RECORD NO. 12-1100

ORAL ARGUMENT NOT YET SCHEDULED

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

WHITE STALLION ENERGY CENTER, LLC, *et al*.,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

Petition for Review of Final Action of the
United States Environmental Protection Agency

BRIEF OF THE CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA AS *AMICUS CURIAE* IN SUPPORT OF INDUSTRY PETITIONERS

Michael B. Wigmore
Sandra P. Franco
Bingham McCutchen LLP
2020 K Street, N.W.
Washington, D.C. 20006
(202) 373-6000
Counsel for the Chamber of Commerce of the United States of America

Of Counsel:
Robin S. Conrad (D.C. Bar #342774)
Rachel Brand (D.C. Bar #469106)
Sheldon Gilbert (D.C. Bar #989442)
NATIONAL CHAMBER
LITIGATION CENTER, INC.
1615 H Street, N.W.
Washington, DC 20062
(202) 463-5337

Submitted: October 30, 2012

ORAL ARGUMENT NOT YET SCHEDULED

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

WHITE STALLION ENERGY CENTER, LLC, *et al.*,	)	
Petitioners,	)	**No. 12-1100**
v.	)	
ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

RULE 26.1 CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1 and D.C. Circuit Rule 26.1, undersigned counsel provides the following disclosures:

The Chamber of Commerce of the United States of America ("Chamber") is the world's largest business federation. The Chamber represents the interests of 300,000 direct members and indirectly represents the interests of more than three million companies and professional organizations of every size, in every industry sector, and from every region of the country. The Chamber routinely represents the interests of its members in matters before Congress, the Executive Branch, and the courts, including this Court.

The Chamber is a "trade association" as defined by Circuit Rule 26.1. It does not have a parent company nor has issued shares or debt securities to the public. No publicly held company has a 10% or greater ownership interest in the Chamber.

Dated: October 30, 2012

Respectfully submitted,

/s/ Michael B. Wigmore

Michael B. Wigmore
Sandra P. Franco
Bingham McCutchen LLP
2020 K Street, N.W.
Washington, D.C. 20006
(202) 373-6000
(202) 373-6001 (facsimile)

Counsel for the Chamber of Commerce of the United States of America

Of Counsel:

Robin S. Conrad (D.C. Bar #342774)
Rachel Brand (D.C. Bar #469106)
Sheldon Gilbert (D.C. Bar #989442)
NATIONAL CHAMBER
LITIGATION CENTER, INC.
1615 H Street, N.W.
Washington, DC 20062
(202) 463-5337

ORAL ARGUMENT NOT YET SCHEDULED

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

WHITE STALLION ENERGY CENTER, LLC, *et al.*,	)	
Petitioners,	)	**No. 12-1100**
v.	)	
ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

CERTIFICATE AS TO PARTIES, RULINGS AND RELATED CASES PURSUANT TO CIRCUIT RULE 28(a)(1)

Pursuant to Circuit Rule 28(a)(1), the Chamber of Commerce of the United States of America, participating as *amicus curiae*, submits this certificate as to parties, rulings, and related cases.

1. Parties and *Amici*. All parties, intervenors, and *amici* appearing in this court are listed in the Joint Brief of State, Industry, and Labor Petitioners.

These consolidated actions are petitions for review of an informal rulemaking by the United States Environmental Protection Agency. There was no action in the district court.

2. Rulings Under Review. The final agency action under review is of the United States Environmental Protection Agency, entitled 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, 77 Fed. Reg. 9,304 (Feb. 16, 2012). The consolidated petitions for review under Case No. 12-1100 relate to the National Emissions Standards for Hazardous Air Pollutants (referred to as the "Utility MACT").

3. Related Cases. Two issues related to the Utility MACT were severed from petitions consolidated under *White Stallion Energy Center, LLC v. EPA*, No. 12-1100. The severed case, *White Stallion Energy Center, LLC v. EPA*, No. 12-1272, addresses the National Emissions Standards for Hazardous Air Pollutants promulgated for "new" fossil-fuel electric generating units (i.e., those for which construction commences after the date that EPA published the proposed rule in the Federal Register (May 3, 2011)).

Issues related to the New Source Performance Standards for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units, which were promulgated under the same Federal Register notice as the standards under review in this case, were

de-consolidated from Case No. 12-1100, and consolidated under Case No. 12-1166.

Dated: October 30, 2012

Respectfully submitted,

/s/ Michael B. Wigmore

Michael B. Wigmore
Sandra P. Franco
Bingham McCutchen LLP
2020 K Street, N.W.
Washington, D.C. 20006
(202) 373-6000
(202) 373-6001 (facsimile)

Counsel for the Chamber of Commerce of the United States of America

Of Counsel:

Robin S. Conrad (D.C. Bar #342774)
Rachel Brand (D.C. Bar #469106)
Sheldon Gilbert (D.C. Bar #989442)
NATIONAL CHAMBER
LITIGATION CENTER, INC.
1615 H Street, N.W.
Washington, DC 20062
(202) 463-5337

TABLE OF CONTENTS

TABLE OF AUTHORITIES

FEDERAL CASES

FEDERAL STATUTES AND LEGISLATIVE MATERIALS

ADMINISTRATIVE MATERIALS

MISCELLANEOUS

AUTHORITIES CHIEFLY RELIED UPON ARE INDICATED BY AN ASTERISK (*).

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

Pursuant to Circuit Rule 28(a)(3), the following is a glossary of acronyms and abbreviations used in this brief:

CAA	Clean Air Act
CRS	Congressional Research Service
EGU	Electric Generating Unit
EPA	U.S. Environmental Protection Agency
HAP	Hazardous Air Pollutant
HCl	Hydrogen Chloride
Hg	Mercury
MACT	Maximum Achievable Control Technology
MeHg	Methylmercury
NAAQS	National Ambient Air Quality Standard
PM	Particulate Matter
PM2.5	Fine Particulate Matter
PM10	Coarse Particulate Matter
RfC	Reference Concentration
RfD	Reference Dose

RIA	Regulatory Impact Analysis
μg/m3	micrograms per cubic meter
Utility MACT	National Emission Standards for Hazardous Air Pollutants From Coal and Oil-Fired Electric Utility Steam Generating Units

STATEMENT OF IDENTITY, INTEREST IN CASE, AND AUTHORITY TO FILE

The Chamber of Commerce of the United States of America ("Chamber") is a nonprofit corporation and the world's largest business federation. The Chamber represents 300,000 direct members and indirectly represents an underlying membership of more than three million companies and professional organizations of every size, in every industry sector, and from every region of the country. The Chamber represents the interests of its members in matters before Congress, the Executive Branch, and the courts. To that end, the Chamber regularly files *amicus curiae* briefs in cases, such as this one, raising issues of vital concern to the nation's business community.

The Chamber has participated in numerous rulemakings, including the Utility MACT at issue in this case, where EPA has relied on so-called "co-benefits," a controversial and legally dubious accounting method that counts as "benefits" the ancillary emissions reductions that are not the target of the rule itself. The Utility MACT will have a considerable impact on the Chamber's members. EPA's own analysis estimates that the rule will cost in excess of $9.6 billion annually—one of the most expensive regulations ever for power plants. The effects of the rule will be felt by power consumers throughout the economy. Thus, the Chamber has a substantial interest in ensuring that EPA is undertaking rational rulemaking consistent with Congressional intent and its statutory authority.

The Chamber submits this *amicus* brief to challenge EPA's claims that its stringent and costly regulations are "appropriate and necessary." EPA justified the Utility MACT based largely on questionable "co-benefits," when the record reflects there is little or no public health benefit from the reduction in emissions of hazardous air pollutants ("HAPs"). EPA also reversed course and now claims it could not consider the significant costs imposed by the regulations. In doing so, EPA has drastically re-interpreted Section 112(n)(1)(A) of the Clean Air Act ("CAA" or "Act"), 42 U.S.C. § 7412(n)(1)(A), to require regulation of HAPs from certain electric generating units ("EGUs"). This rule will cause power plants to be shut down, significantly modified, or replaced, even though the purported "benefits" of the rule derive almost exclusively from supposed coincidental reductions in fine particulate matter ("PM2.5") that are in no way related to reductions in mercury or the other HAPs targeted by the regulation. PM2.5 has previously been regulated by EPA to reduce its presence in the atmosphere to a level sufficient to protect human health with an adequate margin of safety. It is logically inconsistent for EPA to now claim further reductions coincident with compliance with other requirements of the Act would benefit human health.

The Chamber is filing this amicus brief on consent. It has reached out to representatives of the numerous parties involved in this case and submitted a notice of intent to file to which no one objected. Certain parties, including Respondent,

expressed that they do not object to the filing so long as it is the only amicus brief submitted in support of Petitioners. This brief is being filed in accordance with this Court's briefing schedule, and, to the Chamber's knowledge, there are no other parties seeking to participate as *amicus curiae* on behalf of Industry Petitioners.[1]

SUMMARY OF ARGUMENT

In recent years, EPA has attempted to support increasingly stringent emission standards under the CAA by estimating health benefits resulting from the standards and comparing those benefits against the significant costs imposed on industry. The benefits on which EPA relies have increasingly focused not on reduction of risks the standards were intended to address under EPA's statutory authority, but instead on purported health benefits from reductions in emissions of pollutants not directly the subject of the regulation at issue (and oftentimes the subject of other EPA statutory authorities). As is the case here, EPA often justifies its regulations on such alleged "co-benefits," despite the fact that additional direct regulation of those pollutants under the Act may not be necessary to protect public health with an adequate margin of safety. In other words, EPA seeks to achieve

[1] Counsel for the Chamber certifies that no counsel for a party authored this brief in whole or in part and that no person, other than the Chamber, their members, or their counsel, made a monetary contribution to the preparation or submission of this brief.

additional emissions reductions indirectly that it could not lawfully compel through direct regulation.

That is exactly what EPA has done in the Utility MACT. EPA trumpets its belief that the rule will achieve billions of dollars in public health benefits. Yet, on closer examination, only a fraction of 1% of those purported benefits are attributable to reductions in HAP emissions—the type of pollution targeted by Section 112. Virtually all of the purported benefits come from collateral reductions in PM2.5, which is a criteria pollutant specifically regulated by EPA under other parts of the Act.[2]

This approach exceeds EPA's authority under the CAA. EPA established inordinately stringent limits on HAP emissions from EGUs that it estimates will cost industry over $9 billion per year, but which EPA also concedes will yield only $4 to $6 million in benefits associated with HAP reductions. The wildly disproportionate cost of the rule compared to the benefits from HAP reductions makes EPA's conclusion that such regulation is "appropriate and necessary" arbitrary and capricious.

---

[2] "Particulate matter (PM)" refers to a mixture of extremely small particles and liquid droplets. Fine particulate matter or PM2.5 are such particles 2.5 micrometers in diameter and smaller. EPA also regulates PM10, which are particulates larger than 2.5 micrometers and smaller than 10 micrometers in diameter.

Moreover, the Agency's own analyses show that essentially all of the purported benefits of the Utility MACT would be achieved in areas that already meet the National Ambient Air Quality Standards ("NAAQS") for PM2.5, which by statute must be set at a level EPA has determined to be protective of public health with an adequate margin of safety. Thus, the record in this case makes clear EPA designed the rule to achieve PM2.5 emissions reductions that it could not lawfully compel using provisions of the Act authorizing direct regulation of PM2.5. This is plainly unlawful.

The practice of counting "co-benefits" is particularly egregious when, as has become common in recent rulemakings, the supposed co-benefits associated with PM2.5 reductions comprise the overwhelming majority of all benefits from the subject regulation, as in the Utility MACT. The Utility MACT is not an aberration in this regard. According to a recent report by the Congressional Research Service ("CRS"), "co-benefits" associated with reductions in PM2.5 emissions accounted for more than half the benefits used to justify 21 out of 28 of the EPA's economically significant regulations promulgated from 2004-2011.[3]

---

[3] Mem. from James E. McCarthy, CRS, to House Committee on Science, Space, and Technology Subcommittee on Energy and Environment ("House Subcommittee"), at 3 (Oct. 5, 2011), App. to Letter from House Subcommittees to Cass R. Sunstein, Administrator, Office of Information and Regulatory Affairs, Office of Management and Budget (Nov. 15, 2011) (hereinafter referred to as "CRS 2011 Report"). This letter is included as an exhibit in an addendum to this brief.

The Chamber does not dispute that reductions of air emissions are an important and valuable goal, but such reductions must be rational and have a purpose. That is not the case here.

ARGUMENT

I. EPA's Interpretation of the Phrase "Appropriate and Necessary" Under Section 112(n)(1)(A) is Unlawful.

Section 112(n)(1)(A) of the CAA requires EPA to conduct a study to determine whether HAP emissions from EGUs "after imposition of the requirements of" this Act could be "reasonably anticipated" to present "hazards to public health." 42 U.S.C. § 7412(n)(1)(A). The study must also consider "alternative control strategies for emissions which may warrant regulation" under Section 112. *Id.* "[C]onsidering the results of the study," EPA is required to regulate under Section 112 "if the Administrator finds such regulation is *appropriate and necessary*." *Id.* (emphasis added). The phrase "appropriate and necessary" is not defined in the Act.

As Petitioners explain, EPA's interpretation of its authority under Section 112(n)(1)(A) has fluctuated since 2000, and EPA outlined a very different interpretation in 2005 in reaching its conclusion that regulation of EGUs was not appropriate and not necessary. *See* Joint Br. of State, Industry, and Labor Pet'rs at 29-34 [Doc. #1401252] (hereinafter referred to as "Pet'rs Br."); 70 Fed. Reg. 15,994 (Mar. 29, 2005). EPA's ever-changing interpretation must be viewed by

this Court with reservation. *INS v. Cardoza-Fonseca*, 480 U.S. 421, 446 n.30 (1987) ("An agency interpretation of a relevant provision which conflicts with the agency's earlier interpretation is 'entitled to considerably less deference' than a consistently held agency view.") (quoting *Watt v. Alaska*, 451 U.S. 259, 273 (1981)). Indeed, this Court can only conclude that EPA's new reading of Section 112(n)(1)(A) is neither lawful nor reasonable. *See* Pet'rs Br. at 29-48.

EPA now contends that once it identifies "*a* hazard to public health and the environment from HAP emissions from EGUs," it is "appropriate" to regulate EGUs under Section 112. 77 Fed. Reg. 9304, 9327 (Feb. 16, 2012) (emphasis added). EPA's new interpretation also allows it to determine that regulation under Section 112 is still "necessary" even though such regulation will not address the identified hazard to public health, and notwithstanding other statutory authority that may be more effective. 76 Fed. Reg. 24,976, 24,991 (May 3, 2011). The existence of more-effective, available alternatives (even without consideration of costs) by definition means that regulation under Section 112 is not "appropriate and necessary."

In essence, EPA disregards the balancing test mandated by Section 112(n), and is now treating EGUs like any other source category regulated under Section 112 solely because the category emits HAPs. But Congress established an entirely

different scheme to determine whether regulation of EGUs under Section 112 is warranted, and clearly did so for a reason. *See* Pet'rs Br. at 40-41.

EPA previously acknowledged that Congress "imposed special threshold conditions on any EPA regulation of power plants under section 112 that it did not apply to any other source category." Final Br. of Respondent EPA, *New Jersey v. EPA*, No. 05-1097, at 20 (D.C. Cir. June 23, 2007). It acknowledged that Congress understood that EGUs were subject to numerous requirements and "that such sources should not be subject to duplicative or otherwise inefficient regulation." 70 Fed. Reg. at 15,999 (citation omitted). Even in the Utility MACT, EPA recognized these facts. 77 Fed. Reg. at 9322. While Congress eliminated EPA's discretion to regulate other categories of "major sources" under Section 112, it expressly directed EPA to determine whether regulation of EGUs under that Section was "appropriate and necessary."[4] *See Int'l Swaps & Derivatives Ass'n v. CFTC*, --- F.Supp.2d ----, 2012 WL 4466311, at *18 (D.D.C. Sept. 28, 2012) (recognizing the use of "as appropriate" to modify "shall" regulate indicates that agency had discretion not to regulate).

Section 112(n)(1)(A) is unlike other provisions in the Act where EPA is obligated to regulate once threshold health or environmental findings are made.

[4] As such, EPA improperly seeks to rely on provisions regarding listing decisions unrelated to regulation of EGUs to support its new interpretation. Pet'rs Br. at 34-36.

See, e.g., 42 U.S.C. § 7521(a)(1). But as described below, even if EPA finds EGU HAP emissions result in some identifiable hazard, it still has discretion to conclude regulation is not "appropriate and necessary." EPA has unlawfully abdicated this discretion by equating the "appropriate and necessary" standard with the threshold health finding.

II. EPA Unreasonably Interprets Section 112(n)(1)(A) as Precluding Consideration of Costs, Yet Relies on Purported Co-Benefits to Justify Reductions of Non-HAP Pollutants.

As Petitioners explain, EPA estimated the cost of the final rule to be $9.6 billion *annually*, while the purported benefit from HAP emission reductions is a mere $4-$6 million (using a 3% discount rate) plus some unquantifiable set of benefits.[5] Pet'rs Br. at 42-43 (citing 77 Fed. Reg. at 9306). On its face, this makes no sense, and supports EPA's prior finding that regulation of EGUs under Section 112 is not appropriate or necessary.

Yet, EPA pressed forward, in large part based on its new interpretation that costs may not be considered in making its appropriate and necessary determination. EPA then found the final rule will produce some $37-$90 billion in benefits, virtually all of which result from collateral PM2.5 reductions. *See* EPA, Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards, at

[5] These benefits are reduced to $500,000 to $1 million when using a 7% discount rate. 77 Fed. Reg. at 9306.

ES-1 (2011) (EPA-HQ-OAR-2009-0234-20131), *available at* http://www.epa.gov/ttn/ecas/regdata/RIAs/matsriafinal.pdf (hereinafter referred to as "RIA"). And virtually all of the purported health benefits occur at PM2.5 concentrations below the NAAQS—the level EPA determined to be requisite to protect public health with an adequate margin of safety. This makes abundantly clear the true reason EPA decided to regulate EGUs under Section 112—not because the rule would achieve substantial beneficial reductions in HAP emissions, but in order to indirectly require further reductions in PM2.5 emissions from power plants that EPA would be unable to require directly. Such proxy regulation of PM2.5 emissions under Section 112 is unlawful and must be set aside.

Moreover, unlike other source categories, Section 112(n)(1)(A) directs EPA to determine whether it is "appropriate and necessary" to regulate EGUs under Section 112 based, in part, on consideration of "imposition of [other] requirements of this Act"—i.e., collateral reductions in HAPs achieved by regulation of EGUs under other parts of the Act. EPA turns this statutory mandate on its head by instead regulating EGUs under Section 112 to achieve collateral reductions in non-HAPs it otherwise lacks authority to compel.

A. EPA cannot support its changed interpretation of Section 112(n)(1)(A) to exclude consideration of costs.

As Petitioners' explain, EPA recognized in 2005 that Congress "entrusted EPA to exercise judgment" to determine whether regulation under Section 112 is

"appropriate." 70 Fed. Reg. at 16,001. EPA found that if the required study identified no public health hazards, then there is no basis to proceed with regulation under Section 112. *Id.* at 16,000. EPA also determined that, even if a public health hazard is identified, it still may not be "appropriate" to regulate EGUs under Section 112 based on other "relevant factors." *Id.* For example, EPA found regulation may not be appropriate "if the controls mandated under section 112(d) would be ineffective at eliminating or reducing the identified hazards to public health" or "if the health benefits expected as the result of such regulation are marginal and the cost of such regulation is significant and therefore substantially outweighs the benefits." *Id.* at 16,000-16,001. In making its 2005 determination, EPA properly exercised the broad discretion granted by Congress, which is evident in the structure of Section 112(n)(1)(A). *Id.*

EPA continues to recognize that "appropriate" and "necessary" are "very broad terms." 77 Fed. Reg. at 9323. EPA also does not dispute that it may consider other factors when determining whether regulation of EGUs is appropriate and necessary, in addition to whether there are public health hazards. But EPA sweeps the significant costs of the rule (which EPA found could be considered in 2005) under the rug by simply asserting that it no longer interprets

the term "appropriate" to allow the consideration of costs. *Id.* at 9327.[6] EPA merely states that this new interpretation is "the better reading," given that EPA is considering whether to regulate HAPs from EGUs. 76 Fed. Reg. at 24,989. It is arbitrary and capricious to disregard facts and circumstances that underlay a prior policy without providing a reasoned explanation. *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515-16 (2009). EPA has not, and cannot, provide a reasoned explanation for its changed interpretation. This is particularly true here, considering the lack of quantified benefits from reduction of HAPs from EGUs, which supports EPA's prior conclusion that inefficient and costly regulation is not appropriate or necessary.

1. EPA has not identified current hazards to public health from EGU HAP emissions that would justify regulation under Section 112.

The only monetized benefits EPA estimated with respect to *HAP reductions* relate to mercury emissions, which EPA identified to be the HAP of "greatest concern" from EGUs. 65 Fed. Reg. 79,825, 79,827 (Dec. 20, 2000). EPA

---

[6] Regulation under Section 112(n)(1)(A) requires EPA to consider "the results of the study required by *this subparagraph*." 42 U.S.C. § 7412(n)(1)(A) (emphasis added). But to justify the final rule, EPA instead relies on other studies not required under that subparagraph, and bootstraps its position by arguing Congress intended EPA to consider a wide range of environmental effects addressed in other provisions of the Act. Pet'rs Br. at 44-46. Those provisions, including Section 112(n)(1)(A), however, require consideration of alternatives and costs. Thus, EPA contends its discretion is broad, but then concludes the broad discretion provided by Congress precludes any consideration of costs. EPA cannot have it both ways.

recognized that the science of potential health effects of mercury are inconclusive and limited, and, thus, focused its assessment on neurological development effects from digestion of mercury-contaminated fish and seafood by women during their pregnancy. 77 Fed. Reg. at 9426-9428. But total direct benefits from reductions in mercury emissions under the rule were estimated at only $4 to $6 million per year. *Id.* at 9428. And these estimated benefits may be overstated because EPA's methodology has several limitations, including the inability to address the time lag between reduction in mercury emissions and reduction in the MeHg concentrations in fish. RIA at 4-18. While EPA contends that this is a "small subset of the benefits of reducing Hg emissions," it has not identified what other benefits may be realized. 77 Fed. Reg. at 9428. As a result, mercury reductions represent less than 0.01% of the purported benefits of the rule.

While EPA at least attempts to justify the benefits of the rule owing to reductions in mercury emissions, there is no attempt to quantify benefits for non-mercury HAPs, including acid gases. Testimony of Anne E. Smith, Ph.D before the Subcommittee on Energy and Power, House Energy and Commerce Committee, Feb. 8, 2012, at 12, *available at* http://democrats.energycommerce.house.gov/sites/default/files/image_uploads/Testimony_EP_02.08.12_Smith.pdf (hereinafter referred to as "Smith Testimony"). The Regulatory Impact Analysis devotes only 6.5 out of 510 pages to discussion of

the risks from non-mercury HAPs. RIA at 73-79. Such limited discussion is glaring given EPA's assertion that non-mercury HAP emissions pose a hazard to public health (based on case studies at 16 facilities demonstrating lifetime cancer risks slightly exceed 1 in 1 million at only six of the facilities). 77 Fed. Reg. at 9358.[7] EPA's analysis focused on chromium and nickel compounds as the "key drivers" of cancer risk from EGU emissions. *Id.* at 9317. Yet the final rule provides no estimated reductions of these HAPs as a result of the rule. *Id.* at 9424. EPA simply states that "[s]tudies have determined a relationship between exposure to certain of these HAP and the onset of cancer; however, the Agency is unable to provide a monetized estimate of the HAP benefits at this time." *Id.* at 9439. That EPA's discussion of the regulatory impacts does not address how these risks will be addressed by the Utility MACT is telling.

Regarding emissions of HAP acid gases from EGUs, hydrogen chloride (HCl) is the most significant in EPA's analysis. In its appropriate and necessary determination, EPA does not identify any *public health hazard* associated with HAP acid gases, save the simple statement that EGUs are large emitters of such emissions. 77 Fed. Reg. at 9310. Previously, EPA concluded that HCl had an established health threshold (interpreted as the Reference Concentration (RfC) for

[7] EPA disputed a study submitted by industry that showed no units exceed lifetime cancer risk of 1-in-1-million. 77 Fed. Reg. at 9361. But, even using EPA's risk assessments, these levels are very low. Smith Testimony at 14.

chronic effects), and HCl was not classified as a human carcinogen. 76 Fed. Reg. at 25,050. EPA used a chronic RfC for inhalation of HCl of 20 micrograms per cubic meter (µg/m3). *Id.* "An RfC is defined as an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime." *Id.* The hazard index EPA identified for EGUs ranged from 0.05 to 0.005. *Id.* at 25,051 n.170. This means that the highest HCl exposure that EPA found from EGUs was only 5% of the level EPA considers safe. Smith Testimony at 12-13.

Moreover, EPA does not provide any estimate of the monetized benefits for reduction in EGU HCl emissions the rule is estimated to achieve. Nor does EPA even provide a narrative discussion of how these reductions are appropriate and necessary to address a public health hazard.[8] EPA's response is that, for all other source categories regulated under Section 112, EPA is required to regulate all HAP from major sources once a source category is added to the list. 77 Fed. Reg. at 9361. This supports a finding that Congress intended to guard against such

[8] EPA asserts that acid gas emissions from EGUs may have adverse environmental effects. In support, EPA cites to one journal article to assert recent research "has suggested" deposition of airborne HCl has a greater impact on ecosystem acidification than previously considered. 76 Fed. Reg. at 25,050, n.168.

burdensome and inefficient regulation of EGUs by requiring a threshold determination that regulation is "appropriate and necessary" in the first instance.

2. The estimated costs of the Utility MACT are not justified for the limited (if any) benefits identified from required reductions in HAP emissions.

The problems with EPA's new interpretation of Section 112(n)(1)(A) are exacerbated in light of the costs of the rule—$9.6 billion annually in 2015 ($2007). 77 Fed. Reg. at 9425. "Of the dozens of recently proposed EPA rules, the Utility MACT is probably the most costly." CRS, *EPA's Utility MACT: Will the Lights Go Out?*, at 6 (Jan. 9, 2012).[9] It is clear why EPA now asks this Court to ignore those costs.[10]

None of the claimed benefits associated with reduction in HAP emissions comes close to approaching the costs of the rule. The following table is an estimate of the costs, benefits and co-benefits by individual MACT provisions in the Utility MACT rule:

---

[9] Available at http://www.carper.senate.gov/public/_cache/files/7b20fa20-2c84-4fcd-8bc8-8ff4b9597603/CRS%20-%20EPA%20Utility%20MACT%20Reliability.pdf.

[10] EPA expressly determined it should consider costs in making its 2005 determination that regulation of EGUs was not appropriate and necessary.

	Benefits from HAPs reductions (billion/yr)	Co-Benefits from non-HAPs (billions/yr)	Costs (billions/yr)	Net Benefits without co-benefits (billions/yr)	Net Benefits including co-benefits (billions/yr)
Mercury	<$0.1	$1 to $2	$3	-$3	-$2 to -$1
Acid Gases	$0	$32 to $87	$5	-$5	$27 to $82
Non-Hg Metals	$0	$1 to $2	$1	-$1	-$1 to $0
Total	<$0.1	$33 to $90	$10	-$10	$23 to $80

*Source: Smith Testimony at 6.[11]

As reflected in the table, without considering purported co-benefits, the costs associated with the regulation eclipse the benefits, and costs exceed benefits for mercury and non-mercury Metals even considering co-benefits.[12]

The table also shows that the vast majority of the estimated benefits, and the majority of the estimated costs, are associated with controlling acid gases. Yet, as explained above, EPA's evidence of harm to public health stemming *from HAP acid gases* is non-existent. *All of the purported benefits stem from co-benefits from PM2.5 (except for $0.4 billion related to reduction in greenhouse gas emissions).* Smith Testimony at 7. Under Section 112(n)(1)(A), EPA narrowly reads the "broad" terms in the statute to claim it cannot consider costs. But the table above

[11] Ranges used are the minimum and maximum identified by EPA using a 3% and 7% discount rate. Totals may not add up exactly due to rounding.

[12] EPA refers to unquantified benefits, but these are largely still co-benefits from non-HAP pollutants. RIA at ES-10-ES-13.

illustrates this rule is all about regulating PM2.5 and has little to do with regulating HAPs. Indeed, elsewhere in the final rule, EPA takes the opposite approach in declining to regulate HAP acid gases under Section 112(d)(4) and choosing to regulate under the more stringent Section 112(d)(2) provisions. *See* Section II.C. In doing so, EPA broadly reads its authority under Section 112—pursuant to which Congress sought to regulate HAPs that pose a hazard to public health—to claim it has discretion to consider matters wholly unrelated to Congress' intent and to regulate HCl emissions under Section 112(d)(2) to achieve purported benefits of PM2.5 reductions.

EPA's reading of Section 112(n)(1)(A) to bar consideration of costs also ignores Congress' requirement that the study include an assessment of "alternative control strategies for emissions which may warrant regulation under this section." 42 U.S.C. § 7412(n)(1)(A). EPA makes the unsupported and counterintuitive assertion that Congress intended to prohibit consideration of more efficient regulations in determining whether controls are appropriate. Because EPA found there are controls available to address these emissions, it found regulation under Section 112 to be "appropriate."[13]

[13] In 2005, EPA instead addressed alternative control strategies under the "necessary" prong, considering whether another provision of the Act could reasonably be anticipated to effectively address hazards resulting from remaining EGU HAP emissions. 70 Fed. Reg. at 16,001. This determination considered

EPA's only response is that it is not required to conduct a cost/benefit analysis under the statute. 77 Fed. Reg. at 9323. But EPA is required to identify "hazards to public health" for which regulation under Section 112 is "appropriate and necessary." EPA's interpretation of Section 112(n)(1)(A) allows it to impose strict regulations under Section 112(d) merely because there may be some reduction in HAP emissions that may not otherwise be realized under other provisions of the Act. EPA may not do so and reasonably make an "appropriate and necessary" finding wholly divorced from whether any meaningful health benefits may result.[14]

B. In finding regulation to be "appropriate and necessary," EPA is not erring on the side of protecting public health.

In finding regulation under Section 112 to be "necessary" EPA contended that its interpretation is reasonable because it is "err[ing] on the side of regulation of such highly toxic pollutants." 77 Fed. Reg. at 9328. But, this is not what

---

whether regulation under another provision is more cost-effective in reducing such emissions.

[14] EPA side-steps its threshold obligation to determine whether regulation of EGUs is "appropriate and necessary" under Section 112 by noting that "Congress expressly precluded consideration of costs *when setting MACT floors*." 77 Fed. Reg. at 9323 (emphasis added). But, this reinforces the notion that Congress intended to treat EGUs differently from other "major sources" for which EPA must set MACT floors. In any event, the Chamber is not advocating that EPA should consider costs in setting MACT floors, but instead consideration of costs and benefits when determining whether such stringent requirements are "appropriate and necessary" in the first instance.

Section 112(n) of the CAA says. As explained above, virtually all of the benefits estimated by EPA in support of the Utility MACT are PM2.5-related co-benefits, not benefits resulting from HAP emissions reductions. Despite contending its appropriate and necessary determination is based solely on alleged effects of HAP emissions, it is clear EPA is seeking to regulate under Section 112 to address emissions it is not otherwise authorized to regulate under that section.

In the first instance, these alleged co-benefits from PM2.5 reductions are overstated. EPA's risk estimates are based on extrapolations to address levels below those considered in the epidemiological literature.[15] Smith Testimony at 16-17. With respect to its modeling of avoided premature deaths among populations exposed to PM2.5, EPA admits that its "confidence in the results diminishes" at levels lower than the lowest measured level in the studies. RIA at 5-18. EPA's

---

[15] "[T]hese estimates are not based on an evaluation of all available relevant science; rather, EPA relied on two observational epidemiology studies conducted when air pollution levels were generally above current standards." Julie E. Goodman, Ph.D., Gradient, *EPA's Assessment of Health Benefits Associated with PM2.5 Reductions for the Final Mercury and Air Toxics Standards*, Testimony before the House Committee on Energy and Commerce, Subcommittee on Energy and Power, Feb 8, 2012, at 2-3, *available at* http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/Hearings/EP/20120208/HHRG-112-IF03-WState-JGoodman-20120208.pdf. Relying on these two studies, rather than the numerous other studies finding no such correlation, EPA assumed a causal relationship between PM2.5 emissions and premature mortality, and rejected contentions that a threshold exists below which no adverse effects would be observed. *Id.* at 3-4. This cannot be squared with EPA's determination that the PM2.5 NAAQS is set at a level that already protects public health with an adequate margin of safety.

estimates also fail to explain how PM2.5 emissions can account for the significant percentage of mortalities, aside from other causes, that underlie its analysis. Smith Testimony at 20-21. Indeed, the PM2.5 benefits are solely attributable to reduction of HAP acid gas emissions, which, as noted above, EPA found to be well below levels it determined to be safe.

The CAA includes numerous other provisions to address PM, including treating it as a criteria pollutant for which NAAQS are required. *See, e.g.,* 42 U.S.C. §§ 7408, 7409. Section 109 provides that EPA must issue primary NAAQS for criteria pollutants that, "allowing an adequate margin of safety, are requisite to protect the public health." *Id.* § 7409(b)(1). NAAQS must be based on air quality criteria that reflect the latest scientific knowledge to identify effects on public health or welfare. *Id.* § 7408(a).

The estimated reductions in PM2.5 assessed by EPA here average only 0.36 µg/m3 in annual average concentrations, and only 0.6 µg/m3 in 24-hour average concentrations. RIA at 5B-4 to 5B-5. This is compared to the current PM2.5 standard of 15 µg/m3 (annual) and 35 µg/m3 (24-hour).[16] Moreover, even assuming EPA's methodology and approach to assessing risks are valid, the

[16] Any potential reduction of this standard as a result of the current review of the PM2.5 NAAQS also is likely to remain significantly higher than the estimated reductions. In June 2012, EPA proposed to revise the annual PM2.5 standard by lowering the level to within a range of 12.0 to 13.0 µg/m3 and to retain the 24-hour PM2.5 standard. 77 Fed. Reg. 38,890 (June 29, 2012).

exposures in the studies relied on by EPA to estimate its co-benefits were at levels well below the current annual NAAQS (10 μg/m3 and 7.5 μg/m3). *Id.* at 5-98 to 5-100. The emission reductions underlying EPA's estimated co-benefits would occur in areas already in attainment with the current PM2.5 NAAQS, which EPA has determined protects those exposed with "an adequate margin of safety" (without consideration of costs). Smith Testimony at 16-19. Thus, EPA is seeking to impose regulations, based on statistical associations not reviewed by the Clean Air Scientific Advisory Committee, with exorbitant costs for little or no benefit, where it simply otherwise would have no authority to do so.

EPA contends that it "should not interpret the CAA to limit the Agency's discretion to protect the environment absent clear direction to that effect." 76 Fed. Reg. at 24,989. But, Congress has made clear that regulation under the Act is not necessary or appropriate no matter what the cost. Regulation under the CAA is intended to protect and enhance this Nation's air quality "to promote the public health and welfare and the productive capacity of its population." 42 U.S.C. § 7401(b)(1). In addition, a "primary goal" of the Act is to "encourage or otherwise promote *reasonable* Federal, State, and local governmental actions" for pollution prevention. *Id.* § 7401(c) (emphasis added). Finally, in this instance Section 112 is structured to give EPA flexibility to avoid inefficient regulation and unnecessary costs. Thus, Congress did not intend EPA to impose stringent

regulations devoid of any consideration of whether the regulation would be effective, much less whether the benefits of such regulation are worth the costs. *See* Pet'rs Br. at 41.

While EPA contends it does not consider the co-benefits in its appropriate and necessary determination, given the exceedingly insignificant benefits from reduction in HAP emissions, it is clear that EPA's "new" interpretation of Section 112(n)(1)(A) is being driven by some other set of considerations. EPA's attempts to sidestep its statutory authority in order to promote regulation for the mere sake of regulation must be rejected.

C. That EPA is impermissibly seeking to regulate PM2.5 is further illustrated by its arbitrary decision not to regulate HAP acid gases from EGUs under a less stringent standard pursuant to Section 112(d)(4).

For the reasons above, EPA's determination that regulation under Section 112 is "appropriate and necessary" should be vacated. Moreover, EPA's decision *how* to regulate under Section 112 in the final rule further highlights that its goal is to address non-HAP emissions. EPA contends that it determined regulation of EGUs was appropriate and necessary to address hazards associated with *HAP emissions*, and not to obtain the PM2.5 co-benefits that are the focus of its impact analysis. These claims are simply not credible.

While standard setting under Section 112(d) is relatively formulaic, *see generally Sierra Club v. EPA*, 353 F.3d 976, 979-80 (D.C. Cir. 2004), Congress

clearly did not intend EPA to regulate for the sake of regulating. Section 112(d)(4) provides an express mechanism for tailoring the stringency of the standard to the perceived potential impact on public health. 42 U.S.C. § 7412(d)(4). Congress allowed EPA to issue health-based standards rather than the technology-based standards under Section 112(d) when a health threshold was well understood and the delays that had been experienced when such health impacts were not well known could be avoided. S. Rep. No. 101-228 at 171 (1989). As described in the Petitioners' Brief, this provision was intended "to avoid situations where the mechanical setting of §112(d) limits would result in emission standards more stringent than necessary to protect public health." Pet'rs Br. at 61.

EPA admits that it determined a health threshold for HCl in prior rulemakings, but now contends it lacks sufficient information to make such a finding with respect to HCl emissions from EGUs. 76 Fed. Reg. at 25,050. More significantly, EPA declined to use its authority under Section 112(d)(4) in light of expected reductions of other pollutants. Although EPA contends it did not consider co-benefits from PM2.5 reductions in determining whether regulation of EGUs was appropriate and necessary, EPA expressly does so in deciding that it can exercise its discretion to impose more stringent requirements under Section 112(d)(2) rather than under Section 112(d)(4) based on co-benefits associated with non-HAPs.

EPA contends that it has such discretion because Congress recognized that the technology-based MACT standards will have co-benefits. 77 Fed. Reg. at 9406 (citing S. Rep. No. 101-228 at 172). But, the cited Senate Report indicates that this provision was included "[t]o avoid expenditures by regulated entities which secure no public health or environmental benefit." S. Rep. No. 101-228 at 171. Where "the pollutant" presents no risk of other adverse health effects, EPA may use the health threshold "with an ample margin of safety" to set emissions limitations for sources. *Id.*; *see also* Pet'rs Br. at 61-63. Even if Congress intended that EPA "may" consider co-benefits in setting technology-based standards, a concept found nowhere in the statute,[17] Congress certainly did not state that purported co-benefits should drive regulation when the reductions of the HAPs themselves provide no benefits at all. Such a result would be anomalous, given that Congress included Section 112(d)(4) precisely to avoid unnecessary expenditures in regulating HAPs under Section 112.

[17] EPA reads the use of "may" in Section 112(d)(4) to give it discretion to consider co-benefits associated with reductions of non-HAPs to determine *not to regulate* under Section 112(d)(4). 77 Fed. Reg. at 9406. Nothing in Section 112, however, indicates that EPA may consider emissions of pollutants other than HAPs.

III. EPA's Consideration of PM2.5 Co-Benefits Distorts the Record, and Misdirects Limited and Much Needed Resources.

Air regulations account for the vast majority of the costs and benefits of EPA rules. *See* Office of Management and Budget, *2011 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local and Tribal Entities*, at 16 (2011), *available at* http://www.whitehouse.gov/sites/default/files/omb/inforeg/2011_cb/2011_cba_report.pdf. "It is important to emphasize that the large estimated benefits of EPA rules are mostly attributable to the reduction in public exposure to a single air pollutant: fine particulate matter." *Id.* As noted above, however, PM2.5 is separately regulated under the CAA, and the benefits now asserted under these other regulations are based on ambient levels well below the PM2.5 NAAQS level EPA found requisite to protect public health.

Nonetheless, in justifying virtually all of its air regulations in recent years, EPA has relied on the "co-benefits" of addressing PM2.5 emissions. Analyses have shown that in 21 of 28 rules in which EPA attempted to monetize benefits, reductions in PM or its precursors accounted for more than half the monetized benefits. CRS 2011 Report at 3. In several cases, many of which address MACT standards under Section 112 and 129 allegedly aimed at reduction of HAP emissions, PM2.5 co-benefits are the only benefits EPA was able to quantify. Smith Testimony at 15. These estimated benefits have dramatically changed in

recent years based on EPA's new accounting method, which has significantly increased the estimated harms—where EPA once identified 88,000 premature deaths as a result of PM2.5, in 2005 it estimated 320,000 premature deaths—and EPA uses a higher price-per-ton of emissions (as high as $280,000/ton) than estimated by others ($9500/ton). Letter from House Subcommittees to Cass Sunstein, *supra* n.3, at 2-3.

Highlighting the inflated co-benefits appears necessary, however, because without them EPA could not justify such costly regulations that appear to provide no real benefit to the public. Smith Testimony at 16. It also allows EPA to justify its alleged inability to monetize other benefits, because avoidance of premature mortality "generally overwhelms the value of all other benefits combined." CRS 2011 Report at 3.

The Utility MACT illustrates EPA's intent to regulate purely for the sake of regulation, again relying on alleged co-benefits from PM2.5 reductions to justify its regulatory overreach.[18] EPA justifies its new interpretation of Section 112(n)(1)(A) by asserting that EGUs have only been minimally controlled since

[18] Indeed, EPA's estimated co-benefits from the Utility MACT, of which over 99% stem from alleged reductions in PM2.5 emissions, are even higher than the estimated direct benefits of EPA's most recent PM NAAQS of $9-$76 billion. CRS 2011 Report at 5. And the PM NAAQS are established at a level EPA deemed "requisite" to protect public health. If EGU emissions contributed significantly to PM emissions, these emissions surely would be addressed to meet the PM NAAQS.

1990 when the amendments were passed. 76 Fed. Reg. at 24,992. As described above, EPA's "appropriate and necessary" determination appears based solely on its having now found a way to regulate such emissions divorced from any real risk to public health. EPA's focus on justifying the regulation based on PM2.5 reductions rather than the pollutants at hand distorts the record by allowing EPA to claim the rule is "practical, cost-effective, and protective" based on purported benefits that are not associated with the reduction of HAPs. EPA Fact Sheet, *Benefits and Costs of Cleaning Up Toxic Air Pollution From Power Plants*, at 1 (2011), *available at* http://www.epa.gov/airquality/powerplanttoxics/pdfs/20111221MATSimpactsfs.pdf.

Congress has expressed its concern that EPA's regulatory impact analyses are "designed to provide political cover for a more stringent regulatory agenda rather than to objectively inform policy decisions." Letter from House Subcommittees to Cass Sunstein, *supra* n.3, at 1. The problem with seeking to rely on co-benefits to justify regulation is that EPA is not devoting resources to the most serious problems, resulting in irrational regulation and misdirection of much needed resources.

Moreover, Executive Order 13563 expressly recognizes that "[o]ur regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation."

76 Fed. Reg. 3821, 3821 (Jan. 21, 2011). In addition, it "must identify and use the best, most innovative, and least burdensome tools for achieving regulatory ends," and "take into account benefits and costs, both quantitative and qualitative." *Id.* This order reaffirms principles in place since 1993 under Executive Order 12866. *Id.* Under these orders, consistent with the Act, EPA must seek to lessen regulatory burdens on society. EPA's continued reliance on alleged PM2.5 co-benefits to support its regulation of emissions that have not been shown to be a significant threat to public health must be rejected.

CONCLUSION

For the foregoing reasons and for the reasons outlined in the Industry, State and Labor Petitioners brief, this Court must vacate EPA's determination that regulation of EGUs under Section 112 is appropriate and necessary.

Dated: October 30, 2012

Respectfully submitted,

/s/ Michael B. Wigmore

Michael B. Wigmore
Sandra P. Franco
Bingham McCutchen LLP
2020 K Street, N.W.
Washington, D.C. 20006
(202) 373-6000
(202) 373-6001 (facsimile)

Counsel for the Chamber of Commerce of the United States of America

Of Counsel:

Robin S. Conrad (D.C. Bar #342774)
Rachel Brand (D.C. Bar #469106)
Sheldon Gilbert (D.C. Bar #989442)
NATIONAL CHAMBER
LITIGATION CENTER, INC.
1615 H Street, N.W.
Washington, DC 20062
(202) 463-5337

CERTIFICATION PURSUANT TO FRAP 32(a)(7)

Pursuant to Federal Rule of Appellate Procedure 32(a)(7), the undersigned hereby certifies that the foregoing Brief of the Chamber of Commerce of the United States of America as *Amicus Curiae* in Support of Industry Petitioners is 6767 words in compliance with Federal Rule of Appellate Procedure 29(d), and the Court's Order dated August 24, 2012, which provided for a brief of *amici* in support of Petitioners not to exceed 7,000 words.

Respectfully submitted,

/s/ Michael B. Wigmore
Michael B. Wigmore

Dated: October 30, 2012

CERTIFICATE OF SERVICE

I hereby certify that on this 30th day of October, 2012, I caused to be electronically filed the foregoing Brief of the Chamber of Commerce of the United States of America as *Amicus Curiae* in Support of Industry Petitioners with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit by using the Court's CM/ECF system, which will serve such filing to all registered CM/ECF users.

/s/ Michael B. Wigmore
Michael B. Wigmore

ADDENDUM

RALPH M. HALL, TEXAS
CHAIRMAN

EDDIE BERNICE JOHNSON, TEXAS
RANKING MEMBER

U.S. HOUSE OF REPRESENTATIVES

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

2321 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6301
(202) 225-6371
www.science.house.gov

November 15, 2011

The Honorable Cass R. Sunstein
Administrator
Office of Information and Regulatory Affairs
Office of Management and Budget
Eisenhower Executive Office Building
1650 Pennsylvania Avenue, N.W.
Washington, D.C. 20403

Dear Administrator Sunstein:

As Chairmen of the Energy and Environment and Investigations and Oversight Subcommittees of the Committee on Science, Space, and Technology, we have growing concerns with troubling scientific and economic accounting practices in the Environmental Protection Agency's (EPA) crafting of Regulatory Impact Analyses (RIAs) used to justify numerous Clean Air Act (CAA) rules. In many cases, these required cost-benefit analyses appear designed to provide political cover for a more stringent regulatory agenda rather than to objectively inform policy decisions.

There is further evidence that these RIAs are based on flawed and sometimes nontransparent science, and highly-questionable economics that violate the spirit and letter of (1) executive orders governing regulatory reform, (2) EPA and Office of Management and Budget (OMB) standards for peer review and regulatory analysis, and (3) your own previous recommendations for both Office of Information and Regulatory Affairs (OIRA) and EPA cost-benefit analyses. Our concerns with these issues are exacerbated by several recent baseless and irresponsible statements from senior administration officials that illustrate the "press release science" advanced by EPA, particularly with regard to the overestimation of regulatory health benefits and underestimation of actual economic costs.

Accordingly, with EPA regulatory proposals costing tens of billions of dollars now awaiting your review, we implore you to follow the President's instructions to "give careful scrutiny to all regulations that impose significant costs on the private sector or on state, local, or tribal governments,"[1] and your comment from a recent speech that this scrutiny is "especially important in a period of economic difficulty."[2]

We fully agree with your statement that scrutiny of regulatory costs and benefits is especially important during a weak economy, and we hope and expect you to apply this scrutiny to EPA RIAs, which serve as the foundation used to justify the myriad of pending EPA rules that threaten to further damage our already weak economy. As you have previously noted, "the most informative document" in the rulemaking

[1] http://www.whitehouse.gov/sites/default/files/ozone_national_ambient_air_quality_standards_letter.pdf.
[2] Cass Sunstein, "Humanizing Cost-Benefit Analysis," February 17, 2010, http://www.whitehouse.gov/omb/oira_speech_02172010/.

process is the RIA.[3] In particular, we are concerned about the tendency of RIAs to understate economic costs and inflate health benefits through double-counting and other means, and we ask your assistance in clarifying and responding to questions associated with these concerns.

Detailed below are troubling examples of questionable scientific and economic assertions involved in EPA's approach to RIAs. We ask you to respond to these specific questions by December 6, 2011:

I. Press Release Science

In an effort to portray its CAA regulations as generating more benefits than costs, EPA has massively inflated health benefit estimates in the last several years without any change in the underlying scientific understanding. There have been numerous examples of EPA officials citing benefit figures that test credibility. To provide a few examples:

- On September 22, EPA Administrator Lisa Jackson stated that "if we could reduce particulate matter to healthy levels, it would have the same impact as finding a cure for cancer."[4] This claim would mean that reducing fine particulate matter ($PM_{2.5}$) could prevent nearly 600,000 deaths a year, or roughly 20 percent of all deaths in the U.S. It is baseless and unsupported by science, and ignores dramatic improvements in air quality, including the fact that $PM_{2.5}$ levels have declined almost 30 percent over the last two decades.[5]
- During a recent hearing before our Committee, EPA Assistant Administrator Gina McCarthy presented OMB-approved testimony that the Agency's Cross-State Air Pollution Rule (CSAPR) would prevent "up to 34,000 premature deaths" per year.[6] Ms. McCarthy could not explain the cause of these premature deaths, did not account for any uncertainty in this and other statements, and has subsequently failed to provide the underlying data behind such claims.[7]
- As you noted in your review of the National Ambient Air Quality Standards (NAAQS) in the late 1990s, at that time EPA found that lowering the $PM_{2.5}$ standard in 1997 would prevent 350 annual mortalities, and that a lower ozone standard would prevent 0 to 80 premature deaths annually.[8] EPA's current presumption attributes 320,000 deaths in 2005 (roughly 13 percent of all deaths in the U.S.) as "due to $PM_{2.5}$."[9] Similarly, EPA's recent proposal to reconsider the 2008 ozone standard claimed that it would prevent up to 12,000 premature deaths (with more than 90 percent of these deaths actually associated with $PM_{2.5}$ and not ozone).
- Based on a single calculating trick devised in 2009, EPA began counting benefits associated with $PM_{2.5}$ down to the lowest measurable level, including well below the ambient standard that had been deemed adequate to protect public health with an adequate margin of safety for susceptible populations. This simple change allowed the Agency to claim that $PM_{2.5}$ levels resulted in 320,000 premature deaths in 2005, compared to the previous total of 88,000 under the old method.[10]

---

[3] Sunstein, "Is the Clean Air Act Unconstitutional?" Chicago Public Law and Legal Theory Working Paper No. 03, 1999, pg. 26.
[4] Video available at: http://www.c-span.org/Events/EPA-Regulations-Discussed-at-House-Energy-Committee/10737424255/.
[5] http://www.epa.gov/airtrends/aqtrends.html.
[6] http://science.house.gov/sites/republicans.science.house.gov/files/documents/hearings/091511_McCarthy.pdf.
[7] http://science.house.gov/press-release/chairman-harris-calls-transparency-epa-health-data.
[8] Sunstein, "Clean Air Act," pg. 27.
[9] Testimony of Dr. Anne Smith, October 4, 2011, http://science.house.gov/sites/republicans.science.house.gov/files/documents/hearings/100411_smith_0.pdf.
[10] Ibid.

- In 2009, the National Research Council released an analysis of the underlying price per ton for emissions of $PM_{2.5}$ (including health effects) and found that their mean estimate was $9,500.[11] However, EPA used a figure of $280,000 benefit per ton for $PM_{2.5}$ in conducting its nitrogen oxide NAAQS RIA.[12]

Repeated Double-Counting of Health Benefits

The Committee recently received testimony noting that EPA has relied almost exclusively on coincidental $PM_{2.5}$ co-benefits to justify a variety of CAA regulations. For example:

- According to testimony on EPA's ozone reconsideration RIA: "...up to 91% of EPA's benefits estimate for its preferred standard was due to EPA's predictions of coincidental $PM_{2.5}$ reductions rather than to reductions in ozone risks that were the target of the rule. Not a single one of EPA's benefits estimates in that RIA exceeded its costs unless $PM_{2.5}$-mortality co-benefits were added in."[13]
- In analyzing claims that EPA's Maximum Achievable Control Technology Standards for Hazardous Air Pollutants from Electric Utility Generating Units (Utility MACT) would save up to 17,000 lives per year and generate significant health benefits, testimony noted that: "...all of those purported health benefits are due to EPA's predictions of coincidental reductions of $PM_{2.5}$ – which is not an air toxic. Of all the air toxics targeted by this rule, EPA has estimated benefits for only one – mercury – and EPA's highest estimate of those mercury benefits is only $6 million per year, compared to EPA's estimate of $10.9 billion in costs per year. In the Utility MACT's RIA, over 99.99% of the benefits that EPA has attributed to the rule are due to $PM_{2.5}$ co-benefits rather than to the air toxics that are its purpose."[14]
- Over 90 percent of the benefits from the CSAPR rule come from $PM_{2.5}$-related estimates.

These examples demonstrate a broader trend in EPA cost-benefit analysis: EPA has justified nearly all CAA rules on the basis of particulate matter co-benefits, raising significant concerns about double-counting of alleged $PM_{2.5}$ benefits as well OIRA's oversight of the RIA process. Even OIRA recognized this phenomenon in its 2011 *Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities* ("OIRA Report to Congress"), which stated that, "It is important to emphasize that the large estimated benefits of EPA rules are mostly attributable to the reduction in public exposure to a single air pollutant: fine particulate matter."[15]

Appendix A illustrates the extent of this problem in a Congressional Research Service chart showing that, of the 28 CAA RIAs for rules proposed or finalized since 2004 that monetized benefits, 25 of them claimed more than 50 percent of total benefits from $PM_{2.5}$-related benefits.[16] In nearly all of these cases, fine particulate matter was not being regulated and these benefits are coincidental "co-benefits." Most of these rules would not have passed a basic cost-benefit test if they had not incorporated $PM_{2.5}$ co-benefits. Justifying disparate rules on the basis of these co-benefits compounds issues with the Agency's process of prioritization. As you stated in 2002, "EPA's own studies suggest that it is not devoting resources to the most serious problems and indeed that inadequate priority-setting is a particular problem for clear [sic] air

---

[11] National Research Council, *Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use*, 2009, Washington, DC: National Academies Press.

[12] Arthur G. Fraas and Nathan Richardson, "Public Interest Comment on the Environmental Protection Agency's Proposed Clean Air Transport Rule," EPA-HQ-OAR-2009-0491-2573, September 28, 2010, pg. 38.

[13] Smith testimony.

[14] Ibid.

[15] http://www.whitehouse.gov/sites/default/files/omb/inforeg/2011_cb/2011_cba_report.pdf.

[16] In three cases, this includes rules in which the range of $PM_{2.5}$ -related benefits extend above 50 percent.

regulation."[17]

1. Do you believe it is appropriate, accurate, or intellectually defensible to assert economic benefits already claimed in concurrent and prior rulemakings to justify the economics of an individual regulation?

2. How does relying on coincidental $PM_{2.5}$ co-benefits for non- $PM_{2.5}$ rules meet Executive Order (E.O.) 12866's requirement that each "agency shall avoid regulations that are...duplicative with its other regulations"?

3. When the $PM_{2.5}$ benefits are removed from the Utility MACT RIA, EPA is asking the American people to pay $3,600 to $4.36 million for every one dollar of benefit. Absent benefits derived from $PM_{2.5}$ reductions, does OIRA believe that the cost-benefit ratio for achieving the Utility MACT's stated purpose – that is, reducing hazardous air pollutants and not fine particulates – satisfies the E.O. 13563 directive to narrowly tailor regulations such that the benefits justify the cost?

4. In 1999, you stated that "If – as seems clear – the risks prevented by the new ozone regulation are far smaller than the risks that would be prevented by more stringent regulation of particulates, EPA should explain the apparent anomaly in terms of statutorily relevant factors. A chief advantage of this approach is that it should ensure inter-regulation consistency, in such a way as to combat, simultaneously, interest-group power, public torpor, and public over-reaction with respect to certain pollutants."[18] You also stated that "The question is whether EPA can defend apparent interregulation inconsistency in statutorily relevant terms.... If it cannot, it has acted unlawfully."[19]

   How does relying on coincidental $PM_{2.5}$ co-benefits for dozens of non-$PM_{2.5}$ rules achieve inter-regulation consistency as you have defined it?

5. The draft OIRA Report to Congress for 2011 discussed revisions to prevent the double-counting of $PM_{2.5}$ benefits, stating that "...to prevent double-counting, the estimates for the $PM_{2.5}$ NAAQS will be adjusted, and estimates associated with the implementing rules promulgated in subsequent years will be used appropriately. The benefit and cost estimates for lead NAAQS and SO2 NAAQS may also be adjusted in future reports to avoid double-counting...."[20]

   a. Why was this language and other references to revising EPA estimates to prevent $PM_{2.5}$ benefit double-counting deleted from the final OIRA Report to Congress?

   b. Please outline all steps that OIRA has taken to prevent the double-counting of $PM_{2.5}$ benefits for individual CAA rules listed in Appendix A.

   c. Please also outline the steps that will be taken by OIRA to prevent EPA from taking credit for already-counted $PM_{2.5}$ benefits in upcoming $PM_{2.5}$ NAAQS from the Agency.

6. For the Utility MACT and CSAPR, please quantify the aggregate costs and benefits without double-counting (i.e. ensure that both benefits and costs are unique).

---

[17] Sunstein, *Risk and Reason: Safety, Law, and the Environment* (Cambridge University Press, 2002), pg. 239.
[18] Sunstein, "Clean Air Act," pg. 67.
[19] Sunstein, *Risk and Reason*, pg. 247-248.
[20] http://www.whitehouse.gov/sites/default/files/omb/legislative/reports/Draft_2011_CBA_Report_AllSections.pdf.

7. You have also stated in the past that "[a] projection of benefits must depend on a baseline about what would have happened without regulation."[21]

   Please provide a list of all examples for EPA CAA RIAs in which the Agency has clearly removed $PM_{2.5}$ benefits that were already counted in providing a baseline for new rules.

8. As noted above, an accounting change in 2009 allowed EPA to inflate health benefit estimates associated with $PM_{2.5}$ reductions by counting benefits down to the lowest measurable level with no change in the underlying science.

   a. Did OIRA approve this change in benefits calculation?

   b. Has EPA used this same public health benefit assumption in any of the risk analyses regarding its current review of the $PM_{2.5}$ NAAQS? If not, please explain the different treatment of the same air pollutant and why EPA's approach is not the same.

II. Dismal Science

A. Understating Compliance Costs

In estimating regulatory costs for CAA rules, we are concerned that EPA has adopted practices that are inconsistent with OMB guidelines and prevailing economic accounting practices. An enormous disparity exists between EPA's compliance cost estimates and those projected by well-respected nongovernmental economists. While the more-sophisticated nongovernmental analyses project the net present value of multi-year cost streams, EPA instead estimates the annual cost for a single year. EPA's failure to incorporate net present value calculations ignores all up-front capital expenditures that would be needed to comply and allows for another accounting trick to let CAA rules pass a cost-benefit test.[22]

However, OMB Circular A-94 (which applies specifically to all RIAs) states: "The standard criterion for deciding whether a government program can be justified on economic principles is net present value.... Programs with negative net present value should generally be avoided."

How is EPA's practice of estimating single-year compliance costs instead of net present value consistent with OMB Circular A-94? Why has OIRA approved RIAs and agency communications that do not use net present value? What steps has OIRA taken to revise EPA's approach to compliance costs?

B. Ignoring Negative Health Impacts of Regulatory Economic Burdens

You have made several statements indicating the need for RIAs to incorporate potential health-related economic costs associated with regulations:

- "In general, it is right to say that agencies should be required to take account of the health problems produced by regulation designed to reduce health problems."[23]
- "Regulations cost money – sometimes a great deal of money – and private expenditures on regulatory compliance may produce less employment and more poverty. People who are unemployed or poor tend to be in worse health and to live shorter lives."[24]

---

[21] Sunstein, "Clean Air Act," pg. 68.
[22] Garrett Vaughn, "The EPA's Benefit/Cost Jihad on U.S. Electric Utilities," October 10, 2011, http://www.masterresource.org/2011/10/epa-benefit-cost-jihad-utilities/.
[23] Sunstein, "Clean Air Act," pg. 78

- "A great deal of evidence suggests the possibility that an expensive regulation can have adverse effects on life and health."[25]
- "If poor people are paying a significant amount for modest environmental benefits, their health might be made worse rather than better."[26]

As a corollary, you have noted that environmental regulations are more likely to cause economic harm than good: "To be sure, some environmental regulations do increase employment and decrease prices. But as a general rule, there is no reason to believe that regulatory imposition of high costs will benefit workers and consumers; the opposite is more likely to be true."[27]

These statements are not merely academic, as you specifically cited the essential role of OIRA in ensuring these regulatory health disbenefits are incorporated in CAA RIAs:

- "OIRA should see, as one of its central assignments, the task of overcoming governmental tunnel vision, by ensuring that aggregate risks are reduced and that agency focus on particular risks does not mean that ancillary risks are ignored or increased."[28]
- "The Clean Air Act… is permitted to consider the effects of regulation in causing risks to life and health through poverty and unemployment."[29]

1. If, as you have stated, "expensive regulation can have adverse effects on life and health," why have none of the EPA CAA RIAs listed in Appendix A included a single dollar of cost associated with the health effects from regulatory expenditures and accompanying economic outcomes?

2. Please provide a list of all health disbenefits identified by EPA in the RIAs for the ozone NAAQS reconsideration, the Utility MACT, or CSAPR.

3. In the context of the Utility MACT, please explain how the estimated $10.9 billion estimate in compliance costs and subsequent increases in electricity rates will not affect the health of a single American.

C. *Failing to Analyze and Communicate Uncertainties*

We are concerned that EPA has failed to adequately report uncertainty in its analysis of costs and benefits for CAA rules, including the Agency displaying RIA health benefits without ranges of potential effects. As you have noted, "…without the range, it is hard to compare the options not chosen."[30] OMB Circular A-94, which governs RIAs, says that because "uncertainty is basic to many analyses, its effects should be analyzed and reported."

1. Why did OMB approve EPA Assistant Administrator Gina McCarthy's September 15, 2011 testimony[31] before the Committee on Science, Space, and Technology in which she stated that CSAPR would avoid "Up to 34,000 premature deaths; 15,000 heart attacks; 400,000 cases of aggravated asthma; 19,000 cases of acute bronchitis; 19,000 hospital and emergency room visits"?

---

[24] Sunstein, "Health-Health Tradeoffs," University of Chicago Law and Economics Working Paper No. 42, 1996, pg. 7.
[25] Sunstein, "Cost-Benefit Analysis and the Environment," *Ethics*, Vol. 115, No. 2 (January 2005), pg. 366.
[26] Ibid. pg. 367.
[27] Ibid. pg. 368.
[28] Sunstein, "Health- Health Tradeoffs," pg. 30
[29] Ibid., pg. 24.
[30] Sunstein, "Clean Air Act," pg. 29.
[31] http://science.house.gov/sites/republicans.science.house.gov/files/documents/hearings/091511_McCarthy.pdf.

a. Is this treatment of uncertainty consistent with OMB Circular A-94?

b. What steps does OMB take to ensure that EPA's characterizations of RIAs are consistent with the guidelines for these analyses?

2. Former OIRA Administrator John Graham wrote in a December 2001 letter to then-EPA Administrator Christine Todd Whitman that "it is clear that we need to understand better which sources of PM in our economy are responsible for the PM-related health effects."[32] Similarly, you have stated that upon finding the need to lower ambient $PM_{2.5}$ levels, "....EPA will have to decide what, exactly, to regulate; and to do this, it will have to decide what fine particulates consist of."[33]

   Does OIRA continue to hold this view about PM speciation? If so, why has OIRA approved several regulations that are being justified from associations based on PM mass alone?

3. The OIRA Report to Congress indicates that "[t]he 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." The Report further identifies six key assumptions that demonstrate the significant uncertainty in making these associations in RIAs.[34]

   Please explain how EPA's CAA RIAs incorporate an uncertainty analysis that accounts for these six key assumptions.

4. There were also significant changes made to the section on $PM_{2.5}$ uncertainties between the draft and final OIRA Report to Congress for 2011:

   The draft reported stated that: "Although biological mechanisms for this effect have **not been established definitively** yet, the weight of the available epidemiological evidence supports an **assumption of causality**." (emphasis added)

   In the final report, this passage was changed to: "The weight of available epidemiological evidence supports a **determination of causality**. Biological mechanisms for this effect, while not completely understood, are **supportive of this determination**." (emphasis added)

   Why did OIRA alter this section to reflect more certainty in this association? What was the scientific basis for making this change?

5. EPA has acknowledged that its RIAs assume a causal association between $PM_{2.5}$ exposure and premature mortality and that "[i]f the PM/mortality relationship is not causal, it would lead to a significant overestimation of net benefits."[35]

   a. What steps have been taken by EPA in RIAs to reflect uncertainty in making this assumption of causality?

---

[32] http://georgewbush-whitehouse.archives.gov/omb/inforeg/epa_pm_research_prompt120401.html.
[33] Sunstein, *The Cost-Benefit State: The Future of Regulatory Protection* (American Bar Association, 2002), pg. 126.
[34] OIRA Report to Congress, see footnote 19 of the report, pg. 16-17.
[35] EPA, *The Benefits and Costs of the Clean Air Act from 1990 to 2020*, March 2011, pg. 5-40.

b. EPA typically relies on only two studies to extrapolate $PM_{2.5}$ -mortality associations,[36] ignoring a large body of peer-review literature that indicates different results.[37] Is this practice consistent with the President's requirement to develop regulations based on the best available science? In reviewing EPA assertions regarding $PM_{2.5}$ and mortality, does OIRA consider the best available peer-reviewed science? If not, why not? If so, what is this body of science and what does it conclude regarding $PM_{2.5}$ and mortality?

c. What is the appropriate threshold for an assumption of causality between a pollutant and an individual health outcome?

D. Questionable "Value of a Statistical Life" Assumptions

EPA bases its economic benefit estimates on the "Value of a Statistical Life" (VSL), which is generated from willingness to pay surveys conducted decades ago. You have described these willingness to pay surveys as an "especially crude" proxy for welfare.[38]

1. Is EPA's VSL identical to the figure used by other federal agencies? If not, how is it different, and why?

2. As commentators on the CSAPR rule noted: "EPA's estimate for the value of a reduction in the risk of premature mortality was developed in the 1990s based on… literature available circa 1990."[39] You characterized the proposed reconsideration of the 2008 ozone NAAQS as being "based on evidence that is no longer the most current" in violation of E.O. 13563.[40] Is EPA's calculation subject to your interpretation of "evidence that is no longer the most current" in violation of E.O. 13563?

3. EPA's VSL has not been updated or discounted in light of our ongoing economic problems. As you noted in 2003, "[w]illingness to pay is dependent on ability to pay,"[41] suggesting that economic issues could substantially diminish EPA's estimated health-based benefits. Has OIRA recommended that EPA or other agencies evaluate VSL in light of economic conditions? If not, why not?

4. You have stated that "it makes a great deal of sense to focus on statistical life-years rather than statistical lives."[42] In spite of the fact that most mortality associated with $PM_{2.5}$ happens in the population over 65 years of age, EPA puts the same value on mortality for all ages.[43] In your view, is this practice appropriate?

---

[36] Laden, et al., "Reduction in Fine Particulate Air Pollution and Mortality," *American Journal of Respiratory and Critical Care Medicine*, 2006; Pope, et al., "Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution," *Journal of the American Medical Association*, 2002.

[37] See: James Enstrom et al., "Fine particulate matter air pollution and total mortality among elderly Californians, 1973-2002," Inhalation Toxicology, 2005; Fred Lipfert et al., "$PM_{2.5}$ constituents and related air quality variables as predictors of survival in a cohort of U.S. military veterans," Inhalation Toxicology, 2006; Beelen et al., "Long-term effects of traffic-related air pollution on morality in a Dutch cohort (NLCS-Air Study)," Environmental Health Perspectives, 2008.

[38] Sunstein, "Lives, Life-Years, and Willingness to Pay," University of Chicago Law and Economics Working Paper No. 191, July 2003, pg. 13.

[39] Fraas, pg. 30.

[40] http://www.whitehouse.gov/sites/default/files/ozone_national_ambient_air_quality_standards_letter.pdf.

[41] Sunstein, "Lives, Life-Years, and Willingness to Pay," pg. 21.

[42] Ibid., pg. 30.

[43] Fraas, pg. 30.

III. Secret Science

A. Lack of Transparency

RIAs for EPA's proposed ozone reconsideration, Utility MACT, CSAPR, and other major CAA rules have relied heavily on two studies to find a correlation between $PM_{2.5}$ and premature death.[44] In turn, these analyses, which were funded by EPA and the National Institute of Environmental Health Scientists, rely exclusively on data sets that are not transparent and not available to other researchers. To be clear, these studies are often the only sources for health effects offered by EPA staff in CAA RIAs, and it is only with the inclusion of these $PM_{2.5}$-related premature death estimates that many of these rules pass a basic cost-benefit test.

1. Is this practice consistent with:

   a. E.O. 13563, which requires that regulations "must be based on the best **available** science"?

   b. The goals of Public Law 105-277, which sought to require that "all data produced under an award will be made available to the public…"?

   c. OMB Circular A-4 on Regulatory Analysis, which states that "[a] good analysis is transparent and your results must be reproducible"?

2. You recently cited the President's approach to data transparency and stated: "In these ways, the President suggested that transparency can serve as a **disinfectant**; provide **data** for citizens to find and use; and ensure that institutions benefit from the **dispersed knowledge** of Americans. Taken as a whole, these points suggest that if regulation is to be empirically informed, it must be in large part because of the knowledge and participation of the American people."[45] (emphasis in original).

   Is EPA's practice of justifying numerous multi-billion dollar regulations on data that is not publicly available consistent with the President's approach to data transparency?

3. EPA has failed to respond to Chairman Harris' September 22 request for data transparency in EPA's benefits analyses. As OIRA oversees E.O. 13563 (which requires that regulations "must be based on the best available science") and the enforcement of OMB guidelines resulting from P.L. 105-277, please provide (or require EPA to provide) all original data and analysis for the following studies that are used to justify EPA's CAA rules:

   a. The Cancer Prevention Study I compiled by the American Cancer Society.
   b. The Cancer Prevention Study II compiled by the American Cancer Society.
   c. The Harvard Six Cities Study.
   d. The Nurses' Health Study and Nurses' Health Study II.

[44] See Appendix A for a complete list of recent of CAA rules that rely primarily on $PM_{2.5}$ co-benefits.
[45] Sunstein, "Humanizing Cost-Benefit Analysis."

B. Peer Review

As a result of the recently-released report from EPA's Inspector General, "Procedural Review of EPA's Greenhouse Gases Endangerment Finding Data Quality Processes,"[46] important questions have been raised about EPA's approach to peer review and its consistency with both OMB's Final Information Quality Bulletin for Peer Review ("OMB Bulletin")[47] and the third edition of EPA's Peer Review Handbook.

1. Do you agree with the IG conclusion that EPA's "review did not meet all OMB requirements for peer review"? If not, why not? If so, what guidance, oversight, and enforcement is OIRA providing EPA with respect to its compliance with OMB peer review requirements?

2. The OMB Bulletin requires that "Each agency shall prepare an annual report that summarizes key decisions made pursuant to this Bulletin." However, EPA has not made public an Annual Peer Review Report since fiscal year 2009.[48] What steps has OIRA taken to ensure timely compliance with the transparency requirements of the OMB Bulletin?

3. The OMB Bulletin "establishes minimum standards for when peer review is required for scientific information" and "covers original data and formal analytic models used by agencies in Regulatory Impact Analyses." The OMB Bulletin also deems scientific assessments associated with regulations that could have a potential impact of more than $500 million in any one year as "highly influential" and thus subject to rigorous peer review requirements. However, the Administration has refused to categorize the scientific assessments associated with its endangerment finding and $PM_{2.5}$–mortality conclusions—which are directly being used to justify regulations costing into the many billions of dollars—as "influential" or "highly influential." Please explain how this categorization is compliant with the OMB Bulletin, and describe specific OIRA guidance, oversight, and enforcement efforts in support of its peer review requirements.

4. The IG Report highlighted that "EPA's guidance for assessing the quality of externally generated information does not provide procedures or steps for assessing outside data or requirements for documenting such analysis." In light of these concerns about EPA's inability to incorporate externally-generated information, what peer review guidelines has the Agency followed in utilizing these outside assessments of non-peer reviewed data for $PM_{2.5}$-mortality associations?

C. Lessons from the Ozone Reconsideration

1. You urged Administrator Jackson to drop her reconsideration of the 2008 ozone NAAQS because the new standard would be "based on evidence that is no longer the most current" and in violation of E.O. 13563.

   The data underlying $PM_{2.5}$ -premature mortality associations is primarily based on surveys conducted in the 1980s, while several more recent cohort studies go uncited in EPA's RIAs. Why have the Utility MACT and other $PM_{2.5}$ -dependent rules not been held to the same interpretation of E.O. 13563 by OIRA?

---

[46] EPA Inspector General, "Procedural Review of EPA's Greenhouse Gases Endangerment Finding Data Quality Processes," Report No. 11-P-0702, September 26, 2011, http://www.epa.gov/oig/reports/2011/20110926-11-P-0702.pdf.

[47] http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2005/m05-03.pdf.

[48] Available at: http://cfpub.epa.gov/si/si_public_pr_agenda.cfm.

2. In your letter to Administrator Jackson, you also stated that "issuing a final rule in late 2011 would be problematic in view of the fact that a new assessment, and potentially new standards, will be developed in the relatively near future."

   CSAPR attempts to achieve existing particulate matter and ozone standards. These standards will soon be changed, resulting in the need for a new transport rule in the relatively near future. Please explain how the final Cross-State rule (which, despite initial compliance requirements on January 1, 2012, is undergoing a series of "technical adjustments" by EPA to state emissions budgets) was not required to meet the same standard that OIRA applied to the ozone reconsideration.

Please provide written responses by December 6, 2011. If you have any questions regarding this request, please contact Clint Woods of the Subcommittee on Energy and Environment staff at (202) 225-8844.

Sincerely,

Rep. Andy Harris, MD
Chairman
Energy & Environment Subcommittee

Rep. Paul Broun, MD
Chairman
Investigations & Oversight Subcommittee

cc: Rep. Ralph Hall
Chairman

Rep. Eddie Bernice Johnson
Ranking Member

Rep. Brad Miller
Ranking Member
Subcommittee on Energy and Environment

Rep. Paul Tonko
Ranking Member
Subcommittee on Investigations and Oversight

Administrator Lisa Jackson
U.S. Environmental Protection Agency

Enclosure: CRS Memorandum

Appendix A

Congressional Research Service

MEMORANDUM October 5, 2011

To: House Committee on Science, Space, and Technology
Subcommittee on Energy and Environment
Attention: Clint Woods

From: James E. McCarthy
Specialist in Environmental Policy
7-7225, jmccarthy@crs.loc.gov

Subject: **Benefits of Clean Air Act Regulations**

This memorandum responds to your request that CRS review EPA Clean Air Act regulations proposed or promulgated since 2004. You asked us to provide a list of the rules within that time period for which the Regulatory Impact Analysis claimed that a majority of the monetized benefits were related to health effects or premature mortality associated with reductions of particulate matter.

According to the Office of Management and Budget, EPA proposed or promulgated 75 economically significant Clean Air Act rules from January 2004 through August 2011. Many of these rules were duplicates (e.g., a proposed version and final version of the same rule) or represented procedural steps in implementing rules already promulgated (e.g., the 2004 implementation rule for the 1997 National Ambient Air Quality Standard for ozone). After eliminating such rules, CRS identified 31 distinct Clean Air Act rules that were proposed or promulgated in the relevant period (**Table 1**). There is still some duplication: as you requested, if a rule promulgated since 2004 was vacated and/or remanded to EPA by a court, we included both the original rule and any subsequent proposal or promulgation of a replacement.

Limitations of the Data

EPA prepared Regulatory Impact Analyses (RIAs) for all of these rules, but often it did not monetize some or any of the benefits. In the 2004 rule setting standards for hazardous air pollutant emissions from the plywood and composite wood products industry, for example, the RIA did not monetize any benefits. The analysis stated: "The Agency is unable to monetize the benefits from the HAP [Hazardous Air Pollutant], VOC [Volatile Organic Compound], and CO [Carbon Monoxide] emissions reductions due to lack of credible data for assigning a benefits value to these reductions."[1]

In other cases, the RIAs do monetize some benefits, but often they don't quantify the benefits of controlling the emissions that were the primary target of the regulation. For example, the RIA that

[1] U.S. EPA, Regulatory Impact Analysis for the Plywood and Composite Wood Products NESHAP, Final Report, February 2004, p. ES-2, at http://www.epa.gov/ttnecas1/regdata/RIAs/pcwp-finalruleRIA.pdf.

accompanied the 2004 National Emission Standards for Hazardous Air Pollutants from Industrial, Commercial, and Institutional Boilers and Process Heaters (the "2004 Boiler MACT") estimated that there would be $16 billion of annual benefits due to reductions in sulfur dioxide and particulate matter. But it also stated:

> This analysis does not quantify the benefits associated with reductions in hazardous air pollutants (HAP). The magnitude of the unquantified benefits associated with omitted categories and pollutants, such as avoided cancer cases, damage to ecosystems, or materials damage to industrial equipment and national monuments, is not known.[2]

There are hundreds of air pollutants regulated by the Clean Air Act. For example, Congress directed EPA to set emission standards for sources of 187 hazardous air pollutants that are listed in the statute. Many of these are categories of pollutants rather than individual substances, so there are more than 187 pollutants to consider. Although there is research indicating that these pollutants are carcinogenic, mutagenic, teratogenic, neurotoxic, cause reproductive dysfunction, or are otherwise acutely or chronically toxic, in most cases, there are not data regarding the concentrations to which populations are exposed, or epidemiological data regarding illness or mortality associated with exposure to the individual pollutant. The agency proceeds with regulation because it was directed by the statute to do so, but it may not be able to quantify or monetize the benefits of regulating emissions of a specific substance.

Why the RIAs Focus on Particulates

The agency does, however, have an established, peer-reviewed methodology for estimating the benefits of reductions in emissions of particulate matter, which have been linked to increased mortality in numerous scientific studies. Most air pollutants are particulates, and most EPA air quality regulations reduce particulate emissions, either as the targeted pollutant, or as a co-benefit of reducing emissions of some other pollutant. As a result, the agency's RIAs have frequently found sizeable benefits associated with reductions in particulate matter emissions.

Defining "Particulates"

Particulate matter (also known as particle pollution, particulates, or PM) is a category of pollutants rather than a specific chemical. EPA identifies PM as "a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles."[3] Hazardous air pollutants, if not particles themselves, often adhere to particles in the emissions. Because PM includes so many different pollutants, many of the regulations targeting hazardous air pollutants rely on technologies that capture PM. Likewise, given the broad nature of particulate emissions, most of the available pollution control technologies

---

[2] U.S. EPA, *Regulatory Impact Analysis for the Industrial Boilers and Process Heaters NESHAP*, Final Report, February 2004, p. 10-1, at http://nepis.epa.gov/Exe/ZyNET.exe/P1003ASI.txt?ZyActionD=ZyDocument&Client=EPA&Index=2000%20Thru%202005&Docs=&Query=452R04002%20or%20epa%20or%20boiler%20or%20neshap%20or%20ria&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=pubnumber%5E%22452R04002%22&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=pubnumber&IntQFieldOp=1&ExtQFieldOp=1&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C00THRU05%5CTXT%5C00000019%5CP1003ASI.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=10&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p%7Cf&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=-1&ZyEntry=1.

[3] U.S. EPA, Office of Air and Radiation, "Particulate Matter," at http://www.epa.gov/pm/.

(scrubbers, fabric filters, electrostatic precipitators, carbon or other sorbent injection, use of catalysts, etc.) capture particulate emissions or PM precursors.[4]

How Benefits Are Monetized

Another reason that particulates play such an important role in RIAs is that they are linked to premature mortality. When premature mortality is avoided, the monetization of that benefit, using what is called "the value of a statistical life," generally overwhelms the value of all other benefits combined.[5]

The value of statistical lives saved is not without controversy. EPA has relied on this method of monetizing benefits for many years. The agency adopted guidelines under President Reagan that, in updated form, have guided its analyses since 1983. The guidelines were most recently updated in September 2000, and have been used in their current form throughout the Bush and Obama Administrations.[6]

Results

Table 1 identifies 31 RIAs conducted by EPA (or its contractors) between January 2004 and September 2011 for rules defined by EPA as economically significant. Of the 31 RIAs, three did not monetize benefits. In 21 of the remaining 28 analyses, reductions in particulate matter or its precursors accounted for more than half the monetized benefits. In four additional RIAs,[7] EPA produced ranges of benefits that showed PM benefits exceeding 50% of total monetized benefits for some or most, but not all combinations. The table identifies the rules, the dates on which they were proposed or promulgated, the estimated benefits, and whether or not PM accounted for more than 50% of the monetized amount.

I hope this information is useful. If I can be of further assistance, please feel free to call on me.

[4] The term "precursor" refers to a pollutant that reacts with other substances in the atmosphere to form another air pollutant. Sulfur dioxide (SO_2), for example, is a precursor of sulfate particles and sulfuric acid, both of which are considered particulates.

[5] Other benefits considered in Regulatory Impact Analyses include health benefits, such as the avoidance of nonfatal heart attacks, hospital and emergency room visits, cases of respiratory symptoms, cases of aggravated asthma, cases of chronic bronchitis, the number of days when people miss work, and the number of days when people must restrict their activities. Environmental effects, including improvements in visibility in national parks, reductions in damage to ecosystems and building materials, and improvements in fishing, agricultural yields, and forest productivity, are also frequently identified as benefits of a rule in RIAs.

[6] The value of a statistical life used by EPA was nearly $7.9 million in 2009. For additional information, see CRS Report R41140, *How Agencies Monetize "Statistical Lives" Expected to Be Saved By Regulations*, by Curtis W. Copeland.

[7] The four RIAs were those for the 2008 Ozone NAAQS Revision, the 2010 proposed reconsideration of that rule, the 2010 Lead NAAQS Revision, and the 2005 Clean Air Mercury Rule.

Table 1. Clean Air Act Rules and Particulate Matter, 2004-2011

(economically significant rules promulgated or proposed)

Date Proposed or Promulgated	Rule	Status	Estimated Benefits (annual unless noted)	PM Benefits > 50% of Total?
September 15, 2011	Greenhouse Gas Emission Standards for Medium- and Heavy-Duty Trucks	Final	$57 billion over lifetime of vehicles	No
August 23, 2011	Oil and Natural Gas Sector NSPS and NESHAP	Proposed	RIA did not monetize benefits	n.a.
August 8, 2011	Cross-State Air Pollution Rule	Final	$120-280 billion	Yes
May 3, 2011	Mercury and Air Toxics Standards (Utility MACT)	Proposed	$59-140 billion	Yes
March 21, 2011	Boiler MACT	Final, but stayed pending reconsideration	$22-54 billion	Yes
March 21, 2011	Area Source Boiler Rule	Final	$210-520 million	Yes
March 21, 2011	Commercial and Industrial Solid Waste Incinerator (CISWI) Rule	Final, but stayed pending reconsideration	$360-870 million	Yes
September 9, 2010	Portland Cement MACT	Final	$6.7-18 billion	Yes
August 20, 2010	NESHAP for Gasoline-Powered Stationary Engines (RICE Rule)	Final	$510 million - $1.2 billion	Yes
June 22, 2010	Sulfur Dioxide NAAQS Revision	Final	$15-37 billion	Yes
May 7, 2010	Light Duty Motor Vehicle GHG Rule	Final	$240 billion over lifetime of vehicles	No
April 30, 2010	Large Marine Engine Emission Standards	Final	EPA estimated benefits for a coordinated strategy to reduce ship emissions	Yes
March 26, 2010	Changes to Renewable Fuel Standard Program	Final	$13 – 26 billion	No
March 3, 2010	NESHAP for Diesel Stationary Engines (RICE Rule)	Final	$940 million - $2.3 billion	Yes
January 19, 2010	Ozone NAAQS Revision	Proposed (subsequently withdrawn)	$19-100 billion	RIA estimated overlapping ranges for ozone benefits and PM co-benefits

Date Proposed or Promulgated	Rule	Status	Estimated Benefits (annual unless noted)	PM Benefits > 50% of Total?
November 12, 2008	Lead NAAQS Revision	Final	$3.7-6.9 billion	RIA estimated ranges for lead benefits and PM co-benefits. PM benefits would exceed 50% of total benefits in some of the estimated range
October 8, 2008	Nonroad Gasoline Engines and Equipment	Final	$1.2 – 4.0 billion	Yes
May 6, 2008	Locomotives and Marine Diesel Engines	Final	$9.2 – 11 billion	Yes
April 30, 2008	NSPS for Petroleum Refineries	Final	$220 million - $1.9 billion	Yes
March 12, 2008	Ozone NAAQS Revision	Final	$2 – 19 billion	RIA estimated a range of 42% to 99% of benefits due to PM
February 26, 2007	Mobile Source Air Toxics	Final	$6 billion	Yes
September 21, 2006	PM NAAQS Revision	Final	$9 – 76 billion	Yes
July 11, 2006	Stationary Diesel Engine Standards	Final, but later revised due to court decisions	$1.36 billion	Yes
July 26, 2005	Clean Air Visibility Rule	Final	$50 billion	Yes
May 18, 2005	Clean Air Mercury Rule	Final, but later vacated by D.C. Circuit	$1.5 – 44 million	RIA estimated ranges for mercury benefits and PM co-benefits. PM benefits would exceed 50% of total benefits in most of the estimated range
May 12, 2005	Clean Air Interstate Rule (CAIR)	Final, but later remanded by D.C. Circuit	$101 billion	Yes
September 13, 2004	Boiler MACT	Final, but later vacated	$16 billion	Yes
July 30, 2004	Plywood and Composite Wood Products	Final	RIA did not monetize benefits	n.a.

Date Proposed or Promulgated	Rule	Status	Estimated Benefits (annual unless noted)	PM Benefits > 50% of Total?
June 29, 2004	Nonroad Diesel Engines and Fuel	Final	$43 – 81 billion	Yes
June 15, 2004	NESHAP for Stationary Engines	Final, but later revised due to court decisions	$280 million	Yes
April 26, 2004	NESHAP for Surface Coating of Autos and Light Duty Trucks	Final	RIA did not monetize benefits	n.a.

Source: Compiled by CRS from *Federal Register* notices, the Office of Information and Regulatory Affairs (OMB) website, and U.S. EPA RIAs. Listing excludes proposed rules if the rules were finalized during the period, as well as rules that implemented or modified rules already promulgated.

Notes: NESHAP = National Emission Standards for Hazardous Air Pollutants (generally MACT); MACT = Maximum Achievable Control Technology; NSPS = New Source Performance Standards; NAAQS = National Ambient Air Quality Standards