department of Energy

1. *Energy Efficiency Standards for Clothes Dryers and Room Air Conditioners*

This final rule establishes energy conservation standards for residential clothes dryers and room air conditioners.

DOE estimates \$160 million in annual costs. This final rule does not contain mandates under UMRA on State, local, and tribal governments. The overall impact on the private sector does exceed the \$100 million threshold in the aggregate. Consequently, the provisions of this rule constitute a private sector mandate under the UMRA.

²⁴⁵ Interim final rules were not included in this chapter since “Section 202 [of the Unfunded Mandates Reform Act]... does not apply to interim final rules or non-notice rules issued under the ‘good cause’ exemption in 5 U.S.C. 553(b)(B).” See OMB, Memorandum for the Heads of Executive Departments and Agencies, M-95-09, “Guidance for Implementing Title II of S.1,” 1995, available at: <http://www.whitehouse.gov/sites/default/files/omb/memoranda/m95-09.pdf>.

2. Energy Efficiency Standards for Residential Furnaces, Central Air Conditioners and Heat Pumps

This final rule establishes energy conservation standards for residential furnaces, central air conditioners and heat pumps.

DOE estimates \$650 million in annual costs. This final rule does not contain mandates under UMRA on State, local, and tribal governments. The overall impact on the private sector does exceed the \$100 million threshold in the aggregate. Consequently, the provisions of this rule constitute a private sector mandate under the UMRA.

3. Energy Efficiency Standards for Residential Refrigerators, Refrigerator-Freezers, and Freezers

This final rule establishes energy conservation standards for residential refrigerators, refrigerator-freezers, and freezers.

DOE estimates \$1,167 to \$1,569 million in annual costs. This final rule does not contain mandates under UMRA on State, local, and tribal governments. The overall impact on the private sector does exceed the \$100 million threshold in the aggregate. Consequently, the provisions of this rule constitute a private sector mandate under the UMRA.

C. Department of Transportation

Ejection Mitigation

This final rule established a new motor vehicle performance standard to reduce partial and complete occupant ejections (where occupants are ejected from vehicles) mostly in rollover crashes. The standard applies to the side windows next to the first three rows of seats, and to a portion of the cargo area behind the first or second rows in motor vehicles weighing less than 10,000 lbs. The agency anticipates that manufacturers will meet the standard by modifying existing side air bag curtains.

DOT estimates \$507 million in annual costs. This final rule does not contain mandates under UMRA on State, local, and tribal governments. The overall impact on the private sector does exceed the \$100 million threshold in the aggregate. Consequently, the provisions of this rule constitute a private sector mandate under the UMRA.

D. Department of Education

Program Integrity: Gainful Employment-Measures

This final rule establishes measures for determining whether certain postsecondary educational programs lead to gainful employment in recognized occupations, and the conditions under which those educational programs remain eligible for the student financial assistance programs authorized under title IV of the Higher Education Act of 1965, as amended.

Education estimates \$138.50 million in annual costs. This final rule does not contain mandates under UMRA on State, local, and tribal governments. The overall impact on the private sector does exceed the \$100 million threshold in the aggregate. Consequently, the provisions of this rule constitute a private sector mandate under the UMRA.

E. Department of Health and Human Services

Cigarette Warning Label Statements²⁴⁶

The rule is required by the Family Smoking Prevention and Tobacco Control Act, which directed FDA to “issue regulations that require color graphics depicting the negative health consequences of smoking.” When fully implemented, the warnings will be mandatory and occupy 50% of all cigarette packages and 20% of all advertisements. The images will accompany nine different warning statements prescribed by the statute (e.g. “WARNING: Cigarettes are addictive”). FDA may revise the warning statements by regulation if it determines that doing so “would promote greater public understanding of the risks associated with the use of tobacco products.” HHS estimates that upfront costs range from \$319.5 to \$518.4 million, with a primary estimate of \$342.7 million (in 2009 dollars). Annual, recurring costs are estimated to be \$6.2 million, some of which are borne by the FDA. Annualized costs (over twenty years) are estimated range from \$27.4 to \$52.7 million, with a (7%) primary estimate of \$37.0 million. This final rule does not contain mandates under UMRA on State, local, and tribal governments. The overall impact on the private sector does exceed the \$100 million threshold in the aggregate. Consequently, the provisions of this rule constitute a private sector mandate under the UMRA.

F. Department of Treasury

Regulations Governing Practice Before the Internal Revenue Service (IRS)

This final rule increases oversight of paid tax preparers by extending ethical rules and continuing education requirements to all paid tax preparers, including currently unregistered tax return preparers that would be required to register and obtain a Preparer Tax Identification Number (PTIN). The final rule would create a new class of tax practitioners, the “registered tax return preparer,” and would now allow the IRS to suspend or otherwise discipline tax return preparers who engage in unethical or disreputable conduct.

IRS has quantified some, but not all, of the costs associated with the rule. IRS estimates at a minimum the rule will have \$137,512,500 in annual costs on the private sector. This final rule does not contain mandates under UMRA on State, local, and tribal governments. The overall impact on the private sector does exceed the \$100 million threshold in the aggregate. Consequently, the provisions of this rule constitute a private sector mandate under the UMRA.

²⁴⁶On August 24, 2012, a divided panel of the U.S. Court of Appeals for the District of Columbia Circuit vacated the graphic labeling requirements of this rule. On December 5, 2012, the D.C. Circuit denied FDA’s petition for rehearing en banc, and FDA has not sought further review..

G. Joint Rulemakings

EPA/DOT Commercial Medium- and Heavy-Duty On-Highway Vehicles and Work Truck Fuel Efficiency and Greenhouse Gas Emissions Standards

This rule established fuel economy and GHG emissions standards for medium and heavy duty trucks for the first time. DOT's fuel efficiency standards and EPA's GHG emissions standards are tailored to each of three regulatory categories of medium and heavy-duty vehicles: (1) Combination Tractors; (2) Heavy-duty Pick-up Trucks and Vans; and (3) Vocational Trucks. EPA's GHG emissions standards under the Clean Air Act (CAA) begin with model year 2014. DOT's fuel consumption standards under the Energy Independence and Security Act of 2007 (EISA) would be optional in model years 2014 and 2015 due to statutory constraints, but they become mandatory with model year 2016 for most regulatory categories.

The agencies have determined that these final rules do not contain mandates under UMRA on State, local, and tribal governments. The agencies have determined that these rules contain a Federal mandate that may result in expenditures of \$134 million or more for the private sector in any one year. Consequently, the provisions of this rule constitute a private sector mandate under the UMRA.

APPENDIX A: CALCULATION OF BENEFITS AND COSTS

Chapter I presents estimates of the annual benefits and costs of selected major final regulations reviewed by OMB between October 1, 2001 and September 30, 2011. OMB presents more detailed explanation of these regulations in several documents.

- Rules from October 1, 2001 to September 30, 2002: Table 19 of the 2003 Report.
- Rules from October 1, 2002 to September 30, 2003: Table 12 of the 2004 Report.
- Rules from October 1, 2003 to September 30, 2004: Tables 1-4 and A-1 of the 2005 Report.
- Rules from October 1, 2004 to September 30, 2005: Tables 1-4 and A-1 of the 2006 Report.
- Rules from October 1, 2005 to September 30, 2006: Tables 1-4 and A-1 of the 2007 Report.
- Rules from October 1, 2006 to September 30, 2007: Tables 1-4 and A-1 of the 2008 Report.
- Rules from October 1, 2007 to September 30, 2008: Tables 1-4 and A-1 of the 2009 Report.
- Rules from October 1, 2008 to September 30, 2009: Tables 1-4 and A-1 of the 2010 Report.
- Rules from October 1, 2009 to September 30, 2010: Tables 1-5(a) and A-1 of the 2011 Report.
- Rules from October 1, 2010 to September 30, 2011: Tables 1-5(a) and A-1 of this Report.

In assembling estimates of benefits and costs presented in this Report, OMB has:

1. Applied a uniform format for the presentation of benefit and cost estimates in order to make agency estimates more closely comparable with each other (for example, annualizing benefit and cost estimates); and
2. Monetized quantitative estimates where the agency has not done so (for example, converting agency projections of quantified benefits, such as estimated injuries avoided per year or tons of pollutant reductions per year, to dollars using the valuation estimates discussed below).

All benefit and cost estimates are adjusted to 2001 dollars using the latest Gross Domestic Product (GDP) deflator, available from the Bureau of Economic Analysis at the Department of Commerce.²⁴⁷ In instances where the nominal dollar values the agencies use for their benefits and costs is unclear, we assume the benefits and costs are presented in nominal dollar values of the year before the rule is finalized. In periods of low inflation such as the past

²⁴⁷ See *National Income and Product Accounts*, <http://www.bea.gov>.

few years, this assumption does not affect the overall totals. All amortizations are performed using a discount rate of 7 percent unless the agency has already presented annualized, monetized results using a different explicit discount rate.

OMB discusses, in this Report and in previous Reports, the difficulty of estimating and aggregating the benefits and costs of different regulations over long time periods and across many agencies. In addition, where OMB has monetized quantitative estimates where the agency has not done so, we have attempted to be faithful to the respective agency approaches. The adoption of a uniform format for annualizing agency estimates allows, at least for purposes of illustration, the aggregation of benefit and cost estimates across rules; however, agencies have used different methodologies and valuations in quantifying and monetizing effects. Thus, an aggregation involves the assemblage of benefit and cost estimates that are not strictly comparable.

To address this issue in part, the 2003 Report included OMB's regulatory analysis guidance, also released as OMB Circular A-4, which took effect on January 1, 2004 for proposed rules and January 1, 2005 for final rules. The guidance recommends what OMB considers to be "best practices" in regulatory analysis, with a goal of strengthening the role of science, engineering, and economics in rulemaking. The overall goal of this guidance is a more competent and credible regulatory process and a more consistent regulatory environment. OMB expects that as more agencies adopt these recommended best practices, the benefits and costs presented in future Reports will become more comparable across agencies and programs. The 2006 Report was the first report that included final rules subject to OMB Circular A-4. OMB will continue to work with the agencies to ensure that their impact analyses follow the guidance.

Table A-1 below presents the unmodified information on the impacts of 53 major rules reviewed by OMB from October 1, 2010 through September 30, 2011, and includes additional explanatory text on how agencies calculated the impacts for these rulemakings. Unless otherwise stated, the estimates presented in Table A-1 are annualized impacts in 2001 dollars, which is the format requested in OMB Circular A-4.

Table 1-5(a) in Chapter I of this Report presents the adjusted impact estimates for the 12 rules finalized in 2010-2011 that were added to the Chapter I accounting statement totals. Table A-2 below presents the benefits and costs of previously reported major rules reviewed by OMB from October 1, 2001 through September 30, 2010 that are also included in the Chapter I accounting statement totals.

Table A-1: Summary of Agency Estimates for Final Rules October 1, 2010 - September 30, 2011 (As of Date of Completion of OMB Review)²⁴⁸

RIN	Title	Benefits (2001\$)	Costs (2001\$)	Other Information
<i>Department of Agriculture</i>				
0560- AH92	Biomass Crop Assistance Program [76 FR 56949]	Not estimated	Not estimated	Transfers: \$28-36 million The full RIA is available from agency upon request.
0560- AI11	Crop Assistance Program [75 FR 65423]	Not estimated	Not estimated	Transfers: \$111-439 million The full RIA is available from agency upon request.
0570- AA73	Biorefinery Assistance Program--Section 9003 [76 FR 8403]	Not estimated	Not estimated	Transfers: \$69-74 million The Interim Rule would benefit potential applicants considering applying for financial assistance under this program. Benefits accruing to the publication of the Interim Rule included making the program more accessible to lenders and their potential borrowers, aligning more of the provisions to the corresponding provisions of the Business and Industry Guaranteed Loan program, and clarifying any ambiguities conveyed in the NOFAs implementing the program prior to the Interim Rule. Additional benefits stem from the ability of the public and interested parties to comment on the Interim Rule. Benefits of developing and publishing a Final Rule would be further improvements to the program based on public comments on the Interim Rule and any relevant Agency experience since the publication of the Interim Rule. The full RIA is available from agency upon request.

²⁴⁸ Please note that for budgetary transfer rules, benefits and costs are not estimated because agencies typically estimate budgetary impacts instead.

RIN	Title	Benefits (2001\$)	Costs (2001\$)	Other Information
0570- AA75	Rural Business Contracts for Payments for the Bioenergy Program for Advanced Biofuels--Section 9005 [76 FR 7936]	Not estimated	Not estimated	<p>Transfers: \$63-65 million</p> <p>The Interim Rule would benefit potential applicants considering applying for payments under this program. Benefits accruing to the publication of the Interim Rule include clarifying the process, payments, eligibility, and any ambiguities conveyed in the NOCPs implementing the program prior to the Interim Rule. Additional benefits stem from the ability of the public and interested parties to comment on the Interim Rule. Benefits of developing and publishing a Final Rule would be further improvements to the program based on public comments on the Interim Rule and any relevant Agency experience since the publication of the Interim Rule. Implementation costs estimated to total \$4 million across four years. (2009 dollars)</p> <p>The full RIA is available from agency upon request.</p>
0572- AC06	Rural Broadband Access Loans and Loan Guarantees [76 FR 13770]	Not estimated	Not estimated	<p>Transfers: \$246-573 million</p> <p>The full RIA is available from agency upon request.</p>
0584- AD60	Direct Certification of Children in Food Stamp Households and Certification of Homeless, Migrant, and Runaway Children for Free Meals in the NSLP, SBP, and SMP [76 FR 22785]	Not estimated	\$2 million	<p>Transfers: \$55-58 million</p> <p>Improved access to NSLP meals by low income children; eliminate application burden for households.</p> <p>Local School Food Authorities will incur food, labor, and administrative costs to comply with new NSLP and SBP meal requirements. State education agencies will incur additional training, technical assistance, and SFA monitoring and compliance costs.</p> <p>The full RIA is available from agency upon request.</p>
0584- AE11	National School Lunch and School Breakfast Programs: School Food Service Account Revenue Amendments Related to the Healthy, Hunger-Free Kids Act of 2010 [76 FR 35301]	Not estimated	Not estimated	<p>Transfers: \$1,244-1,264 million</p> <p>Students and households, the USDA, and non-Federal sources will transfer resources to SFAs and the State Governments that administer the NSLP & SBP. Dollar values include FY 2011-2015. Annualized administrative costs estimated to equal \$1.7-1.8 million.</p> <p>The full RIA is available from agency upon request.</p>

<i>Department of Defense</i>				
0720-AB45	Civilian Health and Medical Program of the Uniformed Services (CHAMPUS)/TRICARE: Inclusion of TRICARE Retail Pharmacy Program in Federal Procurement of Pharmaceuticals [75 FR 63383]	Not estimated	Not estimated	Transfers: \$607-918 million
0790-AI58	Homeowners Assistance Program (HAP) [75 FR 69871]	Not estimated	Not estimated	Transfers: \$426-444 million The RIA is available from agency upon request.
<i>Department of Education</i>				
1840-AD02	Institutional Eligibility Under the Higher Education Act of 1965; Student Assistance General Provisions [75 FR 66832]	Not estimated	\$102 million Range: \$87-117 million	The RIA is included in the preamble. Qualitative benefits include updated administrative procedures for Federal student aid programs and increased disclosure to students about certain college programs.
1840-AD06	Program Integrity: Gainful Employment-Measures [75 FR 43616]	Not estimated	\$112 million Range: \$101-134 million	Transfers: \$316-421 million. Additional compliance costs from enhanced career or debt management counseling or other efforts to improve a program's performance on the debt measures have not been quantified. The RIA is included in the preamble.
<i>Department of Energy</i>				
1904-AA89	Energy Efficiency Standards for Clothes Dryers and Room Air Conditioners [76 FR 22454]	\$191 million Range: \$169-310 Million	\$132 million Range: \$129-182 million	The RIA is included in the preamble.
1904-AB79	Energy Efficiency Standards for Residential Refrigerators, Refrigerator-Freezers, and Freezers [76 FR 57561]	\$1,837 million Range: \$1,660-\$3,034 million	\$840 million Range: \$803-\$1,281 million	The RIA is included in the Technical Support Document as Chapter 17 and is available at: http://www1.eere.energy.gov/buildings/appliance_standards/pdfs/refrig_finalrule_tsd.pdf
1904-AC06	Energy Efficiency Standards for Residential Furnace, Central Air Conditioners and Heat Pumps [76 FR 37408]	\$940 Million Range: \$719-\$1,766 million	\$538 Million Range: \$475-\$724 million	The RIA is included in the Technical Support Document as Chapter 17 and is available at: http://www1.eere.energy.gov/buildings/appliance_standards/residential/pdfs/hvac_ch_17_ri_a_2011_06_08final.pdf

<i>Department of Health and Human Services</i>				
0920-AA44	Implementation of Title I of the James Zadroga 9/11 Health and Compensation Act: WTC Health Program Requirements for Enrollment, Appeals, Certification of Health Conditions, and Reimbursement [76 FR 38913]	Not estimated	Not estimated	Transfers: \$84-113 million The RIA is included in the preamble.
0938-AP53	Children's Health Insurance Program (CHIP); Allotment Methodology and States' Fiscal Year 2009 CHIP Allotments (CMS-2291-F) [76 FR 9233]	Not estimated	Not estimated	Transfers \$10,935-10,962 million The RIA is included in the preamble.
0938-AP79	Revisions to Payment Policies Under the Physician Fee Schedule and Part B for CY 2011 (CMS-1503-F) [75 FR 73169]	Not estimated	Not estimated	Transfers: \$12,804 million The RIA is included in the preamble.
0938-AP82	Changes to the Hospital Outpatient Prospective Payment System and Ambulatory Surgical Center Payment System for CY 2011 (CMS-1504-F) [75 FR 71799]	Not estimated	Not estimated	Transfers: \$573 million The RIA is included in the preamble.
0938-AP88	Home Health Prospective Payment System Refinements and Rate Update for CY 2011 (CMS-1510-FC) [75 FR 70371]	Not estimated	Not estimated	Transfers: \$786 million These transfers reflects the final distributional effects of an updated wage index, the 1.1 percent home health market basket update, the 3.79 percent case-mix adjustment applicable to the national standardized 60-day episode rates, as well as the 2.5 percent returned from the outlier provisions of the ACA. The RIA is included in the preamble.
0938-AQ00	Revisions to the Medicare Advantage and Medicare Prescription Drug Benefit Programs for Contract Year 2012(CMS-4144-F) [76 FR 21432]	Not estimated	\$30 million	Transfers: \$9,862-10,106 million The RIA is included in the preamble.
0938-AQ12	Administrative Simplification: Adoption of Authoring Organizations for Operating Rules and Adoption of Operating Rules for Eligibility and Claims Status (CMS-0032-IFC) [76 FR 40458]	\$1,034 million	\$438 million	The RIA is included in the preamble.
0938-AQ19	Medicaid Recovery Audit Contractors (CMS-6034-F) [76 FR 57808]	Not estimated	Not estimated	Transfers: \$335-343 million The RIA is included in the preamble.

0938-AQ20	Additional Screening, Application Fees, and Temporary Moratoria for Providers and Suppliers (CMS-6028-F) [76 FR 5861]	Not estimated	\$2 million	Transfers: \$47-48 million The RIA is included in the preamble.
0938-AQ23	Inpatient Psychiatric Facilities Prospective Payment System-- Update for Rate Year and Fiscal Year Beginning July 1, 2011 (CMS-1346-F) [76 FR 26432]	Not estimated	Not estimated	Transfers: \$97 million The RIA is included in the preamble.
0938-AQ24	Final Changes to the Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals and FY 2012 Rates and to the Long-Term Care Hospital PPS and FY 2012 Rates (CMS-1518-F) [76 FR 51476]	Not estimated	Not estimated	Transfers: \$1,209 million The RIA is included in the preamble.
0938-AQ28	Prospective Payment System for Inpatient Rehabilitation Facilities for FY 2012 (CMS-1349-P) [76 FR 47836]	Not estimated	Not estimated	Transfers: \$121 million The RIA is included in the preamble.
0938-AQ29	Prospective Payment System and Consolidated Billing for Skilled Nursing Facilities-- Update for FY 2012 (CMS-1351-P) [76 FR 48486]	Not estimated	Not estimated	Transfers: \$3,129 million The RIA is included in the preamble.
0938-AQ53	Enhanced Federal Funding for Medicaid Eligibility Determination and Enrollment Activities (CMS-2346-F) [76 FR 21950]	Not estimated	Not estimated	Transfers: \$283-518 million The RIA is included in the preamble.
0938-AQ55	Hospital Value-Based Purchasing Program (CMS-3239-F) [76 FR 26490]	Not estimated	Not estimated	No change in budget amount, but transfers between hospitals. Distributive impacts estimated at \$850 million. The RIA is included in the preamble.
0938-AQ60	Revisions to Medicare Advantage and Part D Prescription Drug Programs; MIPPA-Related Marketing Revisions and Agent/Broker Compensation Plan (CMS-4138-F) [76 FR 54600]	Not estimated	Not estimated	Transfers: \$68-69 million The RIA is included in the preamble.
0950-AA06	Medical Loss Ratios [75 FR 74864]	Not estimated	\$31 million Range: \$19-\$47 million	Transfers: \$762 million One-time costs to develop methods for capturing data, and annual costs related to reporting data to the Secretary and providing rebate notifications and payments. The RIA is included in the preamble.

Department of Housing and Urban Development				
2502-AI97	Emergency Homeowners' Loan Program [76 FR 11946]	\$868 million	\$88 million	<p>Transfers: \$623-\$1,261 million</p> <p>All benefits result from a single-years activity under the rule. Benefits are higher with a greater program participation and lower program foreclosure rate.</p> <p>All costs result from a single-years activity under the rule. Costs are higher with a greater program participation and higher program foreclosure rate. Thus, the high (and low) estimates for costs and benefits are not for the same scenario.</p> <p>The RIA is available at: http://portal.hud.gov/hudportal/documents/huddoc?id=ia-emrgncyhownerslp.pdf</p>
2502-AI70	SAFE Mortgage Licensing Act: Minimum Licensing Standards and Oversight Responsibilities (FR-5271-F-03) [76 FR 38464]	Not estimated	\$96-649	<p>The principal benefits of the SAFE Act include the enhanced protection of consumers and of the housing finance system as a whole by ensuring that covered loan originators meet minimum standards for integrity and competence nationwide. A fuller discussion of the qualitative benefits is provided in the analysis prepared for the rule.</p> <p>The RIA is included in the preamble.</p>
Department of the Interior				
1010-AD68	Increased Safety Measures for Oil and Gas Operations on the Outer Continental Shelf (OCS) [75 FR 63345]	Not estimated	\$150 million	<p>The RIA is available at: http://www.regulations.gov Document ID: BOEM-2010-0034-0002</p>
1018-AX34	Migratory Bird Hunting; 2011-12 Migratory Game Bird Hunting Regulations, Early Season [76 FR 54052]	\$271 million	Not estimated	<p>Information about the RIA is available at: http://www.fws.gov/migratorybirds/NewReportsPublications/SpecialTopics/SpecialTopics.html#HuntingRegs</p>
1018-AX34	Migratory Bird Hunting; 2011-12 Migratory Game Bird Hunting Regulations, Late Season [76 FR 58682]	\$271 million	Not estimated	<p>Information about the RIA is available at: http://www.fws.gov/migratorybirds/NewReportsPublications/SpecialTopics/SpecialTopics.html#HuntingRegs</p>
Department of Justice				
1105-AB39	James Zadroga 9/11 Health and Compensation Act of 2010 [76 FR 54112]	Not estimated	\$5 million	<p>Transfers: \$333-353 million</p> <p>The RIA is available at: http://www.justice.gov/civil/docs_forms/911%20VCF%20Final%20Rule%20to%20OLP-%2008%2026.pdf</p>

Department of Labor				
1210- AB07	Improved Fee Disclosure for Pension Plan Participants [75 FR 64910]	\$1,627 million Range: \$780-\$3,255 million	\$290 million Range: \$217-362 million	The regulation's disclosure requirements are expected to reduce participants' time otherwise used for searching for fee and other investment information. Plans are likely to incur administrative burdens and costs in order to comply with the requirements of the regulation. The quantified cost estimate includes costs due to legal review of the regulation, consolidation of fee information, creation and maintenance of a website, record keeping, production and distribution of disclosures, and material and postage costs. The RIA is available at: http://www.dol.gov/ebsa/pdf/frparticipantfeerule.pdf
1205- AB61	Wage Methodology for the Temporary Non-Agricultural Employment H-2B Program [76 FR 3452]	Not estimated	Not estimated	Transfers: \$685 million
1210- AB35	Statutory Exemption for Provision of Investment Advice [76 FR 66136]	\$10,916 million Range: \$5,789-\$15,134 million	\$3,060 million Range: \$1,571-\$4,218 million	The regulation is anticipated to extend quality, expert investment advice to a significantly greater number of participants. This will improve aggregate investment results, reflecting reductions in investment errors (including poor trading strategies and inadequate diversification). In addition to the quantified benefits, the Department anticipates that the regulation will improve aggregate investment results, reflecting reduced participants' investment related expenses, and will improve the welfare of participants by better aligning participant investments and their risk tolerance. The RIA is included in the preamble.
Department of Transportation				
2125- AF19	Real-Time System Management Information Program [75 FR 68418]	\$152 million Range: \$152-\$166 million	\$137 million Range: \$132-\$137 million	The RIA is available at: http://www.regulations.gov Document ID: FHWA-2010-0156-0001

2127- AK23	Ejection Mitigation [76 FR 10524]	\$1,500 million	\$419 million	The primary estimate was based on the 20 km/h curtain; the high estimate was based on the 20 km/h curtain with advanced glazing. Costs start with effective date around September 2013. Benefits start to occur also at that time but occur over the lifetime of the vehicle. Benefits go on potentially forever. With a 25 year passenger car and 36 year light truck lifetime, the period covered would be 2013 to 2049. Benefits are annualized over the 36 year period.
		Range: \$1,500- \$2,375 million	Range: \$419- \$1,373 million	
				The RIA is available at: http://www.nhtsa.gov/staticfiles/rulemaking/pdf/Ejection_mitigation_FR_Jan2011.pdf
Department of Transportation and Environmental Protection Agency				
2127- AK74 ; 206 0- AP61	Commercial Medium- and Heavy-Duty On-Highway Vehicles and Work Truck Fuel Efficiency Standards [76 FR 57106]	\$2,564 million	\$496 million	These annualized benefits represent total benefits (including fuel savings, the social cost of carbon, energy security, and other economic impacts) from EPA's calendar year analysis. The model year benefits presented here are also based on an average social cost of carbon (SCC) value derived using a 3% discount rate. ²⁴⁹ Annualized benefits from EPA's model year analysis are as follows: \$3.1 billion (7% DR) or \$2.6 billion (3% DR). These values use the same SCC assumption and include the benefits from fuel savings. More details regarding the benefits can be found in the Preamble Sections VII and VIII.
		Range: \$2,150- 2,564 million	Range: \$331-496 million	
				DOT's RIA is available at: http://www.nhtsa.gov/staticfiles/rulemaking/pdf/cape/FR-EO12866_GHG+Fuel_Stds_Med-Heavy_Vehicles.pdf
				EPA's RIA is available at: http://www.epa.gov/otaq/climate/documents/420r11901.pdf
Department of the Treasury				
1510- AB26	Management of Federal Agency Disbursements [75 FR 80315]	\$96 million	Not estimated	The RIA is included in the preamble.

²⁴⁹ NHTSA and EPA estimated the benefits associated with four different values of a one ton CO₂ reduction (model average at 2.5% discount rate, 3%, and 5%; 95th percentile at 3%). For the purposes of this overview presentation of estimated costs and benefits, however, we are showing the benefits associated with the marginal value deemed to be central by the interagency working group on this topic: the model average at 3% discount rate, in 2009 dollars. The RIA for the heavy-duty vehicle rule provides a complete list of values for the 4 estimates.

1545-BH01	Regulations Governing Practice Before the Internal Revenue Service [76 FR 32286]	Not estimated	Not estimated	The RIA is included in the preamble
1505-AC34	Small Business Lending Fund Refinance	Not estimated	Not estimated	Transfers: \$2,264 million The RIA is included in the preamble
<i>Department of Veterans Affairs</i>				
2900-AN37	Payment for Inpatient and Outpatient Health Care Professional Services at Non-Departmental Facilities and Other Medical Charges Associated with Non-VA Outpatient Care [75 FR 78901]	Not estimated	Not estimated	Transfers: \$284-297 million The RIA is available at: http://www.va.gov/ORPM/docs/RegMgmt_RegulatoryImpactAnalysisAN37Final_20101202.doc
2900-AN94	Caregivers Program [76 FR 26148]	Not estimated	Not estimated	Transfers: \$107-113 million The RIA is available at: http://www.regulations.gov Document ID: VA-2011-VHA-0012-0002 Also available at: http://www.va.gov/ORPM/docs/RegMgmt_ImpactAnalysisAN94InterimFinal_20110428.doc
2900-AO10	Vocational Rehabilitation and Employment Program—Changes to Subsistence Allowance [76 FR 45697]	Not estimated	Not estimated	Transfers: \$126-133 million The RIA is available at: http://www.regulations.gov Document ID: VA-2011-VBA-0021-0002 Also available at: http://www.va.gov/ORPM/docs/RegMgmt_RegulatoryImpactAnalysisAO10InterimFinal_20110720.docx
<i>Environmental Protection Agency</i>				
2040-AF11	Water Quality Standards (Numeric Nutrient Criteria) for Florida's Lakes and Flowing Waters [75 FR 75762]	\$23 million	\$140 million	The RIA is included in the preamble.
2050-AG50	Oil Pollution Prevention: Spill Prevention, Control, and Countermeasure Rule Requirements - Amendments for Milk Containers [76 FR 21652]	Not estimated	(\$121 million) Range: (\$118-121 million)	The RIA is available at: http://www.regulations.gov Document ID: EPA-HQ-OPA-2008-0821-0004
2060-AP50	Cross-State Air Pollution Rule (CAIR Replacement Rule) [76 FR 48208]	\$20,467-\$59,697 million	\$691 million	The RIA is available at: http://www.epa.gov/crossstaterule/pdfs/TR_070611_WEB.pdf

<i>Equal Employment Opportunity Commission</i>						
3046-AA85	Regulations To Implement the Equal Employment Provisions of the Americans With Disabilities Act Amendments Act [76 FR 16978]	Not estimated	\$107 million	Range: \$53-161 million	The RIA is included in the preamble	

Table A-2: Estimates of Annual Benefits and Costs of Major Final Rules October 1, 2001 - September 30, 2010²⁵⁰
(millions of 2001 dollars)

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
<i>Department of Agriculture</i>						
0579-AB73	Bovine Spongiform Encephalopathy: Minimal Risk Regions and Importation of Commodities	12/29/04	1/4/05	572-639	557-623	2006 Report: Table 1-4
0579-AB81	Mexican Hass Avocado Import Program	11/23/04	11/30/04	122-184	71-114	2006 Report: Table 1-4
0579-AC01	Bovine Spongiform Encephalopathy; Minimal-Risk Regions and Importation of Commodities	9/14/07	9/18/07	169-340	98-194	2008 Report: Table 1-4
0583-AC46	Performance Standards for Ready-To-Eat Meat and Poultry Products	5/30/03	6/6/03	43-152	17	2004 Report: Table 12
0583-AC88	Prohibition of the Use of Specified Risk Materials for Human Food and Requirements for the Disposition of Non-Ambulatory Disabled Cattle	6/29/07	7/13/07	0	87-221	2008 Report: Table 1-4
<i>Department of Energy</i>						
1904-AA78	Energy Efficiency Standards for Residential Furnaces and Boilers	11/6/07	11/19/07	120-182	33-38	2009 Report: Table 1-4
1904-AA90	Energy Efficiency Standards for Pool Heaters and Direct Heating Equipment and Water Heaters [75 FR 20112]	3/30/10	4/16/10	1,274-1,817	975-1,122	2011 Report: Table A-1
1904-AA92	Energy Efficiency Standards for General Service Fluorescent Lamps and Incandescent Lamps	6/26/09	7/14/09	1,111-2,886	192-657	2010 Report: Table 1-4
1904-AB08	Energy Efficiency Standards for Electric Distribution Transformers	9/27/07	10/12/07	490-865	381-426	2008 Report: Table 1-4

²⁵⁰ Based on date of completion of OMB review.

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
1904-AB59	Energy Efficiency Standards for Commercial Refrigeration Equipment	12/18/08	1/9/09	186-224	69-81	2010 Report: Table 1-4
1904-AB70	Energy Conservation Standards for Small Electric Motors [75 FR 10874]	2/25/10	3/9/10	688-827	218	2011 Report: Table A-1
1904-AB93	Energy Efficiency Standards for Commercial Clothes Washers [75 FR 1122]	12/23/09	1/8/10	46-67	17-21	2011 Report: Table A-1
<i>Department of Health and Human Services</i>						
0910-AB66	Food Labeling: Trans Fatty Acids in Nutrition Labeling, Nutrient Content Claims, and Health Claims	7/2/03	7/11/03	230-2,839	9-26	2004 Report: Table 12
0910-AB76	CGMPs for Blood and Blood Components: Notification of Consignees and Transfusion Recipients Receiving Blood and Blood Components at Increased Risk of Transmitting HCV Infection (Lookback)	8/14/07	8/24/07	28-130	11	2008 Report: Table 1-4
0910-AB88	Current Good Manufacturing Practice in Manufacturing, Packing, or Holding Dietary Ingredients and Dietary Supplements	5/8/07	6/25/07	10-79	87-293	2008 Report: Table 1-4
0910-AC14	Prevention of Salmonella Enteritidis in Shell Eggs	7/2/09	7/9/09	206-8,583	48-106	2010 Report: Table 1-4
0910-AC26	Bar Code Label Requirements for Human Drug Products and Blood Products	2/17/04	2/26/04	1,352-7,342	647	2005 Report: Table 1-4
0910-AC34	Amendments to the Performance Standard for Diagnostic X-Ray Systems and Their Major Components	5/27/05	6/10/05	87-2,549	30	2006 Report: Table 1-4
0910-AC48	Applications for FDA Approval To Market a New Drug Patent Listing Requirements and Application of 30-Month Stays on Approval of Abbreviated New Drug Applications Certifying That a Patent...	6/9/03	6/18/03	226	10	2004 Report: Table 12
0910-AF19	Declaring Dietary Supplements Containing Ephedrine Alkaloids Adulterated Because They Present an Unreasonable Risk of Illness or Injury (Final Rule)	2/5/04	2/11/04	0-130	7-89	2005 Report: Table 1-4
0919-AA01	Patient Safety and Quality Improvement Act of 2005 Rules	11/14/08	11/21/08	69-136	87-121	2010 Report: Table 1-4

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
0938-AH99	Health Insurance Reform: Standard Unique Health Care Provider Identifier -- CMS-0045-F	1/13/04	1/23/04	214	158	2005 Report: Table 1-4
0938-AM50	Updates to Electronic Transactions (Version 5010) (CMS-0009-F)	1/9/09	1/16/09	1,114-3,194	661-1,449	2010 Report: Table 1-4
0938-AN25	Revisions to HIPAA Code Sets (CMS-0013-F)	1/9/09	1/16/09	77-261	44-238	2010 Report: Table 1-4
0938-AN49	Electronic Prescribing Standards (CMS-0011-F)	11/1/05	11/7/05	196-660	82-274	2007 Report: Table 1-4
0938-AN79	Fire Safety Requirements for Long-Term Care Facilities: Sprinkler Systems (CMS-3191-F)	8/6/08	8/13/08	53-56	45-56	2009 Report: Table 1-4
0938-AN95	Immunization Standard for Long Term Care Facilities (CMS-3198-P)	9/30/05	10/7/05	11,000	6	2006 Report: Table 1-4
<i>Department of Homeland Security</i>						
1651-AA72	Changes to the Visa Waiver Program To Implement the Electronic System for Travel Authorization (ESTA) Program	5/30/08	6/9/08	20-29	13-99	2009 Report: Table 1-4
<i>Department of Housing and Urban Development</i>						
2502-AI61	Real Estate Settlement Procedures Act (RESPA); To Simplify and Improve the Process of Obtaining Mortgages and Reduce Consumer Costs (FR-5180)	11/7/08	11/17/08	2,303	884	2010 Report: Table 1-4
<i>Department of Justice</i>						
1117-AA60	Electronic Orders for Schedule I and II Controlled Substances	3/18/05	4/1/05	275	108-118	2006 Report: Table 1-4
1117-AA61	Electronic Prescriptions for Controlled Substances [75 FR 16236]	3/10/10	3/31/10	348-1,320	35-36	2011 Report: Table A-1
1190-AA44	Nondiscrimination on the Basis of Disability in Public Accommodations and Commercial Facilities [75 FR 56164]	7/22/10	9/15/10	980-2,056	549-719	2011 Report: Table A-1
1190-AA46	Nondiscrimination on the Basis of Disability in State and Local Government Services [75 FR 56236]	7/22/10	9/15/10	151-304	122-172	2011 Report: Table A-1
<i>Department of Labor</i>						
1210-AB06	Revision of the Form 5500 Series and Implementing Regulations	8/30/07	11/16/07	0	(83)	2008 Report: Table 1-4
1218-AB45	Occupational Exposure to Hexavalent Chromium (Preventing Occupational Illness: Chromium)	2/17/06	2/28/06	35-862	263-271	2007 Report: Table 1-4

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
1218-AB77	Employer Payment for Personal Protective Equipment	11/2/07	11/15/07	40-336	2-20	2009 Report: Table 1-4
1219-AB46	Emergency Mine Evacuation	12/5/06	12/8/06	10	41	2008 Report: Table 1-4
1218-AC01	Cranes and Derricks in Construction [75 FR 47906]	6/22/10	8/9/10	172	123-126	2011 Report: Table A-1
Department of Transportation						
2120-AH68	Reduced Vertical Separation Minimum in Domestic United States Airspace (RVSM)	10/8/03	10/27/03	(60)	(320)	2005 Report: Table 1-4
2120-AI17	Washington, DC, Metropolitan Area Special Flight Rules Area	12/3/08	12/16/08	10-839	89-382	2010 Report: Table 1-4
2120-AI23	Transport Airplane Fuel Tank Flammability Reduction	7/9/08	7/21/08	21-66	60-67	2009 Report: Table 1-4
2120-AI51	Congestion and Delay Reduction at Chicago O'Hare International Airport	8/18/06	8/29/06	153-164	0	2007 Report: Table 1-4
2120-AI92	Automatic Dependent Surveillance--Broadcast (ADS-B) Equipage Mandate to Support Air Traffic Control Service [75 FR 30160]	5/20/10	5/28/10	144-189	148-284	Internal database ²⁵¹
2120-AJ01	Part 121 Pilot Age Limit	6/8/09	7/15/09	30-35	4	2010 Report: Table 1-4
2126-AA23	Hours of Service Drivers; Driver Rest and Sleep for Safe Operation	4/9/03	4/28/03	690	1,318	2004 Report: Table 12
2126-AA59	New Entrant Safety Assurance Process	11/26/08	12/16/08	472-602	60-72	2010 Report: Table 1-4
2126-AA89	Electronic On-Board Recorders for Hours-of-Service Compliance ²⁵²	3/18/2010	4/5/10	Not Included	Not Included	2011 Report: Table A-1
2126-AA90	Hours of Service of Drivers	8/16/05	8/25/05	19	(235)	2006 Report: Table 1-4
2126-AB14	Hours of Service of Drivers ²⁵³	11/13/08	11/19/08	Not included	Not included	2010 Report: Table 1-4

²⁵¹ The benefits and costs of this rule were misreported in Table A-1 of the *2011 Report to Congress on the Costs and Benefits of Federal Regulations and Unfunded Mandates on State, Local and Tribal Entities*. The correct estimates are drawn from the OMB internal database, "ROCIS."

²⁵² This rule was vacated on Aug. 26, 2011, by the U.S. Court of Appeals for the Seventh Circuit. (Benefits: \$165-170 million; Costs: \$126-129 million.)

²⁵³ As explained in the 2010 Report, the benefits and costs of this rule are not included in the benefit and cost totals for the 10-year aggregate. This interim final rule reestablished policies on the maximum time truck drivers were able to drive per day and per week, and the minimum period before which truck drivers could restart the count of their weekly driving time. These policies were put in place through previous rulemakings on the same subject, but were vacated in 2007 by the United States Court of Appeals for the D.C. Circuit, which held that the Agency had failed to provide an opportunity for public comment on certain aspects of their Regulatory Impact Analysis. Furthermore, the analysis accompanying this interim final rule analyzed the impact of maintaining these policies relative to the disruptive impact of their prompt removal, not relative to previous fully-implemented policies. Since OMB already reported and attributed the benefits and costs of the Hours of Service Regulations to other

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
2127-AG51	Roof Crush Resistance	4/30/09	5/12/09	374-1,160	748-1,189	2010 Report: Table 1-4
2127-AH09	Upgrade of Head Restraints	11/23/04	12/14/04	111-139	83	2006 Report: Table 1-4
2127-AI10	Advanced Air Bags: Response to Petitions Federal Motor Vehicle Safety Standards; Occupant Crash Protection	12/5/01	12/18/01	140-1,600	400-2,000	2002 Report: Table 19
2127-AI33	Tire Pressure Monitoring Systems ²⁵⁴	5/29/02	6/5/02	Not Included	Not Included	2003 Report: Table 19
2127-AI70	Light Truck Average Fuel Economy Standards, Model Years 2005-2007	3/31/03	4/7/03	255	220	2004 Report: Table 12
2127-AI91	Rear Center Lap/Shoulder Belt Requirement--Standard 208	11/30/04	12/8/04	188-236	162-202	2006 Report: Table 1-4
2127-AJ10	Side Impact Protection Upgrade--FMVSS No. 214	8/28/07	9/11/07	736-1,058	401-1,051	2008 Report: Table 1-4
2127-AJ23	Tire Pressure Monitoring Systems	3/31/05	4/8/05	1,012-1,316	938-2,282	2006 Report: Table 1-4
2127-AJ37	Reduced Stopping Distance Requirements for Truck Tractors	7/16/09	7/27/09	1,250-1,520	23-164	2010 Report: Table 1-4
2127-AJ61	Light Truck Average Fuel Economy Standards, Model Year 2008 and Possibly Beyond	3/28/06	4/6/06	847-1,035	666-754	2007 Report: Table 1-4
2127-AJ77	Electronic Stability Control (ESC)	3/23/07	4/6/07	5,987-11,282	913-917	2008 Report: Table 1-4
2127-AK29	Passenger Car and Light Truck Corporate Average Fuel Economy Model Year 2011	3/24/09	3/30/09	857-1,905	650-1,910	2010 Report: Table 1-4
2130-AC03	Positive Train Control [75 FR 2597]	12/30/09	1/15/10	34-37	519-1,264	2011 Report: Table A-1
2137-AD54	Pipeline Integrity Management in High Consequence Areas (Gas Transmission Pipelines)	11/26/03	12/15/03	154	288	2005 Report: Table 1-4
2137-AE15	Pipeline Safety: Distribution Integrity Management [74 FR 63906]	11/6/09	12/4/09	97-145	92-97	2011 Report: Table A-1
2137-AE25	Pipeline Safety: Standards for Increasing the Maximum Allowable Operating Pressure for Gas Transmission Pipelines	10/2/08	10/17/08	85-89	13-14	2010 Report: Table 1-4
2130-AB84	Regulatory Relief for Electronically Controlled Pneumatic Brake System Implementation	8/29/08	10/16/08	828-884	130-145	2009 Report: Table 1-4

rulemakings, and those policies were maintained by this interim final rule, we felt that including the benefits and costs of this rulemaking in the ten-year totals would constitute double counting.

²⁵⁴ Superseded by the 2005 final rule (RIN 2127-AJ23).

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
<i>Department of Transportation and Environmental Protection Agency</i>						
2060-AP58; 2127-AK50	Light-Duty Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards [75 FR 25323]	3/31/10	5/7/10	3.9-18.2 thousand	1.7-4.7 thousand	2011 Report: Table 1-5(a)
<i>Environmental Protection Agency</i>						
2040-AD19	National Pollutant Discharge Elimination System Permit Regulation and Effluent Guidelines and Standards for Concentrated Animal Feeding Operations (CAFOs)	12/14/02	2/12/03	204-355	360	2004 Report: Table 12
2040-AD37	National Primary Drinking Water Regulations: Long Term 2 Enhanced Surface Water Treatment Rule	6/22/05	1/5/06	262-1,785	80-132	2006 Report: Table 1-4
2040-AD38	National Primary Drinking Water Regulations: Stage 2 Disinfection Byproducts Rule	11/23/05	1/4/06	598-1,473	74-76	2007 Report: Table 1-4
2040-AD56	Effluent Guidelines and Standards for the Meat and Poultry Products Point Source Category (Revisions)	2/26/04	9/8/04	0-10	41-56	2005 Report: Table 1-4
2040-AD62	Establishing Location, Design, Construction, and Capacity Standards for Cooling Water Intake Structures at Large Existing Power Plants (Final Rule) ²⁵⁵	2/16/04	7/9/04	Not Included	Not Included	2005 Report: Table 1-4
2050-AG16	Revisions to the Spill Prevention, Control, and Countermeasure (SPCC) Rule [74 FR 58784]	10/23/09	11/13/09	0	(78-85)	2011 Report: Table A-1
2050-AG23	Oil Pollution Prevention; Spill Prevention, Control, and Countermeasure (SPCC) Requirements--Amendments	11/15/06	12/26/06	0	(86-148)	2008 Report: Table 1-4
2050-AG31	Definition of Solid Wastes Revisions	9/17/08	10/30/08	16-285	14	2009 Report: Table 1-4
2060-AG52	Plywood and Composite Wood Products	2/26/04	7/30/04	152-1,437	155-291	2005 Report: Table 1-4
2060-AG63	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	2/26/04	6/15/04	105-1,070	270	2005 Report: Table 1-4

²⁵⁵ On January 25, 2007, the Second Circuit remanded this rule back to EPA for revisions and EPA suspended the provisions of the rule. On April 1, 2009, the Supreme Court reversed one part of the Second Circuit ruling related to the use of cost-benefit analysis and remanded the rule to the lower court, which returned the rule to EPA for further consideration at the agency's request. (Benefits: \$72 million; Costs: \$383 million.)

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
2060-AG69	National Emission Standards for Hazardous Air Pollutants: Industrial/Commercial/Institutional Boilers and Process Heaters ²⁵⁶	2/26/04	9/13/04	Not Included	Not Included	2005 Report: Table 1-4
2060-AI11	Emissions From Nonroad Spark-Ignition Engines and Standards for Recreational Spark-Ignition Engines	9/13/02	11/8/02	1,330-4,818	192	2003 Report: Table 19
2060-AI44	Review of the National Ambient Air Quality Standards for Particulate Matter ²⁵⁷	9/21/06	10/17/06	Not Included	Not Included	2007 Report: Table 1-4
2060-AJ31	Clean Air Visibility Rule	6/15/05	7/6/05	2,302-8,153	314-846	2006 Report: Table 1-4
2060-AJ65	Clean Air Mercury Rule-- Electric Utility Steam Generating Units ²⁵⁸	3/15/05	5/18/05	Not Included	Not Included	2006 Report: Table 1-4
2060-AK27	Control of Emissions of Air Pollution From Nonroad Diesel Engines and Fuel (Final Rule)	5/7/04	6/29/04	6,853-59,401	1,336	2005 Report: Table 1-4
2060-AK70	Control of Hazardous Air Pollutants From Mobile Sources	2/8/07	2/26/07	2,310-2,983	298-346	2008 Report: Table 1-4
2060-AK74	Clean Air Fine Particle Implementation Rule	3/28/07	4/25/07	18,833-167,408	7,324	2008 Report: Table 1-4
2060-AL76	Clean Air Interstate Rule Formerly Titled: Interstate Air Quality Rule ²⁵⁹	3/10/05	5/12/05	11,947-151,769	1,716-1,894	2006 Report: Table 1-4

²⁵⁶ On June 19, 2007, the United States Court of Appeals for the District of Columbia Circuit vacated and remanded the national emission standards for hazardous air pollutants for industrial/commercial/institutional boilers and process heaters. Thus, we exclude this rule from the 10-year aggregates in previous reports. (Benefits: \$3,752-\$38,714 million; Costs: \$876 million.)

²⁵⁷ Although promulgated in 2006, this rule was removed from the 10-year aggregate estimates to avoid double counting benefits and costs with implementing regulations. (Benefits: \$3,837-\$39,879 million; Costs: \$2,590-\$2,833 million.)

²⁵⁸ On February 8, 2008, the D.C. Circuit vacated EPA's rule removing power plants from the Clean Air Act list of sources of hazardous air pollutants. At the same time, the Court vacated the Clean Air Mercury Rule. Thus, we exclude this rule from the 10-year aggregates. (Benefits: \$1-2 million; Costs: \$500 million.)

²⁵⁹ On December 23, 2008, CAIR was initially vacated by the U.S. Court of Appeals for the District of Columbia Circuit, see *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008) (per curiam), but in a later decision on rehearing the court modified the remedy to remand without vacatur, thus allowing EPA to continue to administer CAIR pending further rulemaking, see *North Carolina v. EPA*, 550 F.3d 1176 (D.C. Cir. 2008) (per curiam). On July 6, 2011, EPA finalized the Cross-State Air Pollution Rule (CSAPR), which responded to the remand in *North Carolina* and was designed to replace CAIR. On August 21, 2012, a divided panel of the D.C. Circuit vacated CSAPR while again keeping CAIR in place pending further EPA action. See *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012). On January 24, 2013, the D.C. Circuit denied EPA's petition for rehearing en banc. EPA has filed a petition for certiorari in the Supreme Court.

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
2060-AM06	Control of Emissions from New Locomotives and New Marine Diesel Engines Less Than 30 Liters per Cylinder	2/14/08	5/6/08	4,145-14,550	295-392	2009 Report: Table 1-4
2060-AM34	Control of Emissions From Nonroad Spark-Ignition Engines and Equipment	8/18/08	10/8/08	899-4,762	196-200	2009 Report: Table 1-4
2060-AM82	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	6/28/06	7/11/06	679-757	56	2007 Report: Table 1-4
2060-AN24	Review of the National Ambient Air Quality Standards for Ozone	3/12/08	3/27/08	1,581-14,934	6,676-7,730	2009 Report: Table 1-4
2060-AN72	Petroleum Refineries--New Source Performance Standards (NSPS)--Subpart J	4/30/08	6/24/08	176-1,669	27	2009 Report: Table 1-4
2060-AN83	Review of the National Ambient Air Quality Standards for Lead	10/15/08	11/12/08	455-5,203	113-2,241	2010 Report: Table A-1
2060-AO15	National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants [75 FR 54970]	8/6/10	9/9/10	6,074-16,317	839-861	2011 Report: Table A-1
2060-AO48	Review of the National Ambient Air Quality Standards for Sulfur Dioxide [75 FR 35519]	6/2/10	6/22/10	2,809-38,628	334-2,019	2011 Report: Table A-1
2060-AP36	National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (Diesel) [75 FR 9647]	2/17/10	3/3/10	709-1,920	296-311	2011 Report: Table A-1
2060-AQ13	National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines--Existing Stationary Spark Ignition (Gas-Fired) [75 FR 51569]	8/10/10	8/20/10	380-992	202-209	2011 Report: Table A-1
2070-AC83	Lead-Based Paint; Amendments for Renovation, Repair and Painting	3/28/08	4/22/08	657-1,611	383-417	2009 Report: Table 1-4
2070-AJ55	Lead; Amendment to the Opt-out and Recordkeeping Provisions in the Renovation, Repair, and Painting Program [75 FR 24802]	4/22/10	5/6/10	785-2,953	267-290	2011 Report: Table A-1

() indicates negative.

APPENDIX B: THE BENEFITS AND COSTS OF 2000-2001 MAJOR RULES

Table B-1 lists the rules that were omitted from the ten-year running totals presented in Chapter I of our Report to Congress. It consists of the annualized and monetized benefits and costs of rules for which OMB concluded review between October 1, 2000 and September 30, 2001. These rules were included in Chapter I of the 2011 Report as part of the ten-year totals, but are not included in the 2012 Report.

While we limit the Chapter I accounting statement to regulations issued over the previous ten years, we have included in this Appendix the benefits and cost estimates provided for the economically significant rulemakings that have been covered in previous Reports in order to provide transparency. These estimates were first included in the 2002 Report (see Table 19 in that report), except for Energy Efficiency Standards for Central Air Conditioners and Heat Pumps, which was included in the 2003 Report (Table 19).

**Table B-1: Estimates of Annual Benefits and Costs of Twelve Major Federal Rules
October 1, 2000 - September 30, 2001**
(millions of 2001 dollars)

Agency	RIN	Title	OMB Review Completed	Benefits	Costs
USDA/Forest	0596-AB77	Special Areas; Roadless Area Conservation -- 36 CFR Part 294	1/5/01	0	184
HHS/FDA	0910-AA43	Hazard Analysis and Critical Control Point (HACCP); Procedures for the Safe and Sanitary Processing and Importing of Juice	1/10/01	150	30
HHS/FDA	0910-AB30	Food Labeling: Safe Handling Statements, Labeling of Shell Eggs; Refrigeration of Shell Eggs Held for Retail Distribution	11/29/00	261	15
HHS/CMS	0991-AB08	Standards for Privacy of Individually Identifiable Health Information	12/19/00	2,700	1,680
DOL/OSHA	1218-AA65	Safety Standards for Steel Erection	1/8/01	167	78
DOE/EE	1904-AA67	Energy Efficiency Standards for Clothes Washers	1/2/01	2,150	940
DOE/EE	1904-AA76	Energy Efficiency Standards for Water Heaters	1/9/01	680	510
DOE/EE	1904-AA77	Energy Efficiency Standards for Central Air Conditioners and Heat Pumps	1/17/01	1,233	1,132
EPA/Water	2040-AB75	National Primary Drinking Water Regulations, Arsenic, and Clarifications to Compliance and New Source Contaminants Monitoring	1/10/01	140-198	206
EPA/AR	2060-AI34	National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion	12/15/00	293-393	32

		Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills			
EPA/AR	2060-AI69	Heavy-Duty Engine Emission Standards and Diesel Fuel Sulfur Control Requirements 2007	12/21/00	13,000	2,400
EPA/OPPTS	2070-AD38	Lead and Lead Compounds; Lowering of Reporting Thresholds; Community Right-to-Know Toxic Chemical Release Reporting	1/8/01	1,750-6,840	2,700

**APPENDIX C: INFORMATION ON THE REGULATORY ANALYSES FOR MAJOR RULES BY
INDEPENDENT AGENCIES**

**Table C-1: Total Number of Major Rules Promulgated by Independent Agencies,
October 1, 2002 – September 30, 2011**

Agency	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Commodity Futures Trading Commission (CFTC)	--	--	--	--	--	--	--	--	--	1
Consumer Product Safety Commission (CPSC)	--	--	--	--	1	--	--	--	--	1
Federal Communications Commission (FCC)	4	--	1	4	2	2	4	--	--	--
Federal Energy Regulatory Commission (FERC)	--	--	--	--	--	--	1	--	--	--
Federal Reserve System	--	1	1	--	--	--	--	3	7	4
Federal Trade Commission (FTC)	--	--	--	1	--	--	--	--	1	--
National Credit Union Administration (NCUA)	--	--	--	--	--	--	--	--	--	--
Nuclear Regulatory Commission (NRC)	1	1	1	1	1	1	2	2	1	1
Pension Benefit Guaranty Corporation (PBGC)	--	--	--	--	--	--	--	--	--	--
Securities and Exchange Commission (SEC)	3	5	1	5	--	7	4	8	9	10
Total	8	7	4	11	4	10	11	13	18	17

**Table C-2: Total Number of Major Rules with Some Information on Benefits or Costs
Promulgated by Independent Agencies, October 1, 2002- September 30, 2011²⁶⁰**

Agency	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Commodity Futures Trading Commission (CFTC)	--	--	--	--	--	--	--	--	--	1
Consumer Product Safety Commission (CPSC)	--	--	--	--	1	--	--	--	--	0
Federal Communications Commission (FCC)	0	0	1	0	0	0	0	--	--	--
Federal Energy Regulatory Commission (FERC)	--	--	--	--	--	--	1	--	--	--
Federal Reserve System	--	0	1	--	--	--	--	0	2	0
Federal Trade Commission (FTC)	--	--	--	0	--	--	--	--	1	--
National Credit Union Administration (NCUA)	--	--	--	--	--	--	--	--	--	--

²⁶⁰ Table C-2 excludes all fee assessment rules promulgated by independent agencies. FCC promulgated six fee assessment rules from 1997 through 2002. NRC promulgated 13 statutorily mandated fee assessment rules from 1997 through 2011.

Nuclear Regulatory Commission (NRC)	--	--	--	--	--	--	1	1	--	1
Pension Benefit Guaranty Corporation (PBGC)	--	--	--	--	--	--	--	--	--	--
Securities and Exchange Commission (SEC)	3	5	1	5	--	7	4	8	9	9
Total	3	5	3	5	1	7	6	9	12	11

APPENDIX D: THE BENEFITS AND COSTS OF MAJOR RULES BY ADMINISTRATION

Chapter II presents estimates of the annual benefits and costs of major final regulations reviewed by OMB during the first three fiscal years of three Administrations. The totals presented in chapter II are based on aggregation of estimates presented in previous reports. Table D-1 includes major final rules for which OMB completed review between January 20, 1993, and September 30, 1995, where both benefit and cost estimates were previously reported. Table D-2 includes major final rules for which OMB completed review between January 20, 2001, and September 30, 2003, where both benefit and cost estimates were previously reported. Table D-3 includes major final rules for which OMB completed review between January 20, 2009, and September 30, 2011, where both benefit and cost estimates were previously reported. OMB presents more detailed explanation of these regulations in several previous documents.

Table D-1: Estimates of Annual Benefits and Costs of Major Federal Rules, January 20, 1993 to September 30, 1995²⁶¹
(millions of 2001 dollars per year)

Agency	RIN	Title	OMB Review Completed	Published	Benefits	Costs
EPA	2060-AC65	Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines, Regulations Requiring on-Board Diagnostic Systems on 1994 and Later Model Year Light-Duty Vehicles	1/28/93	2/19/93	\$2,062.3	\$226.0
HUD	2502-AE66	Manufactured Housing Construction and Safety Standards	9/21/93	10/21/93	\$103.0	\$63.0
EPA	2060-AD91	Accelerated Phaseout of Ozone Depleting Chemicals and Listing and Phaseout of Methyl Bromide	11/29/93	12/10/93	\$2,626.5	\$1,681.0
EPA	2060-AD27	Fuel and Fuel Additives: Standards for Reformulated Gasoline	12/15/93	2/16/94	\$534.5	\$1,240.0
EPA	2060-AC64	Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines, Refueling Emission Regulations for Light-Duty Vehicles and Trucks and Heavy-Duty Vehicles	1/22/94	4/6/94	\$463.5	\$33.0
DOT	2125-AC85	Controlled Substances and Alcohol Use and Testing	1/25/94	2/15/94	\$1,539.0	\$114.0
DOT	2105-AE43	Prevention of Alcohol Misuse in the Aviation, Transit, Motor Carrier, Railroad, and Pipeline Industries, Common Preamble	1/25/94	2/15/94	\$107.0	\$37.0
EPA	2060-AC19	Hazardous Organic NESHP (HON) for the Synthetic Organic Chemical Manufacturing Industry (SOCMI) and Other Processes	2/28/94	4/22/94	\$1,610.5	\$314.0

²⁶¹ Based on date of completion of OMB review.

Subject to the Negotiated Regulation for Equipment Leaks						
EPA	2060-AD54	Determination of Significance for Nonroad Sources and Emission Standards for New Nonroad Compression Ignition Engines At or Above 37 Kilowatts, Control of Air Pollution -- SAN 3112	5/26/94	6/17/94	\$3,734.0	\$49.5
DOL	1218-AB25	Occupational Exposure to Asbestos	7/1/94	8/10/94	\$92.0	\$448.0
EPA	2050-AD89	Land Disposal Restrictions Phase II, Universal Treatment Standards and Treatment Standards for Organic Toxicity, Characteristic Wastes, and Newly Listed Wastes	7/29/94	9/19/94	\$26.0	\$256.0
EPA	2060-AD71	Interim Requirements for Deposit Control Gasoline Additives, Regulations of Fuels and Fuel Additives	10/14/94	11/01/1994	\$1,045.0	\$197.0
EPA	2040-AC35	Bay/Delta Water Quality Standards	12/13/94	1/24/1995	\$14.0	\$142.5
DOT	2115-AD61	Double Hull Standards for Vessels Carrying Oil in Bulk	1/20/95	3/10/1995	\$17.0	\$583.0
DOT	2127-AA00	FMVSS: Stability and Control of Medium and Heavy Vehicles During Braking	2/13/95	3/10/1995	\$2,094.5	\$694.0
EPA	2060-AD45	Acid Rain Nitrogen Oxides Emission Reduction Programs	3/20/95	4/13/1995	\$2,439.5	\$297.0
EPA	2060-AD02	Federal Standards for Marine Tank Vessel Loading and Unloading Operations and NESHAP for Marine Tank Vessel Loading and Unloading Operations	7/28/95	9/19/95	\$507.0	\$153.0
EPA	2060-AD94	National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries	7/28/95	8/18/1995	\$412.5	\$105.5
DOT	2127-AB85	Head Impact Protection	8/10/95	8/18/95	\$1,855.0	\$633.0

Table D-2: Estimates of Annual Benefits and Costs of Major Federal Rules, January 20, 2001 to September 30, 2003²⁶²
(millions of 2001 dollars per year)

Agency	RIN	Title	OMB Review Completed	Published	Benefits	Costs
DOT	2127-AI10	Advanced Air Bags: Response to Petitions Federal Motor Vehicle Safety Standards; Occupant Crash Protection	12/5/01	12/18/01	\$870.0	\$1,200.0
DOT	2127-AI33	Tire Pressure Monitoring Systems*	5/29/02	6/5/02	\$676.5	\$977.5

²⁶² Based on date of completion of OMB review.

EPA	2060-AI11	Emissions From Nonroad Spark-Ignition Engines and Standards for Recreational Spark-Ignition Engines	9/13/02	11/8/02	\$3,074.0	\$192.0
EPA	2040-AD19	National Pollutant Discharge Elimination System Permit Regulation and Effluent Guidelines and Standards for Concentrated Animal Feeding Operations (CAFOs)	12/14/02	2/12/03	\$279.5	\$360.0
DOT	2127-AI70	Light Truck Average Fuel Economy Standards, Model Years 2005-2007	3/31/03	4/7/03	\$255.0	\$220.0
DOT	2126-AA23	Hours of Service Drivers; Driver Rest and Sleep for Safe Operation	4/9/03	4/28/03	\$690.0	\$1,318.0
USDA	0583-AC46	Performance Standards for Ready-To-Eat Meat and Poultry Products	5/30/03	6/6/03	\$97.5	\$17.0
HHS	0910-AC48	Applications for FDA Approval To Market a New Drug Patent Listing Requirements and Application of 30-Month Stays on Approval of Abbreviated New Drug Applications Certifying That a Patent...	6/9/03	6/18/03	\$226.0	\$10.0
HHS	0910-AB66	Food Labeling: Trans Fatty Acids in Nutrition Labeling, Nutrient Content Claims, and Health Claims	7/2/03	7/11/03	\$1,534.5	\$17.5

*Vacated rule

Table D-3: Estimates of Annual Benefits and Costs of Major Federal Rules, January 20, 2009 to September 30, 2011²⁶³
(millions of 2001 dollars per year)

Agency	RIN	Title	OMB Review Completed	Published	Benefits	Costs
DOT	2127-AK29	Passenger Car and Light Truck Corporate Average Fuel Economy Model Year 2011	3/24/09	3/30/09	\$1,665.0	\$979.0
DOT	2127-AG51	Roof Crush Resistance	4/30/09	5/12/09	\$652.0	\$896.0
DOT	2120-AJ01	Part 121 Pilot Age Limit	6/8/09	7/15/09	\$35.0	\$4.0
DOE	1904-AA92	Energy Efficiency Standards for General Service Fluorescent Lamps and Incandescent Lamps	6/26/09	7/14/09	\$1,924.0	\$486.0
HHS	0910-AC14	Prevention of Salmonella Enteritidis in Shell Eggs	7/2/09	7/9/09	\$1,284.0	\$74.0
DOT	2127-AJ37	Reduced Stopping Distance Requirements for Truck Tractors	7/16/09	7/27/09	\$1,250.0	\$46.0
EPA	2050-AG16	Revisions to the Spill Prevention, Control, and Countermeasure (SPCC) Rule	10/23/09	11/13/09	\$0.0	-\$80.8
DOT	2137-AE15	Pipeline Safety: Distribution Integrity Management	11/6/09	12/4/09	\$97.4	\$96.6
DOE	1904-AB93	Energy Efficiency Standards for	12/23/09	1/8/10	\$50.7	\$19.5

²⁶³ Based on date of completion of OMB review.

Commercial Clothes Washers						
DOT	2130-AC03	Positive Train Control	12/30/09	1/15/10	\$34.3	\$745.3
EPA	2060-AP36	National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines	2/17/10	3/3/10	\$1,314.4	\$311.3
DOE	1904-AB70	Energy Conservation Standards for Small Electric Motors	2/25/10	3/9/10	\$707.2	\$218.2
DOJ	1117-AA61	Electronic Prescriptions for Controlled Substances	3/10/10	3/31/10	\$348.2	\$35.6
DOT	2126-AA89	Electronic On-Board Recorders for Hours-of-Service Compliance*	3/18/10	4/5/10	\$165.0	\$126.0
DOE	1904-AA90	Energy Efficiency Standards for Pool Heaters and Direct Heating Equipment and Water Heaters	3/30/10	4/16/10	\$1,386.0	\$1,062.6
DOT/EPA	2127-AK50; 2060-AP58	Passenger Car and Light Truck Corporate Average Fuel Economy Standards MYs 2012 to 2016	3/31/10	5/7/10	\$11,939.3	\$3,325.9
EPA	2070-AJ55	Lead; Amendment to the Opt-out and Recordkeeping Provisions in the Renovation, Repair, and Painting Program	4/22/10	5/6/10	\$1,869.2	\$290.1
DOT	2120-AI92	Automatic Dependent Surveillance--Broadcast (ADS-B) Equipage Mandate to Support Air Traffic Control Service	5/20/10	5/28/10	\$166.6	\$216.0
EPA	2060-AO48	Review of the National Ambient Air Quality Standards for Sulfur Dioxide	6/2/10	6/22/10	\$10,534.9	\$684.8
DOL	1218-AC01	Cranes and Derricks in Construction	6/22/10	8/9/10	\$171.5	\$126.3
DOJ	1190-AA44	Nondiscrimination on the Basis of Disability in Public Accommodations and Commercial Facilities	7/22/10	9/15/10	\$1,123.1	\$611.0
DOJ	1190-AA46	Nondiscrimination on the Basis of Disability in State and Local Government Services	7/22/10	9/15/10	\$173.3	\$137.9
EPA	2060-AO15	National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants	8/6/10	9/9/10	\$11,195.3	\$850.3
EPA	2060-AQ13	National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines--Existing Stationary Spark Ignition (Gas-Fired)	8/10/10	8/20/10	\$686.4	\$209.2
DOL	1210-AB07	Improved Fee Disclosure for Pension Plan Participants	10/5/10	10/20/10	\$1,627.0	\$289.8
DOT	2125-AF19	Real-Time System Management	10/13/10	11/8/10	\$152.0	\$136.6

Information Program						
EPA	2040-AF11	Water Quality Standards (Numeric Nutrient Criteria) for Florida's Lakes and Flowing Waters	11/18/10	12/6/10	\$23.1	\$139.9
DOT	2127-AK23	Ejection Mitigation	12/23/10	1/19/2011	\$1,500.2	\$419.3
DOE	1904-AA89	Energy Efficiency Standards for Clothes Dryers and Room Air Conditioners	4/8/11	4/21/2011	\$191.4	\$132.3
EPA	2050-AG50	Oil Pollution Prevention: Spill Prevention, Control, and Countermeasure Rule Requirements - Amendments for Milk Containers	4/8/11	4/18/2011	\$0.0	-\$120.7
DOE	1904-AC06	Energy Efficiency Standards for Residential Furnace, Central Air Conditioners and Heat Pumps	6/6/11	6/27/2011	\$939.9	\$537.5
HHS	0910-AG41	Cigarette Warning Label Statements*	6/9/11	6/22/2011	\$183.2	\$30.6
HHS	0938-AQ12	Administrative Simplification: Adoption of Authoring Organizations for Operating Rules and Adoption of Operating Rules for Eligibility and Claims Status (CMS-0032-IFC)	6/30/11	7/8/2011	\$1,033.7	\$437.9
EPA	2060-AP50	Cross-State Air Pollution Rule (CAIR Replacement Rule)	7/1/11	8/8/2011	\$40,081.9	\$690.8
DOT/ EPA	2127-AK74/ 2060-AP61	Commercial Medium- and Heavy-Duty On-Highway Vehicles and Work Truck Fuel Efficiency Standards	8/8/11	9/15/2011	\$2,563.7	\$496.2
DOE	1904-AB79	Energy Efficiency Standards for Residential Refrigerators, Refrigerator-Freezers, and Freezers	8/25/11	9/15/2011	\$1,836.7	\$840.2
DOL	1210-AB35	Statutory Exemption for Provision of Investment Advice	9/29/11	10/25/2011	\$10,916.2	\$3,059.8

*Vacated rule

APPENDIX E: INFORMATION QUALITY AND PEER REVIEW

A. Links for Agency Information Quality Correspondence

1. *Links to Agencies that Received Correction Requests in FY 2011:*

Department of

Commerce: http://ocio.os.doc.gov/ITPolicyandPrograms/Information_Quality/index.htm

Department of Education:

<http://www2.ed.gov/policy/gen/guid/infoqualguide.html>

Department of Health and Human Services:

<http://aspe.hhs.gov/infoquality/requests.shtml>

Department of the Interior:

http://www.doi.gov/ocio/information_management/iq.cfm

Department of Labor:

<http://www.dol.gov/informationquality.htm>

Environmental Protection Agency:

<http://epa.gov/quality/informationguidelines/iqg-list.html>

Federal Communications Commission:

<http://www.fcc.gov/omd/dataquality/welcome.html>

2. *Links to All Agencies' IQ Correspondence Web Pages:*

Access Board:

<http://www.access-board.gov/about/policies/infoquality.htm>

Chemical Safety and Hazard Investigation

Board: <http://www.csb.gov/UserFiles/file/legal/FinalDataQualityGuidelines.pdf>

Commodity Futures Trading

Commission: <http://www.cftc.gov/About/CFTCReports/bulletinpeerreview.html>

Consumer Product Safety Commission: <http://www.cpsc.gov/library/correction/correction.html>

Corporation for National and Community

Service: http://www.nationalservice.gov/home/site_information/quality.asp

Defense Nuclear Facilities Safety Board:

<http://www.dnfsb.gov/policies/information-quality>

Department of Agriculture:

<http://www.ocio.usda.gov/policy-directives-records-forms/information-quality-activities>

Department of Agriculture, Forest Service:

<http://www.fs.fed.us/qoi>

Department of

Commerce: http://ocio.os.doc.gov/ITPolicyandPrograms/Information_Quality/index.htm

Department of Defense:

<http://www.defenselink.mil/pubs/dodiqguidelines.html>

Department of Defense, Army Corps of Engineers:

<http://www.usace.army.mil/ceci/iqa/pages/mission.aspx>

Department of Education:

<http://www2.ed.gov/policy/gen/guid/infoqualguide.html>

Department of Energy:
<http://www.cio.energy.gov/infoquality.htm>

Department of Health and Human Services:
<http://aspe.hhs.gov/infoquality/requests.shtml>

Department of Housing and Urban
Development: <http://www.hud.gov/offices/adm/grants/qualityinfo/qualityinfo.cfm>

Department of Homeland Security:
<http://www.dhs.gov/dhs-information-quality-standards>

Department of Justice:
http://www.usdoj.gov/iqpr/iqpr_disclaimer.html

Department of Labor:
<http://www.dol.gov/informationquality.htm>

Department of State:
<http://www.state.gov/misc/49492.htm>

Department of the Interior:
http://www.doi.gov/ocio/information_management/iq.cfm

Department of the Interior, Bureau of Land
Management: http://www.blm.gov/wo/st/en/National_Page/Notices_used_in_Footer/data_quality.html

Department of the Interior, Fish and Wildlife Service: <http://www.fws.gov/informationquality>

Department of the Interior, National Park
Service: <http://www.nps.gov/policy/infoqualcorrect.htm>

Department of Transportation, Surface Transportation
Board: <http://www.stb.dot.gov/stb/InformationQualityGuidelines.htm>

Department of Transportation:
<http://docketsinfo.dot.gov/Dataquality.cfm>

Department of Veterans Affairs:
http://www.rms.oit.va.gov/Information_Quality.asp

Environmental Protection Agency:
<http://epa.gov/quality/informationguidelines/iqg-list.html>

Equal Employment Opportunity
Commission: <http://www.eeoc.gov/eeoc/plan/informationquality/index.cfm>

Farm Credit Administration:
http://www.fca.gov/FCA-Web/fca%20new%20site/home/info_quality.html

Federal Communications Commission:
<http://www.fcc.gov/omd/dataquality/welcome.html>

Federal Deposit Insurance Corporation:
<http://www.fdic.gov/about/policies/#information>

Federal Energy Regulatory Commission:
<http://www.ferc.gov/help/filing-guide/file-correct.asp>

Federal Maritime
Commission: http://www.fmc.gov/about/information_quality_guideline_details.aspx

Federal Reserve Board:
http://www.federalreserve.gov/iq_correction.htm

Federal Trade Commission:

<http://www.ftc.gov/ogc/sec515/index.htm>

General Services Administration:

<http://www.gsa.gov/portal/content/104725>

Institute of Museum and Library Services:

http://www.imls.gov/about/guidelines_for_information_dissemination.aspx

Internal Revenue Service:

<http://www.irs.gov/pub/irs-utl/infoqualityguidelines.pdf>

Merit Systems Protection

Board: <http://www.mspb.gov/netsearch/viewdocs.aspx?docnumber=251846&version=252119&application=ACROBAT>

National Aeronautics and Space Administration:

<http://www.nasa.gov/offices/ocio/qualityinfo/index.html>

National Archives:

<http://www.archives.gov/about/info-qual/requests/index.html>

National Endowment for the Arts:

<http://www.arts.gov/about/infoquality.html>

National Endowment for the Humanities:

<http://www.neh.gov/whoweare/dissemination.html>

National Labor Relations Board:

<http://www.nlr.gov/information-quality-guidelines>

National Science Foundation:

<http://www.nsf.gov/policies/infoqual.jsp>

National Transportation Safety Board:

<http://www.irs.gov/pub/irs-utl/infoqualityguidelines.pdf>

Nuclear Regulatory Commission:

<http://www.nrc.gov/public-involve/info-quality.html>

Nuclear Waste Technical Review Board:

<http://www.nwtrb.gov/plans/plans.html>

Occupational Safety & Health Review

Commission: <http://www.oshrc.gov/infoquality/infoquality.html>

Office of Federal Housing Enterprise Oversight:

<http://www.fhfa.gov/Default.aspx?Page=56>

Office of Government Ethics:

<http://www.oge.gov/About/Management-Reports-and-Policies/Compliance-Reports/Information-Quality/>

Office of Management and

Budget: http://www.whitehouse.gov/omb/inforeg/info_quality/information_quality.html

Office of Personnel Management:

<http://www.opm.gov/policy/webpolicy/index.asp>

Office of Special Counsel:

<http://www.osc.gov/InfoQuality.htm>

Overseas Private Investment Corporation:

<http://www.opic.gov/publications/quality-guidelines>

Peace Corps:

<http://files.peacecorps.gov/multimedia/pdf/policies/qualitypreamble.pdf>

Pension Benefit Guaranty Corporation:

<http://www.pbgc.gov/res/other-guidance/information-quality-guidelines.html>

Small Business Administration:

<http://www.sba.gov/about-sba-services/7570>

Social Security Administration:

<http://www.ssa.gov/515/requests.htm>

Tennessee Valley Authority:

<http://www.tva.gov/infoquality/>

U.S. International Trade Commission:

www.usitc.gov/documents/infoqualgdl.pdf

USAID:

http://transition.usaid.gov/policy/info_quality/

B. Links for Agency Peer Review Agendas

1. Cabinet-Level Departments

Department of Agriculture:

Agricultural Research Service:

<http://www.ars.usda.gov//docs.htm?docid=19203&dropcache=true&mode=preview>

Animal and Plant Health Inspection

Service: http://www.aphis.usda.gov/peer_review/peer_review_agenda.shtml

Economic Research Service:

<http://www.ers.usda.gov/AboutERS/peerreview.htm>

Food Safety Inspection

Service: http://www.fsis.usda.gov/Information_Quality/Peer_Review/index.asp

Forest Service:

<http://www.fs.fed.us/qoi/peerreview.shtml>

Office of the Chief Economist:

http://www.usda.gov/occe/about_occe/peer_review.htm

Department of Commerce:

http://ocio.os.doc.gov/ITPolicyandPrograms/Information_Quality/index.htm

National Oceanic and Atmospheric Administration:

<http://www.cio.noaa.gov/itmanagement/prplans/PRsummaries.html>

Department of Defense:

<http://www.defenselink.mil/pubs/dodiqguidelines.html>

Department of Education:

<http://www2.ed.gov/policy/gen/guid/iq/peerreview.html#>

Department of Energy:

<http://energy.gov/cio/information-quality>

Department of Health and Human Services:

<http://aspe.hhs.gov/infoquality/peer.shtml>

Center for Disease Control:

<http://www.cdc.gov/od/science/quality/support/peer-review.htm>

Food and Drug Administration:

<http://www.fda.gov/ScienceResearch/SpecialTopics/PeerReviewofScientificInformationandAssessments/default.htm>

National Toxicology Program:

<http://fmp-8.cit.nih.gov/sif/agenda.php>

Office of Public Health and Science: <http://aspe.hhs.gov/infoquality/guidelines/ophspeer.html>

Department of Homeland Security:

<http://www.dhs.gov/xutil/notices.shtm>

Department of Housing and Urban Development:

http://www.huduser.org/about/pdr_peer_review.html

Department of the Interior:

http://www.doi.gov/ocio/information_management/bureau-peer-review.cfm

Bureau of Land Management:

http://www.blm.gov/wo/st/en/National_Page/Notices_used_in_Footer/data_quality.html

Bureau of Reclamation:

<http://www.usbr.gov/main/qoi/peeragenda.html>

Fish and Wildlife Service:

http://www.fws.gov/informationquality/peer_review/index.html

Bureau of Ocean Energy Management:

<http://www.boem.gov/Environmental-Stewardship/Environmental-Studies/Quality.aspx>

National Park Service:

<http://www.nps.gov/policy/peerreview.htm>

Office of Surface Mining:

http://www.osmre.gov/guidance/osm_info_quality.shtm

U.S. Geological Society:

http://www.usgs.gov/peer_review

Department of Justice:

<http://www.justice.gov/iqpr/iqpr.html>

Department of Labor:

<http://www.dol.gov/asp/peer-review/index.htm>

Employee Benefits Security Administration:

<http://www.dol.gov/ebsa/regs/peerreview.html>

Occupational Safety and Health

Administration: http://www.osha.gov/dsg/peer_review/peer_agenda.html

Mine Safety and Health Administration

<http://www.msha.gov/REGS/PEERReview/PEERreview.asp>

Department of State:

<http://www.state.gov/misc/49492.htm>

Department of Transportation:

<http://www.dot.gov/peerreview/>

Department of Veterans Affairs:

http://www.rms.oit.va.gov/Peer_Review.asp

2. Other Agencies

Consumer Product Safety Commission:

<http://www.cpsc.gov/library/peer.html>

Environmental Protection Agency:

http://cfpub.epa.gov/si/si_public_pr_agenda.cfm

Federal Communications Commission:

<http://www.fcc.gov/omd/dataquality/peer-agenda.html>

Federal Energy Regulatory Commission:

<http://www.ferc.gov/help/filing-guide/file-correct.asp>

Federal Trade Commission:

<http://www.ftc.gov/ogc/sec515/>

National Aeronautics and Space Administration:

<http://www.nasa.gov/offices/ocio/qualityinfo/index.html>

Nuclear Regulatory Commission:

<http://www.nrc.gov/public-involve/info-quality.html>

Office of Management and

Budget: http://www.whitehouse.gov/omb/inforeg/info_quality/information_quality.html

Small Business Administration:

<http://www.sba.gov/content/sba-information-quality-peer-review-agenda>

Tennessee Valley Authority:

<http://www.tva.gov/infoquality>

C. Agencies that Do Not Produce or Sponsor Information Subject to the Bulletin

See website links in section A of this Appendix.

Agency for International Development
Corporation for National and Community Service
Council on Environmental Quality
Defense Nuclear Facilities Safety Board
Department of the Treasury
Equal Employment Opportunity Commission
Farm Credit Association
Federal Maritime Commission
Federal Reserve
General Services Administration
Institute of Museum and Library Services
International Trade Commission
Merit Systems Protection Board
National Archives
National Credit Union Administration
National Endowment for the Arts
National Endowment for the Humanities
National Labor Relations Board
National Science Foundation
Nuclear Waste Technical Review Board
Office of Federal Housing Enterprise Oversight
Office of Government Ethics
Office of Personnel Management
Overseas Private Investment Corporation
Patent and Trade Office
Peace Corps
Pension Benefit Guaranty Corporation
Railroad Board
Securities and Exchange Commission

Selective Services System
Social Security Administration
Surface Transportation Board
U.S. Occupational Safety and Health Review Commission

APPENDIX F: AGENCY CONSULTATION ACTIVITIES UNDER THE UNFUNDED MANDATES REFORM ACT OF 1995

Sections 203 and 204 of the Act require agencies to seek input from State, local and tribal governments on new Federal regulations imposing significant intergovernmental mandates. This appendix summarizes selected consultation activities by agencies whose actions affect State, local and tribal governments.²⁶⁴

Four agencies (the Departments of Agriculture, Commerce, Energy, and Health and Human Services) have provided examples of consultation activities that involved State, local and tribal governments not only in their regulatory processes, but also in their program planning and implementation phases. These agencies have worked to enhance the regulatory environment by improving the way in which the Federal Government relates to its intergovernmental partners. In general, many of the departments and agencies not listed here (including the Departments of Justice, State, Treasury, and Veterans Affairs, the Small Business Administration, and the General Services Administration) do not often impose mandates upon States, localities or tribes, and thus have fewer occasions to consult with these governments.

As the following descriptions indicate, Federal agencies conduct a wide range of consultations. Agency consultations sometimes involve multiple levels of government, depending on the agency's understanding of the scope and impact of the rule. OMB continues to work with agencies to ensure that consultation occurs with the appropriate level of government.

A. Department of Agriculture

The Substantially Underserved Trust Areas (SUTA) Provision

The Substantially Underserved Trust Areas (SUTA) provision of the last Farm Bill, once implemented, will increase opportunities to provide affordable financing for infrastructure on trust lands through the USDA Rural Development's Rural Utilities Programs. Specifically, the Secretary of Agriculture (with delegation to the Administrator for Rural Utilities Service) would be granted the discretionary authority to:

- Make loans and issue loan guarantees with interest rates as low as two percent and with extended repayment terms;
- Waive non-duplication restrictions, matching fund requirements, or credit support requirements from any loan or grant program to facilitate construction, acquisition or improvements of infrastructure; and
- Give highest priority to designated projects on a Substantially Underserved Trust Area.

²⁶⁴ The consultation activities described in this appendix are illustrative of intergovernmental consultations conducted by Federal agencies and are not limited to consultations on regulations meeting the UMRA threshold for an unfunded mandate. Similarly, this should not be considered an exhaustive list of Federal consultation activities.

The affected parties include Native American and Pacific Islander communities throughout the United States as well as in trust areas in Alaska, Hawaii, Guam, American Samoa and the Commonwealth of the Northern Mariana Islands.

To develop the proposed rule, USDA Rural Development conducted seven USDA regional consultations, conducted sixteen SUTA specific consultations and hosted three internet and toll free teleconference based webinars consultations with tribal leaders and native communities throughout the United States as well as in trust areas in Alaska, Hawaii, Guam, American Samoa and the Commonwealth of the Northern Mariana Islands. Additionally USDA convened several meetings with Federal agencies – the Departments of Interior, Veterans Affairs, Energy, Commerce, Health and Human Services, Homeland Security, the Environmental Protection Agency, the Federal Communications Commission and the Office of Management and Budget – to determine how best to implement the SUTA provision.

A transcript was the result of each consultation with discussions, proposals, and insights from the participating tribes, stakeholders, and Federal officials. Several written responses on SUTA were also received by RUS from stakeholders and treated like these transcripts. The transcripts represent the raw data that were further reviewed, analyzed, and categorized for consideration during implementation of the provisions of the SUTA authorities. A complete set of this administrative record is preserved digitally and hard copies are maintained at the RUS offices for later use if necessary. The top two topics that were commented on with the highest frequency were concerns regarding the definition of High Need/Substantially Underserved (80 comments) and concerns regarding the definition of Trust Areas (51 comments). Below is a chart that summarizes those main concerns:

Topics Discussed by Tribes	# of Comments By Tribal Participants	Major Concerns Raised by Tribes
High Need Definition	80	Define high need using local/regional tribal data instead of national economic metrics (on poverty rate, per capita income, median household income, unemployment rate, number of residents on government assistance); national data may present an incomplete view of tribal economic conditions; local/regional data, though dated in some instances, should more accurately reflect current economic conditions within the tribal community; aim for the least restrictive definition of high need; level of existing service by incumbent providers is inadequate for tribal needs; State utilities laws and/or local governments' hesitance to extend service may negatively impact tribal service levels
Trust Area Concern	51	Checker-boarded reservation lands (trust lands and non-trust lands); reservation land is not currently in trust, or

Topics Discussed by Tribes	# of Comments By Tribal Participants	Major Concerns Raised by Tribes
		partially in trust; for many tribes, trust lands do not adequately encompass all of the reservation lands; trust lands are under application to DOI for designation; fee land v. land in trust; concern about the impact of <i>Carcieri v. Salazar</i> , 129 S. Ct. 1058 (2009) on trust lands

A Proposed Rule for the SUTA Provision was published in the Federal Register on October 14, 2011. Comments were due December 13, 2011, with a Final or Interim Final rule to follow.

Rural Energy for America Program—Section 9007

Expansion of the definition of rural businesses in the Rural Energy for America Program (REAP) to include Tribal Section 17 Corporations and other similar Tribal Corporations chartered under tribal law. The REAP program provides grants and guaranteed loans to help finance renewable energy systems, energy efficiency improvements, energy audits, feasibility studies and renewable energy assistance to businesses and agricultural producers.

This regulation impacts tribal governments, tribal leaders, tribal professionals and other interested stakeholders.

This rule was included in the USDA Joint Agency Regional Consultations that consolidated consultation efforts of 70 rules across USDA from the 2008 Farm Bill. USDA Rural Development sent senior level agency staff to seven regional locations and reached out to tribal leadership in each region to consult on this proposed rule. Upon completion of the consultation process, USDA Rural Development analyzed the feedback and incorporated input from the consultation into this regulation.

For example, with the intent to increase tribal participation in the program, the definition of a small business in this rule now includes tribal business entities formed as Section 17 Corporations, as determined by the Secretary of the Interior, or other tribal business entities that have similar structures and relationships with their tribal governments as determined by the Rural Development.

Eligibility for the REAP Program is restricted to rural small businesses and agricultural producers. No governmental entities - including tribes - are eligible for assistance under this program. Many comments received through the consultation process requested that tribes be made eligible for the benefits of this program. A legislative change would be necessary to make tribal governments directly eligible for the REAP program. Consequently, the agency made regulatory changes to create a clear path for tribally-owned for-profit corporations to access these funding streams.

The REAP Interim Final Rule instituting this change was published in the Federal Register on April 14, 2011.

B. Department of Commerce

Expansion of Fagatele Bay National Marine Sanctuary, Regulatory Changes, and Sanctuary Name Change

The National Oceanic and Atmospheric Agency (NOAA) recently released a new draft management plan for the Fagatele Bay National Marine Sanctuary (FBNMS), which is a planning document guiding the management of the sanctuary for the next five to ten years. This proposed action includes the expansion of the FBNMS to include five additional discrete units around the American Samoa Archipelago, including the Rose Atoll Marine National Monument.

NOAA has worked closely with the Office of the Governor, the Office of Samoan Affairs, the American Samoa Department of Marine and Wildlife Resources, and a number of the village chiefs and families who currently use the areas proposed for expansion of the sanctuary. The proposal was also developed with the Fagatele Bay National Marine Sanctuary Advisory Council (SAC), which is made up of 20 members representing relevant local Federal agencies, the American Samoa Government, and representatives from various ocean user groups including fishing, recreation, education, and research.

NOAA conducted a public scoping period in February and March of 2009 to identify issues and gauge interest within American Samoa for possible sanctuary expansion and designation of additional sanctuary units. After an initial list of nine potential sites was developed, the SAC established a Site Selection Working Group consisting of members of the SAC and of the public, assisted by sanctuary staff. The working group utilized criteria set forth in the National Marine Sanctuaries Act to evaluate the ecological, cultural, and economic value of the areas proposed. Based on this evaluation the areas were ranked in order. These locations were then further analyzed by NOAA through a biogeographic assessment of the Samoan Archipelago. Since the two Ta'u sites under consideration were so close geographically, they were combined into one proposed site, as recommended by the Governor. The sites at Nu'uli Pala, Leone, and Outer Banks were considered but eliminated for various reasons described in the draft environmental impact statement.

The draft management plan, draft environmental impact statement and proposed regulations were available for public comment until January 6, 2012. To facilitate public comment, NOAA hosted public meetings on the proposal during the period of November 17-21, 2011, on Tutuila, Ta'u, and Ofu.

Scoping revealed wide support for the protection of additional areas throughout the archipelago, as well as some opposition to additional sites. Some expressed concern over the expansion of FBNMS into a network of sites across the territory. The primary concerns reflected in the public comments were: (1) the Territory already has a process for establishing marine protected areas (MPAs); and (2) a Federal presence would not allow for community-driven marine resource management. NOAA is currently receiving a wide spectrum of public comments on the draft proposal.

As a result of the concerns raised during public scoping and NOAA's intention to respect the Samoan culture, NOAA chose each of the proposed units carefully taking into consideration the wishes of the communities as well as the criteria from the NMSA for designating a new national marine sanctuary and the results of a biogeographic assessment of the American Samoa Archipelago. After determining which units would be considered for inclusion, NOAA held multiple meetings with each of the communities associated with the units to foster consensus and collaboration with regard to how the unit would be managed. The development of location-specific regulations occurred through a collaborative process during community meetings between NOAA and village representatives. Issues addressed during the meetings included potential gear restrictions, fishing restrictions, and co-management of the sanctuary unit.

Now that the public comment period is underway, NOAA is continuing to meet with village chiefs and the community regarding the details of the proposal. NOAA is dedicated to a continued dialog with the people of American Samoa on the final shape of this proposal.

Olympic Coast National Marine Sanctuary

NOAA recently released a new management plan for the Olympic Coast National Marine Sanctuary (OCNMS), which is a planning document guiding the management of the sanctuary for the next five to ten years.

The Coastal Treaty Tribes have treaty-protected fishing rights and share co-management responsibilities for fishing activities within the sanctuary with the State of Washington and Federal government. These common interests and joint authorities led the Coastal Treaty Tribes, the State of Washington and the Office of National Marine Sanctuaries (ONMS) to create the Olympic Coast Intergovernmental Policy Council (IPC) in 2007. The first of its kind in the nation, the IPC provides a regional forum for resource managers to exchange information, coordinate policies, and develop recommendations for resource management within the sanctuary. NOAA consulted with the IPC extensively in the development of the revised management plan from 2008 until the publication of the final management plan in November 2011.

NOAA also relied on community and stakeholder involvement, primarily through the 21-seat Sanctuary Advisory Council (SAC), in developing the management plan. The SAC consists of representatives from four Coastal Treaty Tribes, nine State and Federal agencies, local governments, and a variety of local user and interest groups who provide advice to the sanctuary superintendent. All SAC meetings are open to the public, thus providing opportunity for public comment.

The management plan review process resulted in an unprecedented level of coordination between NOAA and the coastal treaty tribes. The IPC and the SAC were involved in developing preliminary priority topics that were presented to the public for feedback during the public scoping period of the management plan review. Due to the sovereign nature of the Coastal Treaty Tribes, NOAA sent letters to each of the Tribes requesting government-to-government consultation on the proposed action on multiple occasions during the management plan review process. In addition, NOAA consulted in person with the Makah Tribe.

During the public scoping and issues analysis stage of the management plan review, NOAA encouraged public involvement by:

- Hosting seven public scoping meetings in Port Angeles, Neah Bay, La Push, Westport, Ocean Shores, Olympia and Seattle;
- Holding a 60-day public comment period during which members of the public could submit Management Plan Review (MPR) comments via e-mail, fax or letter;
- Hosting 23 additional public meetings related to MPR, including SAC meetings, workshops and working group meetings;
- Posting approximately 20 updates to OCNMS' MPR Current Status website (<http://olympiccoast.noaa.gov/>) to keep the public informed about the MPR process;
- Sending approximately 20 updates to the OCNMS MPR listserv, which has over 1,000 members; and
- Making all MPR documents available on the OCNMS MPR Documents webpage in a timely manner (<http://olympiccoast.noaa.gov/>).

Throughout the management plan review process, NOAA informed the public about MPR-related meetings by sending out press releases and listserv e-mails, and posting notices on its website in advance of every public meeting. Additionally, NOAA actively sought out opportunities to present information about the process at various public events and meetings. NOAA also produced and publicized numerous documents detailing each step in the management plan review process so the public could stay informed as progress was made.

During public review of the draft management plan, NOAA announced its availability in a *Federal Register* notice, newspaper articles, web site updates and listserv e-mails. In addition, two public meetings were held in Port Angeles and Forks to provide opportunity for public comment.

The Makah tribe's main concern had to do with a proposed change to the category of sanctuary permits that can be obtained for the purpose of "tribal welfare." They interpreted our proposed change to restrict the opportunity for tribes to obtain permits for activities directly related to tribal welfare.

During government-to-government consultation, NOAA and the Makah were able to agree on some changes to the final rule that address the Makah's concerns and clarify that the changes were not intended to restrict the Tribe's ability to obtain permits. In addition, changes were made to the environmental assessment at the request of the Makah Tribe to provide more in-depth context on the history of the relationship between the Tribe and the OCNMS management.

C. Department of Energy

DOE published one proposed rule and three final rules during the October 2010 to September 2011 period that contain a Federal mandate covered by the Act. DOE complied with the analytical requirements of the Act for each of these rules and discusses its compliance in the preamble of each rule.

Below is a description of the establishment of the Tribal Summit held by the Office of Indian Energy Policy and Programs (OIEPP), or “Office of Indian Energy,” within DOE. The summit was held on May 5, 2011, to engage in interactive government-to-government dialogue and forge a new era of Department of Energy and tribal relations.

Tribal Summit

The summit provided a historic opportunity for the Department of Energy and tribal leaders to discuss a broad range of critical energy and environmental issues in Indian Country.

The Department welcomed the participation of all Native Americans and Alaska Natives in the Tribal Summit. More than 350 people, including representatives from 54 tribes across the continental United States, participated in the summit and pre-summit roundtable held the day prior to the summit. In addition, 260 tribal leaders and representatives from around the country, representing over 200 tribal governments, communities, and nongovernmental organizations and associations, also participated in a number of roundtables leading up to the summit in the early spring of 2011.

The Tribal Summit was held in Arlington, VA, on May 5, 2011. Opening remarks were made by Secretary Chu. White House Deputy Assistant to the President for Energy & Climate Change Heather Zichal and White House Special Advisor on Native American Affairs Kimberly Teehee provided policy remarks, as did other Administration officials active in Indian energy, including EPA Administrator Lisa Jackson, Secretary of Agriculture Tom Vilsack, and Secretary of the Interior Ken Salazar. Legislative staff, Majority Staff Director and Chief Counsel for the U.S. Senate Committee on Indian Affairs Loretta Tuell and Republican Staff Director and Chief Counsel for the U.S. Senate Committee on Indian Affairs David A. Mullon, Jr., also gave remarks.

Panels were held to allow for dialogue between Federal officials and tribal participants.

Panels included a Tribal Leader Panel on Indian Energy Development and an Interagency Panel on Federal Opportunities in Indian Country. In the first panel, tribal leaders from across the country discussed various energy projects under development, as well as their experiences in working with the Department on energy and environmental issues. In the second panel, program leaders from Federal agencies discussed the type of energy development programs available to tribes and tribal organizations, as well as opportunities to coordinate Federal efforts to support energy development in Indian Country. A DOE Leadership Programs Panel was also held to discuss DOE involvement in Indian energy issues.

The day prior to the panel, pre-summit programmatic roundtables were held with tribal leadership on the following topics: Nuclear; Defense Waste; Waste Legacy; Revitalization; Education; Contracting; Business Development; Energy Efficiency and Renewable Energy; and Transmission, Electrical Infrastructure, and Reliability. Also held that day was an open roundtable discussion with Tribal Leaders, Tribal Organizations, and Alaska Native and Tribal Corporations.

In the early spring of 2011, DOE also hosted roundtables with tribal leaders nationwide.

The DOE Office of Indian Energy Policy and Programs provided information on working with tribal governments, Federal agencies, and non-governmental tribal organizations. Tribal leaders, representatives, and participants also provided information on Indian energy priorities and feedback on current and future DOE energy policies and programs, as well as solicited comments on Federal agency coordination and suggestions for future tribal policies and programs. Roundtable participants included: officials from the White House, DOE, U.S. Department of Agriculture, Department of the Interior (DOI), and State agencies, tribal leaders and representatives from tribal energy and environmental programs, and representatives from the U.S. Senate Select Committee on Indian Affairs, as well as numerous Senate and House staff members, representatives from tribal organizations, tribal non-governmental organizations and associations, and representatives from the energy industry and public universities.

Tribal Energy Priorities were discussed, including the need to protect tribal sovereignty and environmental, natural, and cultural resources; support energy project and economic development; provide affordable energy access in rural tribal communities; access, coordinate, and secure a broad range of funding resources for large and small scale tribal energy projects; develop renewable energy projects, including wind, solar, hydro, and biomass energy production; and work with Federal agencies and Congress to streamline various energy policies and regulations, particularly where multiple Federal agencies are involved in tribal energy projects.

Feedback on DOE Tribal Policies and Programs was also provided, including the need to increase tribal access and inclusion in energy transmission planning and capacity; provide flexibility within tribal energy policies and grants across Federal agencies to meet the unique needs of tribal governments and communities on a case-by-case basis, streamline program, policy, and regulatory requirements; re-examine, develop, and adapt tax laws and policies to provide an incentive for tribal governments and the energy industry to develop tribal energy projects within tribal lands; and ensure policies and programs continue to develop and expand tribal technical capacity.

Federal Government-wide Energy Issues and Coordination was also discussed, including the need to engender coordination, leadership, and flexibility among agencies involved in tribal energy projects; support Federal Government and agency preference for buying energy from tribal governments; and coordinate tribal consultation.

Suggestions for future roles for, programs by and support from the DOE Office of Indian Energy were also introduced, including the need to: expand programs that encourage and fund energy efficiency projects within tribal lands; provide DOE Guidance and recommendations for tribal inclusion in transmission development projects; design programs with a training focus for tribal technical capacity building on energy development – particularly including financing and best practices in project development; increase regulatory interaction of and with local energy co-ops to help build better relationships for energy development collaboration; and establish a clearinghouse for federal agencies and tribal governments on energy policies, programs, funding, notices, and projects.

As stated by Secretary Chu, the Department of Energy will work together with tribal governments to promote economic development and help many more tribes and villages seize the clean energy opportunity.

As part of this effort, Secretary Chu announced two new energy initiatives at the summit. He declared the intent to form an Indian clean energy and infrastructure working group -- which will provide a forum to survey, analyze and provide viewpoints on real-time obstacles that tribes face in deploying clean energy as well as potential solutions. He also announced that the Department is planning to develop guidance that will direct the Department of Energy to, when possible, buy renewable energy from tribal lands.

D. Department of Health and Human Services

Revision of State Applications for Substance Abuse and Prevention Block Grants

The Department had for some time been preparing rules to codify criteria for expedited approvals of states' applications for funding under the Substance Abuse and Prevention Block Grant Program. However, a way was found to move forward in this area within 3 months and without imposing the rigidities on stakeholders that codified rules may have brought about.

Having developed a revised application, HHS's Substance Abuse and Mental Health Services Administration (SAMHSA), on April 11, 2011, issued a Federal Register Notice (FRN) requesting comments under the Paperwork Reduction Act on the collection of information that would be entailed if the revised application were to be used. 772 comments from 522 individuals or organizations were received. The comments were: (1) supportive of the changes proposed to the application, (2) requested clarification regarding certain areas, or (3) requested specific changes to the application.

During the 60 day review period, SAMHSA conducted 14 teleconferences to review the proposed changes with State Substance Abuse authorities, State Mental Health Authorities and other stakeholders. SAMHSA also conducted a public outreach effort, to solicit comments on the revised application through announcements in various periodicals and trade association materials; the agency also displayed the Notice and the application on its web site.

Based on the comments received, SAMHSA made changes to the revised block grant application. These changes include:

- Clarifying which sections of the application are required to be submitted as part of the State Plan and which sections SAMHSA is requesting, but not requiring states to submit. SAMHSA continues to strongly encourage states to submit this information. This will allow SAMHSA to understand the applicant state's efforts and identify how it can assist the applicant state meet its goals in a changing environment.
- Clarifying to states that not submitting the optional information will not change SAMHSA's approval of their Plan or payment, although states are strongly encouraged to submit as much as they can so the nation as a whole will have a complete picture of the needs of individuals with behavioral health conditions as well as the innovative approaches states are undertaking in these areas as well as the barriers they encounter to

design and implement important policies and programs.

- Requiring information on states' Maintenance of Effort to be included in the plan rather than the reporting section. States provided this information in their plans in previous years.
- Providing some additional clarity regarding specific sections of the plan in the following areas: Data and Information Technology, Consultation with Tribes, Support of State Partners, and State Behavioral Health Advisory Council.

A second FRN was published on June 17, 2011. The 30-day comment period was completed on July 16. Comments were compiled by OMB and forwarded to SAMHSA. The Uniform Application was approved by OMB on July 19, 2011, 3 months after the publication of the first Notice.

Manufactured Food Regulatory Program Standards

The food safety regulatory system in the United States is a tiered system that involves Federal, State, and local governments. The Food and Drug Administration (FDA) is responsible for ensuring that all foods moving in interstate commerce, except those under United States Department of Agriculture jurisdiction, are safe, wholesome, and labeled properly. State agencies conduct inspection and regulatory activities that help ensure food produced, processed, or sold within their jurisdictions is safe. Many State agencies also conduct food plant inspections under contract with FDA. These inspections are performed under the States' laws and authorities, the provisions of the Federal Food, Drug, and Cosmetic Act (FD&C Act), or both. To maximize the use of resources among the FDA and the States, particularly when their jurisdictions overlap, their inspection programs should be equivalent.

To that end, FDA, along with selected state program managers, have developed a set of standards to be used by states as a guide for continuous improvement of state food manufacturing programs. These program standards were established to protect the public from foodborne illness and injury. The goal of this program is to implement a risk-based food safety program by establishing a uniform basis for measuring and improving the performance of manufactured food regulatory programs in the United States.

The manufactured food regulatory program standards affect all 50 states, U.S. consumers, and the various food manufacturing facilities throughout the country.

This program is optional. States may elect to implement the Manufactured Food Regulatory Standards as an option under their State food contracts with FDA. Currently, States are paid \$5,000 a year to implement this program.

This program was developed in concert with selected States to promote equivalency among the Federal and State food safety inspection and enforcement practices.

This program has bolstered State food regulatory programs with the Federal legal authority and regulatory provisions to protect the public health by ensuring the safety and security of the food supply. It's also provided the regulated industry with consistent standards and requirements throughout the country and reduced redundancies.

Cost-allocation rule exceptions

In August 2011, HHS announced time-limited exceptions to standard cost-allocation rules. Under these exceptions, states making IT investments in eligibility-determination systems for the new health-insurance Exchanges, Medicaid, and the Children's Health Insurance Program, could leverage those investments to support the determination of eligibility in human services programs such as the Temporary Assistance for Needy Families (TANF) program.

Under standard cost allocation rules, all programs that benefit from a shared IT service – such as elements of an eligibility determination system – must share in the cost of building that shared service based on the relative benefit to each program. However, the Affordable Care Act (ACA) requires States to build eligibility systems to support health-insurance Exchanges, Medicaid, and CHIP programs. To the degree that those investments can be leveraged to improve eligibility-determination processes for other programs, there are advantages to States, the Federal Government, and families.

OMB granted an exception to standard cost allocation rules, to allow States that, at their option, choose to create integrated eligibility systems to leverage ACA-based investments for use by other programs. All incremental costs that States incur to add the eligibility determination functionality for human services programs must be paid for by those human services programs, but the costs that States would have incurred to build their health-related eligibility system would be paid for through the health-related funding streams. This time-limited exception to standard cost allocation procedures has been well-received by States and will foster greater interest on the part of States in creating interoperable eligibility systems that can help families access both health and human services benefits and services. Over time, it will result in more efficient systems as the Federal Government will be supporting a single, modern eligibility system rather than paying to maintain one eligibility system for health and another for other programs. There could be program integrity benefits as well, as a single system maintains current information about families' circumstances, with changed circumstances getting captured across programs.

APPENDIX G: RESPONSE TO PEER REVIEWERS AND PUBLIC COMMENTS

We would like to express our sincere thanks and appreciation for the extremely helpful peer review and public comments we have received on the draft 2012 report. In particular, we would like to thank our invited peer reviewers, Robert Stavins of Harvard University, W. Kip Viscusi of Vanderbilt University, and Richard Morgenstern of Resources for the Future, for valuable thoughts and suggestions. We have made a number of changes in response to the comments made by the peer reviewers and members of the public. We summarize here a few of the major comments and our responses. We are giving careful consideration to all of the comments, including those that we do not discuss in this space. Full texts of the comments are available at regulations.gov. The docket ID is OMB-2010-0008.

Peer reviewer Stavins suggests the importance of presenting not only an aggregate picture of benefits and costs, but also a look at individual rules. We agree. Relevant information on individual rules is provided in Appendix A. Peer reviewer Stavins suggests certain additions and changes with respect to citations involving the value of a statistical life, employment effects, and competitiveness. We have followed these suggestions.

Stavins also suggests the use of improved ways to deal with uncertainty, including formal assessment through Monte Carlo analysis. We agree with the suggestion and note that it is endorsed by OMB Circular A-4: “Apply a formal probabilistic analysis of the relevant uncertainties – possibly using simulation models and/or expert judgment...”²⁶⁵ In the past, several agencies have engaged in such analysis. While acknowledging that such analysis can be time-consuming, we agree that it can also be extremely valuable, and we will work with agencies to promote it.

Peer reviewer Viscusi suggests that the VSL used by most agencies is “too low” and suggest that “a value of \$9 million would be more appropriate.” We agree that important work supports this conclusion.²⁶⁶ Individual agencies, along with OMB, continue to investigate the empirical literature, including that cited by Viscusi. As stated on p. 17, footnote 19, of the Report, the range of VSLs is not very wide and several important agencies do use VSLs in the vicinity of the \$9 million figure. Viscusi also states that the discussion of happiness and well-being is speculative. We agree that the discussion is speculative and have added further qualifications to that effect. Viscusi also request elaboration on how the OSHA rule, simplifying hazard warnings, will save money. We have added such an elaboration.

Viscusi suggests that it is valuable to calculate the “net cost per life saved” to understand the merits of regulation, as was done in the 2011 Report. We agree and have added a similar discussion here.

²⁶⁵ OMB Circular A-4, p. 41. For rules that exceed the \$1 billion annual benefits or costs, a formal quantitative analysis of uncertainty is required. For rules with annual benefits or costs in the range from \$100 million to \$1 billion, agencies should seek to match the more rigor of their approach with the magnitude of a rule’s consequences.

²⁶⁶ See Viscusi and Aldy (2003) and Kniesner et al. (2012).

Viscusi offers a number of criticisms of agency assessments of benefits. He believes, for example, that the private benefits from fuel economy and energy efficiency standards are overstated; he makes the same suggestion for the benefits of greenhouse gas reductions and cigarette warning labels. OMB strongly agrees that private benefits must be analyzed separately and that the analysis of such benefits raises a number of challenging questions.²⁶⁷ In the context of the rules at issue, those questions were subject to considerable discussion in the rulemaking process (including public comment). For such rules, as for all rules, this Report (consistent with longstanding practice) uses agency numbers as they have emerged from that process. Nonetheless, OMB continues to consider these questions, and Viscusi's comments will be taken into account in assessing the benefits of future rules that raise such questions.

Peer reviewer Morgenstern suggests that OMB provide guidance to agencies in three areas. First, he suggests that further guidance is needed for performing the retrospective analysis, including providing best practices in retrospective analysis. He suggests providing examples of high quality retrospective analysis and the number of retrospective analyses the agencies should provide annually. Second, Morgenstern suggests offering agencies a discussion of the characteristics of good studies that examine employment effects, and also providing agencies with guidelines on how to prepare adequate employment analyses that inform regulatory decisions. He suggests that this Report should provide a fuller discussion of Greenstone (2002), Kahn (2001) and Walker (2011). Third, and finally, Morgenstern suggests providing agencies with further guidance on how to characterize nonquantified or nonmonetized benefits or costs in regulatory impact analyses (RIAs), including providing a list of "potentially important or significant effects" (p. 3).

These are useful suggestions and we have given them careful consideration. In particular, we agree that there would be value in refining methods of examining nonquantified and nonmonetized effects. We also agree on the importance of improving retrospective analysis and consideration of employment effects. We are engaged with agencies in discussion of these topics.

The following is a summary of the significant comments that OIRA received from others, and OIRA's response to these comments.

The Chamber of Commerce of the United States of America (Chamber of Commerce) recommends that OMB expand the scope of the Report to include rules, "regardless of whether it is expressly mandated by the Regulatory Right-to-Know Act" (p. 4). The Chamber of Commerce also recommends providing specific actions that OMB is taking to encourage agencies to provide "more thorough, evidence-based and monetized in terms of both costs and benefits" (p. 5) so that more rules can be included in the Report. We appreciate the comments and acknowledge in this and previous Reports that the focus on major rules reviewed by OMB does not present a complete picture. At the same time, we believe that an assessment of the costs and benefits of economically significant rules, consistent with the Regulatory Right-to-Know Act, is extremely informative, and that the aggregate estimates captures the majority of the total

²⁶⁷ See 2011 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities, pp. 72-23, and Alcott and Greenstone (2012).

benefits and costs of all rules subject to OMB review. Please see the 2004 and 2008 Reports for additional discussion.

The Chamber of Commerce states that the Report should explicitly recognize “the serious error that EPA introduced into the cost-benefit calculus by relying on fine particulate matter ‘co-benefits’ in its regulatory impact analyses of standards designed specifically to address hazards other than fine particulate matter” (p. 9). In response to this comment, it is not an error to consider “co-benefits.” On the contrary, consideration of co-benefits is required by any effort to provide a full accounting. For purposes of analysis, it is essential to consider co-benefits (to the extent feasible), just as it is essential to consider the universe of costs. In this regard, OMB Circular A-4 provides the following guidance on ancillary benefits and countervailing risks: “Your analysis should look beyond the direct benefits and direct costs of your rulemaking and consider any important ancillary benefits and countervailing risks.” We will continue to work with agencies to make clear how co-benefits influence agencies’ policy regulatory decisions.

The Chamber of Commerce suggests that the Report provide justification for including private benefits, such as energy savings, that accrue to individuals as social benefits. Regarding energy savings, the Mercatus Center states in its comments that there is no empirical evidence to support the notion of consumer irrationality and therefore, in the Center’s view, imposing energy efficiency standards when consumers do not value the energy savings actually constitutes a net cost to consumers, not savings.

In response to these comments, we agree that consideration of private benefits raises serious conceptual and empirical questions and that it is important to continue to consider those questions. (See the discussion in the 2011 Report, pp. 72-73.) At the same time, agencies have long considered any such benefits, if they exist, as part of a cost-benefit analysis. If, for example, an energy efficiency rule would reduce the lifetime cost of an appliance by \$500 million (population-wide), then that savings is a legitimate part of cost-benefit analysis. An analysis that ignored those savings would be incomplete.

But there are two other, and separate, questions:

- (1) What is the market failure here? and
- (2) Is there a consumer welfare loss, accompanying the private savings, that should be accounted for in the analysis, and that reduces (or perhaps even erases) the net benefits?

The comments of the Chamber of Commerce and the Mercatus Center bear on those questions; we agree that they are important. With respect to question (1), it is best not to speak abstractly or broadly of “consumer irrationality,” but to ask empirical questions about the extent to which a lack of information, a lack of salience, and a focus on the short-term may lead consumers not to purchase products that are in their economic interest. A growing literature explores those questions.²⁶⁸ With respect to question (2), it is true that a consumer welfare loss may, in principle, accompany private savings – as, for example, would occur if a more energy-

²⁶⁸ See Alcott and Greenstone (2012).

efficient appliance lacks certain attributes that consumers would value. OMB continues to work with agencies to investigate this possibility and seeks to adopt approaches (to the extent permitted by law) that maximize net benefits.

The National Federation of Independent Business (NFIB) suggests that OIRA should recommend that Congress require agencies to include reasonable indirect costs in regulatory impact analyses. In response, while noting that these legislative recommendations are outside the scope of this Report and would require further analysis, we agree that inclusion of important indirect costs in regulatory impact analysis is important, and we note that agencies are already directed – by OMB Circular A-4 – to include important ancillary benefits and countervailing risks in their benefit-cost analyses.

The Institute for Policy Integrity recommends that OIRA standardize analytical methods including “harmonizing the value of statistical life; requiring and establishing best practices for distributional analysis; establishing best practices for labeling rules; and standardizing agency cancer risk assessment practices” (p. 2). We agree that standardizing analytical methods can be an important endeavor and we are considering these recommendations.

The Mercatus Center criticizes the Report for what it sees as inadequate treatment of uncertainty in benefit estimation (e.g., conservative estimates of health benefits associated with PM reduction), relegating the uncertainty discussion to a footnote, insufficient number of rules included in the report, and “failing at the most basic principles of sound regulatory decision making” (p. 6). The Mercatus Center suggests that the Report include a separate section titled “Significant Uncertainties in Benefit and Cost Estimates,” (p. 18) highlighting the sources of uncertainty and disagreements in methods between OMB and the agencies (p. 5). These comments raise a series of complex issues and we will be exploring them in the future. As stated in our response to peer reviewer Stavins, we agree in particular with the Mercatus Center that adequate treatment of uncertainty is important and we have altered the discussion accordingly. For subsequent reports, we will give careful consideration to the recommendations of the Mercatus Center.

The Business Roundtable states that it does not support qualitative or quantitative analysis (including monetization) that conveys a sense of accuracy or precision that is misleading or unwarranted based on the underlying data. We agree that conveying an unwarranted sense of accuracy or precision would be misleading, and we have discussed the underlying issues in a way that recognizes that risk.

The Chamber of Commerce recommends that OMB “identify and explain the different assumptions across time and across agencies, as well as the effect of those different assumptions” (p. 3). We will continue to work with agencies to explain the underlying assumptions and their effects on the estimated benefits and costs in the uncertainty discussions.

The American Forest and Paper Association recommends analyzing the cumulative impact of all regulations promulgated in the past ten years, and the Institute for Policy Integrity recommends including a “public call for examples of existing regulatory conflicts or incoherence” (p. 8), in addition to surveying academic literature and consulting with agencies.

The Institute for Policy Integrity also recommends “using retrospective review to pursue balanced, evidence-based, data-driven decision-making—not just cost-cutting... To further advance retrospective review, as well as to more broadly support efforts to evaluate regulatory programs based on evidence-based criteria, OIRA should work with other OMB Offices (like E-Government) to promote the collection, interoperability, and sharing of data” (p. 1). We agree that these are worthwhile ideas and will consider them for future reports.

A number of commenters (American Forest and Paper Association, Business Roundtable, Institute for Policy Integrity, NFIB, Noe) agree that examining employment effects is important and worthwhile and should be included in regulatory impact analysis, while one commenter notes that there is a long history of calls to examine employment effects. The Institute for Policy Integrity states that employment impacts should be focused on net effects. The Institute and Mr. Noe recommend distinguishing between short-term and long-term effects. We agree that examining employment effect is important, and we will continue to work with agencies to focus on net effects and to distinguish between short-term and long-term effects.

A number of commenters (American Forest and Paper Association, Institute for Policy Integrity, Mr. Noe) suggest that the models and data that are used to analyze employment should be relevant to the particular sectors being affected. They also suggest that employment analyses should be transparent and should appropriately characterize the uncertainties. We agree that it is important to use appropriate models and data to analyze employment effects as well as to present the results clearly along with appropriate discussion of uncertainties; we will continue to work with agencies in their efforts to analyze employment effects.

Aldy et al. recommend that “OMB establish regular and formal consultations with all of the independent financial regulatory agencies to ensure reasoned and consistent determinations as to whether their regulations are ‘major’” (p. 2) and that the designation process “should be transparent—and it should provide an evidence-based and data-driven determination of major rules for important financial regulatory decisions” (p. 2). We appreciate these suggestions. We note that following the enactment of the Congressional Review Act, on March 30, 1999, OMB issued Memorandum 99-13, “Guidance for Implementing the Congressional Review Act.” The guidance, which is applicable to departments, executive and independent agencies, is still in effect today. We will consider additional steps to promote consistency and transparency.

Public Commenters

Aldy, Joe, Art Fraas and Randall Lutter
American Forest and Paper Association
Anonymous
Business Roundtable
Chamber of Commerce
Institute for Policy Integrity (NYU)
Mercatus Center
National Federation of Independent Business (NFIB)
Noe, Paul
OMB Watch

APPENDIX H: REFERENCES

- Acemoglu, Daron and Joshua D. Angrist. "Consequences of Employment Protection? The Case of the Americans with Disabilities Act." *Journal of Political Economy*, 2001, 109(5), 915-957.
- Adler, Matthew. *Well-being and Fair Distribution: Beyond Cost-Benefit Analysis*, 2011, Oxford: Oxford University Press.
- Adler, Matthew and Eric A. Posner. "Happiness Research and Cost-Benefit Analysis." *Journal of Legal Studies*, 2008, 37(S2), S253-S292.
- Alcott, Hunt and Michael Greenstone. "Is There an Energy Efficiency Gap?" *Journal of Economic Perspectives*, 2012, 26(1), 3-28.
- Ashenfelter, Orley and Alan Krueger. "Estimates of the Economic Return to Schooling from a New Sample of Twins." *The American Economic Review*, 1994, 84(5).
- Balleisen, Edward and David Moss. *Government and Markets: Toward a New Theory of Regulation*, 2009, Cambridge, U.K.: The Tobin Project.
- Banerjee, Abhijit V. and Esther Duflo. *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty*. Public Affairs, 2011.
- Banerjee, Abhijit V. and Esther Duflo. "The Experimental Approach to Development Economics." *Annual Review of Economics*, 2009, 1:151-178.
- Bartik, Timony J. "Including Jobs in Benefit-Cost Analysis." *Annual Review of Resource Economics*, 2012, 4(1), 55-73.
- Baum, Charles L. "The Effect of State Maternity Leave Legislation and the 1993 Family and Medical Leave Act on Employment and Wages." *Labour Economics*, 2003, 10(5), 573-596.
- Becker, Randy A. "Air Pollution Abatement Costs under the Clean Air Act: Evidence from the PACE Survey." *Journal of Environmental Economics and Management*, 2005, 50(1), 144-169.
- Becker, Randy and Vernon Henderson. "Effects of Air Quality Regulation on Polluting Industries." *Journal of Political Economy*, 2000, 108(2), 379-421.
- Berman, Eli and Linda T.M. Bui. "Environmental Regulation and Labor Demand: Evidence from the South Coast Air Basin." *Journal of Public Economics*, 2001, 79: 265-295.
- Berman, Eli and Linda T.M. Bui. "Environmental Regulation and Productivity: Evidence from Oil Refineries." *The Review of Economics and Statistics*, 2001, 83(3), 498-510.
- Bertrand, Marianne and Francis Kramarz. "Does Entry Regulation Hinder Job Creation? Evidence from the French Retail Industry." *The Quarterly Journal of Economics*, 2002, 117(4), 1369-1413.

Beshears, John, James J. Choi, David Laibson, and Brigitte C. Madrian. "Simplification and Saving," available at:
<http://www.economics.harvard.edu/faculty/laibson/files/Simplification%2Band%2Bsaving%2B100802.pdf>.

Biswas-Diener, Robert, Joar Vitterso and Ed Diener. "The Danish Effect: Beginning to Explore High Well-Being in Denmark." *Social Indicators Research*, 2010, 97, 229-246.

Blanchard, Olivier and Francesco Giavazzi. "Macroeconomic Effects of Regulation and Deregulation in Goods and Labor Markets." *The Quarterly Journal of Economics*, 2003, 118(3), 879-907.

Blanchflower, David G. and Andrew J. Oswald. "Well-Being Over Time in Britain and the USA." *Journal of Public Economics*, 2004, 88(7-8), 1359-1386.

Blanchflower, David G. and Andrew J. Oswald. "International Happiness," 2010. National Bureau of Economic Research Working Paper Series.

Bloom, David, Canning, David and Jaypee Sevilla. "The Effect of Health on Economic Growth: A Production Function Approach," *World Development*, 2004, 32:1: 1-13.

Brunnermeier, Smita B., and Arik Levinson. "Examining the Evidence on Environmental Regulations and Industry Location." *The Journal of Environment and Development*, 2004, 13(1), 6-41.

Carpenter, Dan. "Confidence Games: How Does Regulation Constitute Markets?" in Edward Balleisen and David Moss, eds., *Government and Markets: Toward a New Theory of Regulation*, Cambridge University Press:2009.

Carpenter, Dan. "Protection without Capture: Dynamic Product Approval by a Politically Responsive, Learning Regulator," *American Political Science Review*, 2004, 98:4, 613-631.

Carpenter, Dan and M.M. Ting. "Regulatory Errors with Endogenous Agendas," *American Journal of Political Science*, 2007, 51(4) , 835-853.

Chapman, Gretchen B. and Eric Johnson. "Incorporating the Irrelevant: Anchors in Judgments of Belief and Value." In *Heuristics and Biases: The Psychology of Intuitive Judgment*. Eds. Thomas Gilovich, Dale Griffin, and Daniel Kahneman, Cambridge University Press, 2002: 120-38.

Chay, Kenneth and Greenstone, Michael. "Does Air Quality Matter? Evidence from the Housing Market," *Journal of Political Economy*, 2005, 113(2): 376-424.

Cohen, Daniel and Marcelo Soto. "Growth and Human Capital: Good Data, Good Results," *Journal of Economic Growth*, 2007, 12: 51-76.

Cole, Matthew A. and Rob J. Elliot. "Do Environmental Regulations Cost Jobs? An Industry-Level Analysis of the UK." *The B.E. Journal of Economic Analysis & Policy*, 2007, 7(1).

Congdon, William J., Jeffrey P. Kling, and Sendhil Mullainathan. *Policy and Choice: Public Finance through the Lens of Behavioral Economics*. Brookings Institution Press, 2011.

Copeland, Curtis W. *How Agencies Monetize "Statistical Lives" Expected to Be Saved By Regulations*, CRS Report for Congress, Congressional Research Service, March 24, 2010.

Crain, Mark. *The Impact of Regulatory Costs on Small Firms*. Report to the Office of Advocacy, United States Small Business Administration, 2005.

Crain, Nicole V. and Mark W. Crain. *The Impact of Regulatory Costs on Small Firms*. Report to the Office of Advocacy, United States Small Business Administration, 2010

Crain, W. Mark and Thomas D. Hopkins. *The Impact of Regulatory Costs on Small Firms*. Report to the Office of Advocacy, United States Small Business Administration, 2001

Deaton, Angus. "Income, Health, and Well-Being Around the World: Evidence from the Gallup World Poll," *Journal of Economic Perspectives*, 2008, 22(2): 53-72.

Dean, Thomas J.; Brown, Robert L, and Stango, Victor. "Environmental Regulation as a Barrier to the Formation of Small Manufacturing Establishments: A Longitudinal Examination." *Journal of Environmental Economics and Management*, 2000, 40, 56-75.

Deaton, Angus; Fortson, Jane and Tortora, Robert. "Life (Evaluation), HIV/AIDS, and Death in Africa." In *International Differences in Well-Being*, eds. Ed Diener, John F. Helliwell, and Daniel Kahneman. New York and Oxford: Oxford University Press, 2010: 105-36.

Devoto, Florencia, Esther Duflo, Pascaline Dupas, Vincent Pons, and William Pariente. "Happiness on Tap: Piped Water Adoption in Urban Morocco."

Diener, Ed; Richard Lucas; Ulrich Schimmack; and John Helliwell. *Well-Being for Public Policy*. Oxford University Press, 2009.

Diener, Ed; Daniel Kahneman, Daniel; William Tov and Raksha Arora. "Income's Association with Judgments of Life Versus Feelings." In *International Differences in Well-Being*, eds. Ed Diener, John F. Helliwell, and Daniel Kahneman. New York and Oxford: Oxford University Press, 2010: 3-15.

Djankov, Simeon; Rafael La Porta; Florencio Lopez-de-Silanes and Andrei Shleifer. "The Regulation of Entry," *Quarterly Journal of Economics*, 2002, 107:1: 1-37.

Dynan, Karen E. and Enrichetta Ravina. "Increasing Income Inequality, External Habits, and Happiness." *American Economic Review*, 2007, 97(2): 226-231.

Ellison, Glenn, and Sara Fisher Ellison. "Search, Obfuscation, and Price Elasticities on the Internet," *Econometrica*, 2009, 77 (2): 427-452.

Engelbrecht, Hans-Jürgen. "Natural Capital, Subjective Well-Being, and the New Welfare Economics of Sustainability: Some Evidence from Cross-Country Regressions." *Ecological Economics*, 2009, 69: 380-388.

Environmental Protection Agency. "Valuing Mortality Risk Reductions for Environmental Policy: A White Paper." Dec. 10, 2010. Available at: [http://yosemite.epa.gov/ee/epa/eerm.nsf/vwAN/EE-0563-1.pdf/\\$file/EE-0563-1.pdf](http://yosemite.epa.gov/ee/epa/eerm.nsf/vwAN/EE-0563-1.pdf/$file/EE-0563-1.pdf).

Fullerton, Don. "Six Distributional Effects of Environmental Policy." NBER Working Paper 16703. Cambridge, Mass.: National Bureau of Economic Research, 2011.

Fung, Archon, Mary Graham and David Weil. *Full Disclosure: The Perils and Promise of Transparency*, Cambridge University Press, 2007.

Goodstein, E.B. *Jobs and the Environment: The Myth of a National Trade-Off*. Economic Policy Institute, Washington, D.C., 1994.

Gray, Wayne B. and Ronald Shadbegian. "Environmental Regulation, Investment Timing, and Technology Choice." *The Journal of Industrial Economics*, 1998, 46(2), 235-256.

Greenstone, Michael. "The Impacts of Environmental Regulations on Industrial Activity: Evidence from the 1970 and 1977 Clean Air Act Amendments and the Census of Manufacturers." *Journal of Political Economy*, 2002, 110(6), 1175-1219.

Greenstone, Michael. "Toward a Culture of Persistent Regulatory Experimentation and Evaluation." In *New Perspectives on Regulation*, David Moss and John Cisternino (Eds.). Cambridge, MA: The Tobin Project, Inc., 2009.

Greenstone, Michael, John A. List and Chad Syverson. "The Effects of Environmental Regulation on the Competitiveness of U.S. Manufacturing." U.S. Census Bureau Center for Economic Studies Discussion Paper (February 2011).

Greenstone, Michael, Paul Oyer and Annette Vissing-Jorgensen. "Mandated Disclosure Stock Returns and the 1964 Securities Act Amendments." *The Quarterly Journal of Economics*, 2006, 121(2), 399-460.

Gruber, Jonathan. "The Incidence of Mandated Maternity Benefits." *American Economic Review*, 1994, 84(3), 622-641.

Hagerty, Michael and Ruut Veenhoven. "Wealth and Happiness Revisited – Growing National Income Does Go with Greater Happiness." *Social Indicators Research*, 2003, 64, 1-27.

Hahn, Robert and John Hird, "The Costs and Benefits of Regulation: Review and Synthesis," *Yale Journal on Regulation* 8 (1991), pp. 233-278.

Hanna, Rema. "U.S. Environmental Regulation and FDI: Evidence from a Panel of U.S.-Based Multinational Firms," *American Economic Journal: Applied Economics*, 2010, 2(3), 158-189.

Harter, James K. and Raksha Arora. "The Impact of Time Spent Working and Job fit on Well-Being Around the World." In *International Differences in Well-Being*, eds. Ed Diener, John F. Helliwell, and Daniel Kahneman. New York and Oxford: Oxford University Press, 2010: 398-430.

Hastings, Justine S., and Jeffrey M. Weinstein. "Information, School Choice, and Academic Achievement: Evidence from Two Experiments," *Quarterly Journal of Economics*, 2008, 123 (4): 1373-1414.

Hopkins, Thomas D. *Profiles of Regulatory Cost*, Report to the Office of Advocacy, United States Small Business Administration, 1995.

Ifcher, John and Homa Zarghamee, "Happiness and Time Preference: The Effect of Positive Affect in a Random-Assignment Experiment," *American Economic Review*, 2011, 101(7), 3109-3129. .

Inglehart, Ronald, Roberto Foa, Christopher Peterson, and Christian Welzel. "Development, Freedom, and Rising Happiness: A Global Perspective (1981-2007)." *Perspectives on Psychological Science*, 2008, 3, 264-285.

Isen, A.M. "Positive Affect, Cognitive Processes, and Social Behavior." In Berkowitz (Ed.), *Advances in Experimental Social Psychology*. New York: Russell Sage Foundation, 1987.

Jaffe, Adam B., et al. "Environmental Regulation and the Competitiveness of U.S. Manufacturing: What Does the Evidence Tell Us?" *Journal of Economic Literature*, 1995, 33(1), 132-163.

Jaffe, Adam and Karen Palmer, "Environmental Regulation and Innovation: A Panel Data Study," *Review of Economics and Statistics* 1997, 610-9.

Jacobson, Louis, Robert LaLonde and Daniel Sullivan, "Earnings Losses of Displaced Workers," *American Economic Review*, 83, 1993.

Jolls, Christine. "Accommodation Mandates." *Stanford Law Review*, 2000, 53, 223-306.

Jorgenson, Dale W. and Peter J. Wilcoxon. "Environmental Regulation and U.S. Economic Growth." *RAND Journal of Economics*, 1990, 21(2), 314-340.

Kahn, Matthew E. "The Beneficiaries of Clean Air Act Regulation." *Regulation Magazine*, 2001 24(1).

Kahn, Matthew E. "Particulate Pollution Trends in the United States." *Journal of Regional Science and Urban Economics*, 1997, 27: 87-107.

Kahneman, Daniel. "Objective Happiness." In D. Kahneman, E. Diener, & N. Schwarz (Eds.). *Well-being: the foundations of hedonic psychology*. New York: Russell Sage Foundation, 1999.

Kahneman, Daniel and Angus Deaton. "High Income Improves Evaluation of Life But Not Emotional Well-Being." *Proceedings of the National Academy of Sciences*, 2010, 107(38) (2010).

Kahneman, Daniel and Alan Krueger. "Developments in the Measurements of Subjective Well Being." *The Journal of Economic Perspectives*, 2006, 20(1), 3-24.

Kahneman, Daniel, Alan Krueger, David Schkade, N. Schwarz and Arthur Stone. "Toward National Well-Being Accounts." *American Economic Review*, 2004, 94(2), 429-434.

Kahneman, Daniel; David A. Schkade, Claude Fischler, Alan B. Krueger, and Amy Krilla. "The Structure of Well-Being in Two Cities: Life Satisfaction and Experienced Happiness in Columbus, Ohio; and Rennes, France." In *International Differences in Well-Being*, eds. Ed Diener, John F. Helliwell, and Daniel Kahneman. New York and Oxford: Oxford University Press, 2010: 398-430.

Kamenica, Emir, Sendhil Mullainathan, and Richard Thaler. "Helping Consumers Know Themselves." *American Economic Review: Papers & Proceedings*, 2011, 101, 417-422.

Keller, Wolfgang, and Arik Levinson. "Pollution Abatement Costs and Foreign Direct Investment Inflows to U.S. States." *The Review of Economics and Statistics*, 2002, 84(4), 691-703.

Kling, Jeffrey R., Sendhil Mullainathan, Eldar Shafir, Lee Vermeulen, and Marian Wrobel. "Comparison Friction: Experimental Evidence from Medicare Drug Plans," *Quarterly Journal of Economics*, 2012, 127(1), 199-235. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1931181.

Kniesner, Thomas et al. "The Value of Statistical Life: Evidence from Panel Data." *The Review of Economics and Statistics*, 2012, 94(1), 74-87.

Krueger, Alan B., ed. *Measuring the Subjective Well-Being of Nations: National Accounts of Time Use and Well-Being*. The University of Chicago Press, 2009.

Krueger, Alan B., et al. "National Time Accounting: The Currency of Life." *Measuring the Subjective Well-Being of Nations: National Accounts of Time Use and Well-being*, Alan B. Krueger, ed. Chicago: The University of Chicago Press, 2009, 9-86.

- Krueger, Alan B. and Mikael Lindahl. "Education for Growth: Why and For Whom?" *Journal of Economic Literature*, 2001, XXXIX, 1101-1136, available at: <http://www.nber.org/papers/w7591>.
- Krueger, Alan B. and Andreas Mueller. "Job Search, Emotional Well-Being and Job Finding in a Period of Mass Unemployment: Evidence from High-Frequency Longitudinal Data." *Brookings Papers on Economic Activity*, 2011. .
- Krueger, Alan B., and David A. Schkade. "The Reliability of Subjective Well-Being Measures." *Journal of Public Economics*, 2008, 92(8-9), 1833-1845.
- La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer, "Corporate Ownership around the World," *Journal of Finance*, 54 (1999), pp. 471–517.
- Lane, Robert E. *The Loss of Happiness in Market Democracies*. New Haven: Yale University Press, 2001.
- Lanoie, Paul, Michel Patry, Richard Lajeunesse, "Environmental Regulation and Productivity: Testing the Porter Hypothesis," *Journal of Productivity Analysis*, 2008, 30, 121-8.
- Levinson, Arik, and M. Scott Taylor. "Unmasking the Pollution Haven Effect." *International Economic Review*, 2008, 49:1, 223-254.
- List, John A., Daniel L. Millimet, Per G. Fredriksson, and W. Warren McHone. "Effects of Environmental Regulations on Manufacturing Plant Births: Evidence from a Propensity Score Matching Estimator." *The Review of Economics and Statistics*, 2003, 85(4), 944-952.
- Ludwig, Jens, Jeffrey R. Kling, and Sendhil Mullainathan. "Mechanism Experiments and Policy Evaluations." *Journal of Economic Perspectives*, 2011, 25(3), 17-38.
- Luttmer, Erzo F. P. "Neighbors as Negatives: Relative Earnings and Well Being." *The Quarterly Journal of Economics*, 2005, 120(3), 963-1002.
- Masur, Jonathan S. and Eric A. Posner. "Regulation, Unemployment, and Cost-Benefit Analysis," *Virginia Law Review*, 2012., 98(3).
- Miller, Wilhelmine, Lisa Robinson, and Robert S. Lawrence, eds. *Valuing Health for Regulatory Cost-Effectiveness Analysis*. National Academies Press, 2006.
- Morgenstern, Richard D., William A. Pizer, and Jhih-Shyang Shih. "Jobs Versus the Environment: An Industry-Level Perspective." *Journal of Environmental Economics and Management*, 2002, 43, 412-436.
- Moss, David and John Cisternino, eds., *New Perspectives on Regulation*, 2009. Cambridge, U.K.: The Tobin Project.

National Research Council. *Estimating the Public Health Benefits of Proposed Air Pollution Regulations*. National Academies Press, 2002.

National Research Council. *Estimating Mortality Risk Reduction and Economic Benefits from Controlling Ozone Air Pollution*. National Academies Press, 2008.

Neumark, David and William L. Wascher. *Minimum Wages*. Cambridge: The MIT Press, 2008.

Nordhaus, William D. "Principles of National Accounting For Non-Market Accounts." National Bureau of Economic Research Paper (February 6, 2004). Available at: <http://www.nber.org/CRIW/CRIWs04/nordhaus.pdf>.

Nordhaus, William D. and Edward C. Kokkelenberg. *Nature's Numbers: Expanding the National Economic Accounts to Include the Environment*. National Academies Press, 1999.

Oswald, Andrew J. and Stephen Wu. "Measures of Human Well-Being: Evidence from the U.S.A." *Science*, 2010, 327: 576-579.

Peoples, James. "Deregulation and the Labor Market." *Journal of Economic Perspectives*, 1998, 12(3), 111-130.

Ruhm, Christopher. "The Economic Consequences of Parental Leave Mandates: Lessons From Europe." *The Quarterly Journal of Economics*, 1998, 113(1), 285-317.

Sen, Amartya. *Development as Freedom*, Oxford University Press, 1999.

Sen, Amartya. *Commodities and Capabilities*, Oxford University Press, 1999.

Stewart, Neil. "The Cost of Anchoring on Credit-Card Minimum Repayments." *Psychological Science*, 20(39), 2009.

Stevenson, Betsey and Justin Wolfers. "Economic Growth and Happiness: Reassessing the Easterlin Paradox." *Brookings Papers on Economic Activity*, Spring 2008a, 1-87.

Stevenson, Betsey and Justin Wolfers. "Happiness Inequality in the United States." *Journal of Legal Studies*, 2008b, 37(S2), S33-S80.

Stiglitz, Joseph, Amartya Sen, and Jean-Paul Fitoussi. *Mismeasuring Our Lives: Why GDP Doesn't Add Up*, The New Press, 2010.

Summers, Lawrence. "Some Simple Economics of Mandated Benefits," *The American Economic Review*, 1989, 79(2), 177-183.

Temple, Jonathan, "The New Growth Evidence," *Journal of Economic Literature*, 1999, 37:1, 112-156.

Tversky, Amos and Daniel Kahneman. "Judgment under Uncertainty: Heuristics and Biases." *Science*, New Series, 1974, 185(4157), 1124-1131.

van Stel, Andre, David Storey, and A. Roy Thurik, "The Effect of Business Regulations on Nascent and Young Business Entrepreneurship," *Small Business Economics* 28 (2007), pp. 171-186.

Viscusi, W. Kip and Joseph E. Aldy. "The Value of a Statistical Life: A Critical Review of Market Estimates throughout the World." *Journal of Risk and Uncertainty*, 2003, 27(1), 5-76.

Vitarelli, Anthony. "Behavioral Economics in Federal Regulation", *27 Yale Journal on Regulation*, 2010, 27(1).

von Wachter, Till, Jae Song, and Joyce Manchester, "Long-Term Earnings Losses due to Mass Layoffs During the 1982 Recession: An Analysis Using U.S. Administrative Data from 1974 to 2004," 2009. Columbia University, Department of Economics Discussion Paper Series DP0910-07. .

Waldfoegel, Jane. "The Impact of the Family and Medical Leave Act." *Journal of Policy Analysis and Management*, 1999, 18(2), 281-302.

Walker, W. Reed. "Environmental Regulation and Labor Reallocation: Evidence from the Clean Air Act." *American Economic Review: Papers & Proceedings*, 2011, 101, 442-447.

Warr, P. "Well-Being and the Workplace." In D. Kahneman, E. Diener, and N. Schwarz (Eds.). *Well-Being: The Foundations of Hedonic Psychology*. New York: Russell Sage Foundation, 2003.

Xing, Yuqing, and Charles D. Kolstad. "Do Lax Environmental Regulations Attract Foreign Investment?" *Environment and Resource Economics*, 2002, 21, 1-22.