

QUESTIONS FOR THE RECORD
The Honorable Jim Bridenstine (R-OK)
U.S. House Committee on Science, Space, and Technology

EPA Regulatory Overreach: Impacts on American Competitiveness

Friday, June 19, 2015

Questions for Mr. Bill Kovacs

- 1. The GAO released a report on EPA’s need to improve procedures to process Congressional requests for scientific advice. Do you think the EPA should immediately ask the Clean Air Scientific Advisory Committee (CASAC) to provide advice on adverse social, economic, or energy effects related to the proposed ozone National Ambient Air Quality Standards (NAAQS), and wait for its findings, before issuing any recommendations to tighten existing standards?**

Yes. Ideally, EPA should ask CASAC to evaluate the adverse social, economic, and energy effects associated with a more stringent ozone NAAQS standard *before* any final action is taken by EPA to tighten the standard. EPA should put itself in a better position to evaluate the anticipated adverse impacts of a tightened standard—including threats to electricity grid reliability and economic impacts to smaller communities—before it issues a tougher standard.

EPA certainly needs to ask CASAC for this information before taking any action to classify attainment/nonattainment areas across the country based on a revised standard or implement a revised standard. EPA needs to ensure that a CASAC panel with appropriate expertise reviews social, economic, and energy impact issues before requiring implementation action. The CASAC panel should consider whether the more stringent standard is achievable and feasible, whether individual areas can actually come into attainment, and the magnitude of background levels of ozone from non-anthropogenic and overseas sources.

- 2. Do you think that CASAC should be looking at the health impacts of unemployment from job loss resulting from EPA regulations? Isn’t this an important public health issue that should be addressed?**

Yes, absolutely. There are numerous U.S. and international studies describing the health impacts from unemployment, including depression, alcoholism/drug abuse, spousal/child abuse and neglect, and suicide. CASAC should evaluate these studies and compare their findings to observed demographic trends in regions that have experienced large, rapid increases in unemployment in recent years (e.g., rural areas in the Pacific Northwest, areas in Eastern Kentucky and West Virginia). In some areas, CASAC is likely to find that adverse health

impacts from job losses far outweigh any presumed health benefits from more stringent air quality requirements.

- 3. In your testimony, you discuss how EPA has failed to utilize the Information Quality Act (IQA). This is especially troubling, since EPA regulations are so costly to the average American. According to a NERA study, the ozone proposed rule could be the costliest rule ever. Regarding this proposed ozone rule, did the EPA properly utilize the IQA and have they been selective in their interpretation of IQA? Please explain.**

As I stated in my testimony, the IQA mandates transparency, full disclosure of all data and reports used to justify or formulate an agency's position on a given topic, and full disclosure of all uncertainties or error sources so that a member of the public may evaluate and reproduce the results of an agency analysis or study. The IQA requires agencies to use the best available, peer-reviewed science, studies developed through objective scientific practices, and data collected by accepted methods or best available methods. Agencies must also have a procedure to allow affected persons to "seek and obtain" correction or disclosure of information that fails to meet the Office of Management and Budget's information quality requirements.

In the case of the proposed ozone NAAQS revision, critical information quality issues remain unresolved, which EPA has failed to address. First and foremost, by EPA's own estimates, about **65%** of the costs of attaining a 65 ppb ozone standard are based on wholly **unknown** control technologies. Beyond the question of the quality of EPA's data about control technologies is the much larger problem that the technologies themselves are unknown. How can the public understand and meaningfully comment on critical components of a rulemaking for which there is no data whatsoever?

Beyond this threshold issue, other relevant data quality issues that were raised by stakeholders during the abandoned 2010-2011 effort to tighten the 2008 ozone NAAQS standard have not been resolved. These data quality issues include concerns about the way that health effects studies were selected or discarded, lack of impartiality on the part of researchers, the role of confounding variables, assertions of causation supported only by inadequate data showing weak associations, and monetized health benefit estimates based on wholly subjective factors. All of these issues remain, and EPA has not corrected poor quality data brought to its attention through the IQA petition process.

- 4. In your testimony, you discuss how EPA has failed to utilize the Information Quality Act (IQA). This is especially troubling, since EPA regulations are so costly to the average American. According to a NERA study, the ozone proposed rule could be the costliest rule ever. Regarding this proposed ozone rule, did the EPA properly utilize the IQA and have they been selective in their interpretation of IQA? Please explain.**

See answer to Question 3 above.

- 5. In your testimony, you describe the lack of EPA’s continuous evaluation of employment impacts of its regulations as prescribed by the Clean Air Act. EPA’s disregard for Congressional mandated review is particularly troubling in the face of these expensive regulations.**
- a. Do you believe that EPA is purposefully disregarding its duty to conduct this review?**

While the Chamber does not know EPA’s intent, we know that the Senate put the Administrator of the EPA on clear notice of the agency’s congressional mandate to implement Section 321(a). Congress in 1977 mandated in every major environmental statute that EPA “continuously evaluate potential loss or shifts in employment” from its regulations in order to gauge the real regulatory impact on individuals and communities. With good intentions, Congress passed broad and remedial environmental laws such as the Clean Air Act. Congress acknowledged that in exchange for allowing environmental standards to be set without regard to cost impacts, the agency must continuously evaluate the overall impact of the growing body of environmental requirements on loss or shifts in employment due to its regulations . In *Whitman v. American Trucking Association*, Justice Scalia, writing for a near-unanimous opinion, observed:¹

In particular, the economic cost of implementing a very stringent standard might produce health losses sufficient to offset the health gains achieved in cleaning the air—for example, by closing down whole industries and thereby impoverishing the workers and consumers dependent upon those industries. This is unquestionably true and Congress was unquestionably aware of it.

As part of the 1977 Clean Air Act amendments, Congress enacted Section 321(a) of the Clean Air Act, which mandates EPA to conduct a continuous evaluation of potential job loss and shifts in employment from the agency’s air quality rules.² EPA has ignored its statutory duty to conduct these employment analyses since 1977. For years, members of Congress and the Chamber have put EPA on notice of its duty to comply with Section 321(a), yet the agency continues to ignore its statutory mandate to conduct employment reviews.

On October 13, 2009, six U.S. Senators wrote to EPA requesting the results of its continuing Section 321(a) evaluation of potential loss or shifts of employment which may result from the suite of regulations addressing greenhouse gases EPA had proposed or finalized.³ On October 26, 2009, then-EPA Assistant Administrator for Air, Gina McCarthy, responded to the

¹ *Whitman v. Am. Trucking Ass’ns*, 531, U.S. 457, 466 (2001).

² Section 321(a) of the Clean Air Act; 42 U.S.C. § 7621

³ Letter from Senators Vitter, Risch, Johanns, Inhofe, Ensign and Hatch to EPA Administrator Lisa Jackson, October 13, 2009.

six Senators stating “EPA has not interpreted CAA section 321 to require EPA to conduct employment investigations in taking regulatory actions.”⁴

In 2013, McCarthy, responding to questions for the record related to her nomination to become Administrator of the EPA, once again echoed her 2009 letter stating:⁵

CAA section 321 authorizes the Administrator to investigate, report and make recommendations regarding employer or employee allegations that requirements under the Clean Air Act will adversely affect employment. In keeping with Congressional intent, EPA has not interpreted this provision to require EPA to conduct employment investigations in taking regulatory actions. Section 321 was instead intended to protect employees in individual companies by providing a mechanism for EPA to investigate allegations that specific requirements, including enforcement actions, as applied to those individual companies, would result in lay-offs. EPA has found no records indicating that any Administration since 1977 has interpreted section 321 to require job impacts analysis for rulemaking actions....

EPA Administrator McCarthy’s interpretation of the supposed Congressional intent that Section 321(a) is merely a discretionary duty is not in line with the House Interstate and Foreign Committee’s report which made clear⁶:

Under [Section 321(a)], the Administrator *is mandated to undertake an ongoing* evaluation of job losses and employment shifts due to requirements of the act. This *is to include* investigations of threatened plant closures or reductions in employment which are alleged to have occurred because of such requirements.

The Chamber has also worked vigorously to hold the EPA accountable to its Section 321(a) mandate. On September 14, 2012, the Chamber issued a FOIA request to EPA requesting all draft, interim final, and final reports as well as evaluations prepared by the agency or its contractors pursuant to Section 321(a).⁷ It took EPA nine months to respond that it could not locate any such documents.⁸

A debate that started four decades ago when Congress directly mandated a study of the employment effects of regulations so as to determine the truth of conflicting allegations about whether regulations adversely impact jobs is still unresolved due to the refusal of the agency to conduct such an evaluation. Despite being placed on notice of its statutory mandate to conduct employment reviews under Section 321(a) by members of Congress, EPA continues to promulgate sweeping and costly major rules such as the CPP and stricter ozone standards while

⁴ Letter from EPA Assistant Administrator for Air Gina McCarthy to Senator Inhofe (Oct. 26, 2009) at 2.

⁵ *Senator David Vitter, Questions for the Record, Gina McCarthy Confirmation Hearing, Environment and Public Works Committee, 113th Cong. 17-18 (2013).*

⁶ H.R. Rep. No. 95-317 (1977). (emphasis added).

⁷ Letter from William Kovacs to EPA (Sept. 14, 2012).

⁸ Letter from EPA to William Kovacs (June 14, 2013).

denying Congress the vital employment impact information the legislative branch needs to make policy assessments related to the Clean Air Act.

b. What can be done to get EPA to provide us as Congress with this information?

Private parties have engaged in litigation to hold EPA accountable for failing to conduct Section 321(a) reviews. For example, Murray Energy Company has brought suit in federal court seeking declaratory and injunctive relief for EPA's failure to conduct an employment effects review pursuant to Section 321(a) in the context of regulations which are negatively impacting the coal industry. In rejecting the EPA's motion to dismiss the case, the U.S. District Court for the Northern District of West Virginia found that the requirement to perform the "continuing evaluations" was not a discretionary provision that EPA could freely ignore.⁹ The court's decision to allow the 321(a) employment impacts case to continue is a critical next step in forcing EPA to own up to the real impacts its regulations have on industries like coal, power generation, brickmakers, foundries, forest products manufacturers, and many others.

6. EPA Administration Gina McCarthy wrote an op-ed stating that the Agency's air standards "attract new business, new investment and new jobs." Do you agree with this statement? This might sound like a good political statement, but is it a correct economic statement?

The Chamber's members do not consider new regulations to be a job creation mechanism. On the contrary, while regulatory compliance may create some new jobs, the jobs lost due to regulation, when fully measured by whole economy modeling, will almost always outweigh those gained. In 2013 the Chamber released a study on regulatory job loss analysis conducted by the EPA.¹⁰ First, it is important to note that EPA rarely performs a comprehensive type of analysis using a whole economy model of jobs impacts in its rulemakings, doing so on only 2 out of 56 cases examined (see chart on page 7). In all other cases EPA performed job loss analysis using only a limited model and a job creation formula clearly inappropriate for most of the rules where EPA used it. Congress tasked the agency to perform ongoing analyses of job displacement in Section 321(a) of the Clean Air Act (CAA) and provide that information to Congress. To date, the agency has never performed its duties under Section 321(a).

Secondly, the Chamber study of job impact analyses, using EPA data, demonstrated exactly why EPA's claims that regulations create jobs are incorrect. In performing job impact analyses the few times it did, EPA used an inappropriate modeling framework, looking only at a

⁹ Murray Energy Corp. v. McCarthy, No. 5: 14-CV-39, 2014 U.S. Dist. LEXIS 129196 (N.D. W. Va. Sept. 16, 2014).

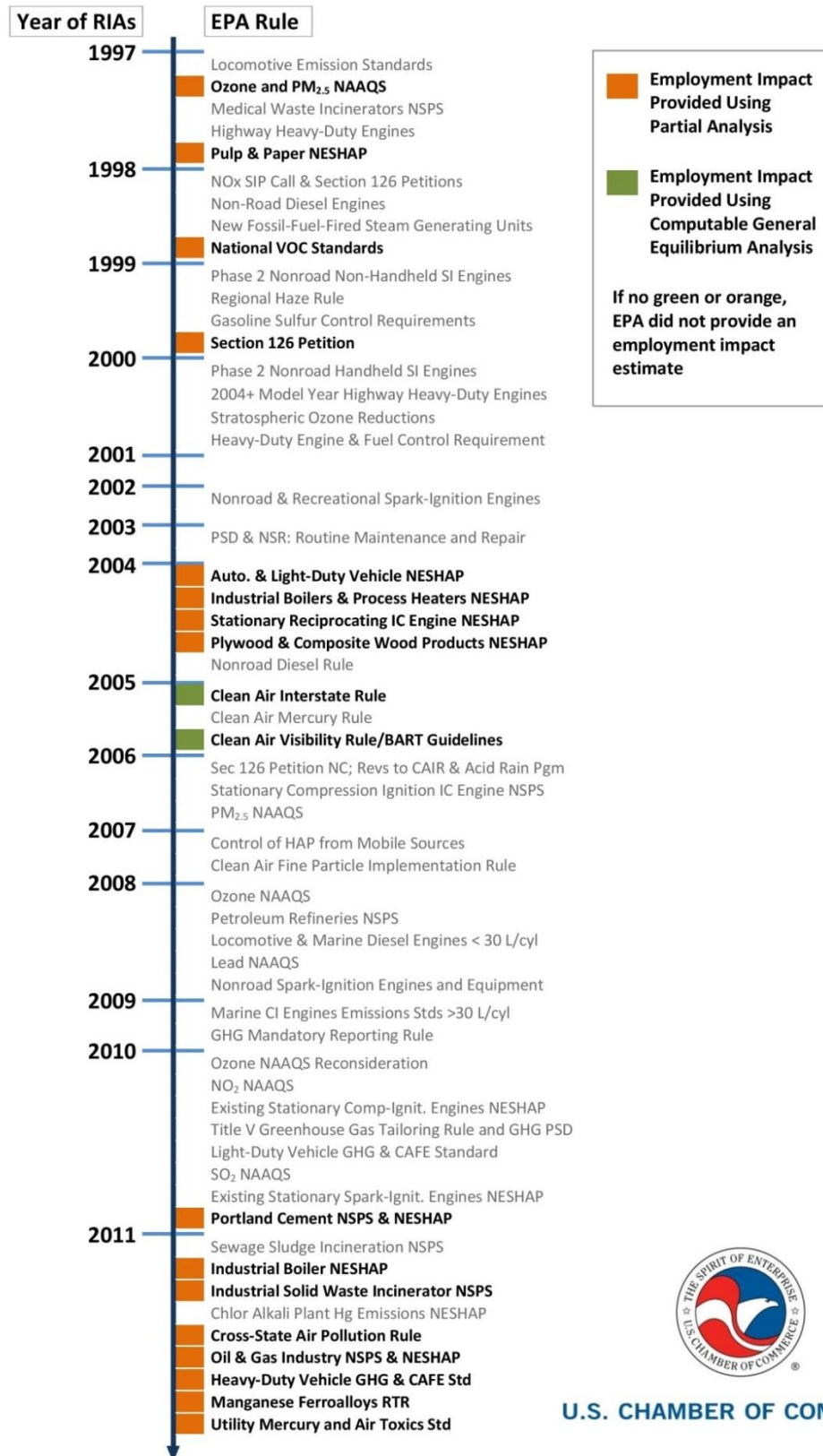
¹⁰ U.S. Chamber of Commerce, *Impacts of Regulations on Employment: Examining EPA's Oft-Repeated Claims that Regulations Create Jobs*, 2013. See <https://www.uschamber.com/report/impacts-regulations-employment-examining-epa-s-oft-repeated-claims-regulations-create-jobs>.

limited sample of impacts and ignoring impacts on other sectors of the economy. This type of model is referred to as a “partial economy model,” in contrast with a whole economy model, which attempts to model the entire economy and account for impacts across all industries, such as electric power utilities, the mining of fuel for electricity generation, manufacturing, transportation, and retail and wholesale sales. The benchmark case that the report uses to demonstrate how different the job impact results can be when a more comprehensive and appropriate whole economy model is used estimates job losses from the Mercury and Air Toxics Standard (MATS). EPA estimated that the costly, \$10 billion per year rule would create a net 8,000 jobs in 2015, while estimation using a whole economy model that examines all of the impacts of the regulation showed that compliance with the rule would cause 180,000 job losses in 2015.¹¹

In light of the vast differences in estimates of regulatory impacts based on which type of model is used, it becomes even more imperative that agency regulatory analysis be held to high standards. All data used in analyses of costs and benefits should be made available to the public for review so that if need be the quality of the data and analysis can be challenged under the provisions of the Information Quality Act.

¹¹ *Id.* at 29.

Timeline of Air Regulatory Impact Analyses Found to Contain Employment Impact Estimates



U.S. CHAMBER OF COMMERCE

7. How much of the negative impact of environmental policies on economic growth is related to delays in permit approvals and construction versus higher production and manufacturing costs?

- a. A recent US Chamber study, *Project No Project*, found that permit delays can result in hundreds of billions of dollars in lost income. Why is delay so costly?**

Delay is costly because major projects require significant financing, which is typically only available for a limited amount of time. If a project cannot secure its permits, the project's financing usually goes elsewhere, to productive uses. No one has calculated exactly what the costs of delay are to the businesses whose projects languish year after year, tying up valuable capital resources, while producing no returns. The U.S. Chamber of Commerce's 2011 study *Project No Project* found that a sample of 351 energy generation and transmission projects with stalled permits would generate \$577 billion in direct investment, add \$1.1 trillion to GDP, and create about 1.9 million jobs over the seven year construction timetable typical of these projects. After completion, these projects would add \$145 billion to GDP annually and generate 791,000 jobs.¹² Interestingly, nearly half of the stalled projects were renewable energy projects, mostly wind. The EPA's Clean Power Plan (CPP) regulation, designed to retire coal-powered electric generation and replace it with gas and renewable sources, relies on numerous new generation projects being undertaken in the coming years. In the current permitting environment, this would be nearly impossible and add significant costs to each of these projects.

- b. How do environmental regulations, such as MATS, WOTUS and ozone cause delays?**

When federal regulatory agencies like the EPA estimate the cost of a new regulation, they are estimating the compliance cost of achieving exactly, and only, what the rule prescribes as necessary actions to mitigate pollution emissions. These costs include the higher production and manufacturing costs brought about by the need to install new equipment or change manufacturing processes, but not the permitting costs or the delays caused by the permitting process. When businesses choose to undertake large investment projects, such as a new electric power generation facility, they must budget the cost of that expansion into their plans. Once the decision is made to move forward with a project, the capital flows required to finance it are tied up and cannot be used for other projects. Thus, because project delays due to the permitting process effectively freeze the project development process, each stalled project represents capital that has been taken out of the economy and left on the sidelines. If the project was allowed to go forward, the investment expenditure of the project would be counted in GDP, and jobs would be

¹² U.S. Chamber of Commerce, [*Project No Project Progress Denied: A Study on the Potential Economic Impact of Permitting Challenges Facing Proposed Energy Projects*](#), 2011.

created that paid workers who would also increase their expenditures and contribute to GDP. Project delays are the equivalent of a penalty box for investment capital, taken out of circulation rather than contributing to the economy.

c. What effect can uncertainty have on the capital investment necessary to expand the economy?

The costs of project delays are missing from the cost-benefit calculations of regulations, and as such they are one source of business complaints that cost-benefit analyses consistently underestimate the true costs of regulations. Agencies like the EPA maintain that the permitting process is separate from the regulations being promulgated, and as such the costs of permits should not be considered as regulatory burdens in a rule's cost-benefit analysis. However, this is incorrect. The WOTUS rule, for instance, increases the number of permits that will be required under the CWA dramatically. This increases the number of project delays caused by the new necessary permits. In its economic analysis, EPA estimated the costs of the WOTUS rule simply by looking at the paperwork burden of the permitting process and considering some project mitigation costs. It is likely that the cost to businesses of project delays, many of which drag on for years, will be far greater than the cost of obtaining additional permits. The same is true of the Ozone NAAQS rule, which will make it significantly harder for businesses to obtain permits in ozone non-attainment areas, which will expand dramatically when EPA lowers the standard.

8. Some of the studies cited by EPA in claiming minimal impacts on employment assume workers from one industry can simply relocate and almost instantaneously acquire the necessary skills for another industry. What are they so-called frictions on the movement of labor in the economy that undermine these claims of no-effect on employment?

EPA routinely assumes that regulations create jobs, and that workers displaced by its costly regulations can easily adjust. However, adjustment is seldom easy for displaced workers. When, for instance, a manufacturing plant shuts down, the workers who relied on those jobs are often out of work for extended periods of time, and seldom ever regain employment at the compensation they enjoyed in manufacturing. This happens for two reasons. First, often these manufacturing jobs are located in small communities that, once a plant shuts down, have no equivalent jobs to replace those lost.

Second, there is a significant mismatch of needed skills between the manufacturing workers and those in the industries EPA trumpets as sources of regulatory job creation. Most of the newly-created jobs are in regulatory compliance industries, such as environmental engineers and attorneys, in industries that build or install pollution control equipment, or in industries that rely on heavy government subsidies to operate. Either way, the skills required are in most cases significantly different than those needed by a factory worker.

As a consequence, older manufacturing workers who lose their jobs typically have a difficult time finding employment with equivalent salary ranges and benefits. For instance, according to the Bureau of Labor Statistics' Displaced Worker Survey, as of January 2012, workers aged 60 or more that were displaced from employment between 2009 and 2011 and were able to find new jobs earned more than 20% less than they did in their previous job.¹³

In 2013, in testimony before the Joint Economic Committee, Michael Greenstone, formerly on President Obama's Council of Economic Advisors, summarized the results of his academic work on the topic of job loss due to regulation. "Some of my recent research finds that an important set of Clean Air Act rules has raised polluting industries' costs of production by roughly 2.6%," he said. "This has reduced firms' profits and led to higher prices for consumers. Further, it has caused regulated firms to scale back their operations, which led to employment losses at those firms."¹⁴ Additionally, Reed Walker studied the impact of the Clean Air Act on unemployment.¹⁵ Workers in newly regulated plants experienced more than \$9 billion in foregone earnings for the years after the change in policy. Most of these impacts are driven by non-employment and lower earnings in future employment, while the compensation of workers who remain with their firm did not change. Clearly, the data shows that regulations destroy jobs, not create them, and that workers who lose their job due to regulation suffer from that loss for the remainder of their working lives.

¹³ U.S. Chamber of Commerce, *Impacts of Regulations on Employment: Examining EPA's Oft-Repeated Claims that Regulations Create Jobs*, 2013. See <https://www.uschamber.com/report/impacts-regulations-employment-examining-epa-s-oft-repeated-claims-regulations-create-jobs>.

¹⁴ Michael Greenstone. June 26, 2013. Hearing: Eliminating Unnecessary Red Tape through Smarter Regulation. Joint Economic Committee. U.S. Congress.

¹⁵ Reed Walker. 2012. The Transitional Costs of Sectoral Reallocation: Evidence from the Clean Air Act and the Workforce. US Census Bureau Center for Economic Studies Paper No. CES-WP- 12-02. Available at SSRN: <http://ssrn.com/abstract=2000069> or <http://dx.doi.org/10.2139/ssrn.2000069>

QUESTIONS FOR THE RECORD
The Honorable Brian Babin (R-TX)
U.S. House Committee on Science, Space, and Technology

EPA Regulatory Overreach: Impacts on American Competitiveness

Friday, June 19, 2015

Questions for Mr. Bill Kovacs

- 1. EPA estimates, rather conservatively, that is proposed ozone rule will impose an annual cost of between \$4.7 and \$16.6 billion in 2025. However, in producing these estimates, EPA excludes the cost of meeting the current 2008 standard. Isn't it true that many areas are still struggling to meet the 2008 standards, and that the expected cost of meeting this standard is likely to be billions?**

It is in fact true that there are still several areas in the country that are trying to meet the 2008 ozone National Ambient Air Quality Standard (NAAQS), and some are still working to attain the 1997 ozone standard. With respect to the 2008 ozone NAAQS, the EPA only issued the final implementation guidelines for the standard in February of this year. Additionally, the EPA delayed making designations for the 2008 ozone NAAQS until 2012, while it made a failed attempt in 2010 to reconsider the 2008 standard.

All of these delays mean that many states are still trying to implement the 2008 ozone NAAQS – an important reason why the EPA should retain the current standard and hold off on making any revisions to lower the standard. For what still needs to be done to meet the 2008 ozone NAAQS, there almost certainly will be a significant amount of costs for states, businesses, consumers, etc. Most, if not all, of the “low-hanging fruit” controls – which typically are less expensive – have been implemented already, so what is left will be particularly costly, disruptive, burdensome and in some instances the applicable technologies are unknown.

- a. Would you agree that the true unrealized cost of meeting EPA's proposed ozone standards is actually much higher than the estimate EPA provides?**

Yes, it is important to note that the EPA's annual cost estimate for the proposed ozone rule – between \$4.7 and \$16.6 billion in 2025 – does not capture the reality of the costs of tightening the standard. Specifically, it only looks at the costs in 2025, failing to capture the costs that will be incurred in the next decade. That number also excludes any of the costs of other regulations, such as the Clean Power Plan, the Utility MACT rule, and fuel efficiency standards for mobile sources – all of which the EPA is counting on being implemented and reducing emissions in order to limit the number of counties that will be in nonattainment in 2025.

Additionally, in terms of a compliance path for the proposed 65 ppb ozone standard, the EPA has been able to identify only 35% of the control technologies needed to meet the standard. That means that nearly 65% of the technologies that will be needed to meet a 65 ppb ozone standard do not currently exist, or are “unknown controls.” In looking at costs, the EPA assigned a flat value of \$15,000 per ton for these unknown controls, and applied that amount across the board. This approach is unrealistic for a couple of reasons. First, many of the “known controls” for ozone do not cost much less than \$15,000 per ton in terms of emissions reductions, so it only makes sense that technologies that do not currently exist are going to exceed \$15,000 per ton. Second, control technologies typically get more expensive as more reductions are required so the EPA’s assumption of a flat per ton value for unknown controls is improbable and unworkable.

- 2. By estimating annual costs in only one year, 2025, EPA also appears to be underestimating the true costs cities and states will feel in the first ten years of the program. For instance, instead of just nine counties projected to be out of attainment in 2025, EPA acknowledges that close to 350 counties will fail to meet at 70 ppb standard based on current air quality data. What will happen to most of these counties when the new standard is issued?**
 - a. Won’t many of these counties likely be classified as nonattainment in 2017 or 2018 and forced to install controls?**
 - b. Wouldn’t you expect the annual costs in these earlier years to be much higher than EPA estimates for 2025?**

When the new standard is issued, EPA will use emissions monitoring data for ozone to determine which counties are not in attainment. This non-attainment determination may happen as early as 2017, but will certainly happen during the 2017-2025 time period for virtually all counties. This means that any counties that are able to come into attainment between 2017 and 2025 will have costs that were never estimated by EPA. It is therefore likely that the costs in the earlier years, 2017-2025, will be higher than those EPA estimates in 2025.

However, the early attainment counties are most likely not the most significant error in EPA’s estimate of the costs of the proposed Ozone NAAQS rule. The counties that are able to come into attainment over the 2017-2025 period are likely to be the marginal cases that will have an easier time reaching the new standard, and therefore will likely have lower costs. The more difficult cases involve counties that are not yet even in compliance with the 2008 standard. EPA did not actually estimate the costs of controlling the emissions of the pollutants that contribute to ozone for many of the counties farthest from attainment because it did not know how they would achieve attainment. These “unknown controls” account for as much as 65% of the total costs of the ozone standard, and EPA estimated these costs by assuming that they would be more or less the same as the costs for the controls that they did know would be needed and that they could model.

However, this is almost certainly incorrect, as the unknown controls are very likely to be significantly more costly. NERA economic consulting estimated that at a standard of 65 ppb, the Ozone NAAQS would reduce GDP by about \$140 billion each year from 2017 through 2040, and cost about 1.4 million jobs.¹⁶ Much of the reason NERA's estimate is significantly higher than EPA's is because they attempted to model the "unknown controls" and discovered that they are vastly more costly than the known controls.

3. One research study (Greenstone 2002) found job losses of 590,000 in nonattainment areas due to the NAAQS program from 1972 to 1987. While many of these jobs may have migrated over time to attainment areas, the large number of new nonattainment designations expected at 70 and 65 ppb suggests that more jobs may go overseas. Do you agree?

The Chamber agrees that the proposed Ozone NAAQS rule, which drops the standard from 75 ppb to a range of 65 to 70 ppb, will cost jobs and prevent new investment in areas designated as being in non-attainment. The study by Greenstone singles out the Ozone NAAQS regulations as being especially costly in the area of job losses. However, the study estimating 590,000 lost jobs from 1972 to 1987 surely underestimates the magnitude of the problem. Since the end date of the study period, the ozone standard has been dropped twice, with the proposed rule marking the third time the standard was lowered. It is more than likely that as the standard drops further and further, the number of jobs lost from each new rule is even greater than those previous standard reductions, as the new standards vastly expand the number of non-attainment areas. Each area newly classified in non-attainment with the more stringent ozone standard will have a far more difficult time attracting or retaining industries, permitting existing businesses to modify and expand, and finding ways to further reduce the individual air pollutants that combine in the atmosphere to form ozone when they react to sunlight.

NERA Economic Consulting estimates that if EPA sets the new standard at 65ppb, the U.S. economy would have 1.4 million fewer jobs each year from 2017 through 2040 than if the standard were kept at the current 75 ppb, set in 2008.

¹⁶ NERA Economic Consulting, [*Economic Impacts of a 65 ppb National Ambient Air Quality Standard for Ozone*](#), Feb. 2015.

QUESTIONS FOR THE RECORD
The Honorable Gary Palmer (R-AL)
U.S. House Committee on Science, Space, and Technology

EPA Regulatory Overreach: Impacts on American Competitiveness

Friday, June 19, 2015

Questions for Bill Kovacs

- 1. The second building block of EPA's proposed CPP rule assumes that the power from coal plants can be re-dispatched to existing and/or new gas-fired power plants. However, EPA's proposed ozone standards may make it harder for new gas plants to be built (or existing plants to be modified) in both attainment and nonattainment areas. Can you explain why?**
 - a. Won't new gas plants in attainment areas have to show that the plant's emissions will not contribute to a NAAQS violation – something that may become very hard to show as EPA lowers the existing standard to near background levels?**
 - b. As far as you know, did EPA consider this fact in developing the CPP or did the Agency just assume that all of these gas plants would magically appear when needed?**

Yes, it is likely that the Ozone NAAQS revised standards will increase the difficulty of compliance with the CPP. Because the designation of attainment and non-attainment areas must be done using current emissions monitoring data, EPA will be forced to designate areas' emissions reduction requirements based on emissions data that is virtually certain to change significantly in the very near future. In writing the Ozone NAAQS standard, EPA chose to include in its cost estimate the overall reductions in emissions that would result from the CPP. However, it did not estimate how the massive coal plant retirements (EPA predicts 49,000 megawatts of coal-fired generation will be retired due to the CPP) and subsequent necessary construction of natural gas and renewable plants would affect the map of criteria pollutant emissions.

This reshuffling will make it extremely difficult for states to properly model their ozone reduction efforts. The Ozone NAAQS standard will also make the job of obtaining preconstruction permits for new power plants under Section 165 of the Clean Air Act much more difficult and costly, because more areas will either be classified in non-attainment—thus requiring costly offsets (if they are available)—or the area will be much closer to non-attainment. More extensive modeling and air monitoring will be required to show that a new project made necessary by the CPP can be built, adding significantly to the cost and delays for each project.

In actuality, EPA's lack of accounting for potential emissions reshuffling under the combination of the CPP and Ozone NAAQS highlights a major problem with EPA's overall strategy. When the WOTUS rule, which will also affect permitting for new electric power generation project construction under the CPP, is added into the mix, EPA is concurrently undertaking three major rulemakings that will almost certainly conflict with one another and make compliance in many cases exceedingly difficult. E.O. 12,866 requires agencies to consider impacts from conflicts with other regulations, and EPA ignored this requirement in all three of its rulemakings.

2. In estimating the total cost of the lower ozone standard, EPA assumed that the CPP would be fully implemented despite the many significant legal issues that have been raised with this rule. If the CPP is overturned in the Courts, what impact will this have on the costs of EPA's proposed ozone standard?

The costs would massively increase if the CPP is overturned in the courts. EPA's Regulatory Impact Analysis (RIA) for the Ozone NAAQS establishes a baseline for estimating the incremental costs of the rule that includes reductions in coal-fired electric power generation from both the Mercury and Air Toxics Standard (MATS) rule and the CPP rule. For instance, when EPA proposed and ultimately withdrew ozone standards of 65 to 70 ppb in 2011, it estimated compliance costs for the 65 ppb standard at \$33 to \$45.4 billion annually.¹⁷ In the 2014 proposal EPA had reduced the cost to \$15 billion annually for the 65 ppb standard. The difference between the two estimates represents the reduction in costs due to the assumption that both MATS and CPP will be fully implemented, and that the reduction in coal-fired electric power generation mandated by those two rules will cut the costs of ozone compliance by more than fifty percent. If the CPP is struck down by the courts, and the 49,000 megawatts of coal-fired generation that rule seeks to retire is kept online, the costs of the ozone NAAQS will increase significantly.

¹⁷ These figures are presented in 2011 dollars in order to facilitate comparison to the estimates in the 2014 Ozone NAAQS proposal, also presented in 2011 dollars. The original 2006 dollars estimates in the 2011 ozone NAAQS proposal were \$32 to \$44 billion for the 65 ppb standard.

QUESTIONS FOR THE RECORD
The Honorable Bruce Westerman (R-AR)
U.S. House Committee on Science, Space, and Technology

EPA Regulatory Overreach: Impacts on American Competitiveness

Friday, June 19, 2015

Questions for Mr. Bill Kovacs

- 1. Last week, the Commerce Department announced that the US economy contracted by 0.7 percent in the first quarter of this year, suggesting that the economy is faltering, despite a \$300 billion stimulus from the recent fall in energy prices. Do you think excessive regulation is one reason for this faltering growth?**
 - a. Broadly speaking, what are the general reasons regulations can slow economic growth and capital investment?**

Regulations are one reason why economic growth can be slowed. Generally, regulations raise the cost of investing capital in new projects. Major high-impact regulations increase the cost of new projects because they require costly capital investments that produce no returns. Additionally, costly delays due to lengthy environmental permitting also make businesses less likely to invest in new projects. The Chamber study *Project No Project* found that a sample of 351 energy generation and transmission projects with stalled permits would generate \$577 billion in direct investment, add \$1.1 trillion to GDP, and create about 1.9 million jobs over the typical seven year construction period typical of these projects. After completion, these projects would add \$145 billion to GDP annually and generate 791,000 jobs.¹⁸

- b. How important are EPA regulations in slowing potential economic growth?**

EPA regulations are the most significant driver of overall regulatory costs from federal regulatory agencies. The reason is that high-cost, high-impact rules are the main driver of regulatory burden, and the EPA leads the field in enacting these regulations. In our study entitled *Charting Federal Costs and Benefits*, we found that between 2000 and 2013 executive branch regulatory agencies produced 30 regulations that each cost over \$1 billion annually. EPA produced 17 of the 30 rules, and its rules accounted for 82.5% of the total \$109.4 billion in annual costs these 30 rules imposed on the U.S. economy. That's over \$100 billion in lost investment each and every year that could have grown the economy and created jobs.

¹⁸ U.S. Chamber of Commerce, [*Project No Project Progress Denied: A Study on the Potential Economic Impact of Permitting Challenges Facing Proposed Energy Projects*](#), 2011.

2. Researchers have also found that environmental policies can negatively affect wages and employment (NERA studies of MATS, Boiler MACT, and RFF). As you know, the US has been suffering from wage stagnation, particularly for middle and low income wage earners. Do you agree environmental policies are contributing to this wage stagnation? Can you explain why?

It is unclear what part regulations might play in wage stagnation at the national level. However, we do know that environmental regulations have a deleterious effect on the incomes of those workers who lose their job due to EPA regulations. Michael Greenstone, a former Obama administration appointee, investigated the impact of the Clean Air Act on employment.¹⁹ From 1972 to 1987, counties located in nonattainment areas lost nearly 590,000 jobs compared to counties located in attainment areas. Affected companies reduced output by some \$105 billion and invested less, resulting in a loss of capital stock of roughly \$52 billion.

Using detailed production data from nearly 1.2 million plant observations drawn from the 1972-1993 Annual Survey of Manufactures, Greenstone, John List, and Chad Syverson estimated the effects of air quality regulations on the productivity of the manufacturing sector.²⁰ They concluded that regulations governing ozone have particularly large negative effects on productivity, though effects are also evident among emitters of particulates and sulfur dioxide. They estimated a decline in total factor productivity (TFP) for regulated facilities, which corresponded to an annual economic cost of roughly \$21 billion, which represented **nearly nine percent** of manufacturing sector profits during this period.

The impact of the Clean Air Act extends to other countries as well, suggesting that multinational firms escape some US regulation by shifting production to other countries where regulation is less costly. Rema Hanna estimated that US-based multinational firms increased their foreign production by 9% and their foreign assets by 5% in response to tougher regulation under the Clean Air Act Amendments of 1990.²¹

Last year, in testimony before the Joint Economic Committee, Greenstone summarized the results of his academic work on this topic. “Some of my recent research finds that an important set of Clean Air Act rules has raised polluting industries’ costs of production by roughly 2.6%,” he said. “This has reduced firms’ profits and led to higher prices for consumers.

¹⁹ Michael Greenstone. 2002. The impacts of environmental regulations on industrial activity: evidence from the 1970 and 1977 Clean Air Act Amendments and the Census of Manufactures. *Journal of Political Economy*. 110(6): 1175–219.

²⁰ Michael Greenstone, John A. List, and Chad Syverson. 2012. The effects of environmental regulation on the competitiveness of U.S. manufacturing. NBER Working Paper 18392. MIT Department of Economics Working Paper No. 12-24.

²¹ R. Hanna. 2010. US environmental regulation and FDI: evidence from a panel of US-based multinational firms. *American Economic Journal: Applied Economics*, 2(3): 158-189.

Further, it has caused regulated firms to scale back their operations, which led to employment losses at those firms.”²²

This last point, about the devastating effect regulatory-induced unemployment has on workers, has also been the subject of economic research. For example, Reed Walker studied the impact of the Clean Air Act on unemployment.²³ Workers in newly regulated plants experienced more than \$9 billion in foregone earnings for the years after the change in policy. Most of these impacts are driven by non-employment and lower earnings in future employment, while the compensation of workers who remain with their firm did not change.

In another study, Walker followed displaced workers over time using confidential data from the Longitudinal Employer Household Dynamics (LEHD) data set from the U.S. Census Bureau.²⁴ He found that following a non-attainment designation, “the average worker in a newly regulated plant experiences a present discounted **earnings loss of 20% compared to their pre-regulatory earnings**. In the aggregate, this equates to almost \$5.4 billion in forgone earnings.”

²² Michael Greenstone. June 26, 2013. Hearing: Eliminating Unnecessary Red Tape through Smarter Regulation. Joint Economic Committee. U.S. Congress.

²³ Reed Walker. 2012. The Transitional Costs of Sectoral Reallocation: Evidence from the Clean Air Act and the Workforce. US Census Bureau Center for Economic Studies Paper No. CES-WP- 12-02. Available at SSRN: <http://ssrn.com/abstract=2000069> or <http://dx.doi.org/10.2139/ssrn.2000069>

²⁴ W. R. Walker. The transitional costs of sectoral reallocation: evidence from the Clean Air Act and the workforce, *The Quarterly Journal of Economics*, 1787-1835. Available at: http://faculty.haas.berkeley.edu/rwalker/research/walker_transitional_costs_CAA.pdf.