2013 DRAFT REPORT TO CONGRESS
ON THE BENEFITS AND COSTS OF FEDERAL REGULATIONS AND AGENCY COMPLIANCE WITH THE UNFUNDED MANDATES REFORM ACT

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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 draft Report to Congress on the Benefits and Costs of Federal Regulations (Report). This will be the sixteenth annual Report since OMB began issuing this Report in 1997. The draft 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 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, 2002, to September 30, 2012, for which agencies estimated and monetized both benefits and costs, are in the aggregate between $193 billion and $800 billion, while the estimated annual costs are in the aggregate between $57 billion and $84 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 expected from 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 2012 (FY 2012), executive agencies promulgated 47 major rules, of which 22 were "transfer" rules – rules that primarily caused income transfers. Most transfer rules implement Federal budgetary programs as required or authorized by Congress.

    - For the 22 transfer rules, in all but two cases the issuing agencies quantified and monetized the transfer amounts. (The transfer amounts reflect the principal economic consequences of such rules.)
    - For 14 rules, representing the majority of the benefits and costs of rules issued in FY 2012, the issuing agencies quantified and monetized both benefits and costs. Those 14 rules were estimated to result in a total of $53.2 billion to $114.6 billion in annual benefits and $14.8 billion to $19.5 billion in annual costs.
    - For two rules, the issuing agency was able to quantify and monetize only benefits. For these two rules, the agencies estimated annual benefits of $350 million to $461 million.
    - For nine rules, the issuing agencies were able to quantify and monetize only costs or cost savings. For these rules, the agencies estimated total

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

annual costs of about $1 billion. Some of the rules were statutorily mandated.

- The independent regulatory agencies, whose regulations are not subject to OMB review under Executive Orders 12866 and 13563, issued 21 major final rules in FY 2012. Ten of the 21 rules were issued by the Commodity Futures Trading Commission (CFTC). CFTC also issued three joint rules with the Securities and Exchange Commission (SEC). SEC issued four additional rulemakings in the same period.

It is important to emphasize that the estimates used 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 effects, 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 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 draft 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 and 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, "Retrospective Analysis of Existing Rules," 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.[2]

OMB emphasizes that careful consideration of costs and benefits is best understood as a pragmatic way of helping to ensure 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).

[2] Further discussion of the impact Executive Order 13563 has had on Agency rulemakings to date may be found in Chapter II of this report.

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") and that agencies "select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity)." It should be emphasized that these requirements, 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 to enable the most informed cost benefit analysis.

Consistent with the Regulatory Right-to-Know Act, this draft Report also offers several recommendations for regulatory reform. They include: facilitating public participation and fostering transparency by using plain language; making objective, evidence-based assessment of costs and benefits an integral part of the regulatory decision-making process; using retrospective review to inform decisions about specific rules and, more broadly, about the appropriate interpretation of impact analyses that feature incomplete quantification; and, finally, aligning agency priorities across all levels of internal hierarchy.

In addition to making recommendations for reform, this draft Report discusses implementation of Executive Order 13563, which encourages improved regulatory coordination, greater public participation in the regulatory process, reductions in regulatory burden, and simplification of requirements and language. FY 2012 saw achievements in a number of these areas. Public participation was facilitated by the launch and redesign of a number of Federal Government websites; the President, with officials from both Canada and Mexico, announced work plans related to international regulatory coordination; and, in response to several Executive Orders and OMB memoranda issued in FY 2012 that built on E.O. 13563, agencies across the Federal Government pursued initiatives in the areas of regulatory look-back, reducing paperwork burden, simplifying government communications, and promoting long-run economic growth and job creation via international regulatory cooperation.[3]

This draft Report is being issued along with a draft of OMB's Sixteenth 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.

[3] Further discussion of international regulatory cooperation efforts may be found in Chapter II of this report.

PART I: DRAFT 2013 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 FY 2012 (September 30, 2012). As in previous Reports, this chapter uses a ten-year lookback. Estimates are based on the major regulations reviewed by OMB from October 1, 2002 to September 30, 2012.[4] For this reason, two rules reviewed from October 1, 2001 to September 30, 2002 (fiscal year 2002) were included in the totals for the 2012 Report but are not included in this Report. A list of these fiscal year 2002 (FY 2002) rules can be found in Appendix B (see Table B-1). The removal of the two FY 2002 rules from the ten-year window is accompanied by the addition of 14 FY 2012 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.[5] 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.[6] 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

[4] All previous Reports are available at: http://www.whitehouse.gov/omb/inforeg_regpol_reports_congress/.

[5] OMB 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.

[6] Section 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.[7] 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. Using examples from the recent past, if a rule would reduce the incidence of rape, prevent the denial of health insurance to children with preexisting conditions, 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. So far as we are aware, there is only limited analysis of the distributional effects of regulation in general or in significant domains[8]; such analysis could prove illuminating.

[7] See Greenstone (2009).
[8] 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 2003(FY 2003) through FY 2012, Federal agencies published 37,786 final rules in the *Federal Register*.[9] OMB reviewed 3,203 of these final rules under Executive Orders 12866 and 13563.[10] Of these OMB-reviewed rules, 536 are considered major rules, primarily as a result of their anticipated impact on the economy (i.e., an impact of $100 million 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 broader than the class of rules that impose $100 million or more in costs on the private sector. We include in our 10-year aggregate of annualized benefits and costs of regulations rules that meet two conditions:[11] (1) each rule was estimated to generate benefits or costs of approximately $100 million, or more, 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.[12] Table 1-1 presents estimates of the total annualized benefits and costs of 115 regulations reviewed by OMB over the ten-year period from October 1, 2002, to September 30, 2012, 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, 2002, to September 30, 2012, are based on agency analyses conducted prior to issuance of the regulation and subjected to public notice, comments, and OMB review under Executive Orders 12866 and 13563.

[9] This count includes all final and interim final rules from all Federal agencies (including Independent agencies).
[10] 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.
[11] 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, which 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 in applying this guidance to their impact analyses.
[12] In many instances, agencies were unable to quantify all benefits and costs. We have included information about 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. [13]

Table 1-1: Estimates of the Total Annual Benefits and Costs of Major Federal Rules by Agency, October 1, 2002 - September 30, 2012 (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	12	$8.2 to $15.3	$3.6 to $5.5
Department of Health and Human Services	19	$16.6 to $40.2	$2.4 to $5.2
Department of Homeland Security	2	$0 to $0.5	$0.1 to $0.3
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	8	$7.3 to $21.4	$2.3 to $5.1
Department of Transportation (DOT)[14]	29	$16.2 to $27.6	$7.9 to $14.1
Environmental Protection Agency (EPA)[15]	32	$112.0 to $637.6	$30.4 to $36.5

[13] 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.

[14] This total excludes FMCSA's 2010 Electronic On-Board Recorders for Hours-of-Service Compliance rule. The rule was vacated on Aug. 26, 2011, by the U.S Court of Appeals for the Seventh Circuit. 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, 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.

Agency	Number of Rules	Benefits	Costs
Joint DOT and EPA	3	$27.3 to $49.6	$7.3 to $14.0
Total	**115**	**$192.7 to $799.7**	**$56.6 to $83.7**

The aggregate benefits and costs reported in Table 1-1 are somewhat higher than those presented in last year's final Report. As with previous Reports, the reported monetized benefits continue to be significantly higher than the monetized costs. Two agencies (the Department of Transportation and the Environmental Protection Agency) issued a majority of total rules — 64 of 115. In addition, the Environmental Protection Agency and the Department of Transportation are responsible for a majority of both total benefits and total costs.

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 draft 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 final status of the two rules has been resolved, however, we have chosen to maintain the distinction between the two rules.

This total also 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. EPA subsequently published the final versions of these rules on January 31 and February 1, 2013. The current 10-year aggregate estimates therefore do not include the benefits and costs of these rules; however, they will be included in the 2014 version of this Report.

This total also 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.

Finally, 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. As of the production of this draft Report, EPA is working on a revised version of this rulemaking.

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 three overlapping sets of rules pertaining to vehicle fuel economy, 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, 2002 - September 30, 2012 (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	12	$8.2 to $15.3	$3.6 to $5.5
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	10	$14.4 to $18.2	$1.5 to $3.8
Department of Labor			
Occupational Safety and Health Administration	4	$0.8 to $3.0	$0.5 to $0.6
Employee Benefits Security Administration	3	$6.6 to $18.4	$1.7 to $4.5
Department of Transportation			
National Highway Traffic Safety Administration	11	$13.1 to $22.3	$5.2 to $10.1
Federal Aviation Administration	6	0.3 to 1.2	$0 to $0.4
Federal Motor Carriers Safety Administration	5	$1.4 to $2.5	$1.6
Federal Railroad Administration	3	$0.9 to $1.0	$0.7 to $1.4
Environmental Protection Agency			
Office of Air	21	$109.4 to $629.1	$29.4 to $35.3
Office of Water	5	$1.1 to $3.6	$0.7 to $0.8
Office of Solid Waste and Emergency Response	4	$0 to $0.3	-$0.3
Department of Transportation/Environmental Protection Agency			
National Highway Traffic Safety	3	$27.3 to $49.6	$7.3 to $14.0

Agency	Number of Rules	Benefits	Costs
Administration/Office of Air			

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 $2.2 billion to $19.1 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 and Radiation. EPA rules account for 58 to 80 percent of the monetized benefits and 44 to 54 percent of the monetized costs.[17] Of these, rules that have as either a primary or significant aim to improve air quality account for 98 to 99 percent of the benefits of EPA rules.

It is important to emphasize that the large estimated benefits of EPA rules issued pursuant to the Clean Air Act are mostly attributable to the reduction in public exposure to a single air pollutant: fine particulate matter. Of the EPA's 21 air rules, the rules with the highest estimated benefits are the Clean Air Fine Particle Implementation Rule, issued in 2007, with benefits estimates ranging from $19 billion to $167 billion per year; the Clean Air Interstate Rule, issued in 2005, with benefits estimates ranging from $12 to $152 billion; and the National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units ("Utility MACT"), issued in 2011, with benefits estimates ranging from $28 billion to $77 billion. While the benefits of these rules far exceed the costs, they are also among

[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 CAFE rules as "EPA" rules.

the costliest rules. The Utility MACT rule, which is estimated to be the costliest of the EPA rules, has annualized costs of about $8.1 billion.

We provide additional information 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.

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.[18] 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 particular 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, we understand that significant additional research is currently being conducted that may be exceedingly valuable to clarify and resolve relevant scientific issues and to make further progress on the relationship between particulate matter, including the differentiation between different "species" of 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 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.

[18] See "Qualification and a brief discussion of uncertainties" for more discussion.

3. Qualifications and a brief discussion on 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 mortality[19] and morbidity), different baselines in terms of the regulations and controls already in 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/National Academy of Sciences

[19] 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).
Two agencies, EPA and DOT, have developed official guidance on VSL. In its 2013 update, DOT adopted a value of $9.1 million ($2012), and requires all the components of the Department to use that value in their RIAs. See Department of Transportation (2013). 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 reviewing the National Ambient Air Quality Standards for particulate matter, for example, EPA adjusted this VSL to account for a different currency year ($2010) 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 draft guidelines in response to recommendations received from its Science Advisory Board.
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 Hazard Communication final rule, OSHA used a VSL of $8.7 million ($2010). 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.)

released the study *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 (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 (PM) 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 current 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, 2002 to September 30, 2012 by fiscal year for which reasonably complete monetized estimates of both benefits and costs are available.[20] Figure 1-1 provides similar information as Table 1-3 in graphical form (note that in previous years, we have used a point estimates for this graph; however, for the purposes of this draft report we have attempted to incorporate the full range of impacts across the 10 fiscal years. We are particularly interested in comment on this new approach to the figure). As the figure shows, the monetized additional costs of private mandates tend to be around or below $10 billion per year. The vast majority of benefits and costs for rules finalized in FY2012 results from two rules: EPA's court-ordered Mercury and Air Toxics Standards (MATS) rule (the National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Electric Utility Steam Generating Units), and EPA and the Department of Transportation's Joint Rulemaking to Establish 2017 and Later Model Year Light Duty Vehicle GHG Emissions and CAFE Standards. Both rules have benefits that significantly outweigh their costs.

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
2003	6	$1.6 to $4.5	$1.9 to $2.0
2004	9[21]	$8.8 to $69.7	$2.6 to $2.8

[20] 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.

[21] 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

Fiscal Year	Number of Rules	Benefits	Costs
2005	12[22]	$27.9 to $178.1	$3.8 to $6.1
2006	6[23]	$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[24]	$8.6 to $28.9	$3.7 to $9.5
2010	17[25]	$18.6 to $85.9	$6.4 to $12.4
2011	12	$34.3 to $89.5	$5.0 to $10.1
2012	14	$53.2to $114.6	$14.8 to $19.5

Variability in benefit estimates appears greater than in cost estimates. Note that the benefits exceed the costs in every fiscal year and that the highest benefit year, in terms of the midpoint of the range of estimates, was 2007.

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.

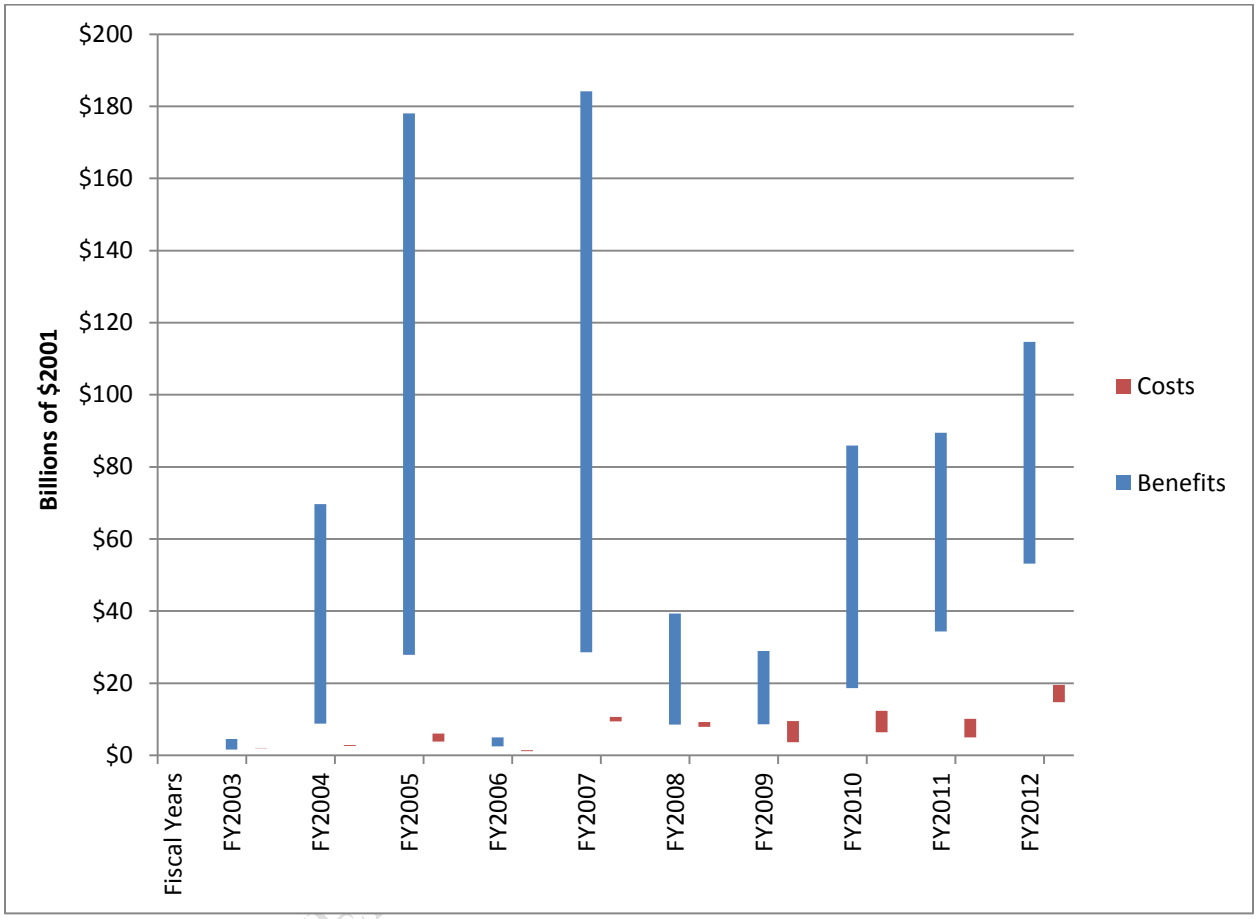
[22] This total does not include EPA's 2005 Clean Air Mercury Rule which was vacated in 2008.

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

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

[25] 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.

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



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 draft 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.[26] In addition, the groundwork for the regulations issued by one administration is often begun in a

[26] 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.[27] 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 2012

1. Major Rules Issued by Executive Departments and Agencies

In this section, we examine in more detail the estimated benefits and costs of the 47 major final rules for which OMB concluded review during the 12-month period beginning October 1, 2011, and ending September 30, 2012.[28] (Note that 22 of the 47 rules are transfer rules.) Major rules represent approximately 19 percent of the 278 final rules reviewed by OMB.[29] OMB believes, however, that the benefits and costs of major rules, which have the largest economic effects, account for the majority of the total benefits and costs of all rules subject to OMB review.[30]

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.

[27] For 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. Also, NHTSA's Corporate Average Fuel Economy rule for Model Year 2011 was proposed during the Bush Administration, but finalized in the first year of the Obama Administration.

[28] 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.

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

[30] 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, 2011 - September 30, 2012 (billions of 2001 dollars)

Agency	Number of Rules	Benefits	Costs
Department of Energy	2	$1.8 to $3.4	$0.3 to $0.7
Department of Health and Human Services	3	$0.9 to $1.7	$0.3 to $1.0
Department of Homeland Security	1	$0 to $0.4	$0.1 to $0.2
Department of Labor	1	$0.5 to $1.6	$0.1 to $0.2
Department of Transportation	3	$0.3 to $1.3	$0.4
Environmental Protection Agency	3	$28.5 to $77.5	$8.3
Joint DOT and EPA[31]	1	$21.2 to $28.8	$5.3 to $8.8
Total	**14**	**$53.2 to $114.6**	**$14.8 to $19.5**

Twenty-two of the rules were "transfer rules"—rules that primarily caused income transfers, usually from taxpayers to program beneficiaries. Most of these implement Federal budgetary programs as required or authorized by Congress. 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.

Tables 1-5(a) and 1-5(b) lists each of the 25 "non-transfer" rules and, where available, provides information on their monetized benefits, costs, and transfers.

[31] Estimates listed here are for EPA's rule. DOT's rule has lower estimated costs and benefits due to differences in their regulatory requirements.

Table 1-6(a) lists each of 19 "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 47 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 in Appendix A. Table 1-6(b) lists the three non-budget transfer rules. The primary economic impact of each of these three rules is to cause transfers between parties outside the Federal Government, and the table includes agencies' estimates of these transfers.

Overall, HHS promulgated the largest number of rules (twenty-one). Fourteen of these largely transfer income from one group of entities to another without imposing significant costs on the private sector, while the other seven do have significant economic impact on the private sector.

Table 1-5 (a): Major Rules Reviewed with Estimates of Both Annual Benefits and Costs, October 1, 2011 - September 30, 2012 (billions of 2001 dollars)

Agency	RIN[32]	Title	Benefits	Costs
HHS	0938-AQ11	Administrative Simplification: Adoption of Standards for Electronic Funds Transfer (EFT) (CMS-0024-IFC)	$0.2-$0.3	<0.1
HHS	0938-AQ13	Administrative Simplification: Standard Unique Identifier for Health Plans and ICD-10 Compliance Date Delay (CMS-0040-F)	$0.7 Range: $0.4-$1.0	$0.5 Range: $0.2-$0.8
HHS	0938-AR01	Administrative Simplification: Adoption of Operating Rules for Electronic Funds Transfer (EFT) and Remittance Advice (RA) (CMS-0028-IFC)	$0.2-$0.3	$0.1-$0.3
DOL	1218-AC20	Hazard Communication	$0.6 Range: $0.5-$1.6	$0.2 Range: $0.1-$0.2
DHS	1625-AA32	Standards for Living Organisms in Ships' Ballast Water Discharged in U.S. Waters	$0.2 Range: <$0.1-$0.4	$0.1 Range: $0.1-$0.2
DOE	1904-AB50	Energy Efficiency Standards for Fluorescent Lamp Ballasts	$1.0 Range: $0.8-$1.6	$0.3 Range: $0.2-$0.5
DOE	1904-AB90	Energy Conservation Standards for Residential	$1.1 Range:	$0.2 Range:

[32] 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/inforeg/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.

Agency	RIN[32]	Title	Benefits	Costs
		Clothes Washers	$1.0-$1.8	$0.2-$0.3
EPA	2060-AN72	Petroleum Refineries--New Source Performance Standards (NSPS)--Subparts J and Ja	$0.4-$0.7	$0.1
EPA	2060-AP52	National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Electric Utility Steam Generating Units	$28.1-$76.9	$8.2
EPA	2060-AP76	Oil and Natural Gas Sector--New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants	$0.2	$0.1
EPA & DOT	2060-AQ54; 2127-AK79	Joint Rulemaking to Establish 2017 and Later Model Year Light Duty Vehicle GHG Emissions and CAFE Standards[33]	$28.8 Range: $21.2-$28.8	$8.8 Range: $5.3-$8.8
DOT	2126-AA97	National Registry of Certified Medical Examiners	$0.1 Range: $0.1-$0.2	<$0.1
DOT	2126-AB26	Hours of Service	$0.5 Range: $0.2-$1.0	$0.4
DOT	2130-AC27	Positive Train Control Systems Amendments (RRR)	<$0.1 Range: $0-$0.1	<0.1

Eleven rules that partially monetized either benefits or costs and are listed in Table 1-5(b). Two of these rules, DOI's two Migratory Bird Hunting regulations, assessed only benefits. Nine rules reported only monetized costs or cost savings 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.[34]

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

[33] Estimates listed here are for EPA's rule. DOT's rule has lower estimated costs and benefits due to differences in their regulatory requirements.

[34] 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 non-quantified 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.

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."

Table 1-5(b): Major Rules Reviewed with Partial Estimates of Annual Benefits or Costs, October 1, 2011 - September 30, 2012 (billions of 2001 dollars)

Agency	RIN	Title	Benefits	Costs
USDA	0584-AD59	Nutrition Standards in the National School Lunch and School Breakfast Programs	Not Estimated	$0.5
HHS	0938-AQ22	Medicare Shared Savings Program: Accountable Care Organizations (CMS-1345-F)	Not Estimated	$0.1
HHS	0938-AQ67	Establishment of Exchanges and Qualified Health Plans Part I (CMS-9989-F)	Not Estimated	$0.6 Range: $0.5-$0.6
HHS	0938-AQ89	Medicare and Medicaid Programs: Reform of Hospital and Critical Access Hospital Conditions of Participation (CMS-3244-P)	Not Estimated	-$0.7
HHS	0938-AQ96	Regulatory Provisions To Promote Program Efficiency, Transparency, and Burden Reduction (CMS-9070-P)	Not Estimated	-$0.1
DOI	1014-AA02	Increased Safety Measures for Oil and Gas Operations on the Outer Continental Shelf (OCS)	Not Estimated	$0.1
DOI	1018-AX97	Migratory Bird Hunting; 2012-2013 Migratory Game Bird Hunting Regulations—Early Season	$0.2	Not Estimated

Agency	RIN	Title	Benefits	Costs
DOI	1018-AX97	Migratory Bird Hunting; 2012-2013 Migratory Game Bird Hunting Regulations—Late Season	$0.2	Not Estimated
DOJ	1105-AB34	National Standards to Prevent, Detect, and Respond to Prison Rape	Not Estimated	$0.4
DOL	1210-AB08	Improved Fee Disclosure for Pension Plans	Not Estimated	$0.1 Range: <$0.1-$0.1
EPA	2060-AR55	Regulation of Fuels and Fuel Additives: 2013 Biomass-Based Diesel Renewable Fuel Volume	Not Estimated	$0.2-$0.3

Table 1-6(a) Major Rules Implementing or Adjusting Federal Budgetary Programs, October 1, 2011 - September 30, 2012 (billions of 2001 dollars)

Agency	RIN	Title	Transfers
USDA	0584-AE15	Certification of Compliance With Meal Requirements for the National School Lunch Program Under the Healthy, Hunger-Free Kids Act of 2010	$0.2
HHS	0938-AO53	Home and Community-Based State Plan Services Program and Provider Payment Reassignments (CMS-2249-P2)	$0.1
HHS	0938-AQ01	Changes in Provider and Supplier Enrollment, Ordering and Referring, and Documentation Requirements; and Changes in Provider Agreements (CMS-6010-F)	($0.1)
HHS	0938-AQ25	Revisions to Payment Policies Under the Physician Fee Schedule and Part B for CY 2012 (CMS-1524-FC)	($15.4)
HHS	0938-AQ26	Changes to the Hospital Outpatient Prospective Payment System and Ambulatory Surgical Center Payment System for CY 2012 (CMS-	$0.5

Agency	RIN	Title	Transfers
		1525-F)	
HHS	0938-AQ27	End-Stage Renal Disease Prospective Payment System for CY 2012, Quality Incentive Program for PY 2013 and PY 2014; Ambulance Fee Schedule; and Durable Medical Equipment (CMS-1577-F)	$0.2
HHS	0938-AQ30	Home Health Prospective Payment System Refinements and Rate Update for CY 2012 (CMS-1353-F)	($0.3)
HHS	0938-AQ35	Community First Choice Option (CMS-2337-F)	$1.5
HHS	0938-AQ62	Medicaid Eligibility Expansion Under the Affordable Care Act of 2010 (CMS-2349-F)	$23.8
HHS	0938-AQ84	Medicare and Medicaid Electronic Health Record Incentive Program--Stage 2 (CMS-0044-F)	$2.0
HHS	0938-AQ98	Establishment of the Consumer Operated and Oriented Plan Program (CMS-9983-F)	Not Estimated
HHS	0938-AR12	Changes to the Hospital Inpatient and Long-Term Care Prospective Payment Systems for FY 2013 (CMS-1588-F)	$1.7
HHS	0938-AR20	Prospective Payment System and Consolidated Billing for Skilled Nursing Facilities--Update for FY 2013 (CMS-1432-N)	$0.5
TREAS	1505-AC42	Assessment of Fees for Large Bank Holding Companies and Nonbank Financial Companies Supervised by the Federal Reserve to Cover the Expenses of the Financial Research Fund	Not Estimated
ED	1810-AB12	Teacher Incentive Fund	$0.2
ED	1810-AB15	Race to the Top--Early Learning Challenge Phase 2	$0.1
ED	1840-AD11	Federal Pell Grant Program	($3.8)
ED	1894-AA01	Race to the Top Fund Phase 3	$0.2
VA	2900-AO10	Vocational Rehabilitation and Employment Program—Changes to Subsistence Allowance	$0.1

( ) indicates a budget savings

Table 1-6(b): Additional Non-Budget Transfer Rules Reviewed, October 1, 2011 - September 30, 2012 (billions of 2001 dollars)

Agency	RIN	Title	Transfers
HHS	1904-AB50	Policy and Technical Changes to the Medicare Advantage and the Medicare Prescription Drug Benefit Programs for Contract Year 2013 (CMS-4157-F)	$4.9
HHS	0938-AR07	State Requirements for Exchange--Reinsurance and Risk Adjustments (CMS-9975-F)	$9.9 Range: $9.6-$9.9
DOL	1210-AB08	Labor Certification Process and Enforcement for Temporary Employment in Occupations Other Than Agriculture or Registered Nursing in the United States (H-2B Workers)[35]	$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.

[35] On April 26, 2012, the U.S. District Court for Northern District of Florida issued a preliminary injunction against this rule. On April 1, 2013, the U.S. Court of Appeals for the Eleventh Circuit upheld this decision.

Table 1-7: Estimates of the Net Costs per Life Saved of Selected Health and Safety Rules Reviewed by OMB in Fiscal Years 2012-2013 (millions of 2001 dollars)

Agency	Rule	Net Cost per Life Saved	Notes
DOL/OSHA	Hazard Communication	Negative	Savings from productivity improvements exceed costs.
DOT/FMCSA	Hours of Service	Negative	Savings from property damage and congestion prevention, plus benefits from improved driver health exceed costs.
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 live is about $0.3 million per life. Adjusting to 2001 dollars yields about $0.2 million per life saved.
EPA/AR	Cross State Air Pollution Rule (CAIR Replacement Rule)	Negative	Morbidity and visibility benefits exceed costs.
EPA/AR	National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Electric Utility Steam Generating Units	$0.5-1.2	The agency estimates that the rule will prevent between 4,300 and 11,000 premature deaths, annually. Total costs associated with the rule are $9.6 billion annually. The monetized annual value of the morbidity and other non-mortality benefits is $3 billion (using a 3% discount rate). If we subtract the non-mortality benefits from costs, the net cost per life saved is approximately $0.6 to 1.5 million ($2007). Adjusting to 2001 dollars yields roughly $0.5 to $1.2 million.
EPA/AR	Petroleum Refineries--New Source Performance Standards (NSPS)--Subparts J and Ja	Negative	Value of recovered natural gas exceeds 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.

2. Major Rules Issued by Independent Agencies

The Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA)[36] 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, 2011 to September 30, 2012.[37] GAO reported that five agencies issued a total of 21 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 estimates for the rule. The majority of rules were issued to regulate the financial sector. Ten of the 21 rules were issued by the Commodity Futures Trading Commission (CFTC). CFTC also issued three joint rules with the Securities and Exchange Commission (SEC). SEC issued four additional rulemakings in the same period.

16 of the 21 rules provided some information on the benefits and costs of the regulation. The independent agencies still continue to struggle in providing monetized estimates of benefits and costs of regulation. Six rules included analyses that monetized portions of the costs; none of the rules provided analyses that include monetized estimates of benefits. 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

[36] Pub. L. No. 104-121.

[37] Footnote 3, 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.[38]

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 2003 through 2012, which are presented in Tables C-1 and C-2.[39]

Table 1-8: Major Rules Issued by Independent Regulatory Agencies, October 1, 2011 - September 30, 2012

Agency	Rule	Information on Benefits or Costs	Monetized Benefits	Monetized Costs
Bureau of Consumer Financial Protection	Electronic fund transfers (Regulation E) (77 FR 6194)	Yes	No	No
Bureau of Consumer Financial Protection	Fair credit reporting (Regulation V) (76 FR 79308)	Yes	No	No
Commodity Futures Trading Commission	Business conduct standards for swap dealers and major swap participants with counterparties (77 FR 9734)	Yes	No	No
Commodity Futures Trading Commission	Core principles and other requirements for designated contract markets (77 FR 36612)	Yes	No	Yes
Commodity Futures Trading Commission	Customer clearing documentation, timing of acceptance for clearing, and clearing member risk management (77 FR 21278)	No	No	No

[38] 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

[39] 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 2003 through 2012 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
Commodity Futures Trading Commission	Derivatives clearing organization general provisions and core principles (76 FR 69334)	No	No	No
Commodity Futures Trading Commission	Investment of customer funds and funds held in an account for foreign futures and foreign options transactions (76 FR 78776)	Yes	No	No
Commodity Futures Trading Commission	Position limits for futures and swaps (76 FR 71626)	Yes	No	Yes
Commodity Futures Trading Commission	Protection of cleared swaps customer contracts and collateral; conforming amendments to the commodity broker bankruptcy provisions (77 FR 6336)	Yes	No	No
Commodity Futures Trading Commission	Real-time public reporting of swap transaction data (77 FR 1182)	Yes	No	No
Commodity Futures Trading Commission	Swap data recordkeeping and reporting requirements (77 FR 2136)	Yes	No	No
Commodity Futures Trading Commission	Swap dealer and major swap participant recordkeeping, reporting, and duties rules; futures commission merchant and introducing broker conflicts of interest rules; and chief compliance officer rules for swap dealers, major swap participants, and futures commission merchants (77 FR 20128)	No	No	No

Agency	Rule	Information on Benefits or Costs	Monetized Benefits	Monetized Costs
Commodity Futures Trading Commission and Securities Exchange Commission	Further definition of "swap dealer," "security-based swap dealer," "major swap participant," "major security-based swap participant" and "eligible contract participant" (77 FR 30596 (Interim Final Rule), 77 FR 48208 (Final Rule))	Yes	No	Yes
Commodity Futures Trading Commission and Securities and Exchange Commission	Further definition of "swap," "security-based swap," and "security-based swap agreement"; mixed swaps; security-based swap agreement recordkeeping (77 FR 48208)	No	No	No
Commodity Futures Trading Commission and Securities Exchange Commission	Reporting by investment advisers to private funds and certain commodity pool operators and commodity trading advisors on form PF (76 FR 71128)	Yes	No	Yes
Consumer Product Safety Commission	Testing and labeling pertaining to product certification (76 FR 69482)	No	No	No
Nuclear Regulatory Commission	Revision of fee schedules; fee recovery for FY 2012 (77 FR 35809)	Yes	No	No
Securities and Exchange Commission	Consolidated audit trail (77 FR 45722)	Yes	No	Yes
Securities and Exchange Commission	Disclosure of payments by resource extraction issuers (77 FR 56365)	Yes	No	Yes
Securities and Exchange Commission	Investment adviser performance compensation (77 FR 10358)	Yes	No	No
Securities and Exchange Commission	Net worth standard for accredited investors (76 FR 81793)	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.[40]

1. Impacts on State, Local, and Tribal Governments

Over the past ten years, only five rules 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):[41]

- *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). [42] 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

[40] 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.

[41] 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 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.

[42] 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).

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.
- *EPA's National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards for Performance for Electric Utility Steam Generating Units (2011)*: This rule will reduce emissions of hazardous air pollutants (HAP) including mercury from electric power generators, both private and public. The annualized estimated cost is $9.6 billion ($2007, using discount rates of 3% and 7%). The lower annualized estimated benefit is $33 billion ($2007, 7% discount rate); the higher $90 billion ($2007, 3% discount rate). The annualized net compliance cost to government entities is approximately $294 million in 2015.
- *USDA's Nutrition Standards in the National School Lunch and School Breakfast Programs (2012)*: This rule updates the meal patterns and nutrition standards for the National School Lunch and School Breakfast Programs to align them with the Dietary Guidelines for Americans. This rule requires most schools to: (1) increase the availability of fruits, vegetables, whole grains, and fat-free and low-fat fluid milk in school meals; (2) reduce the levels of sodium, saturated fat and trans fat in meals; and (3) meet the nutrition needs of school children within their calorie requirements. USDA estimates $479 million in annual costs for the Local School Food Authorities and training, technical assistance, monitoring, and compliance costs for the State Education Agencies.

Although these five 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."[43] 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.[44] 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 compliance dates, simplified reporting requirements, and partial or total exemptions. The President's memorandum emphasizes the relationship between small and new businesses and

[43] Section 202(2) of Pub. L. No. 104-121.
[44] 5 U.S.C. §§ 601-612.

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.[45]

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.[46] 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.[47]

Becker offers a more complex view, focusing on the effect of air pollution regulation on small business.[48] He finds that although "progressively larger facilities had progressively higher unit abatement costs, ceteris paribus,"[49] 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 SOx, 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."[50]

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 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

[45] 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.
[46] See Hopkins (1995); Dean, et al. (2000); Crain and Hopkins (2001); Crain (2005).
[47] Dean, et al. (2000).
[48] Becker (2005).
[49] *Id*., p. 163.
[50] *Id*., p. 165.

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.[51] 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.[52] 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 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

[51] Neumark & Wascher (2008).
[52] Summers (1989).

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.[53] 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.[54] 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.[55] 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.[56] Bartik reviews labor market literature and offers recommendations on how to improve employment benefits using adjusted reservation wage gains and adjusted earnings gains.[57] Using 1994-1998 International Adult Literacy Survey microdata for Canada, Finland, Italy, the Netherlands, Switzerland, the United Kingdom, and the US, Kahn finds that employment protection mandates increases the incidence of temporary employment for low skilled workers, youth and women and raises relative joblessness among the young, immigrants and possibly women.[58] Botero et al largely echo this result when they

[53] Jolls (2000).
[54] Acemoglu and Angrist (2001).
[55] Gruber (1994).
[56] 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.
[57] Bartik (2012).
[58] Kahn (2007).

examined the relationship between labor force participation and employment laws, collective relations laws and social security laws in 85 countries.[59] OMB continues to investigate the growing literature on these topics. The references here are meant to be illustrative rather than exhaustive.

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.[60]

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.[61] 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

[59] Botero, et al (2004).
[60] Berman and Bui (2001b).
[61] Data include information from 1979, 1980, 1981, 1985, 1988 and 1991.

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 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.[62] 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.[63]

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.

[62] Berman and Bui (2001).

[63] 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.

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 produced estimates that are either small, statistically insignificant, or not robust to tests of model specification."[64]

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.[65] 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."[66]

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."[67] 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."[68] Levinson and Taylor's (2008) results in examining trade flows and environmental regulation are consistent with these other studies.[69]

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,[70] 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.

[64] Jaffe et al, pp. 157-8.
[65] Keller and Levinson (2002), p. 691.
[66] Xing and Kolstad (2002), p. 1.
[67] Hanna (2010), p. 160.
[68] Brunnermeier and Levinson (2004), p. 6.
[69] Levinson and Taylor (2008).
[70] Peoples (1998).

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 purchasing power, and lower employment levels.[71] The theoretical negative effect of entry regulation on employment was supported empirically by Bertrand and Kramarz,[72] who examine entry restrictions in the French retail industry and find that they have reduced employment growth in France. Using individual worker information from CPS files from 1973 through 1988, Peoples and Saunders show that deregulation of the trucking industry led to significant real wage reduction for white drivers, narrowing the black/white income gap.[73]

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

[71] Blanchard and Giavazzi (2003).
[72] Bertrand and Kramarz (2002).
[73] Peoples and Saunders (1993).

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.[74] Efforts to expand the national accounts to incorporate omitted factors – such as improvements in environmental quality in satellite accounts – suggest the incompleteness of existing measures.[75]

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).[76] Two of the most important contributors to this literature are Nobel Prize winner Daniel Kahmeman 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.[77] 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.[78] 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.[79] 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.[80] Some studies, for example, find that life satisfaction generally increases with income but that experienced well-being does not.[81]

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.[82] 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

[74] See Sen (1999a, 1999b), Krueger (2009), Kahneman, et al. (2004), and Stiglitz, et al. (2010).
[75] Nordhaus & Kokkelenberg (1999); Nordhaus (2004).
[76] 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.
[77] See Deeton (2008); Hagerty & Veenhoven (2003); Stevenson & Wolfers (2008a); Inglehart, Foa, Peterson, & Welzel (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).
[78] Stevenson and Wolfers (2008a) characterize this conclusion as one that has garnered a "clear consensus in the literature."
[79] 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.
[80] Diener et al. (2010); Kahneman (1999).
[81] Krueger & Schkade (2008); Diener et al. (2010).
[82] 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).

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 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.[83] 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.[84] Another study suggests that the impact of relative income levels matters more at higher levels of income.[85]

- 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

[83] See, e.g., Vitarelli (2010); Adler and Posner (2008).
[84] Luttmer (2005).
[85] See Dynan & Ravina (2007).

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.[86]

- 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.[87]

- 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."[88]

- 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.[89]

- 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."[90] 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).[91] 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

[86] Kahneman & Deaton (2010).
[87] Biswas-Diener (2010).
[88] Kahneman (2010).
[89] See Branchflower & Oswald (2004).
[90] See Blanchflower & Oswald (2010).
[91] 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."

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 required to compensate one's resulting life evaluation.[92]

- 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.[93] 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.[94]
- 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 particular 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[nsurance], although unmeasured characteristics of workers could distort the estimated relationships; and (7) we find little evidence that exhaustion of extended U[nemployment] I[nsurance] benefits is associated with an increase in job search activity or in job offers."[95]
- 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.[96] 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.

[92] Deaton et al (2010).
[93] Harter and Arora (2010).
[94] Isen (1987); Warr (1999).
[95] Krueger and Mueller (2011), pp. 3-4.
[96] Ifcher & Zarghamee (2011).

- Examining data collected from fifty-eight countries, Engelbrecht finds that natural capital per capita across those countries is correlated with subjective life-satisfaction measures, especially in high-income nations.[97] 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).[98] Some evidence strongly suggests that regulations promoting educational attainment may improve human capital accumulation, thereby increasing economic growth.[99] Ashenfelter and Krueger study the economic returns to 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."[100] Other studies show a positive link between increased life expectancy and growth.[101]

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.[102] By contrast, van Stel et.

[97] Englebrecht (2009).
[98] See, e.g., Temple (1999).
[99] 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).
[100] 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.
[101] 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.
[102] 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. [103]

Relatively few studies attempt to measure the economic impact of regulations in the aggregate; the literature focuses instead on particular regulatory arenas.[104] The literature examining the economic impact of environmental regulations in particular is extensive. Here are a few examples:[105]

- Jorgenson and Wilcoxen 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.[106]
- 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"[107] and that "abatement associated with the SCAQMD regulations was productivity enhancing."[108]
- 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,[109] 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 crowing out productive investment within a plant and firms

[103] van Stel et al (2007). They also find that regulations improving access to credit have a positive impact on entrepreneurship.
[104] 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.
[105] Berman and Bui (2001a) 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.
[106] Jorgensen & Wilcoxen (1990).
[107] *Id*, p. 509.
[108] *Id*, p. 499. SCAQMD is South Coast Air Quality Management District.
[109] 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."[110]

- Becker and Henderson[111] 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."[112]
- Greenstone[113] 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)."[114] 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.[115]
- As noted above, Hanna[116] 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 Palmer[117] 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 studies[118] 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

[110] *Id*, at 254-255.
[111] Becker & Henderson (2000).
[112] *Id.*, at 414-415.
[113] Greenstone (2002).
[114] *Id*, at 1213.
[115] List, et al. (2003).
[116] Hanna (2010).
[117] Jaffe and Palmer (1997).
[118] See Lanoie et al (2008).

overcome by the high returns that regulation creates for new pollution-control technology."[119] These results, however, are noted to be sensitive to the definitions of the time lag and difficulties in specifying research and development models, coding patent types, and linking research and development to overall economic growth.

- Chay and Greenstone[120] 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.'"[121]

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.[122] 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.[123]

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

[119] Jaffe & Palmer (1997), at 618.
[120] 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.
[121] Kahn (2001).
[122] Carpenter (2009). For more historical and formal modeling approaches to this same argument, see, e.g., Carpenter (2004) and Carpenter & Ting (2007).
[123] *Id.* 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.[124] 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 functioning, increase economic activity, and promote economic growth.[125]

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.

[124] On the possible welfare and economic gains from employing alternative regulatory approaches, see generally Moss & Cisternino (2009).
[125] *Id.* See also Balleisen and Moss, eds. (2009).

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

The Regulatory Right-to-Know Act charges OMB with making "recommendations for reform," and the Consolidated Appropriations Act, 2012 (Public Law 112-74), requires OMB to "submit to the Committees on Appropriations of the House and the Senate a report on the implementation of Executive Order 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." [126]

This chapter consists of recommendations for regulatory and analytic reform, our report on FY 2012 activities conducted as part of the implementation of Executive Order 13563, and regulatory cost and benefit comparisons by administration.

Recommendations for Reform

In its 2009, 2010, 2011 and 2012 reports, OMB recommended a wide range of regulatory and analytic reforms and practices, including retrospective analysis of existing rules; examination of how to conduct and present regulatory impact analyses when necessary inputs are non-quantifiable; use of cost-effectiveness analysis, especially for regulations designed to reduce mortality risks; clear presentation of quantified and non-quantifiable costs, benefits, and distributional effects of proposed regulations and their alternatives; promotion of public participation and transparency through technological means; regulatory cooperation with international trading partners; promotion of economic growth and innovation; empirical testing of disclosure strategies; and careful consideration of approaches to regulation that are informed by an understanding of human behavior and choice.[127] OMB continues to support these recommendations and especially highlights the following points:

- Transparency and public participation are facilitated by, among other things, plain writing. Indeed, 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 Executive Order 13563 states that regulations must be "accessible,

[126] 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. For the Regulatory Right-to-Know Act, see 31 U.S.C. section 1105.

[127] Earlier versions of the benefit-cost report are available on OMB's website at http://www.whitehouse.gov/omb/inforeg_regpol_reports_congress/.

consistent, written in plain language, and easy to understand."[128] Agencies would do well to follow the example of USDA's Animal and Plant Health Inspection Service, which has recently had success enhancing the clarity of its regulations by assigning writers with degrees in English to collaborate with attorneys, subject matter experts and other more traditional participants in the rulemaking process.

- Regulatory impact analysis (RIA) should be used as a central part of open government. Objective, evidence-based, logical assessment of costs and benefits should not be the last step in rulemaking or dismissed as a box to check; it should be an integral part of the regulatory decision-making process. RIAs of economically significant regulations should contain clear, tabular presentations of both benefits and costs, including tables showing undiscounted year-to-year effects as well as tables showing costs and benefits of the individual provisions that may make up a larger regulation.

- In spite of the seeming diversity of OMB's recommendations, reform efforts can dovetail together. Consider, for example, how retrospective analysis may advance our understanding of non-quantifiable effects in a prospective analysis. Suppose there were a safety rule for which costs could be quantified at the time of issuance, but key inputs for the benefits analysis were not yet quantifiable. On the basis of a break-even calculation showing that the rule's benefits would exceed its costs if it reduced hazards by one percent—and the sense that a one-percent reduction was "small" and therefore easily attainable—the rule was issued. If subsequent retrospective analysis showed that the rule's effectiveness at hazard reduction was well below one percent, such analysis could inform decisions about both the rule itself and, more broadly, the appropriate interpretation of RIAs that feature incomplete quantification.

- Agencies should seek to align their priorities, including priorities that reflect OMB recommendations for reform, across all levels of internal hierarchy. Even though this process may involve the unpleasant task of asking staff members or managers to abandon projects in which they invested a good deal of time in the past, efficiency of staff efforts in the present requires that the priorities of an agency's top leaders be communicated to, and built into the incentive structures for, lower-level managers. Indeed, policy decisions should be a function less of past momentum than of present coordination within and across agencies.

Because the goal of Executive Order 13563 is to change regulatory culture, further recommendations for reform will be implicit in our discussions of activities conducted as part of OMB's implementation of that Executive Order. Such a discussion for FY 2012 appears in the next portion of this chapter.

[128] Available at http://www.archives.gov/federal-register/executive-orders/pdf/12866.pdf and http://www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf.

Implementation of Executive Order 13563 in Fiscal Year 2012

The range of activities conducted under the auspices of Executive Order 13563 has included reducing regulatory burden, simplifying requirements and language, regulatory coordination, encouragement of public participation in the regulatory process, and consideration of the relationship between regulation and employment and economic growth.

A. Reducing Regulatory Burden: Recent Achievements and Future Progress

The prospective analysis of regulatory costs and benefits required by Executive Orders 12866 and 13563 may depend on a degree of speculation, so the actual costs and benefits of a regulation may be lower or higher than what was originally anticipated. Executive Order 13563 calls for careful reassessment—in other words, retrospective analysis—of regulations that are in place. After retrospective analysis has been undertaken, agencies will be in a position to streamline, modify, or eliminate rules that do not make sense in their current form or under existing circumstances.

Building on Executive Order 13563's call for retrospective analysis, President Obama issued Executive Order 13610, *Identifying and Reducing Regulatory Burdens* (May 10, 2012), to institutionalize regulatory look-back and specifically require agencies to prioritize "initiatives that will produce significant quantifiable monetary savings or significant quantifiable reductions in paperwork burdens."[129] Executive Order 13610 also requires agencies to "give special consideration to initiatives that would reduce unjustified regulatory burdens or simplify or harmonize regulatory requirements imposed on small businesses." Finally, Executive Order 13610 requires agencies to focus on "cumulative burdens" and to "give priority to reforms that would make significant progress in reducing those burdens."

Recent examples of reforms that will have a significant impact include:

- In March, 2012, the Department of Labor issued a final rule that will bring U.S. requirements for hazardous chemical warning labels in line with those of other nations. This rule will reduce employer costs related to training and updating of materials and reduce trade barriers for chemical manufacturers that sell their products abroad.

- The Treasury Department, along with the Department of Homeland Security's Customs and Border Protection, issued a final rule in August, 2012, eliminating the mailing of paper "courtesy" notices of liquidation, which provide informal, advanced notice of liquidation dates to importers of record whose entry summaries are electronically filed. This effort to proceed only electronically streamlines the notification process and reduces printing and mailing costs.

- The Department of Transportation has proposed a rule that would allow combined drug and alcohol testing for operators conducting commercial air tours. The intent is to

[129] Available at http://www.whitehouse.gov/the-press-office/2012/05/10/executive-order-identifying-and-reducing-regulatory-burdens.

decrease operating costs by eliminating duplicate programs while ensuring no loss in safety.

- The Federal Acquisition Regulation (FAR) is being amended to accelerate payments to small business subcontractors. This change is in accordance with policy guidance provided by the Office of Management and Budget (OMB) in Memorandum M-12-16, dated July 11, 2012, "Providing Prompt Payment to Small Business Subcontractors."

The regulatory look-back is not a one-time exercise; regular reporting about recent progress and coming initiatives is required. The goal is to change the regulatory culture so that rules on the books are consistently evaluated to confirm they are effective, cost-justified, and based on the best available science. By creating regulatory review teams at agencies, OMB will continue to examine what is working and what is not, and to eliminate unjustified and outdated regulations.

B. Simplification of Requirements and Language

1. Simplifying Paperwork Requirements

In addition to looking back at existing regulations, OMB is also focused on reducing other unjustified reporting and paperwork burdens. In a June 22, 2012, Memorandum, "Reducing Reporting and Paperwork Burdens," OIRA asked executive departments and agencies to assess possibilities for eliminating redundant or unnecessary information collections; streamlining forms; exempting small businesses from information collections; simplifying applications for federal licenses or approvals for participation in federal programs; using sampling rather than collecting data from every member of a population of interest; replacing paper-based communication or data systems with electronic options; reducing frequency of information collection; reducing record retention requirements; or maximizing re-use of data that are already collected.[130]

Agencies identified opportunities for measurable reductions in paperwork burdens and are pursuing plans that include the following:

- The Department of Veterans Affairs (VA) is working to consolidate the application and renewal process for health benefits by eliminating the collection of financial information that is already collected by the Internal Revenue Service (IRS) and Social Security Administration (SSA). The VA expects to improve its application by making it more adaptive to data provided by respondents. VA expects veterans to save thousands of hours and the Federal Government to save millions of dollars from this improved process.

- The Federal Emergency Management Agency (FEMA) is progressing toward the implementation of an integrated agency-wide e-Grants online application that will be available to the public online. The system will simplify submission of grant program

[130] This memorandum is available at http://www.whitehouse.gov/sites/default/files/omb/inforeg/memos/reducing-reporting-and-paperwork-burdens.pdf.

applications across FEMA by creating online forms. Fully integrating and automating these systems will improve efficiency and the effectiveness of FEMA operations to better serve the needs of internal and external stakeholders. Grantees are expected to save over 500,000 hours in paperwork burden per year.

- The Internal Revenue Service's plan to simplify reporting for capital gains and losses will allow taxpayers the option to report summary information without unnecessary line-by-line details for each transaction. IRS estimates that the changes will save about 20 million taxpayers, or their preparers, a total of 19 million hours.

- The Federal Emergency Management Agency's improved standard flood hazard determination online form, with drop-down menus, will save respondents time when a property is used as collateral. FEMA estimates the improved form will save the public over two million hours per year.

- The Internal Revenue Service's Optional Office-in-the-Home Deduction proposal will allow taxpayers to elect an optional, simpler method of determining their office-in-the-home tax deduction by using the number of square feet in the home office multiplied by a dollar per square foot amount provided by the IRS. IRS expects taxpayers to save over 1.6 million hours per year and $7 million in out-of-pocket costs from this simpler calculation method.

- The Department of Homeland Security's plan to make arrival and departure records electronic and automated for non-immigrant visitors to the United States promises to save travelers over one million hours per year, benefiting airlines and streamlining government operations.

- The Internal Revenue Service expects its initiative to allow individual taxpayers to electronically file their amended tax return (Form 1040-X) will save 6.5 million taxpayers a total of about 1 million hours and $11 million in out-of-pocket costs per year.

Further details on these and many other promising initiatives that will reduce burden on the American people are available in the "Information Collection Budget of the United States Government 2012."[131]

2. Simplifying Language

Executive Orders 12866 and 13563 state that regulations should be written in a style that is easy to understand. The Plain Writing Act of 2010[132] extends the call for writing that is clear, concise, and well-organized to documents that:

- are necessary for obtaining any Federal Government benefit or service, or filing taxes (e.g., tax forms or benefit applications);

[131] This report is available at http://www.whitehouse.gov/sites/default/files/omb/inforeg/icb/icb_2012.pdf. Additional, ongoing updates may be found by visiting OMB's blog, http://www.whitehouse.gov/omb/blog.
[132] Pub. L. 111-274.

- 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).

Consistent with the Plain Writing Act, in an August 9, 2012, Memorandum, "Testing and Simplifying Federal Forms," OIRA directed federal agencies to test complex or lengthy forms in advance, in order to determine if people can actually understand them. Advance testing—which could take a variety of forms including focus groups or web-based experiments—would make agencies better able to identify likely burdens on members of the public and to find ways to increase simplification and ease of comprehension.

C. Regulatory Coordination

Building on Executive Order 13563, which directs agencies to promote "coordination, simplification, and harmonization," President Obama issued Executive Order 13609, "Promoting International Regulatory Cooperation" in May, 2012. The Executive Order emphasizes the importance of international regulatory cooperation as a key tool for eliminating unnecessary differences in regulation between the United States and its major trading partners; this approach supports economic growth, job creation, innovation, trade and investment, while also protecting public health, safety, and welfare. Among other things, Executive Order 13609 provides that agencies that are required to submit a Regulatory Plan must "include in that plan a summary of… international regulatory cooperation activities that are reasonably anticipated to lead to significant regulations." Further, the Executive Order requires agencies to identify in OIRA's semiannual regulatory agenda regulations that would have "significant international impacts" and, as part of the regulatory look-back initiative, to "consider reforms… that address unnecessary differences in regulatory requirements between the United States and its major trading partners."

Several major steps were taken toward greater international regulatory coordination in FY 2012, including on December 7, 2011, when President Obama and Prime Minister Harper announced the launch of the United States-Canada **Regulatory Cooperation Council (RCC) Action Plan**. As of July, 2012, all of the 29 Work Plans to implement sectoral and cross-cutting initiatives in the Action Plan were finalized. In December, 2012, the RCC presented the one-year "Progress Report to Leaders."[133] The Progress Report provides status updates on each of the Work Plans and highlights the full range of activities currently being undertaken by U.S. and Canadian regulators to achieve more effective and coordinated approaches to regulation. These approaches are aimed at reducing unnecessary regulatory differences and enhancing our joint economic competitiveness while continuing to protect the health, safety, and welfare of the American people. The work plans have two-year timeframes and include clear milestones and

[133] Available at http://www.whitehouse.gov/sites/default/files/docs/pco_bnet-30471-v38-rcc-progress_report_-_dec_2012_final.pdf.

timelines, mechanisms to promote ongoing regulatory alignment, and regular opportunities for public participation and stakeholder engagement.

February of 2012 saw the launch of the United States-Mexico High-Level Regulatory Cooperation Council (HLRCC) Work Plan. This Work Plan identifies a number of areas of mutual interest – food, transportation, nanotechnology, e-health, oil and gas, and conformity assessment – and outlines activities to be carried out by the United States and Mexico over a period of two years. Among other things, the Work Plan is designed to:

- Develop common approaches to food safety in ways that will benefit consumers and the food industry on both sides of the border;
- Reduce burdens on U.S. and Mexican businesses, while maintaining the safety and reliability of products, by bringing the two countries together to develop compatible electronic certification programs;
- Improve the safety of our citizens by ensuring that all trucks in each country are inspected to a consistently high standard, regardless of the vehicle's country of origin;
- Foster innovation while reducing risks to environmental and human health by ensuring that the United States and Mexico share, at an early stage, information about each other's regulatory approaches to nanomaterials;
- Decrease costs and reduce the time required to implement electronic health record systems in each country, by increasing cooperation and sharing best practices on Electronic Health Record certification; and
- Minimize risks in oil and gas exploration, production activities, and drilling, by developing a common approach to managing contingencies in the Gulf of Mexico.

In addition to pursuing regulatory coordination within North America, OMB's Office of Information and Regulatory Affairs, through its contributions to the Transatlantic Economic Council and its leadership role on the U.S.-E.U. High Level Regulatory Cooperation Forum ("the Forum"), is working to enhance regulatory cooperation with the European Union. In September of 2012, the U.S. and E.U. jointly requested public input on how to promote greater transatlantic regulatory compatibility, specifically seeking detailed input on: (1) differences between existing regulation in the United States and Europe that may impose unnecessary costs and burdens on businesses, and (2) on priority areas where the U.S. and E.U. should cooperate on future regulations affecting new and innovative growth markets and technologies, particularly where growth and innovation are spurred by small and medium sized businesses.

On February 12, 2013, President Obama, together with E.U. leaders, announced their intention to launch negotiations on a Transatlantic Trade and Investment Partnership.[134] The

[134] The official announcement is available at http://www.whitehouse.gov/the-press-office/2013/02/13/statement-united-states-president-barack-obama-european-council-presiden.

goals of the Partnership include addressing costly "behind the border" non-tariff barriers that impede the flow of goods and services and reducing the cost of differences in regulation and standards by promoting greater compatibility, transparency, and cooperation. With the announcement concerning negotiations on horizontal and sectoral regulatory issues, OMB will continue efforts to make progress through the Forum, taking into consideration the input provided by public stakeholders in response to the September, 2012, joint solicitation.

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

Under Executive Order 13563, agencies are directed to promote public participation. Moreover, OIRA itself is committed to using technology to improve transparency and to increase public participation in the regulatory process. Efforts in this area have been a high priority, as shown by the United States' collaboration with other countries in the global Open Government Partnership (OGP);[135] by the launch of the U.S. Open Government National Action Plan; [136] and by the introduction and redesign of websites that facilitate communication between members of the public and the U.S. Federal Government.

One such website is "We the People", an online tool that allows Americans to directly petition the White House.[137] As of early 2013, 7.2 million people have logged more than 11.6 million signatures on more than 178,000 petitions on issues ranging from education to immigration to tax policy.

Another website of note is Regulations.gov, a centralized portal for timely public access to regulatory dockets. As discussed in more detail in last year's benefit-cost report, Regulations.gov has launched a major redesign, including innovative new search tools, social media connections, and better access to regulatory data.

Also new at Regulations.gov is the availability of Application Programming Interfaces (APIs). With the addition of APIs, other web sites – ranging from other Government pages to industry association and public interest group pages – will now be able to repurpose publicly-available regulatory information on Regulations.gov and format this information in unique ways such as mobile apps, analytical tools, "widgets" and "mashups." Future releases will include APIs that allow Regulations.gov to receive comment submissions from other sites. In general, availability of APIs will make possible fundamental changes in the way people are able to interact with public federal regulatory data and content.

As part of the Open Government Partnership National Action Plan, the Obama Administration has committed to promoting the use of Smart Disclosure—Smart Disclosure being the timely release of complex information and data in standardized, machine-readable formats in ways that enable consumers to make informed decisions. The National Science and Technology Council has established a task force dedicated to promoting better disclosure policies, and in September of 2011, the Office of Management and Budget issued guidance to

[135] For more information on the Open Government Partnership, see http://www.opengovpartnership.org/.
[136] Available at http://www.whitehouse.gov/sites/default/files/us_national_action_plan_final_2.pdf.
[137] Available at https://petitions.whitehouse.gov/.

federal agencies on Smart Disclosure. Moreover, on March 30, 2012, the White House and the National Archives and Records Administration, with support from ideas42, hosted a summit in order to advance federal departments and agencies' expansion of the use of Smart Disclosure. Leading innovators and experts inside and outside of government shared best practices and practical advice, the goal being to support agency efforts to integrate Smart Disclosure into their everyday work.

E. Employment and Economic Growth Effects of Regulation

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*" (emphases added). Furthermore, Executive Order 12866 requires regulatory impact analyses to include assessments of regulations' effects on the functioning of the economy and on employment.

OMB continues to believe that it is important for regulatory agencies to attempt, to the extent feasible, to consider the employment effects (whether negative or positive) of their regulations, particularly in view of the potential long-term adverse consequences of reduced employment for affected workers and their families.[138] However, when assessing the effects of regulations on employment and applying those assessments to policy decisions, there are several potential pitfalls:

- Expecting a precise, measurable impact from most individual regulations. Only a small fraction of individual regulations or agency actions will have a large enough effect to allow for measurement of changes in gross domestic product (GDP) or national employment. It is the cumulative sum over time of many small changes that may be significant in these areas.

- Ignoring long-run or indirect impacts. Many regulatory actions have direct, short-run effects that are mitigated by long-run market adjustments. For example, businesses sometimes shut down as a result of a regulation; because jobs are temporarily lost, a short-run, industry-specific job-counting model would give the impression that regulation reduces employment. Alternatively, firms may need to hire new workers to perform activities necessary for coming into compliance with a regulation; in this case, the same job-counting model would give an impression that regulation increases employment. However, these apparent reductions or increases in employment often will, in the medium or long run, turn out to be shifts in employment between economic sectors.[139]

- Ignoring the importance of timing. With employment-related policy goals, timing is often essential; spurring job creation is much more desirable during an economic downturn than during expansionary portions of the business cycle. Regulatory development, meanwhile, typically involves years of assessing evidence on the need for

[138] See Jacobson et al. (1993); Krueger and Mueller (2011); and von Wachter et al. (2009).
[139] Examples may be seen in a variety of areas, including tobacco (Warner et al., 1996), water resource investment (Haveman and Krutilla, 1967) and many others.

and effect of regulation; also, once issued, many regulations will remain effective indefinitely. Given their development and effectiveness timeframes, very few regulations that were originally motivated by policy goals unrelated to employment will be well-suited to targeting job creation when it is most needed.

A more valid approach to assessing the effects of regulatory actions on economic growth and employment focuses on technological progress. Technological progress—defined as the creation and diffusion, among consumers and producers, of new ideas or information—is a key source of economic growth; in fact, through much of the past century of U.S. history, it has been the most important source of growth.[140] Regulators' effects on jobs and growth thus depend on their effects on technological progress. Areas in which regulations may foster this progress include:

- New or improved consumer products. If issuing a new regulation increases the flow of innovative products, or revising an old regulation removes a barrier to developing new products, the direct effect on growth and jobs will be positive.

- Production, collection and dissemination of information. Various regulatory activities can lead to increased production and collection of knowledge and increased dissemination of that knowledge after it is produced. These activities encourage innovation and economic growth.

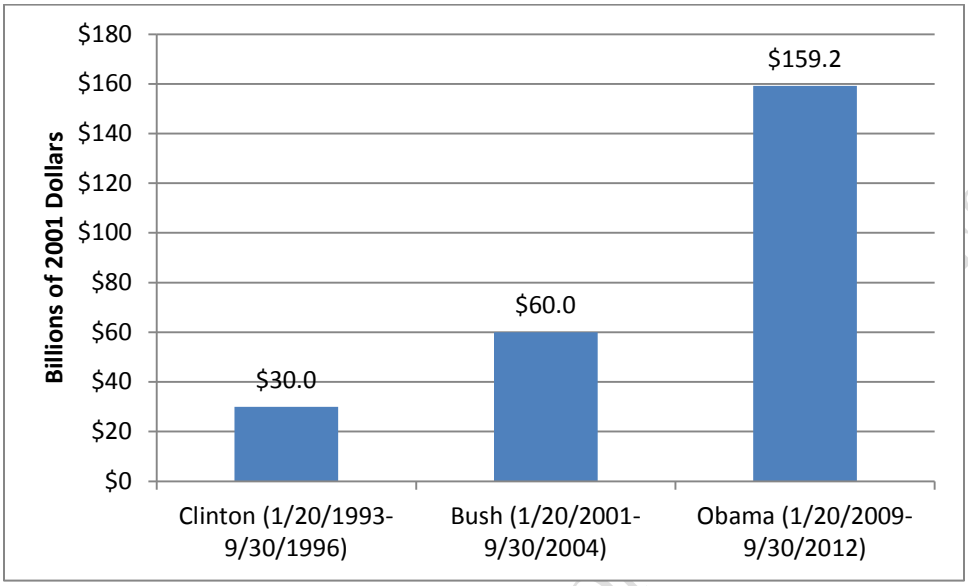
- Increased international trade. Regulations promoting harmonization of manufacturing, labeling or other requirements encourage international trade and thus long-run economic growth and job creation. The benefits of making regulatory information more easily available—through, for example, increased use of the Internet—are enhanced, even beyond their domestic effects, when they encourage trade.

Net Benefits of Regulations, Compared Across Administrations

In the past four years, agencies and OMB have worked together to issue a number of rules for which the benefits exceed the costs and by a large margin. The following figures and tables (see Appendix D for more detailed information) provide more detail about aggregate net benefits and about costs and benefits of rules from the past four years, compared to earlier administrations. Figures 2-1(a) and 2-1(b) present the net benefits of rules from the first four years of the past three administrations. For comparison purposes, Figure 2-1(a) includes rules that have been subsequently overturned, while Figure 2-1(b) excludes these rules. Table 2-1 presents costs and benefits from the first four years of the past three administrations.

[140] Snowdon and Vane (2003).

Figure 2-1(a): Total Net Benefits of Major Rules through the Fourth Fiscal Year of an Administration, Including Vacated Rules[141]



[141] For the purposes of showing general trends by Administration, totals are computed by summing annualized net benefits for rules from the first four 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. 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.

Figure 2-1(b): Total Net Benefits of Major Rules through the Fourth Fiscal Year of an Administration, Excluding Vacated Rules[142]

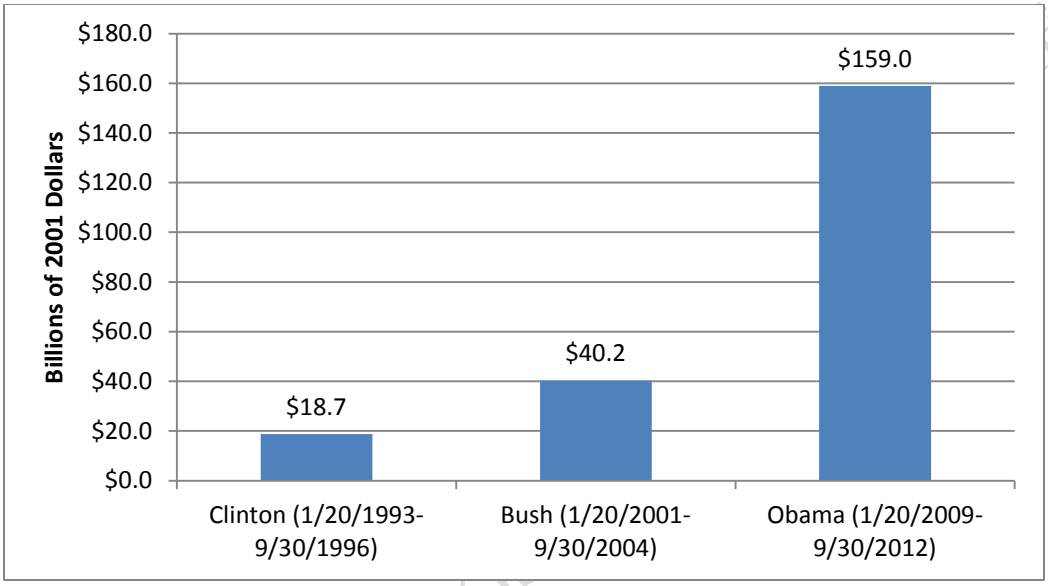


Table 2-1: Annual Benefits and Costs of Major Rules through the Fourth Fiscal Year of an Administration (billions of 2001 dollars)[143]

Administration	Benefits	Costs
Obama (1/20/09-09/30/12)	$110.0 to $315.3	$27.8to $46.3
Bush (1/20/01-09/30/04)	$11.9 to $120.4	$5.1 to $9.4
Clinton (1/20/93-09/30/96)	$11.8 to $55.4	$8.4 to $9.5

[142] This figure uses the same methodology as Figure 2-1(a), but exclude the following rules which have been vacated or are not in effect: Regulations Restricting the Sale and Distribution of Cigarettes and Smokeless Tobacco to Protect Children and Adolescents (HHS, 1996), Establishing Location, Design, Construction, and Capacity Standards for Cooling Water Intake Structures at Large Existing Power Plants (EPA, 2004), National Emission Standards for Hazardous Air Pollutants: Industrial/Commercial/Institutional Boilers and Process Heaters (EPA, 2004), Tire Pressure Monitoring Systems (DOT, 2002), Electronic On-Board Recorders for Hours-of-Service Compliance (DOT, 2010), and Cigarette Warning Label Statements (HHS, 2011). The figure includes one rule that has been vacated but is included, as explained in more detail above: EPA's appeal: Cross-State Clean Air Rule (CAIR Replacement Rule) (EPA, 2011).

[143] Estimates are based on ranges of costs and benefits reported in this and previous Reports. The low ends of ranges reported above reflect low estimates and exclude vacated rules, while the high ends of ranges reported above reflect high estimates and include vacated rules. See Appendix D for a list of rules included in the totals.

Tables 2-2, 2-3, and 2-4 list the individual rules concluded during the Obama administration with the highest net benefits, highest benefits, and highest costs, respectively.

Table 2-2: Major Rules with the Highest Net Benefits through the Fourth Fiscal Year of the Obama Administration (billions of 2001 dollars)[144]

Agency	Rule	Net Benefits
EPA/AR	National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units	$44.3
EPA/AR	Cross-State Clean Air Rule (CAIR Replacement Rule)	$39.4
DOT/NHTSA & EPA/AR	Joint Rulemaking to Establish 2017 and Later Model Year Light Duty Vehicle GHG Emissions and CAFE Standards	$20.0
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[145]
EPA/AR	Review of the National Ambient Air Quality Standards for Sulfur Dioxide	$9.9

[144] 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.

Table 2-3: Major Rules with the Highest Benefits through the Fourth Fiscal Year of the Obama Administration (billions of 2001 dollars)[146]

Agency	Rule	Benefits
EPA/AR	National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units	$52.4
EPA/AR	Cross-State Clean Air Rule (CAIR Replacement Rule)	$40.1
DOT/NHTSA & EPA/AR	Joint Rulemaking to Establish 2017 and Later Model Year Light Duty Vehicle GHG Emissions and CAFE Standards	$28.8
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

Table 2-4: Major Rules with the Highest Costs through the Fourth Fiscal Year of the Obama Administration (billions of 2001 dollars)[147]

Agency	Rule	Costs
DOT/NHTSA & EPA/AR	Joint Rulemaking to Establish 2017 and Later Model Year Light Duty Vehicle GHG Emissions and CAFE Standards	$8.8
EPA/AR	National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units	$8.2
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

[146] Table 2-3 reports the top five rules with highest benefits based on the primary agency estimates, or midpoints if only ranges are reported.
[147] Table 2-4 reports the top five rules with highest costs based on the primary agency estimates, or midpoints if only ranges are reported.

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 2011 through September 2012; rules published before October 2011 are described in last year's report.

Since 2001, this report has been included in 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 benefits and costs and takes into consideration the interests of our intergovernmental partners.

State and local governments have a vital constitutional role in providing government services. They have the primary 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, State, local, and tribal governments 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 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;
- Agencies should estimate direct benefits and costs to assist with these consultations;
- 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 E for a description of agency consultation activities).

The remainder of this report lists and briefly discusses the regulations meeting the Title II threshold and the specific requirements of Sections 202 and 205 of the Act from October 1, 2011 to September 30, 2012.

In FY 2012, Federal agencies issued eleven final rules that were subject to Sections 202 and 205 of the Unfunded Mandate Reform Act of 1995 (UMRA), as they required 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 published two, Department of Energy published two, Department of Health and Human Services published two, Department of the Treasury published one, Department of Homeland Security published one, and the Environmental Protection Agency and Department of Transportation issued one joint rule.[148]

OMB worked with the agencies in applying the requirements of Title II of the Act to their selection of the regulatory options for these rules. Descriptions of the rules in addition to agency statements regarding compliance with the Act are included in the following section.[149]

A. Environmental Protection Agency

1. *National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Electric Utility Steam Generating Units*

[148] 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.

[149] All cost estimates are in 2001 dollars.

This final rule established emissions standards for air pollutants emitted by coal- and oil-fired electric generating units.

EPA estimated $8.2 billion in annual costs. EPA estimated the annualized net compliance cost to State, local, and tribal government entities to exceed the $100 million threshold. Also, the estimated overall impact on the private sector exceeds the $100 million threshold in the aggregate. Consequently, the provisions of this rule constitute a private sector mandate and a mandate on State, local, and tribal governments under UMRA.

2. EPA Regulation of Fuels and Fuel Additives: 2013 Biomass-Based Diesel Renewable Fuel Volume

In this final rule, EPA specified the amount of biomass-based diesel fuel under the Renewable Fuels Program (RFS) that must be used in transportation fuel in 2013.

EPA raised the biomass-based diesel volume requirement by 280 million gallons and estimated the cost of this net increase to be between $207 and $311 million in 2013. 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 UMRA.

B. Department of Energy

1. DOE Energy Conservation Standards for Residential Clothes Washers

This final rule established energy and water conservation standards for residential clothes washers.

DOE estimated the annual costs at $151 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 UMRA.

2. DOE Energy Efficiency Standards for Fluorescent Lamp Ballasts.

The final rule revised existing energy efficiency standards to be more stringent and expands the scope to cover bulb ballasts, sign ballasts, and residential ballasts.

DOE estimated the annual costs at $297 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 UMRA.

C. Department of Health and Human Services

1. Policy and Technical Changes to the Medicare Advantage and the Medicare Prescription Drug Benefit Programs for Contract Year 2013

This final rule implemented a phase-out of the Part D coverage gap, or "donut hole" for Medicare beneficiaries who do not already receive low-income subsidies from CMS and made other changes. Manufacturers are required to provide Medicare beneficiaries with a discount on each applicable drug of 50 percent of an amount equal to the negotiated price of the drug (less any dispensing fee). In general, manufacturers must agree to provide these discounts by signing an agreement with CMS in order for their applicable drugs to continue to be covered under Medicare Part D.

CMS estimate that the implementation of the Coverage Gap Discount Program will cost drug manufacturers approximately $3.8 billion annually. 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 UMRA.

2. Administrative Simplification: Standard Unique Identifier for Health Plans and ICD-10 Compliance Date Delay

This final rule established a standard and requirements for a national unique health plan identifier. It also specifies the circumstances under which a health care provider must require health care providers who are prescribers to disclose a National Provider Identifier. The rule also changed the compliance date for ICD-10 implementation from October 1, 2013 to October 1, 2014.

CMS estimated that the adoption of the health plan identifier will cost health plans $469 million in the first year. 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 UMRA.

D. Department of Treasury

1. *Assessment of Fees for Large Bank Holding Companies and Nonbank Financial Companies Supervised by the Federal Reserve to Cover the Expenses of the Financial Research Fund*

For all bank holding companies with total consolidated assets of $50 billion or greater and nonbank financial companies supervised by the Federal Reserve, this final rule established the fee structure Treasury will use to collect funds to finance the expenses of the Office of Financial Research (OFR) created under the Dodd-Frank Act.

While specific costs were not estimated, Treasury anticipates more than $100 million in annual costs associated with the rule. 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 UMRA.

E. Department of Homeland Security

1. Standards for Living Organisms in Ships' Ballast Water Discharged in U.S. Waters

This final rule establishes standards for vessels discharging ballast water into U.S. waters. The final rule establishes the allowable concentrations of living organisms discharged via ballast water into U.S. waters.

DHS estimates the private sector will incur costs of $146 million in 2016 and $131 million in 2017. 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 UMRA.

F. Department of Labor

1. Hazard Communication

The rule adopts the UN coordinated Global Harmonization framework to apply to OSHA's Hazard Communication Standard. This change is expected to improve the quality and relevance of information regarding hazards to the workers who produce, transport, and process chemicals.

DOL estimates $164 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 UMRA.

G. Department of Agriculture

1. Nutrition Standards in the National School Lunch and School Breakfast Programs

This final rule updates the meal patterns and nutrition standards for the National School Lunch and School Breakfast Programs to align them with the Dietary Guidelines for Americans. This rule requires most schools to increase the availability of fruits, vegetables, whole grains, and fat-free and low-fat fluid milk in school meals; reduce the levels of sodium, saturated fat and trans fat in meals; and meet the nutrition needs of school children within their calorie requirements.

FNS estimates $479 million in annual costs. Local School Food Authorities (SFA) will incur food, labor, and administrative costs to comply with new National School Lunch Program and

School Breakfast Program meal requirements. State Education Agencies will incur additional training, technical assistance, and SFA monitoring and compliance costs. Consequently, this final rule contains mandates under UMRA on State, local, and tribal governments.

H. Joint Rulemakings

1. Joint DOT/EPA rulemaking to Establish 2017 and Later Model Year Passenger Car and Light Truck Corporate Average Fuel Economy Standards

The joint final rule between the U.S. Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA) set greenhouse gas and corporate average fuel economy (CAFE) standards for model years 2017-2025 light-duty vehicles.

The annual cost of the rule is estimated at $8.8 billion.[150] 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 UMRA.

[150] EPA and DOT estimated costs and benefits separately. DOT estimates costs of $2.9 billion annually, while EPA estimates costs of $8.8 billion annually.

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, 2002 and September 30, 2012. OMB presents more detailed explanation of these regulations in several documents.

- 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 the 2012 Report.
- Rules from October 1, 2011 to September 30, 2012: 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.[151] 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

[151] See *National Income and Product Accounts*, http://www.bea.gov.

dollar values of the year before the rule is finalized. In periods of low inflation such as the past 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 in applying the new guidance to their impact analyses.

Table A-1 below presents the unmodified information on the impacts of 47 major rules reviewed by OMB from October 1, 2011 through September 30, 2012, and includes additional explanatory text on how agencies calculated the impacts for these rulemakings.[152] Unless otherwise stated, the estimates presented in Table A-1 are annualized impacts in 2001 dollars, which is the requested format in OMB Circular A-4.

Table 1-5(a) in Chapter 1 of this Report presents the adjusted impact estimates for the 14 rules finalized in 2011-2012 that were added to the Chapter 1 accounting statement totals. Table A-2 below presents the benefits and costs of previously reported major rules reviewed by OMB from October 1, 2002 through September 30, 2011 that are also included in the Chapter 1 accounting statement totals.

[152] There are 48 rules listed in Table A-1; however, the table includes a joint Department of Transportation/Environmental Protection Agency rule—Passenger Car and Light Truck Corporate Average Fuel Economy Standards MYs 2017 and Beyond—that is listed separately under each agency.

Table A-1: Summary of Agency Estimates for Final Rules October 1, 2011 - September 30, 2012 (As of Date of Completion of OMB Review)[153]

RIN	Title	Benefits (2001$)	Costs (2001$)	Other Information
Department of Agriculture				
0584-AD59	Nutrition Standards in the National School Lunch and School Breakfast Programs	Not estimated	$479 million Range: $479-500 million	Source: ROCIS. The primary benefit of this rule is to align the regulations with the requirements placed on schools under NSLA to ensure that meals are consistent with the goals of the most recent Dietary Guidelines and the Dietary Reference Intakes. It also results in a number of additional benefits, including alignment between Federal program benefits and national nutrition policy, improved confidence by parents and families in the nutritional quality of school meals, and the contribution that improved school meals can make to the overall school nutrition environment. 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. No direct regulation of small business.
0584-AE15	Certification of Compliance With Meal Requirements for the National School Lunch Program Under the Healthy, Hunger-Free Kids Act of 2010	Not estimated	$2 million	Transfers: $227-230 million Source: ROCIS. Rule encourages compliance with NSLP and SBP meal standards by providing an additional 6 cent reimbursement for lunches that meet the requirements. Costs are a combination of State. SFA, and Federal costs, including administrative costs of submitting and processing compliance claims. Transfers are the sum of transfers from the Federal Government to State agencies, plus transfers from the Federal Government to SFA for meal reimbursements.
Department of Education				
1810-AB12	Teacher Incentive Fund	Not estimated	Not estimated	Transfers: $224 million Source: ROCIS. Transfers are from Federal Government to States, local education agencies, and nonprofits.
1810-AB15	Race to the Top--Early Learning Challenge Phase 2	Not estimated	Not estimated	Transfers: $105 million Source: ROCIS. Transfers are from the Federal Government to States.

[153] 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
1840-AD11	Federal Pell Grant Program	Not estimated	Not estimated	Transfers: $3,787-3,807 million Source: Preamble. Transfers are from recipients of a 2nd Pell grant to the Federal Government.
1894-AA01	Race to the Top Fund Phase 3	Not estimated	Not estimated	Transfers: $160 million Source: ROCIS. Transfers are from the federal gov't to states that were runners-up in Phase 3 of the Race to the Top program.
Department of Energy				
1904-AB50	Energy Efficiency Standards for Fluorescent Lamp Ballasts	$1,049 million Range: $759-1,553 million	$297 million Range: $178-452 million	Source: ROCIS
1904-AB90	Energy Conservation Standards for Residential Clothes Washers	$1,129 million Range: $1,010-1,802 million	$151 million Range: $151-253 million	Source: ROCIS
Department of Health and Human Services				
0938-AO53	Home and Community-Based State Plan Services Program and Provider Payment Reassignments (CMS-2249-P2)	Not estimated	Not estimated	Transfers: $118-120 million Source: ROCIS. Transfers are from the Federal Government to providers. There is an additional transfer of $113-$115 million ($2012) annually from State governments to providers.
0938-AQ01	Changes in Provider and Supplier Enrollment, Ordering and Referring, and Documentation Requirements; and Changes in Provider Agreements (CMS-6010-F)	Not estimated	Not estimated	Transfers: $108-109 million Source: ROCIS. Transfers are from providers and suppliers to the Federal Government. This is an anti-fraud measure--savings are due to a reduction in fraud.
0938-AQ11	Administrative Simplification: Adoption of Standards for Electronic Funds Transfer (EFT) (CMS-0024-IFC)	$222-331 million	$2-3 million	Source: ROCIS.
0938-AQ13	Administrative Simplification: Standard Unique Identifier for Health Plans and ICD-10 Compliance Date Delay (CMS-0040-F)	$721 million Range: $425-1,017 million	$469 million Range: $150-758	Source: ROCIS.

RIN	Title	Benefits (2001$)	Costs (2001$)	Other Information
0938-AQ22	Medicare Shared Savings Program: Accountable Care Organizations (CMS-1345-F)	Not estimated	$90 million	Transfers: -$88 million. Range: -$191 to $9 million. Source: ROCIS. Transfers are from Federal Government to ACO Providers. Low estimate reflects a Federal cost, while primary and high estimates reflect Federal savings. Costs represent average start-up investment and ongoing annual operating costs borne by ACO participants.
0938-AQ25	Revisions to Payment Policies Under the Physician Fee Schedule and Part B for CY 2012 (CMS-1524-FC)	Not estimated	Not estimated	Transfers: $15,353 million Source: ROCIS. This annual rule revises payment policies under Part B. Transfers are from physicians, other practitioners and providers and suppliers who receive payments under Medicare to the Federal Government.
0938-AQ26	Changes to the Hospital Outpatient Prospective Payment System and Ambulatory Surgical Center Payment System for CY 2012 (CMS-1525-F)	Not estimated	Not estimated	Transfers: $516 million Source: ROCIS. Transfers from Federal Government to Medicare outpatient hospitals added to transfers from Federal Government to Medicare ACS providers to derive a total transfers figure.
0938-AQ27	End-Stage Renal Disease Prospective Payment System for CY 2012, Quality Incentive Program for PY 2013 and PY 2014; Ambulance Fee Schedule; and Durable Medical Equipment (CMS-1577-F)	Not estimated	$10 million	Transfers: $150 million Transfers are the sum of transfers from Federal Government to Medicare ESRD providers, plus transfers from Federal Government to Medicare ambulance providers, less transfers from ESRD providers to Federal Government. There also is a transfer of $50 million ($2011) from patients to ESRD providers due to the increased beneficiary co-insurance for the ESRD PPS that is not included in the total.
0938-AQ30	Home Health Prospective Payment System Refinements and Rate Update for CY 2012 (CMS-1353-F)	Not estimated	Not estimated	Transfers: $344 million Source: ROCIS. Transfers from home healthcare providers to federal Government, reflecting reduced government payments to providers. Aggregate impact to the proposed CY 2012 HH PPS reflects the distributional effects of an updated wage index, the 1.4 percent home health market basket update ($280 million increase in $2011), and the 3.79 percent case-mix adjustment applicable to the national standardized 60-day episode rates (-$720 million in $2011).
0938-AQ35	Community First Choice Option (CMS-2337-F)	Not estimated	Not estimated	Transfers: $1,469-1,510 million Source: ROCIS. Transfers are from the Federal Government to Medicaid Qualified Providers. There are additional transfers of $1.09-$1.12 annually ($2012) from State governments to Medicaid Qualified Providers.

RIN	Title	Benefits (2001$)	Costs (2001$)	Other Information
0938-AQ62	Medicaid Eligibility Expansion Under the Affordable Care Act of 2010 (CMS-2349-F)	Not estimated	Not estimated	Transfers: $23,772-24,948 million Source: ROCIS. Transfers are from the Federal Government to Medicaid recipients. There is an additional transfer of $2,568 ($2012 annualized using a 7% discount rate; $2,694 at a 3% discount rate) from state governments to Medicaid recipients.
0938-AQ67	Establishment of Exchanges and Qualified Health Plans Part I (CMS-9989-F)	Not estimated	$552 million Range: $539-552 million	Transfers: $539-552 million Source: ROCIS. Benefits include improved access to health insurance, with numerous positive effects, including earlier treatment and improved morbidity, fewer bankruptcies and decreased use of uncompensated care. Exchanges will also serve as a distribution channel for insurance, reducing administrative costs as a part of premiums and providing comparable information on health plans to provide a more efficient shopping experience. Costs are offset by grant outlays from the Federal Government to States to establish Exchanges.
0938-AQ84	Medicare and Medicaid Electronic Health Record Incentive Program--Stage 2 (CMS-0044-F)	Not estimated	Range: $147-151 million	Transfers: $1,941-2,033 million Source: ROCIS. Transfers are from the federal Government to Medicare-eligible professionals. Monetized costs include private industry costs associated with the rule's reporting requirements. Qualitative costs include the impact of EHR activities such as reduced staff productivity related to learning how to use the EHR technology, the need to for additional staff to work with HIT issues, and administrative costs related to reporting.
0938-AQ86	Policy and Technical Changes to the Medicare Advantage and the Medicare Prescription Drug Benefit Programs for Contract Year 2013 (CMS-4157-F)	Not estimated	Not estimated	Transfers: $3,907-3,957 million Source: Calculations based on numbers in the Preamble. Transfers are from drug manufacturers to Medicare recipients who were in the "donut hole." The agency lists these transfers as a cost, but they do not represent a cost to society as a whole. In addition, there is a transfer of $215 to $221 million annually ($2011) from the Federal Government to Medicare organizations and a transfer of $0.4 million ($2011) annually from Part D sponsors and from Medicare organizations to States.
0938-AQ89	Medicare and Medicaid Programs: Reform of Hospital and Critical Access Hospital Conditions of Participation (CMS-3244-P)	Not estimated	-$740 million	Source: ROCIS.

RIN	Title	Benefits (2001$)	Costs (2001$)	Other Information
0938-AQ96	Regulatory Provisions To Promote Program Efficiency, Transparency, and Burden Reduction (CMS-9070-P)	Not estimated	-$102 million	Source: ROCIS.
0938-AQ98	Establishment of the Consumer Operated and Oriented Plan Program (CMS-9983-F)	Not estimated	Not estimated	Transfers: not estimated Preamble contains cost and transfer estimates for a single, hypothetical buyer.
0938-AR01	Administrative Simplification: Adoption of Operating Rules for Electronic Funds Transfer (EFT) and Remittance Advice (RA) (CMS-0028-IFC)	Range: $208-318 million	$101-262 million	Source: ROCIS.
0938-AR07	State Requirements for Exchange--Reinsurance and Risk Adjustments (CMS-9975-F)	Not estimated	Not estimated	Transfers: $7,703-7,937 million Source: ROCIS. Risk adjustment transfers funds among individual and small group market health plan issuers. Reinsurance collects funds from all issuers and distributes it to individual market issuers. Qualitative benefits include improved access to health insurance, earlier treatment, improved morbidity, fewer bankruptcies and decreased use of uncompensated care. The Exchange will also serve as a distribution channel for insurance reducing administrative costs and providing comparable information on health plans to allow for a more efficient shopping experience.
0938-AR12	Changes to the Hospital Inpatient and Long-Term Care Prospective Payment Systems for FY 2013 (CMS-1588-F)	Not estimated	Not estimated	Transfers: $1,665 million Source: ROCIS. Transfers are the sum of transfers from Federal Government to IPPS providers, plus transfers from Federal Government to LTCH PPS providers.
0938-AR20	Prospective Payment System and Consolidated Billing for Skilled Nursing Facilities--Update for FY 2013 (CMS-1432-N)	Not estimated	Not estimated	Transfers: $527 million Source: ROCIS. Transfers are from Federal Government to SNF Medicare Providers.
Department of Homeland Security				
1625-AA32	Standards for Living Organisms in Ships' Ballast Water Discharged in U.S. Waters	$163 million Range: $4-442 million	$79 million Range: $77-152 million	Source: RIA. Primary estimate for benefits in the midpoint of the range provided as a primary estimate in the RIA. The RIA also includes a wider range of benefits, which is included as the high and low estimates here.

Department of the Interior				
1014-AA02	Increased Safety Measures for Oil and Gas Operations on the Outer Continental Shelf (OCS)	Not estimated	$107 million	Source: ROCIS
1018-AX97	Migratory Bird Hunting; 2012-13 Migratory Game Bird Hunting Regulations	$175-231 million	Not estimated	Source: ROCIS
1018-AX97	Migratory Bird Hunting; 2012-13 Migratory Game Bird Hunting Regulations	$175-231 million	Not estimated	Source: ROCIS
Department of Justice				
1105-AB34	National Standards to Prevent, Detect, and Respond to Prison Rape	Not estimated	$375 million Range: $367-375 million	Source: ROCIS. Agency did not estimate benefits, but conducted a break-even analysis and concluded that costs would break even with the benefits if the standards are successful in avoiding between 1667 and 2329 victims.
Department of Labor				
1205-AB58	Labor Certification Process and Enforcement for Temporary Employment in Occupations Other Than Agriculture or Registered Nursing in the United States (H-2B Workers)	Not estimated	$1 million	Transfers: $70-100 million Source: ROCIS. Transfers are from employers to domestic and foreign workers and include payments for transportation and wage increases for corresponding employment.
1210-AB08	Improved Fee Disclosure for Pension Plans	Not estimated	$51 million Range: $47-51 million	Source: ROCIS. The final regulation will increase the amount of information that service providers disclose to plan fiduciaries. Non-quantified benefits include information cost savings, discouraging harmful conflicts of interest, service value improvements through improved decisions and value, better enforcement tools to redress abuse and harmonization with other EBSA rules and programs. A detailed analysis of the non-quantified benefits compared to the quantified costs is contained in the impact analysis of the July 16, 2010 interim final regulation. Quantified costs include costs for service providers to perform compliance review and implementation, for disclosure of general, investment-related, and additional requested information for responsible plan fiduciaries to request additional information from service providers to comply with the exemption and to prepare notices to DOL if the service provider fails to comply with the request.
1218-AC20	Hazard Communication	$619 million Range: $517-1,585 million	$164 million Range: $132-164 million	Source: ROCIS. Benefits reflect 43 fatalities and 585 injuries/illnesses prevented annually.

Department of Transportation				
2126-AA97	National Registry of Certified Medical Examiners	$121 million Range: $58-180 million	$28 million Range: $25-28 million	Source: ROCIS
2126-AB26	Hours of Service	$526 million Range: $184-1,036 million	$393 million	Source: ROCIS
2127-AK79	Passenger Car and Light Truck Corporate Average Fuel Economy Standards MYs 2017 and Beyond (RRR)	$9,207 million Range: $125-17,924 million	$2,930 million Range: $3-6,276	Source: ROCIS. Primary estimates for costs and benefits are derived from best estimates used in the main analysis, and are based on the analysis utilizing the 2010 baseline fleet. Low and high estimates are derived from the uncertainty analysis, also corresponding to the 2010 baseline fleet. Standards cover MY 2017 through MY 2021 vehicles, with annualization performed to base year 2017. There will be transfer payment impacts due to reduced Federal, state, and local fuel tax revenue from reduced fuel consumption. In addition, there will be reduced petroleum market externality payments that are offset by reduced receipts by domestic petroleum suppliers. These transfer payment impacts are excluded from NHTSA's analysis.
2130-AC27	Positive Train Control Systems Amendments (RRR)	$48 million Range: $34-65 million	$2 million Range: $1-3 million	Source: ROCIS.
Department of the Treasury				
1505-AC42	Assessment of Fees for Large Bank Holding Companies and Nonbank Financial Companies Supervised by the Federal Reserve to Cover the Expenses of the Financial Research Fund	Not estimated	Not estimated	Transfers: not estimated
Department of Veterans Affairs				
2900-AO10	Vocational Rehabilitation and Employment Program—Changes to Subsistence Allowance	Not estimated	Not estimated	Transfers: $123-129 million Source: ROCIS. Transfers are from the Federal Government to eligible veterans.

Environmental Protection Agency				
2060-AN72	Petroleum Refineries--New Source Performance Standards (NSPS)--Subparts J and Ja	$369-668 million	$84 million	Source: Calculations based on numbers in Preamble. Costs are compliance costs. EPA reports the value of natural gas recovered as a negative cost, but here this cost is reported as a benefit. The total monetized benefits reflect the sum of the value of recovered natural gas, plus EPA's estimate of human health benefits associated with reducing exposure to PM2.5 through reductions of PM2.5 precursors such as NOx and SO2 as well as CO2 benefits. Monetized benefits do not include the reduced health effects from direct exposure to SO2 and NOx, ozone exposure, ecosystem effects, or visibility impairment. Analysis year is the year of full rule implementation (2017). Qualitative benefits include decrease in headaches, eye irritation, and pneumonia due to reduced HAP exposure.
2060-AP52	National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Electric Utility Steam Generating Units	$28,185-76,868 million	$8,199 million	Source: ROCIS
2060-AP76	Oil and Natural Gas Sector--New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants	$155 million	$142 million	Source: Calculations based on numbers in Preamble. Costs are engineering costs, monitoring, reporting, and recordkeeping costs. EPA reports revenue from additional national gas product recovery as a negative cost, but here this revenue is reported as a benefit. EPA expects that avoided emissions will result in improvements in health effects associated with HAP, ozone, and particulate matter, as well as climate effects associated with methane, but could not quantify these benefits because of modeling difficulties.
2060-AQ54	Joint Rulemaking to Establish 2017 and Later Model Year Light Duty Vehicle GHG Emissions and CAFE Standards	$28,822 million Range: $21,220-28,822 million	$8,828 million Range: $5,305-8,828 million	Source: RIA. Annualized benefits represent total benefits (including fuel savings, the social cost of carbon, energy security, and other economic impacts) from EPA's model 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.
2060-AR55	Regulation of Fuels and Fuel Additives: 2013 Biomass-Based Diesel Renewable Fuel Volume	Not estimated	$207-311 million	Source: ROCIS

Table A-2: Estimates of Annual Benefits and Costs of Major Final Rules October 1, 2002 - September 30, 2011[154]

(millions of 2001 dollars)

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
Department of Agriculture						
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
Department of Energy						
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-AA89	Energy Efficiency Standards for Clothes Dryers and Room Air Conditioners	4/8/11	4/21/11	169-310	129-182	2012 Report: Table 1-5(a)
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
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

[154] Based on date of completion of OMB review.

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
1904-AB79	Energy Efficiency Standards for Residential Refrigerators, Refrigerator-Freezers, and Freezers	8/25/11	9/15/11	1,660-3,034	803-1.281	2012 Report: Table 1-5(a)
1904-AC06	Energy Efficiency Standards for Residential Furnaces, Central Air Conditioners and Heat Pumps	6/6/11	6/27/11	719-1,766	475-724	2012 Report: Table 1-5(a)
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
Department of Health and Human Services						
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

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
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
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
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	7/8/11	930-1,138	260-616	2012 Report: Table 1-5(a)
Department of Homeland Security						
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
Department of Housing and Urban Development						
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
Department of Justice						
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

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
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
Department of Labor						
1210-AB06	Revision of the Form 5500 Series and Implementing Regulations	8/30/07	11/16/07	0	(83)	2008 Report: Table 1-4
1210-AB07	Improved Fee Disclosure for Pension Plan Participants	10/5/10	10/20/10	780-3,255	217-362	2012 Report: Table 1-5(a)
1210-AB35	Statutory Exemption for Provision of Investment Advice	9/29/11	10/25/11	5,789-15,134	1,571-4,218	2012 Report: Table 1-5(a)
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
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[155]
2120-AJ01	Part 121 Pilot Age Limit	6/8/09	7/15/09	30-35	4	2010 Report: Table 1-4
2125-AF19	Real-Time System Management Information Program	10/13/10	11/8/10	152-166	132-137	2012 Report: Table 1-5(a)
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

[155] 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."

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
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[156]	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[157]	11/13/08	11/19/08	Not included	Not included	2010 Report: Table 1-4
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-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-AK23	Ejection Mitigation	12/23/10	1/19/11	1,500-2,375	419-1,373	
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

[156] 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)

[157] 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 DC 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 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.

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
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
Department of Transportation and Environmental Protection Agency						
2127-AK50: 2060-AP58	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)
2127-AK74; 2060-AP61	Commercial Medium- and Heavy-Duty On-Highway Vehicles and Work Truck Fuel Efficiency Standards	8/8/11	9/15/11	2,150-2,564	331-496	2012 Report: Table 1-5(a)
Environmental Protection Agency						
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

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
2040-AD62	Establishing Location, Design, Construction, and Capacity Standards for Cooling Water Intake Structures at Large Existing Power Plants (Final Rule)[158]	2/16/04	7/9/04	Not Included	Not Included	2005 Report: Table 1-4
2040-AF11	Water Quality Standards (Numeric Nutrient Criteria) for Florida's Lakes and Flowing Waters	11/18/10	12/6/10	23	111-169	2012 Report: Table 1-5(a)
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
2050-AG50	Oil Pollution Prevention: Spill Prevention, Control, and Countermeasure Rule Requirements - Amendments for Milk Containers	4/8/11	4/18/11	0	(118-121)	2012 Report: Table 1-5(a)
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
2060-AG69	National Emission Standards for Hazardous Air Pollutants: Industrial/Commercial/Institutional Boilers and Process Heaters[159]	2/26/04	9/13/04	Not Included	Not Included	2005 Report: Table 1-4
2060-AI44	Review of the National Ambient Air Quality Standards for Particulate Matter[160]	9/21/06	10/17/06	Not Included	Not Included	2007 Report: Table 1-4

[158] 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)

[159] 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)

[160] 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: Costs: 2,590-2,833.)

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
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[161]	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[162]	3/10/05	5/12/05	11,947-151,769	1,716-1,894	2006 Report: Table 1-4
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

[161] 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)

[162] On July 11, 2008, the DC Circuit Court vacated the rule; however, in response to EPA's petition, the Court, on December 23, 2008, remanded the rule without vacatur, which keeps this rule in effect while EPA conducts further proceedings consistent with the Court's July 11 opinion. As explained in more detail in a previous footnote. On July 6, 2011, EPA finalized the Cross-State Air Pollution Rule (CSAPR), which was designed to replace the Clean Air Interstate Rule (CAIR). On August 21, 2012, however, the final CSAPR rule was vacated. EPA has filed a petition for certiorari in the Supreme Court.

RIN	Title	Completed	Published	Benefits	Costs	Source of Estimate
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-AP50	Cross State Air Pollution Rule (CAIR Replacement Rule)	7/1/11	8/8/11	20,467-59,697	691	2012 Report: Table 1-5(a)
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 FISCAL YEAR 2002 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, 2001 and September 30, 2002. These rules were included in Chapter I of the 2012 Report as part of the ten-year totals, but are not included in the 2013 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. The estimates for DOT's rule were first included in the 2002 Report (see Table 19 in that report), and estimates for EPA's rule were first included in the 2003 Report (see Table 19 in that report).

Table B-1: Estimates of Annual Benefits and Costs of Two Major Federal Rules October 1, 2001 - September 30, 2002
(millions of 2001 dollars)

Agency	RIN	Title	OMB Review Completed	Benefits	Costs
DOT/NHTSA	2127-AI10	Advanced Air Bags: Response to Petitions Federal Motor Vehicle Safety Standards; Occupant Crash Protection	12/5/2001	$140-$1,600	$400-$2,000
EPA/AR	2060-AI11	Emissions From Nonroad Spark-Ignition Engines and Standards for Recreational Spark-Ignition Engines	9/13/2002	$1,330-$4,818[163]	$192

[163] The 2003 Report contained a typographical error when reporting the low end of this range.

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, 2003 – September 30, 2012

Agency	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bureau of Consumer Financial Protection (CFPB)	--	--	--	--	--	--	--	--	--	2
Commodity Futures Trading Commission (CFTC)	--	--	--	--	--	--	--	--	1	13[164]
Consumer Product Safety Commission (CPSC)	--	--	--	1	--	--	--	--	1	1
Federal Communications Commission (FCC)	--	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	2	2	1	1	1
Pension Benefit Guaranty Corporation (PBGC)	--	--	--	--	--	--	--	--	--	--
Securities and Exchange Commission (SEC)	5	1	5	--	7	4	8	9	10	7[165]
Total	7	4	11	4	10	11	13	17	17	21

Table C-2: Total Number of Major Rules with Some Information on Benefits or Costs Promulgated by Independent Agencies, October 1, 2003- September 30, 2012[166]

Agency	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bureau of Consumer Financial Protection (CFPB)	--	--	--	--	--	--	--	--	--	2
Commodity Futures Trading Commission (CFTC)	--	--	--	--	--	--	--	--	1	9[167]
Consumer Product Safety Commission (CPSC)	--	--	--	1	--	--	--	--	0	0
Federal Communications Commission (FCC)	0	1	0	0	0	0	--	--	--	--

[164] Three of these rules are joint rules with SEC.
[165] Three of these rules are joint rules with CFTC.
[166] 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.
[167] Two of these rules are joint rules with SEC.

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)	--	--	--	--	--	--	--	--	--	--
Nuclear Regulatory Commission (NRC)	--	--	--	--	--	1	1	--	1	1
Pension Benefit Guaranty Corporation (PBGC)	--	--	--	--	--	--	--	--	--	--
Securities and Exchange Commission (SEC)	5	1	5	--	7	4	8	9	9	6[168]
Total	5	3	5	1	7	6	8	11	11	16

[168] Two of these rules are joint rules with CFTC.

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 four 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 its review between January 20, 1993, and September 30, 1996, where both benefit and cost estimates were previously reported. Table D-2 includes major final rules for which OMB completed its review between January 20, 2001, and September 30, 2004, where both benefit and cost estimates were previously reported. Table D-3 includes major final rules for which OMB completed its review between January 20, 2009, and September 30, 2012, where both benefit and cost estimates were previously reported. OMB presents more detailed explanation of these regulations in several previous versions of this report.

Table D-1: Estimates of Annual Benefits and Costs of Major Federal Rules, January 20, 1993 to September 30, 1996[169]

(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	$226
HUD	2502-AE66	Manufactured Housing Construction and Safety Standards	9/21/93	10/21/93	$103	$63
EPA	2060-AD91	Accelerated Phaseout of Ozone Depleting Chemicals and Listing and Phaseout of Methyl Bromide	11/29/93	12/10/93	$2,627	$1,681
EPA	2060-AD27	Fuel and Fuel Additives: Standards for Reformulated Gasoline	12/15/93	2/16/94	$535	$1,240
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	$464	$33
DOT	2125-AC85	Controlled Substances and Alcohol Use and Testing	1/25/94	2/15/94	$1,539	$114
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	$37
EPA	2060-AC19	Hazardous Organic NESHAP (HON) for the Synthetic Organic Chemical Manufacturing Industry (SOCMI) and Other Processes Subject to the	2/28/94	4/22/94	$1,611	$314

[169] Based on date of completion of OMB review.

		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	$50
DOL	1218-AB25	Occupational Exposure to Asbestos	7/1/94	8/10/94	$92	$448
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	$256
EPA	2060-AD71	Interim Requirements for Deposit Control Gasoline Additives, Regulations of Fuels and Fuel Additives	10/14/94		$1,045	$197
EPA	2040-AC35	Bay/Delta Water Quality Standards	12/13/94		$14	$143
DOT	2115-AD61	Double Hull Standards for Vessels Carrying Oil in Bulk	1/20/95		$17	$583
DOT	2127-AA00	FMVSS: Stability and Control of Medium and Heavy Vehicles During Braking	2/13/95		$2,095	$694
EPA	2060-AD45	Acid Rain Nitrogen Oxides Emission Reduction Programs	3/20/95		$2,440	$297
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	$153
EPA	2060-AD94	National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries	7/28/95		$413	$106
DOT	2127-AB85	Head Impact Protection	8/10/95	8/18/95	$1,855	$633
DOT	2115-AD81	Vessel Response Plan	10/2/95		$44	$305
EPA	2060-AD00	Standards of Performance for New Stationary Sources: Municipal Waste Combustors (MWCs)	10/31/95		$404	$349
HHS	0910-AA10	Procedures for the Safe and Sanitary Processing and Importing of Seafood	12/4/95		$169	$93
EPA	2060-AC42	Air Emissions from Municipal Solid Waste Landfills, New Source Performance Standards and Emission Guidelines	12/4/95		$147	$109
EPA	2050-AD26	Accidental Release Prevention Requirements: Risk Management Programs under Clean Air Act Section 112(r)(7)	5/23/96		$185	$109
HHS	0910-AA19	Food Labeling, Nutrition Labeling, Small Business Exemption	6/13/96		$377	$2
EPA	2060-AG06	Certification Standards for Deposit Control Gasoline	6/20/96		$645	$151
USDA	0583-AB69	Pathogen Reduction, Hazard Analysis and Critical Control Point	7/3/96		$1,566	$120

		(HACCP) Systems				
EPA	2060-AE27	Revisions to the Federal Test Procedures for Emissions from Motor Vehicles (Final Regulations)	8/15/96		$2,332	$246
HHS	0910-AA48	Regulations Restricting the Sale and Distribution of Cigarettes and Smokeless Tobacco to Protect Children and Adolescents*	8/22/96	8/28/96	$11,401	$196
HHS	0910-AA09	Medical Devices: Current Good Manufacturing Practice (CGMP), Quality System Regulation (Final Rule)	8/30/96		$327	$98
EPA	2050-AD04	Financial Assurance Mechanisms for Local Government Owners and Operators of Municipal Solid Waste Landfill Facilities	9/30/96		$120	$0

*Vacated rule excluded from Figure 2-1(b).

Table D-2: Estimates of Annual Benefits and Costs of Major Federal Rules, January 20, 2001 to September 30, 2004[170]

(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
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

[170] Based on date of completion of OMB review.

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
DOT	2120-AH68	Reduced Vertical Separation Minimum in Domestic United States Airspace (RVSM)	10/8/03	10/27/03	-$60	-$320
DOT	2137-AD54	Pipeline Integrity Management in High Consequence Areas (Gas Transmission Pipelines)	11/26/03	12/15/03	$154	$288
HHS	0938-AH99	Health Insurance Reform: Standard Unique Health Care Provider Identifier -- CMS-0045-F	1/13/04	1/23/04	$214	$158
HHS	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	$65	$48
EPA	2040-AD62	Establishing Location, Design, Construction, and Capacity Standards for Cooling Water Intake Structures at Large Existing Power Plants (Final Rule)*	2/16/04	7/9/04	$72	$383
HHS	0910-AC26	Bar Code Label Requirements for Human Drug Products and Blood Products	2/17/04	2/26/04	$4,347	$647
EPA	2040-AD56	Effluent Guidelines and Standards for the Meat and Poultry Products Point Source Category (Revisions)	2/26/04	9/8/04	$5	$49
EPA	2060-AG52	Plywood and Composite Wood Products	2/26/04	7/30/04	$795	$223
EPA	2060-AG63	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*	2/26/04	6/15/04	$588	$270
EPA	2060-AG69	National Emission Standards for Hazardous Air Pollutants: Industrial/Commercial/Institutional Boilers and Process Heaters*	2/26/04	9/13/04	$22,233	$876
EPA	2060-AK27	Control of Emissions of Air Pollution From Nonroad Diesel Engines and Fuel (Final Rule)	5/7/04	6/29/04	$33,127	$1,336

*Vacated or reconsidered rule excluded from Figure 2-1(b).

Table D-3: Estimates of Annual Benefits and Costs of Major Federal Rules, January 20, 2009 to September 30, 2012[171]

(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 Commercial Clothes Washers	12/23/09	1/8/10	$50.7	$19.5
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-	4/22/10	5/6/10	$1,869.2	$290.1

[171] Based on date of completion of OMB review.

		out and Recordkeeping Provisions in the Renovation, Repair, and Painting Program				
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 Information Program	10/13/10	11/8/10	$152.0	$136.6
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	6/6/11	6/27/2011	$939.9	$537.5

		Heat Pumps				
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	$3,060
DOE	1904-AB50	Energy Efficiency Standards for Fluorescent Lamp Ballasts	10/28/2011	11/14/2011	$1,051	$297
EPA	2060-AP52	National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Electric Utility Steam Generating Units	12/16/2011	2/16/2012	$52,448	$8,187
DOT	2126-AB26	Hours of Service	12/20/2011	12/27/2012	$521	$389
HHS	0938-AQ11	Administrative Simplification: Adoption of Standards for Electronic Funds Transfer (EFT) (CMS-0024-IFC)	1/3/2012	1/10/2012	$277	$3
DOL	1218-AC20	Hazard Communication	2/21/2012	3/26/2012	$619	$164
DHS	1625-AA32	Standards for Living Organisms in Ships' Ballast Water Discharged in U.S. Waters	2/23/2012	3/23/2012	$163	$79
DOT	2126-AA97	National Registry of Certified Medical Examiners	4/4/2012	4/20/2012	$121	$28
EPA	2060-AP76	Oil and Natural Gas Sector--New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants	4/17/12	08/16/2012	$155	$142
DOE	1904-AB90	Energy Conservation Standards for Residential Clothes Washers	4/26/2012	5/31/2012	$1,129	$151

EPA	2060-AN72	Petroleum Refineries--New Source Performance Standards (NSPS)--Subparts J and Ja	5/7/2012	9/12/2012	$410	-$79
DOT	2130-AC27	Positive Train Control Systems Amendments (RRR)	5/9/2012	5/14/2012	$48	$2
HHS	0938-AR01	Administrative Simplification: Adoption of Operating Rules for Electronic Funds Transfer (EFT) and Remittance Advice (RA) (CMS-0028-IFC)	8/6/2012	8/10/2012	$263	$182
HHS	0938-AQ13	Administrative Simplification: Standard Unique Identifier for Health Plans and ICD-10 Compliance Date Delay (CMS-0040-F)	8/27/2012	09/05/2012	$721	$469
DOT/EPA	2060-AQ54; 2127-AK79	Joint Rulemaking to Establish 2017 and Later Model Year Light Duty Vehicle GHG Emissions and CAFE Standards	8/27/2012		$28,822	$8,828

*Vacated rule excluded from Figure 2-1(b).

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

Sections 203 and 204 of the Unfunded Mandates Reform 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.[172]

Five agencies (the Departments of Agriculture, Energy, Health and Human Services, Interior, and Transportation) 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 (i.e. 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 help them determine the appropriate level of government for their consultations.

A. Department of Agriculture

Nutrition Standards in the National School Lunch and School Breakfast Programs

The final Rule "Nutrition Standards in the National School Lunch and School Breakfast Programs" (77 FR 4088), issued January 26, 2012, requires that school meals offer more fruits, vegetables and whole grains; adequate calorie levels for each grade group; and less sodium, saturated fat, and trans fat to safeguard children's health.

The groups directly affected by the provisions of this rule are State agencies, school districts, students/households, food manufacturers, and stakeholders such as the School Nutrition Association (which represents school food service professionals). USDA consulted formally with the Institute of Medicine (IOM) of the National Academies, which assembled a committee of nationwide experts from various disciplines (school food service professionals, nutrition and health practitioners, economists, etc.) to develop the recommendations that serve as the basis for the final rule. USDA also received informal input from key stakeholders such as the State agencies, the School Nutrition Association, the Food Research and Action Center, and the National Alliance for Nutrition and Activity at public forums, including national conferences and regional meetings.

[172] 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.

USDA and several advocates/stakeholders conducted briefings on July 8, 2008 and January 28, 2009 at the Institute of Medicine (IOM) to inform the IOM committee members about the school meal programs and the concerns of the affected groups.

The following entities provided oral testimony for IOM (and USDA) at two public meetings on July 8, 2009 and January 28, 2009: Action for Healthy Kids; Alliance for a Healthier Generation; American Academy of Pediatrics; American Dietetic Association; Apple Processors Association; ARAMARK Education; Baylor College of Medicine, Food Research and Action Center, California Food Policy Advocates; Chartwells School Dining Services; Economic Research Service, Food Distribution Program and Food and Nutrition Service of United States Department of Agriculture; General Mills; Grocery Manufacturers Association; International Dairy Foods Association; Local Matters; National Alliance for Nutrition and Activity; National Dairy Council; National Pork Board; Nemours Division of Health and Prevention Services; School Nutrition Association; Soyfoods Association of North America; Sunkist Taylor LLC; United Egg Producers; United Fresh Produce Association; University of Minnesota; U.S. Apple Association; and Wellness in American Schools.

USDA also considered the input provided by different stakeholders at the conference IOM Strategies to Reduce Sodium in Washington, DC in March 2009.

USDA received over 133,000 public comments in response to the proposed rule (76 FR 2494), published January 13, 2011. These comments were considered in the development of the final rule.

USDA also held five consultations (webinars and conference calls) with Indian Tribal organizations in 2011 to discuss implementation of the Healthy, Hunger-Free Kids Act of 2010, including the school meals updates.

The key concerns raised by stakeholders and other program partners included:

- Cost of improving school meals due to more fruits, vegetables and whole grains, and the meat/meat alternate requirement at breakfast;
- Possible food waste increase due to more fruits, vegetables, and whole grains in the meals; and
- Ability of schools to meet the sodium reduction timeline.

USDA modified several proposed provisions in response to the input provided by stakeholders and partners. In comparison with the proposal, the final rule:

- Reduces the required grains quantities at lunch to reduce food cost,
- Removes the daily meat/meat alternate requirement at breakfast to reduce food cost,
- Removes the starchy vegetable limit in response to program operators' concerns,
- Allows students to select ½ cup of a fruit or a vegetable to reduce food waste,
- Allows more time to comply with the second intermediate sodium targets,
- Provides additional time for implementation of the breakfast requirements, and

- Reduces the administrative burden by requiring State agencies to conduct a nutrient analysis of school meals using one week of menus, rather than two weeks as proposed.

USDA is also providing a 6 cent increase in per-lunch subsidies to help to ensure that schools have the resources they need to offer more nutritious meals. In addition, USDA Foods is helping program operators stretch limited food budgets. School commodities, which represent approximately 15-20% of the food on the cafeteria serving line, now include more fruits and vegetables, more whole grains, and more food that is lower in sugar, salt, and fat than ever before.

Furthermore, USDA has available a wide array of technical resources and practical tools that provide menu planning guidance and recipes updated to reflect the new meal requirements. Resources, including best practices, are available online at http://www.fns.usda.gov/cnd/Governance/Legislation/nutritionstandards.htm.

B. Department of Energy

Tribal Summit

At the May 5, 2011 Tribal Summit described in the Department of Energy's (DOE) UMRA report for the October 2010 – September 2011 reporting period, Secretary Chu announced DOE's intent to form an Indian clean energy and infrastructure working group to 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.

On January 26, 2012, the final charter for the Indian Country Energy and Infrastructure Working Group (ICEIWG) was issued. The charter describes the objectives of the ICEIWG and the scope of its activities as follows:

a. Make recommendations to DOE's Director of the Office of Indian Energy Policy and Programs ("OIE Director") on the energy and infrastructure development, education, capacity building, and electrification goals and objectives of programs carried out under Title V of the Energy Policy Act of 2005, and make administrative and policy recommendations to improve these programs, including actions that should be considered to encourage non-Federal resources (including private resources) to supplement Federal financial assistance;

b. Provide guidance to the OIE Director and the Secretary about best practices and methods related to energy development activities on Indian lands, especially with respect to capacity-building.

c. Provide the OIE Director and Secretary with advice on better facilitating and encouraging appropriate development of tribal energy resources to stimulate Indian tribal economies.

d. Make recommendations on how the Department may assist tribes in developing their expertise in managing all aspects of energy exploration and development activities.

e. Respond to OIE Director or Secretarial requests for recommendations on DOE policy on programs or policies regarding Indian energy development.

f. Share ideas with the OIE Director regarding development-related policies and approaches that are consistent with tribal cultural values.

g. Perform such other Indian energy resource development related functions as the OIE Director or the Secretary may assign to the Working Group.

h. Serve as a liaison between the Tribes and the OIE on energy resource programs; and

i. Encourage transfer of the results of the energy efficiency and renewable energy activities carried out by the Federal Government.

All Indian tribes and Alaska Natives have the potential to benefit from the activities of the ICEIWG. Under its charter, the ICEIWG would survey and assess the current state of Indian energy, energy business, and energy infrastructure development and needs; exchange information about energy development practices, needs, obstacles, and potential solutions, including alternative approaches to energy development in its various forms; develop and disseminate to the public and prospective technology partners information about tribal resources and opportunities; and utilize its forum to share information, to transfer lessons learned, and to inform and be informed on current policy, procedures, and industry partnership mechanisms. The ICEIWG would also encourage discussion of policy concerns and would forward recommendations or comments to the OIE Director.

Current ICEIWG tribal members are:

- Central Council of Tlingit & Haida Indian Tribes of Alaska (CCTHITA)
- Confederated Tribes of the Warm Springs Reservation of Oregon (OR)
- Crow Nation (MT)
- Ewiiaapaayp Band of Kumeyaay Indians (Southern CA)
- Gila River Indian Community (AZ)
- Ho-Chunk Nation (WI)
- Yocha Dehe Wintun Nation (Northern CA)

The ICEIWG has met several times during the reporting period in geographically diverse locations in the United States, including Portland, OR, Chandler, AZ, New Orleans, LA, and Golden, CO. (See http://energy.gov/indianenergy/iceiwg-meeting-agendas-and-summaries.) In addition to sessions for ICEIWG members to discuss current activities and progress towards working group goals, the meetings include open sessions for interested tribes and members of the public to receive information about ICEIWG activities and offer input on energy issues that impact tribes.

At the ICEIWG meetings, participants requested information on DOE training programs for tribal members, as well as progress reports and further consultation on the development of

DOE policy to purchase renewable energy from tribal lands, among other items of importance to the development of Indian energy.

DOE accomplished its goal, as stated at the May 2011 Tribal Summit, of establishing the ICEIWG. Throughout the reporting period, the ICEIWG has worked to develop a new renewable energy education and training program to make sure Tribal leaders and staff have the information and resources they need to advance community-scale and commercial project financing and development. The program is anticipated to be finalized in time for the UMRA report for October 2012 – September 2013, and made available to interested participants through regional workshops and the Department's National Training & Education Resource at www.nterlearning.org.

At the May 5, 2011 Tribal Summit described in the Department of Energy's (DOE) UMRA report for October 2010 – September 2011, Secretary Chu also announced DOE's plan to develop guidance that will direct DOE to, when possible, buy renewable energy from tribal lands. This policy statement would assist DOE's efforts to cut red tape for Tribal energy development and meet its own sustainability goals. DOE has worked on developing the guidance throughout the reporting period and anticipates including the guidance in its UMRA report for October 2012 – September 2013.

C. Department of Health and Human Services

Partnership for Food Protection

During 2012, the Food and Drug Administration (FDA) continued to consider the impact of its regulations and policies on State and local governments, and tried to lessen the impact of regulatory requirements while more effectively promoting and protecting the public health. With the passage of the Food Safety and Modernization Act in 2011, there has been an increase in food protection cooperation throughout all levels of government.

The purpose of the Partnership for Food Protection (PFP) is to bring federal, state, local, territorial and tribal representatives with expertise in food, feed, epidemiology, laboratory, animal health, environment and public health together to develop an Integrated Food Safety System (IFSS). The importance of the work was underscored by the passage of the Food Safety Modernization Act of 2011, for which an IFSS is a key mandate.

Following an initial 50-State Workshop in St. Louis, the PFP was established by the FDA. The PFP is currently governed by the PFP Coordinating Committee (CC), composed of 11 representatives from FDA's Council of Association Presidents and several at-large members from state and local jurisdictions, plus federal representatives from FDA, CDC, USDA's Food Safety and Inspection Service and DHS.

In 2012, the PFP held its 4th 50-state workshop for partners from all disciplines of food safety and public health to work on an implementation plan for an IFSS. This implementation plan included proposed pilot projects to test concepts and recommendations for joint work

planning, joint inspections, sharing regulatory information and conducting after-action review meetings.

To date FDA, in conjunction with the PFP, has:

- Increased Federal funding awarded to state and local programs for manufactured food, feed, laboratory and retail cooperative programs.
- Developed a Business Process Evaluation and Improvement Tool for Inspection Systems that is designed to help state and local programs gain a detailed understanding of their business processes and form requirements for IT system improvements.
- Drafted a National Standards Guidance Document to help facilitate harmonization and reduce redundancy in laboratory testing.
- Proposed recommendations for improving how the different national programs standards are maintained and implemented to promote an understanding of the comment elements of existing US standards.
- Developed a standard framework for work planning

Food Protection Rapid Response Teams

Food Protection Rapid Response Teams (RRTs) conduct integrated, multiagency responses to all hazardous food and feed emergencies across the Nation. RRTs are developed through multiyear cooperative agreements between FDA and State food regulatory partners. They are activated in response to food emergencies, drawing on the resources and partnership of each member.

There are currently nineteen (19) RRTs within the Project. The cooperative agreements require that these teams engage partners across disciplines and jurisdictions to build core capabilities and explore innovative approaches to response. The RRTs vary from each other in accordance with differences in government structures, geographies, laws, resources, etc.

The nine pilot RRTs continued to develop their teams individually and as a national network. The program started when many state and local resources were encountering new financial and other challenges. However, they have taken advantage of both the similarities among their situations and their differences to create a model that can be helpful for a wide range of other partners.

The RRT project was created to address the growing need for improved, integrated response to human food and animal feed emergencies. In recent years, the outbreak of foodborne illness has increased and the need for multistate and national responses to these outbreaks has become apparent.

The RRTs have documented best practices in the RRT Best Practices Manual, explored and tested new tools, and demonstrated the process and value of building partnerships to improve emergency response.

Recent RRT responses to emergencies exhibit the benefits of strengthened collaboration and capabilities on the efficiency and effectiveness of their responses. For example, in 2012, when a Michigan dairy herd accidentally consumed a medicated feed, the state of Michigan was able to find a diagnostic laboratory quickly and with FDA's guidance ensured that the milk supply remained wholesome and free of veterinary drug residues.

E. Department of Interior

Bureau of Indian Affairs Leasing Regulations

The leasing rule was published as a final rule in December 2012. The rule revised the regulations at 25 CFR 162 that address leasing on Indian land (i.e., land the United States holds in trust or restricted status for Indian tribes or individual Indians).

Federally recognized Indian tribes are affected by the final leasing rule because the rule addresses the process for obtaining Bureau of Indian Affairs approval for leases on Indian land. Federally recognized Indian tribes were included in the tribal consultations on the draft and proposed versions of the leasing rule.

The consultation process began in 2011, when Indian Affairs distributed draft versions of new leasing regulations to each tribal leader. Indian Affairs then hosted several in-person consultation sessions with tribes at locations throughout the country. Indian Affairs then reviewed each comment provided orally and in writing and made changes to the regulation, as appropriate. The resulting version was published in the Federal Register as a proposed rule in November 2011. The proposed rule's preamble also summarized and responded to each comment received. Again, Indian Affairs notified the tribes of a comment period and hosted in-person consultation sessions throughout the country. Indian Affairs again reviewed each comment and made changes to the regulation, as appropriate. The resulting version was published as a final rule on December 5, 2012. The final rule's preamble summarized and responded to each comment received.

Tribes raised a number of issues and requests for revision to increase recognition of tribal sovereignty and streamline the leasing process. The preamble of the final rule includes an exhaustive summary of the issues.

The final rule incorporates most of the changes requested by tribes including, for example, deference to tribes' negotiated rent for leases (rather than requiring an appraisal and fair market rental), eliminating the requirement for insurance and bonding for residential leases, limiting what documents and information must be submitted for a lease proposal to be considered complete, and including a process for compelling action by elevating the issue within Indian Affairs before resorting to the Interior Board of Indian Appeals.

Buy Indian Act Regulations

The rule implementing the Buy Indian Act for all offices and bureaus under the Assistant Secretary – Indian Affairs was proposed in the Federal Register in August 2012. This rule

codifies procedures Indian Affairs will follow to set aside acquisitions of goods and services to Indian-owned economic enterprises.

Federally recognized Indian tribes are affected by the Buy Indian rule because the tribe and/or its members may qualify as an Indian-owned economic enterprise under the rule, Federally recognized Indian tribes were included in the tribal consultations on the draft and proposed versions of the leasing rule.

While consultation on this rule has occurred on and off for several years, most recently, Indian Affairs distributed draft versions of the rule to each tribal leader in 2010. Indian Affairs then hosted several in-person consultation sessions with tribes at locations throughout the country. Indian Affairs then reviewed each comment provided orally and in writing and made changes to the regulation, as appropriate. The resulting version was published in the Federal Register as a proposed rule in August 2012. The proposed rule's preamble also summarized and responded to each comment received. Again, Indian Affairs notified the tribes of a comment period and hosted in-person consultation sessions throughout the country. Indian Affairs again reviewed each comment and made changes to the regulation, as appropriate. The final rule is expected to publish in Spring 2013.

Tribes raised issues seeking various clarifications to the rule that are detailed in the preamble to the proposed rule.

The final rule clarifies appropriate areas, such as when a construction contract may be set aside for an Indian-owned economic enterprise and distinguishing a challenge to someone's representation as an Indian-owned economic enterprise from a general award protest.

F. Department of Transportation

National Standards for Traffic Control Devices; the Manual on Uniform Traffic Control Devices for Streets and Highways

This regulation revised certain information relating to target compliance dates for traffic control devices. The changes adopted were intended to reduce the impacts of compliance dates on State and local highway agencies and streamline and simplify information contained in the MUTCD without reducing safety.

The final rule revised Table I-2 of the MUTCD by eliminating the compliance dates for 46 items (8 that had already expired and 38 that had future compliance dates) and extending and/or revising the dates for 4 items. The target compliance dates for 8 items that are deemed to be of critical safety importance remain in effect. In addition, this final rule adds a new Option statement exempting existing historic street name signs within a locally identified historic district from the Standards and Guidance of Section 2D.43 regarding street sign color, letter size, and other design features, including retroreflectivity.

The FHWA received comments on this rulemaking from private citizens, local government highway agencies, State DOTs, industry representatives, national associations

representing practitioners, national associations representing safety advocates, elected officials, and traffic engineering consultants.

In response to concerns about the potential costs and impact of previously adopted MUTCD compliance dates on State and local governments in the current economic climate, on November 30, 2010, the FHWA published in the Federal Register a Request for Comments on traffic control device compliance dates (75 FR 74128). The FHWA asked for responses to a series of seven questions about compliance dates, their benefits and potential economic impacts, especially economic hardships to State and local governments that might result from specific target compliance dates for upgrading certain non-compliant existing devices.

By the end of the comment period, the FHWA received 592 letters to the docket. The comments were submitted by 360 private citizens, 168 local government highway agencies, 28 State DOTs, 16 industry representatives, 6 national associations representing practitioners, 5 national associations representing safety advocates, 5 elected officials, and 4 traffic engineering consultants.

After reviewing and considering the nearly 600 letters submitted by State and local government highway agencies, national associations, traffic industry representatives, traffic engineering consultants, and private citizens, on August 31, 2011, the FHWA published a Notice of Proposed Amendments, proposing revisions to the MUTCD at 76 FR 54156. The FHWA received, reviewed, and analyzed 158 letters submitted to the docket, which contain nearly 240 different comments on the proposed changes. The American Association of State Highway and Transportation Officials (AASHTO), the National Committee on Uniform Traffic Control Devices (NCUTCD), the American Public Works Association (APWA), the National Association of County Engineers (NACE), the American Traffic Safety Services Association (ATSSA), American Road and Transportation Builders Association (ARTBA), State departments of transportation (DOTs), city and county government agencies, other associations, transportation consultants, and individual private citizens submitted comments.

When new provisions are adopted in a new edition or revision of the MUTCD, any new or reconstructed traffic control devices installed after adoption are required to be in compliance with the new provisions. For existing devices in the field that do not comply with the new MUTCD provisions, 23 CFR 655.603(d)(1), authorizes the FHWA to establish target compliance dates for compliance of particular existing devices. Table I-2 in the Introduction of the 2009 edition of the MUTCD lists 58 specific provisions for which the FHWA has established target compliance dates for upgrading existing devices in the field via the Federal rulemaking process in Final Rules issued in 2000, 2003, 2007, and 2009.

In the absence of a specific target compliance date, existing devices in the field that do not meet the new MUTCD provisions are expected to be upgraded by highway agencies over time to meet the new provisions via a systematic upgrading process as required by 23 CFR 655.603(d)(1), but there are no specific dates for required completion of the upgrades. Systematic upgrading programs enable highway agencies to prioritize traffic control upgrades based on a variety of factors such as relative safety needs, costs, and available resources.

Agencies can decide, where appropriate, to defer upgrading certain non-compliant devices until the device wears out, is damaged or destroyed, or is replaced.

The FHWA received concerns about the potential impact of previously adopted MUTCD compliance dates on State and local governments in the current economic climate. This final rule revises Table I-2 of the MUTCD by eliminating the compliance dates for 46 items (8 that had already expired and 38 that had future compliance dates) and extends and/or revises the dates for 4 items. The changes in the MUTCD will reduce burdens on State and local government in the application of traffic control devices. They will provide additional clarification, guidance, and flexibility to such governments. The uniform application of traffic control devices will greatly improve roadway safety and traffic operations efficiency. The standards, guidance, options, and support are also used to create uniformity and to enhance safety and mobility. The changes in this rulemaking will not require the expenditure of additional funds, but rather will provide State and local governments with the flexibility to allocate scarce financial resources based on local conditions and the useful service life of its traffic control devices.

APPENDIX F: REFERENCES

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