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THE COMBINED EFFECT OF THE OBAMA EPA RULES

Total costs of proposed and finalized rules represent only about 0.1 percent of the economy and are far outweighed by cumulative benefits

BY ISAAC SHAPIRO

President Obama’s Environmental Protection Agency has been under wide-scale attack this year. A series of congressional hearings and industry statements have argued that particular EPA regulations, especially in combination with one another, will damage the economy and lower employment. Previous Economic Policy Institute analyses discuss the relationship between regulations and employment in detail (Shapiro and Irons 2011). This paper examines the combined effects of the major EPA regulations that the Obama administration has already finalized as well as the regulations that it has proposed but not finalized. The paper focuses on major rules for which cost and benefit data are available. In May 2011, EPI first released a paper tallying up the effect of Obama EPA rules, but several significant changes in final and proposed EPA rules have been made since then (see Appendix A for those changes), so it was necessary to issue this new paper that accounts for these changes.

Two broad conclusions emerge from this analysis. First, the dollar value of the benefits of the major rules finalized or proposed by the EPA so far during the Obama administration exceeds the rules’ costs by an exceptionally wide margin. Health benefits in terms of lives saved and illnesses avoided will be enormous. Expressed in 2010 dollars:

- Setting aside the Cross-State Air Pollution rule, the combined annual benefits from all final major rules exceed their costs by \$10 billion to \$95 billion a year. The benefit/cost ratio ranges from 2-to-1 to 20-to-1.

TABLE OF CONTENTS

Benefits versus costs	2
Cumulative costs of the regulations relative to the size of the economy	6
Conclusion	7
Appendix A: Differences from original estimate	8
Appendix B: A summary of EPA rules discussed in this paper	8

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- The net benefits from the Cross-State Air Pollution rule exceed \$100 billion a year (this rule is treated separately because benefits accruing from action under the Bush administration and the Obama administration cannot be disentangled).
 - The combined annual benefits from three major proposed rules examined here exceed their costs by \$62 billion to \$188 billion a year. The benefit/cost ratio ranges from 6-to-1 to 15-to-1.

Second, the costs of all the finalized and proposed rules total to a tiny sliver of the overall economy, suggesting that fears that these rules together will deter economic progress are unjustified. The calculations below describe the costs of the rules when “fully in effect.” A complete explanation of the calculations can be found in the text, but for now it is worth noting that it takes several years for most rules to take full effect. It is also worth noting that these cost calculations do not consider the offsetting direct economic benefits from the rules, such as increased worker productivity or consumer savings.

- When fully in effect in 2014, the combined costs of the major rules finalized by the Obama administration’s EPA would amount to significantly less than 0.1% of the economy.
- Assuming the proposed rules are also finalized, when fully in effect in 2016 the combined costs of the major EPA rules finalized and proposed so far under the Obama administration would amount to about 0.13% of the economy.

Benefits versus costs

This section of the paper examines the combined benefits and costs of the “major” EPA rules finalized to date during the Obama administration,¹ and similarly reviews significant EPA rules that have been proposed but not finalized. Among the final rules are regulations that cap the concentration of sulfur dioxide in the air we breathe, regulations that reduce pollutants from diesel-fueled internal combustions engines, regulations that limit greenhouse gas emissions and improve fuel efficiency from vehicles, and regulations that reduce the extent of cross-state air pollution. The proposed rules include regulations that seek to limit hazardous emissions from the electric power industry. Short descriptions of each of the rules discussed in this paper can be found in Appendix B.

Under an Executive Order, the EPA must provide an economic cost-benefit analysis for each major regulation. One note of caution: Cost-benefit analyses should not be considered precise. Such analyses rely on a series of difficult and controversial assumptions and valuations. Furthermore, it is impossible to quantify all of the benefits and costs of regulations. For example, the monetized benefits described later in this paper for the “Boiler MACT” rule are far from complete; as the EPA Regulatory Impact Analysis of the rule stated, “Data, resource, and methodological limitations prevented EPA from quantifying or monetizing the benefits from several important benefit categories, including benefits from reducing toxic emissions, ecosystem effects, and visibility impairment” (U.S. EPA 2011a, 7-37).

Nonetheless, the data, methodologies, analytic tools, and assumptions that EPA uses are all subject to rigorous scrutiny, including by the Office of Management and Budget, and the resulting cost-benefit analyses typically provide a reasonable sense of the implications of EPA rules. Moreover, the information analyzed here shows that benefits overwhelmingly exceed costs, strongly indicating that a more precise calculation would yield similar findings, especially since benefits are not fully accounted for and costs (as discussed later) may be overstated.

1. Major regulations are those that meet criteria such as a predicted annual effect on the economy of \$100 million or more.

TABLE 1

Annual costs and benefits of EPA rules finalized under the Obama administration

Rule	(In millions of 2010 dollars)			
	Costs (range)		Benefits (range)	
	Low	High	Low	High
<i>Revisions to the Spill Prevention, Control, and Countermeasure Rule*</i>	\$-104	\$-95	\$0	\$0
<i>NESHAP: Portland Cement Notice of Reconsideration*</i>	1,024	1,051	7,446	19,897
<i>Review of the National Ambient Air Quality Standards for Sulfur Dioxide*</i>	408	2,464	3,540	47,117
<i>NESHAP: Reciprocating Internal Combustion Engines (Diesel)*</i>	361	380	865	2,344
<i>NESHAP: Reciprocating Internal Combustion Engines—Existing Stationary Spark Ignition (Gas-fired)*</i>	247	255	464	1,211
<i>Lead: Amendment to the Opt-out and Recordkeeping Provisions in the Renovation, Repair, and Painting Program*</i>	326	354	883	3,293
<i>Light-Duty Vehicles Greenhouse Gas Emission Standards and CAFÉ Standards (Joint rule with the Department of Transportation)*</i>	2,075	5,737	4,761	22,216
<i>Boiler MACT area sources**</i>	499	499	194	530
<i>SPCC milk amendments**</i>	-147	-144		
<i>Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles**</i>	404	404	2,625	3,129
Total	\$5,093	\$10,905	\$20,777	\$99,737
<i>Cross-State Air Pollution Rule**</i>	\$2,500	\$2,500	\$114,508	\$291,474

* Data for these rules come from the annual OMB report to Congress on the costs and benefits of federal regulations.

** Data for these rules come from the individual Regulatory Impact Analyses prepared by EPA (and by EPA and DOT for the vehicle rules).

NOTE: NESHAP stands for National Emission Standards for Hazardous Air Pollutants.

SOURCE: EPI calculations based on OMB (2011), U.S. EPA (2011a, 2011b, 2011c), and U.S. EPA and U.S. DOT (2011).

Final rules. Table 1 lists the estimated annual benefits of each of the major EPA rules that have been finalized under the Obama administration for which cost-benefit data are available. Typically, the value of the benefits (calculated by “monetizing” various benefits from the rules, notably a range of health benefits) exceeds the estimated costs, usually by a sizable margin. Unless otherwise indicated, all dollar figures in this report are in 2010 dollars.² The estimates rely on the official cost-benefit data from the Office of Management and Budget (2011), the Environmental Protection Agency (2011a, 2011b, 2011c), and the Environmental Protection Agency and the Department of Transportation (2011).³

In combination, the monetized benefits of these rules also greatly exceed the estimated costs. Setting aside the Cross-State Air Pollution rule for a moment:⁴

- OMB (2011) presents its data in 2001 dollars. Different EPA sources present their data in different dollars. The author converted all of the data to 2010 dollars using the government’s GDP deflator.
- The latest OMB regulatory report to Congress (2011) covers rules finalized before October 1, 2010, so this report relies on OMB for such rules. For rules finalized after that date, or for proposed rules (the OMB report only covers final rules), this report relies on EPA information, or on EPA/DOT information.
- The estimating procedures used for different EPA rules vary somewhat. That is, the cost-benefit estimates that are added together here are not absolutely comparable. EPA updates its estimating process to incorporate changing economic assumptions (such as assumptions about electricity demands as new forecasts become available) as well as changes in the estimated cost and effectiveness of control technologies.

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- Ultimately, the total estimated benefit of these final rules is roughly \$21 billion to \$100 billion a year, well in excess of their combined annual cost of \$5.1 billion to \$10.9 billion. It will take several years to reach this level of costs and benefits, because firms typically are given several years to come into compliance with regulations and because pollution levels do not immediately adjust.
 - The ratio of combined benefits to costs ranges from 2-to-1 to 20-to-1.
 - The combined net benefits range from \$10 billion to \$95 billion a year.⁵

The Cross-State Air Pollution rule is discussed separately because EPA estimates of its benefits do not distinguish between benefits produced by the original rule issued in 2005 during the Bush administration from the benefits produced by the strengthening of the rule during the Obama administration. The combined compliance costs of the original and strengthened rule amount to \$2.5 billion a year (with actions by Obama's EPA accounting for a third of the costs), the combined benefits amount to between \$115 billion and \$291 billion a year, far in excess of the costs.

The rules affect many important aspects of our lives. They are dominated by rules aimed at cleaning the air we breathe. The importance of clean air to human health can be illustrated by listing some expected benefits of the rule designed to reduce cross-state air pollution.

The Cross-State Air Pollution rule, according to EPA, "requires 27 states in the eastern half of the United States to significantly improve air quality by reducing power plant emissions that cross state lines." By reducing exposure to fine particles and ozone the rule is expected to produce the following estimated benefits in 2014 (U.S. EPA 2011b):

- 13,000–34,000 lives saved (which EPA describes as avoiding "premature mortality")
- 15,000 fewer heart attacks
- 19,000 fewer hospital and emergency room visits
- 820,000 fewer cases of respiratory symptoms
- 1.7 million more work days (because workers are not too sick to go to work)

Three proposed rules. EPA has proposed three other major rules—the air toxics, Boiler MACT, and cooling water rules—that may be finalized during President Obama's first term. The estimates rely on the official cost-benefit data from the Environmental Protection Agency (2011a, 2011d, 2011e). As monetized, the benefits of two of three of these rules far exceed their costs. As measured to date, this is not true of the cooling water rule, but the benefit data for this rule are especially incomplete and thus its benefits are significantly understated.⁶

5. Following OMB convention, this range is calculated by subtracting the high end of the cost range from the low end of the benefit range and also subtracting the low end of the cost range from the high end of the benefit range. The same approach was followed in calculating the ratios.

6. The initial Regulatory Impact Analysis for this proposal monetized benefits related to recreational and commercial fishing but did not monetize most other benefits, such as the benefits of diminishing the risk to endangered species. EPA is conducting a survey to help it more accurately quantify the benefits from the proposal.

TABLE 2

Annual costs and benefits of certain EPA rules proposed during the Obama administration but not yet finalized

Rule	(in millions of 2010 dollars)			
	Costs (range)		Benefits (range)	
	Low	High	Low	High
<i>Power plant, mercury, and air toxics (the "Toxics" rule)</i>	\$11,347	\$11,347	\$55,172	\$145,737
<i>Boiler MACT*</i>	1,814	1,814	20,695	55,870
<i>Cooling water intake structure (the "Cooling Water" rule)**</i>	388	463	16	18
Total	\$13,548	\$13,624	\$75,883	\$201,625

* Boiler MACT reflects major source rule and commercial and solid wastes rule.

** The benefit data for this rule are especially incomplete.

NOTE: The proposed coal ash rule is discussed separately in this paper.

SOURCE: EPI calculations based on U.S. EPA (2011a, 2011d, 2011e, 2011f).

The combined potential benefits of these rules, and the degree to which the monetized value of these benefits exceed their costs, are dramatic:

- The total estimated benefit of these proposed rules is \$76 billion to \$202 billion a year, far greater than their combined cost of \$14 billion a year. (See **Table 2.**)
- The ratio of combined benefits to costs ranges from about 6-to-1 to 15-to-1.
- The combined net benefits range from \$62 billion to \$188 billion a year.

The improvements in public health from these proposals are expected to be substantial. For example, the air toxics rule, which regulates the amount of hazardous pollutants emitted, would have the following estimated health benefits in 2016:

- 6,800–17,000 lives saved
- 11,000 fewer heart attacks
- 12,200 fewer hospital and emergency room visits
- 225,000 fewer cases of respiratory symptoms
- 850,000 more work days

Of further interest, in June, the Economic Policy Institute released an analysis of the employment impacts of the toxics rule. This analysis found that the rule “would have a modest positive net impact on overall employment, likely leading to the creation of 28,000 to 158,000 jobs between now and 2015” (Bivens 2011).

Finally, note that in combination, the Cross-State Air Pollution, air toxics, and Boiler MACT rules alone would save an estimated 22,300 to 57,500 lives a years.

Coal ash and other potential rules. One major rule that has been proposed by the Obama administration, the coal ash rule, is not included in the above tabulation. This rule is excluded because the proposal contains a particularly diverse range of options examined under three distinctly different industry scenarios, making it impossible to neatly assess the rule's potential effects. While there is relatively little dispute over the compliance costs of the options, which are expected to amount to \$238 million to \$1.5 billion annually, there is substantial dispute over the benefits. Under what EPA considers the most likely scenario, benefits would significantly exceed costs (EPA 2010). (Under other scenarios, such as the "stigma" scenario considered less likely by the EPA, costs would significantly exceed benefits. The Environmental Integrity Project (2010) as well as the Institute for Policy Integrity (2010) have separately advanced strong arguments against the application of the worst-case "stigma" scenario, in which the regulation of coal ash is assumed to undercut the use of coal ash for other purposes.)

It is worth noting that later this year EPA is expected to propose major rules that set important standards for greenhouse gas emissions from power plants and petroleum refineries.⁷ The type of analysis conducted in this paper needs to be repeated as additional proposals are made, or as proposed rules are finalized.

Cumulative costs of the regulations relative to the size of the economy

One frequent criticism made by opponents of EPA rules advanced under the Obama administration is that their cumulative impact will be immensely damaging to the economy and employment.

A straightforward way to place these claims in some context is to compare the costs of the EPA rules with the size of the economy. Are these rules so costly that they plausibly will have a dominant or significant effect on economic progress?

The answer to this question is an unequivocal "no," as will be shown. This does not mean that the effects of particular regulations on particular industries and groups of workers should simply be ignored; potential effects and ways to respond to them deserve careful consideration. (The effects on particular industries themselves, however, are often overstated, a conclusion supported by a recent report by the Congressional Research Service on EPA's regulation of coal-fired power (McCarthy and Copeland 2011).)

But the size of the potential compliance costs created by EPA rulemaking under the Obama administration to date is not a significant factor in U.S. economic performance overall.

The calculations below examine the annual costs of the rules once they are "fully in effect," relative to the size of the economy. It typically takes three to five years for final rules to be fully implemented. The often considerable time provided to firms to come into compliance eases any necessary transitions and mitigates the immediate and eventual economic impacts.

The calculations that follow assume all rules that have been finalized will be fully in effect in 2014, because most of EPA's cost estimates for these rules were estimated for 2014 or earlier. Following a similar approach, these calculations assume that all rules that have been finalized or proposed will be fully in effect in 2016. In both cases, because not all the rules will really be fully in effect in those years, costs as a share of the economy are overstated. The calculations may also be overstated due to the historic tendency of government cost estimates to themselves overstate the effects of environmental regulations.⁸ Furthermore, it bears keeping in mind that the figures below do not consider the offsetting

7. An initial step connected to these forthcoming rules was the so-called "tailoring rule," which took effect on January 2, 2011. The rule essentially exempts small-scale polluters from any greenhouse gas permitting requirements established between now and 2016. The rule considerably diminishes any potential compliance costs and is really a regulatory relief bill. Because of the difficulty in estimating the appropriate baseline against which to assess the amount of regulatory relief, OMB chose not to include an estimate of such savings in its annual cost-benefit report to Congress.

8. The tendency for government cost estimates of individual rules to be overstated is discussed in Shapiro and Irons (2011, 21-23).

benefits, and these consist not only of enormous health benefits but also of significant direct economic benefits. The direct economic benefits include increased productivity from effects such as increased work days, as well as savings to consumers due to the use of less gasoline.

This report finds:

- Once the EPA rules finalized so far by the Obama administration are fully in effect, their combined costs would amount to significantly less than 0.1% of the economy. (Their annual costs, including the additional costs of the Cross-State Air rule due to the actions of the Obama administration, would be just 0.04% to 0.07% of the estimated size of the economy in 2014.)
- Assuming the EPA rules that have been proposed are finalized, their effect combined together with the EPA rules that have already been finalized would be as follows: the combined costs would amount to just above 0.1% of the economy.⁹ (Their annual costs would be just 0.11% to 0.15% of the estimated size of the economy in 2016.)

Conclusion

The regulations finalized and proposed by the Obama administration are likely to be of tremendous value to the nation, producing a wide range of significant health benefits. Further, the finding that the estimated costs of these regulations amount to only about one one-thousandth the size of the economy, as well as the extended period over which they will take effect, indicate that they would not be a major impediment to economic or job growth in the near-term or in the future.

9. The relatively modest costs of the proposed coal ash rule are included in this calculation.

APPENDIX A: Differences from original estimate

Four major changes to EPA rules have occurred since EPI first released a tally of these rules on May 31, 2011.

First, on June 24, EPA formally announced that while initially issued as a final rule in February 2011, the heart of the Boiler MACT rule should not be considered final. Instead, EPA extended the comment period, and plans to offer refined proposed standards for major sources and commercial and solid wastes by the end of October 2011, and to issue a final rule by the end of April 2012.

Second, on July 6, the Cross-State Air Pollution rule was finalized. This rule had been proposed in 2010.

Third, on August 9 the fuel efficiency standards for medium- and heavy-duty trucks were finalized. This rule had also been proposed in 2010.

Fourth, on September 2, the Obama administration withdrew its proposed Ozone standard.

APPENDIX B: A summary of EPA rules discussed in this paper

By Nicholas Finio

This appendix provides a brief summary of each of the eleven finalized and five proposed EPA rules discussed in this paper. For a majority of these rules, monetized health benefits come from reduced exposure to particulate matter; these monetized benefits are mostly accounted for as lives saved (which EPA describes as avoiding “premature mortality”). More information on the rules can be found through the EPA’s Technology Transfer Network (<http://www.epa.gov/ttn/>) web portal, the U.S. Government Printing Office’s Federal Digital System (<http://www.gpo.gov/fdsys/>) or www.regulations.gov.

Final Rules

Revisions to the Spill Prevention, Control, and Countermeasure Rule

This EPA regulation aims to prevent spills of oil and other products from spreading into U.S. waterways and affecting human life and the environment. These revisions streamlined existing regulations to make them more effective. Specifically, the regulations now exempt hot-mix asphalt, pesticide application equipment, home heating oil tanks, underground back-up generator tanks at nuclear facilities, and several other items. The revisions are estimated to have negative costs, since they decreased the costs of complying with the underlying rule.

NESHAP: Portland Cement Notice of Reconsideration

This regulation amends the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Portland cement plants (this type of cement is not associated with a city; rather, it is a certain type of hydrochloric cement). These amendments add or revise emission limits for mercury, total hydrocarbons, particulate matter, and hydrochloric acid

(separate limits apply during startup, shutdown, and operating modes). The benefits and costs of this regulation are estimated for year 2013.

Review of the National Ambient Air Quality Standards for Sulfur Dioxide

The EPA sets ambient air quality standards with the goal of protecting public health. The final ambient standard for sulfur dioxide concentrations was set at 75 parts per billion. Benefits and costs of attaining this standard are measured for the year 2020. The majority of sulfur dioxide emissions (66%) come from power plant fuel combustion.

NESHAP: Reciprocating Internal Combustion Engines (Diesel)

This regulation reduces Hazardous Air Pollutant (HAP) emissions from reciprocating internal combustion engines that use diesel fuel, not natural gas. The regulation affects industries such as power generation, pipeline transportation, and oil and gas extraction. The estimates of benefits and costs of this regulation are a snapshot of the year 2013. The regulation reduces 1,014 tons of HAPs each year.

NESHAP: Reciprocating Internal Combustion Engines—Existing Stationary Spark Ignition (Gas-Fired)

This regulation reduces Hazardous Air Pollutant emissions from reciprocating internal combustion engines that use natural gas. This regulation reduces 109,000 tons of carbon monoxide emissions and 6,000 tons of hazardous air pollutants each year. The benefits and costs of this act are estimated for the year of full implementation, 2013.

Lead: Amendment to the Opt-out and Recordkeeping Provisions in the Renovation, Repair, and Painting Program

With this regulation, the EPA has begun to regulate the renovation, repair, and painting of public and commercial buildings under the Toxic Substances Control Act. This regulation aims to mitigate the effects of lead paint-based hazards on the health of workers and people living in these buildings. This regulation includes measures such as restricting building access during renovation, closing windows, proper disposal of waste, etc.

Light-Duty Vehicles Greenhouse Gas Emission Standards and CAFE Standards (Joint Rule with the Department of Transportation)

The new standards for emissions and fuel economy jointly established by EPA and the Department of Transportation apply to vehicles in model years 2012–2016. The goals of the new standards are to reduce greenhouse gas emissions and increase fuel economy. For the first time, a greenhouse-gas emission target level is established based on vehicle “footprint,” or size. Over the lives of all vehicles produced from 2012-2016, the regulations are estimated to save 1.8 billion barrels of oil, reduce greenhouse gas emissions by 960 million metric tons, and to provide a net benefit to consumers of \$130-\$180 annually (the lower amounts of fuel they will use over the lifetimes of their vehicles will save them \$4,000, which is greater than the increased costs of the vehicles themselves).

NESHAP: Industrial, Commercial, and Institutional Boilers and Process Heaters (also known as the “Boiler MACT” rule)

The EPA’s regulatory impact analysis (RIA) covered two provisions that limit emissions of hazardous air pollutants from industrial, commercial, and institutional boilers and process heaters: a “major source rule” for larger emitters, and an “area source rule” for facilities that emit smaller amounts of HAP. The rules will also limit emissions of mercury, carbon monoxide, hydrochloric acid, and other pollutants. Benefits and costs for these rules are calculated for the year 2014. The area source rule is considered final; the major source rule is now considered proposed.

Final Amendment to the Oil Pollution Prevention Regulations to Exempt Milk and Milk Product Containers, Associated Piping and Appurtenances

This amendment to the EPA's Spill Prevention, Control, and Countermeasure (SPCC) rule streamlines the regulatory process for owners and operators of milk and milk product containers. The rule exempts these owners and operators from complying with the SPCC rule. The existing sanitation requirements and ordinances for milk already provided a similar framework and result when compared to the SPCC rule's intended outcome. This amendment thus allows the SPCC to continue to protect the environment while reducing compliance costs. Annualized savings are estimated for the year 2009 and utilize data from U.S. Department of Agriculture surveys of the milk industry.

Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles

As with the light-duty vehicle greenhouse gas standards, the EPA and Department of Transportation established a framework for heavy duty vehicles such as heavy trucks, vans, tractors, and pickups. The goals of these regulations are to provide a more fuel efficient and environmentally cleaner national heavy-duty vehicle fleet. Additional health benefits would result from reduced pollution. The benefits of these regulations are calculated based on lifetime use of the new vehicle fleet.

Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone

The "Cross-State Air Pollution rule" aims to reduce interstate transport of sulfur dioxide and nitrogen oxide(s) emissions from the electric power industry in 27 eastern states. The health benefits of this proposed regulation, estimated for the year 2014, come from diminished particulate matter and ozone concentrations in downwind areas. Sulfur dioxide contributes to particle formation and nitrogen oxide contributes to the formation of particulate matter and ground level ozone.

Proposed Rules

National Emission Standards for Hazardous Air Pollutants From Coal and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units

The proposed "Air Toxics rule" aims to reduce emissions of Hazardous Air Pollutants from the electric power industry, including mercury, other metals such as cadmium and arsenic, acid gases, and organics. The rule's benefits and costs are estimated by EPA for the year 2016.

NESHAP: Industrial, Commercial, and Institutional Boilers and Process Heaters (also known as the "Boiler MACT" rule)

The EPA's regulatory impact analysis (RIA) covered two provisions that limit emissions of hazardous air pollutants from industrial, commercial, and institutional boilers and process heaters: a "major source rule" for larger emitters, and an "area source rule" for facilities that emit smaller amounts of HAP. The rules will also limit emissions of mercury, carbon monoxide, hydrochloric acid, and other pollutants. Benefits and costs for these rules are calculated for the year 2014. The major source rule is considered proposed while the area source rule is considered final.

Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units

The EPA completed a five-year review requirement for this extant regulation as per Clean Air Act requirements. The EPA added amendments to address emissions from the solid waste incineration units and also clarified certain rules. This regulation reduces carbon monoxide, hydrochloric acid, lead, cadmium, and mercury emissions. Benefits and costs are estimated for the year 2016.

National Pollutant Discharge Elimination System—Cooling Water Intake Structures at Existing Facilities and Phase I Facilities

This proposed “Cooling Water” regulation would establish requirements under the Clean Water Act for manufacturing and industrial facilities that withdraw from U.S. waterways more than 2 million gallons of water per day, at least 25% of which is used for cooling purposes. High levels of water usage can result in significant mortality rates for wildlife in the adjoining waters, through two distinct processes: impingement and entrainment. Impingement occurs when fish and other organisms are trapped against screens where water is drawn into facilities. Entrainment occurs when smaller organisms pass through these screens and are killed by high pressure or temperature in the facility itself. EPA estimates that 2.1 billion fish, crab, and shrimp are killed annually by these processes. The new regulations would establish national requirements for the construction of these facilities, including the use of technology to limit impingement and entrainment.

Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals From Electric Utilities

This rule, also titled the Coal Combustion Residuals (CCR) rule and referred to in this paper as the coal ash rule, is intended to reduce risks presented by disposal of the byproducts of coal combustion (from power generation). Vast amounts of CCR are disposed of in landfills or surface impoundments. CCR contain antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver, and thallium. To limit groundwater contamination, and to ensure structural stability, the proposed EPA regulations establish standards for coal ash disposal.

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