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Hearing Title: The First Step to Cutting Red Tape: Better Analysis

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Dean Graham's Qualifications

My name is John D. Graham. I am Dean of the School of Public and Environmental Affairs (SPEA) at Indiana University and former Administrator of the Office of Information and Regulatory Affairs, OMB in the George W. Bush administration (2001-2006). SPEA is one of the largest schools of public affairs in the country. The new graduate-school rankings of U.S. News and World Report rate SPEA's Masters of Public Affairs (MPA) degree program as second in the country out of 266 total programs. Prior to serving at Indiana University and OMB, I was a tenured faculty member and founding director at the Center for Risk Analysis, Harvard School of Public Health (1985-2001).

My technical expertise is in the application of risk analysis and benefit-cost analysis to health, safety and environmental issues. I have published eight books and over two hundred articles in this field. Several years ago, I was awarded the Distinguished Lifetime Achievement Award by my professional society, the Society for Risk Analysis. I am also an elected member of the National Academy of Public Administration.

I earned my BA degree (economics and politics) at Wake Forest University (1978), my MA in public affairs at Duke University (1980), and my Ph.D. in public affairs at Carnegie-Mellon University (1983). My doctoral dissertation was a benefit-cost analysis of automobile airbag technology. Before joining the faculty of the Harvard School of Public Health in 1985, I was a post-doctoral fellow at Harvard in environmental health (1983-84).

SUMMARY OF MAJOR POINTS

The theme of my testimony today is that the federal government's regulatory system could be much more effective and economically efficient if regulatory policies were developed based on high-quality regulatory analyses. Those analyses encompass tools such as risk assessment, cost-effectiveness analysis, benefit-cost analysis, decision analysis, uncertainty analysis, and value-of-information analysis.

It is not enough for Congress to insist that regulatory analysis be undertaken.
A regulatory analysis is no better than the quality of data used in the analysis and the quality of the analytical procedures that are employed. Congress needs to insist that the federal government's standards for information quality be respected by regulators.

Moreover, Congress itself often passes legislation with ambitious regulatory requirements but Congress lacks an institutional mechanism to perform regulatory analysis on its own bills and amendments. For example, the high-quality analyses that the Congressional Budget Office has applied to the health care industry under the Affordable Care Act are rarely applied to regulatory legislation that impacts other economic sectors such as agriculture, chemicals, energy, finance, higher education, information technology and manufacturing. The European Parliament recently established a "regulatory impact assessment" (RIA) unit to check the informational power of the European Commission; the U.S. Congress needs to move in this directions as well. Thus, a comprehensive approach to better regulation must include a more evidence-based analytic approach in both Congress and the executive branch agencies.

With regard to legislative reforms, I make five basic points: (1) reform must cover all quasi-regulatory actions, not just rulemakings; (2) federal reform can (and should) address some costly and conflicting state and local regulations, not just federal rulemakings; (3) reform must address the quality of scientific information that supports official hazard determinations, not just federal regulations that may flow from hazard determinations; (4) reform must bring evidence, analysis, and transparency to the consent-decree process that often leads to mandatory rulemakings; and (5) reform must contain a push for regulatory cooperation between U.S. regulators and their counterparts in Europe and Asia, where our principal markets for exports are located.

I now turn to an explanation of each of these points.

First, federal regulators are issuing press releases, memoranda of understanding, policy statements, and guidance documents with burdensome impacts on specific industries, yet these quasi-regulatory actions are often not subject to any formal benefit-cost analysis and/or OIRA review.

A vivid illustration of this behavior is the recent use of quasi-regulatory documents by federal regulators to institute dramatic changes in the policy toward granting permits for surface coal mining operations in Appalachia, especially new mining projects in Kentucky, Ohio, Pennsylvania, and West Virginia. Before considering the policy change, I consider why mountaintop mining is undertaken in the first place.

Over the last twenty years, coal mining in Appalachia has changed due to new technology, efforts to minimize labor costs, and the safety concerns about underground mining. While the practice of underground mining still accounts for almost 60% of the coal mined in Appalachia, surface mining at the top of mountains -- often called "mountaintop mining" -- already accounts for more than 40% of the coal mined in Appalachia and 45% in West Virginia (NMA, 2009). The coal mined in Appalachia is used as fuel for electric power plants in the United States, as in input to iron making in the United States, and as a valuable export to countries in the world that cannot mine enough coal to meet their own needs for electric power and steel making.

Both forms of mining in Appalachia are associated with risk: underground mines, even when operated properly, entail a certain amount of risk to the safety of coal miners; mountaintop mining, even when conducted with proper reclamation practices, entails a risk of surface water contamination and ecosystem damage. Thus, there is no such thing as zero-risk coal mining.

Specific mining projects, including reclamation plans, need to be analyzed for benefit, risk, and cost, and this project-by-project analysis has historically occurred at the state level under guidance and oversight from federal officials at the Army Corps of Engineers/Department of Defense, the Department of Interior and the Environmental Protection Agency. From 2000 to 2008, for example, about 511 mining reclamation projects were approved in the state of West Virginia alone under procedures spelled out by the Army Corps of Engineers in Nationwide General Permit 21. A key principle of this Permit is that mountaintop mining may proceed as long as adverse aquatic impacts are minimized through reclamation and mitigation measures (Copeland, 2010).

Mountaintop mining is controversial because there are important stakes on both sides of the issue. It is estimated that the practice creates about 14,000 direct jobs and 60,000 indirect jobs, with average salaries ($66,000) that are relatively high for rural Appalachia. In the state of West Virginia alone, almost 10% of the state's tax revenue is linked to the economic stimulus of mountaintop mining (NMA, 2009).

On the other hand, by its very nature the practice of mountaintop mining has adverse ecological impact. The tops of mountains are leveled (to access coal seams) and the excess dirt and rock is disposed of in the valley fills on the sides of the mountains. Entire streams are often buried. Although only a small percentage of streams in Appalachia are impacted by mountaintop mining, the impacted streams are a significant environmental concern. In theory, mines are reclaimed and disrupted streams are mitigated on at least a one-to-one basis. Buried streams are replaced, or new streams are created in another location, or already degraded streams are improved. However, reclamation and mitigation efforts are sometimes inadequate, and continued damages are found after mines have been abandoned (GAO, 2010). Recent evidence suggests that even reclaimed areas can become a significant source of surface water contamination, and the extent of contamination is proportional to the amount of mountaintop mining in the area (Lindberg et al, 2011). In some cases, contamination continues almost two decades after reclamation plans were implemented. The impacted streams have been shown to experience aquatic toxicity and other forms of ecological damage (GAO, 2010). More study is needed to determine how the precise placement and treatment of rock spoil in valleys affects the mobility and transport of pollutants in impacted watersheds.

A big change in regulatory policy occurred soon after President Obama took office. In June 2009 EPA issued a press release entitled "Obama Administration Takes Unprecedented Steps to Reduce Environmental Impacts of Mountaintop Coal Mining, Announces Interagency Action Plan to Implement Reform" (EPA, 2009). A memorandum of understanding signed by EPA, the Corps and the Office of Surface Mining and Reclamation and Enforcement (OSM) in the Interior Department accompanied the press release. Although the interagency plan contained a significant shift from existing regulatory policy defined in the Corps Nationwide General Permit 21, there was no prior request for public comment on the new plan and no benefit-cost analysis was conducted to support the major shift in policy toward more restrictions on mountaintop mining. While the Corps did formally propose a suspension of General Permit 21 (as applied to mountaintop mining) in July 2009 (EPA, 2009), the action was not finalized until June 2010, many months after regulators had changed their approach to issuing permits (EPA, 2010).

Basically, the Obama administration authorized EPA to make project-by-project determinations on water-quality issues rather than rely primarily on the states and the Army Corps of Engineers. Industry complained that the criteria for EPA's project-by-project determinations were not clear, and thus developers of mining projects did not know what was expected of them (Fahrenthold, 2010). Ultimately, after many months of uncertainty, on April 21, 2010, EPA issued a 31-page guidance document that did not prohibit mountaintop mining but called for minimal or no filling of valleys with mining debris (EPA, 2010). The guidance was effective immediately, even though no public comments were solicited and no benefit-cost analysis was undertaken. In particular, the new guidance expects mining projects to adhere to strict limits on

conductivity levels in streams (a measure of salinity in water). But EPA's numeric approach was based on two draft scientific documents that were not yet finalized (Copeland, 2012).

A year earlier (October 2009), EPA also stunned the industry by reversing a 2007 decision of the Army Corps of Engineers to approve a 2,300-acre mining operation in Logan County, West Virginia (Ward, 2009; Copeland, 2010). The Spruce #1 Mine in Logan County, which had been scaled back to address environmental concerns, was still the largest mountaintop removal mine in West Virginia history (Ward, 2009). Meanwhile, EPA took more than a year to make decisions on 175 proposed mining sites. It ultimately signed off on only 48 (EPA IG, 2011; Quinones, 2011; Fahrenthold, 2010). EPA argued that it was using legal authority under the Clean Water Act and its new technical approach to assessing water quality impacts. The industry countered that EPA's new, unprecedented regulatory approach would effectively prohibit a majority of surface coal mining in Appalachia, and the entire matter is now the subject of expensive, time consuming litigation in multiple federal courts (Copeland, 2011).

A key lesson from this example is that changes in regulatory policy accomplished through press releases, memoranda of understanding, policy statements and guidance documents can have the same costly impact, at least in the short run, as an official rulemaking under the Administrative Procedure Act. Congress should require agencies, when making significant shifts in regulatory policy, to support those shifts with a benefit-cost analysis that is informed by a public comment process. In effect, what is now required for rulemakings should apply to regulatory policy shifts initiated through press releases, memoranda of understanding, policy statements, and guidance documents.

Second, federal regulators are refusing to use their power to restrict or reform regulatory activities by the states that are unnecessarily costly to industry. Of particular concern are arbitrary inconsistencies in state regulations that burden companies that sell products across state lines. In some cases, federal regulators collaborate with state regulators in the promulgation of overly costly rules that completely evade benefit-cost requirements and/or OIRA review.

A sobering example of this behavior is the recent decision of federal regulators to allow the State of California to require that automakers produce an increasing number of zero-emission vehicles (ZEVs) from 2018 to 2025. (As a practical matter, a ZEV under California criteria is likely to be a plug-in vehicle that is powered entirely or partly by electricity, though some hydrogen-powered vehicles also qualify). By 2025, each major automaker doing business in California is required to sell enough ZEVs to comprise at least 15% of their new-vehicle sales in California (CARB, 2011). Since the cost of producing a ZEV is currently $10,000 to $20,000 per vehicle greater than the cost of producing a similar gasoline-powered vehicle, the ZEV program is certainly worth reviewing from a cost-benefit perspective. If California succeeds in compelling the sale of 1.4 million ZEVs by 2025 at an extra cost of $10,000 per vehicle, the overall cost to consumers will be in the neighborhood of $14 billion.

According to the State of California, the ZEV program is evolving from a traditional focus on public health protection from localized air pollution (smog and soot) to a new focus on control of greenhouse gases linked to the global phenomenon of climate change. Both rationales remain

but, due to the dramatic progress in reducing smog and soot from new gasoline-powered vehicles, California regulators acknowledge that the future rationale for the ZEV program will be the control of greenhouse gases (CARB, 2011).

Under the national Clean Air Act, California regulators are given special regulatory privileges because of the poor air quality in southern California but California is not permitted to issue its own rules without permission from the federal government. Congress wanted to make sure that California's regulatory actions are necessary and appropriate, since automakers might be forced to design and produce a different fleet of cars and trucks for California than for other states. (There are about ten states that have chosen to align with California's standards but I shall simplify the presentation by referring to compliance in California). Moreover, the statute underpinning the Department of Transportation's Corporate Average Fuel Economy (CAFE) program prohibits all 50 states (including California) from adopting any regulatory programs "related to" the fuel economy of vehicles, since that is the province of CAFE. There may be creative legal arguments that can rescue an unnecessary and costly California ZEV program from litigation trouble, but surely Congress, through new legislation, has the power to subject California's ZEV program to serious cost-benefit analysis and OIRA review under a national regulatory reform statute. So the key legislative questions are: Is the California ZEV program necessary and appropriate, and does it have any plausible benefit-cost justification?

The case for the California ZEV rule is certainly questionable, given the force of the following arguments:

--California regulators cannot slow global climate change to a meaningful degree unless China and India control their greenhouse gas emissions but the California ZEV program does not -- and cannot -- cover China and India;

--The Obama administration, through a joint rulemaking of EPA and DOT, has already mandated a sharp reduction in greenhouse gases from new cars and light trucks for model years 2017 to 2025 through a performance standard, a numeric standard based on carbon emissions that allows automakers to undertake some averaging of low-emitting and high-emitting vehicles (EPA-NHTSA, 2011);

--The joint EPA-DOT rule already provides generous compliance incentives for manufacturers who offer ZEVs (e.g., a ZEV's "upstream" emissions at the electric power plant are ignored and each ZEV may be counted more than once in the compliance process) to supplement the federal government's generous $7500 income tax credit to purchasers of ZEV-like vehicles;

--The California ZEV program may not accomplish additional greenhouse-gas control (beyond the control achieved by the EPA-DOT joint rule) because any extra ZEVs produced and sold due to California's rule will be offset in the production plans of automakers by extra sales of more high-emitting vehicles in the 50 states covered by the EPA-DOT rule; and

--The California ZEV program, by forcing automakers to sell more expensive vehicles that are cheaper to operate, will exacerbate greenhouse gas emissions due to two perverse behavioral responses: some consumers will hold on to their old, high-emitting vehicles longer than they

would otherwise (Gruenspecht, 2001), and those consumers who do purchase an expensive ZEV will drive them more miles each year because electricity is cheaper than gasoline (Tierney, 2011; Bialik, 2009).

Even if these arguments are overstated, and the ZEV program is determined to be a promising contributor to global greenhouse gas control, it is highly unlikely that the program would pass a cost-benefit test under the official technical guidance in OMB Circular A-4, which governs regulatory analysis in the federal government.

The staff of the California Air Resources Board released in December 2011 a rudimentary analysis aimed at providing some analytic justification for the tighter ZEV requirements for model years 2018 to 2025. The basic result of the staff analysis is that the energy savings provided by ZEVs, accumulated over the vehicle's life, are about equal to the $10,000 additional cost of producing a ZEV (CARB, 2011, Table 5.7).

The State of California does not have an OIRA-like office and thus CARB staff have considerable analytic discretion, more than EPA or DOT analysts have. Based on a careful read of the CARB analysis, I noted several analytical assumptions that would be unlikely to survive a careful OIRA review under OMB Circular A-4.

1. The cost of producing ZEVs will decline by about 40% between today and 2025 due to learning by doing in the manufacturing process. The 40% figure is at the top of the range of estimates in the literature on learning by doing in the manufacturing sector. However, the battery advances necessary to satisfy the consumer's demand for driving range may cause the cost of future ZEVs to increase, not decline. CARB staff have also ignored the possible increase in prices of rare earths and lithium -- these are inputs to lithium ion batteries and electric motors -- that may result from Chinese actions, once the U.S. transport sector becomes significantly dependent on ZEVs. Rare earths and lithium currently account for a small percentage of the cost of producing a ZEV but that percentage could rise significantly in ways that are difficult for the United States to control. The Obama administration has recently joined with the EU and other nations in a WTO action against China, citing Chinese price manipulation of rare earths through export restrictions (Lee, 2012).

2. The ZEV will last for an average of 14 years and be driven for 186,000 miles. These figures are on the high end of the range of estimates of average light-duty vehicle lifetime and mileage.

3. A 5% real discount rate is applied to future fuel savings to express them in present value. A 7% discount rate is typically applied to future fuel savings. Changing this assumption alone is likely to reverse the conclusion of CARB's "payback analysis".

4. A long-term gasoline price of $4 per gallon is assumed. This figure could be too low or too high in the short run but fuel prices in the USA can be brought well below $4 per gallon over the 2018-2050 period if the US enacts enlightened energy policies (e.g., expanded oil and gas production in the USA in conjunction with the tighter CAFE standards and other consumer-focused conservation measures to reduce demand for oil).

Overall, based on the implausibility of CARB's assumptions, it seems unlikely that a ZEV mandate would pass a careful payback analysis from the consumer's perspective, at least not ZEVs produced in the pre-2025 period. Consumers may be further disinclined to purchase PEVs if the federal and state tax incentives are reduced for fiscal reasons (California has already reduced its ZEV rebate from $5,000 to $2,500 and the U.S. Congress has not renewed the $2,000 tax credit for the costs of installing a recharging system in one's home).

If ZEVs prove to be a loser in the eyes of the consumer, automakers and dealers will have a difficult time selling them. The early commercial experiences with the Nissan Leaf and the Chevrolet Volt suggest that commercialization of ZEVs will not be easy. Moreover, surveys of consumers indicate that they are not willing to pay a large price premium to obtain the advantages of a plug-in vehicle (White, 2012; Woodyard, 2011; Child and Sedgwick, 2012). Under these circumstances, either the ZEV mandate will have to be relaxed (as has occurred in the past) or automakers and dealers will have to cut prices of ZEVs, incur substantial losses on each ZEV that is sold, and raise prices on all non-ZEV products to cover the losses. In effect, the ZEV mandate will become a price increase on all new vehicles sold in the United States (a troubling scenario that is acknowledged in the CARB document). If this occurs, the result will be fewer new vehicle sales throughout the United States and fewer jobs at plants where new non-ZEV vehicles are produced and at plants of suppliers of non-ZEV vehicles.

The job losses from the ZEV mandate are unlikely to occur in the State of California because very few automotive suppliers and vehicle assembly plants are located in California. This is a point noted in the CARB document. Here are some examples of plants that might be adversely impacted, since they are busiest North American plants that assemble non-ZEV vehicles (measured by 2011 production levels).

1. VW/Puebla, Mexico 514,910
2. Ford/Kansas City, Missouri 460,338
3. Nissan/Aguascalientes, Mexico 410,693
4. GM/Oshawa, Ontario 380,149
5. Ford/Dearborn, Michigan 343,888
6. Hyundai/Montgomery, Alabama 342,162
7. Nissan/Smyrna, Tennessee 333,392
8. Ford/Hermosillo, Mexico 328,599
9. Toyota/Georgetown, Kentucky 315,889
10. Ford/Louisville, Kentucky 310,270

The supplier community for non-ZEV vehicles also has a broad geographic distribution (including many plants outside the United States) but many suppliers locate their plants near assembly plants in the United States (e.g., in the Midwest and the South).

The CARB analysis does not make employment forecasts outside of California with and without the ZEV regulation. CARB does, however, forecast positive job impacts in California because a variety of the companies that makes recharging equipment for electric vehicles are located in California (CARB, 2011, 68-9). I think it is fair to say that the employment analysis of the

California ZEV mandate, if had been conducted under OIRA review, would have looked at many more regions of the United States than the state of California.

In summary, federal regulators have permitted the State of California to promulgate a costly ZEV mandate that, in reality, may do little or nothing to protect the world against the forces of global climate change. The economic impacts of the California program are likely to be significant and nationwide in scope. A comprehensive benefit-cost analysis of the ZEV program has not yet been performed, yet the program is already on a clear path toward implementation.

Congress can address this problem in a general regulatory reform bill. In particular, federal agencies should be required to use their powers to restrict or reform state regulatory actions to ensure that regulatory benefits justify costs. When a federal agency decides to allow state regulators to issue rules with national economic ramifications, the agency should be required to justify the decision with a benefit-cost analysis under OMB Circular A-4.

Third, federal regulators are issuing hazard determinations that appear to be at tension with findings reported by committees of the U.S. National Research Council/National Academy of Sciences. A hazard determination is a claim that exposure to a technology or chemical substance is known to be hazardous to human health. Congress can address this problem by requiring OIRA and/or the White House Office of Science and Technology Policy (OSTP) to resolve disputes about hazard, at least in cases where there have been clear determinations by NRC/NAS.

The federal government's recent handling of formaldehyde illustrates this conundrum. Formaldehyde is a widely used industrial chemical that is useful in activities ranging from housing construction to health care services. Each year sales of formaldehyde are worth about $1.5 billion and products that make use of formaldehyde are linked to about four million jobs and $145 billion in economic activity. It is estimated that, if formaldehyde had to be substituted in the U.S. economy, consumers would incur costs of about $17 billion per year. The industrial sector where formaldehyde generates its largest economic value is the housing industry.

Human exposures to formaldehyde are already heavily regulated by multiple federal agencies because high doses of formaldehyde are known to cause irritation of the respiratory system and a rare form of nasal cancer. Spurred by a provocative report (IARC, 2004) from an international organization in Lyon, France, EPA -- through the Integrated Risk Information System -- made a preliminary determination in 2010 that formaldehyde exposure is known to cause leukemia as well as nasal cancer (EPA, 2010). If the scientific evidence is definitive, EPA should make a definitive hazard determination, since it may help trigger a variety of regulatory and market-based actions that offer additional protection to workers, consumers, and the general public.

A hazard determination should not, however, be based on inconclusive scientific information. An official determination that formaldehyde exposure causes leukemia has the potential to cause a variety of adverse impacts on industry (e.g., lawsuits among people who have leukemia and may have been exposed to formaldehyde, and voluntary product withdrawals), even before any new federal regulation is adopted. The stigma of a hazard

determination, once imposed, is very difficult to erase, even if the technology or substance is completely exonerated through additional scientific research.

In this case, industrial scientists were skeptical of EPA's preliminary determination because the epidemiological literature on formaldehyde is difficult to interpret with confidence and the biological mechanism (i.e., how formaldehyde causes leukemia) is not clear. They persuaded Congress to compel EPA to subject their scientific evidence and reasoning to independent review by a panel of the National Research Council/National Academy of Sciences, an official scientific advisory group to the federal government. In a rather critical report, the NRC/NAS panel raised serious questions about EPA's theory that formaldehyde exposure causes leukemia while reaffirming the known link between formaldehyde exposure and respiratory cancer (NRC, 2011; Jacobs, 2011). NRC/NAS also raised broader questions about the scientific credibility of EPA's IRIS process since there is a pattern of NRC/NAS questions about EPA's hazard determinations (e.g., in the cases of dioxin and perchlorate).

Before EPA could respond to the NAS/NRC report, an entirely different federal agency -- the Department of Health and Human Services' National Toxicology Program (HHS-NTP) -- included in its Annual Report to Congress an addendum on formaldehyde. The addendum makes a strong claim about the formaldehyde-leukemia link that is similar to the preliminary EPA claim (NTP, 2011). NTP makes a limited effort to reconcile its view with the view of NRC/NAS but ultimately acknowledges that it agrees with NRC/NAS's view that it is not known -- from a biological mode of action perspective -- how formaldehyde is causing leukemia. NTP takes the position that a substance can be known to cause cancer even if the biological mode of action is unknown.

A key question becomes who in the federal government should be in charge of managing and resolving these issues. The actions of EPA and HHS-NTP may not appear to be "regulations" but they are "science-policy" determinations that can have the practical impact of a regulation (e.g., economic burdens). Before making these kinds of determinations, agencies should be expected to make an assessment of whether significant economic impact may result. If the impact is likely to be significant, an independent review by an organization such as NRC/NAS should be required, and federal agency compliance with the findings of the NRC/NAS panel should be overseen by OIRA and/or OSTP in consultation with other interested federal agencies.

In order to play this role effectively, OIRA and OSTP will need a modest increase in scientific staffing above their current levels. However, it is important to recognize that the roles of OIRA and OSTP are not to redo the agency's hazard determination. Instead, the OIRA/OSTP role is to determine whether a hazard determination should be referred to NRC/NAS and, if so, whether the agency has adhered to the determinations made by NRC/NAS in the agency's final determination. OIRA and OSTP will also supervise interagency discussions of these matters, since multiple federal agencies may have an interest.

Fourth, federal regulators, after being sued by pro- or anti-regulation activist groups, are entering into binding agreements with litigants that call for new rulemakings within specified deadlines. The rulemaking commitments are being made prior to any benefit-cost analysis or public comment and without OIRA review. Sometimes the deadlines are set in a manner that

ensures that benefit-cost analysis and OIRA review will be compromised. Congress should constrain agency powers to enter into such settlements without first conducting appropriate analysis (to determine whether a rule is necessary and desirable) and seeking public comment. Congress should require that ample time be made available for OIRA review.

During my tenure at OMB, I experienced the consequences of "regulation by consent decree" on several occasions. For example, EPA entered into a litigation settlement that virtually committed the agency to an expensive rulemaking aimed at reducing mercury emissions from coal-fired power plants. When EPA staff briefed me on the benefit-cost basis for the mercury rule, it became clear that many of the emissions reductions expected from the mercury rule were already to be accomplished by another rule aimed at reducing nitrogen dioxide emissions from coal plants. (The same control technology that reduces nitrogen dioxide also reduces oxidized mercury but not elemental mercury). According to EPA staff, the residual benefits (of reducing elemental mercury) were not sufficient to justify the entire cost of the mercury rule, yet the agency was legally committed to issuing a rule by a fixed deadline, and expectations for a rule had been established in the environmental advocacy community. EPA tried to craft a different rationale for the mercury rule based on the "co-benefits" resulting from simultaneous control of a different pollutant, particulate matter. In principle, co-benefits should be considered in such a rulemaking. The obvious counterargument to this position is that direct regulation of particulate matter from many sources (not just coal plants) might be a more cost-effective method of capturing those benefits. With a judicial deadline forcing our hand, we did work with EPA to issue a mercury rule but it had a weak benefit-cost justification. The rule was ultimately overturned in court for reasons unrelated to the benefit-cost issue.

The lesson I drew from this example is that regulators are not necessarily reluctant, during settlement negotiations, to commit themselves to rulemakings that have not yet been analyzed from a cost-benefit perspective. If we are serious about regulatory reform, this practice needs to be restrained.

Finally, regulatory reform needs to compel regulators to fashion rules in ways that facilitate international trade between countries through (a) sharing of best regulatory analysis practices across countries, (b) harmonization efforts on specific regulatory programs, and (c) mutual recognition pacts when regulatory systems are different but neither trading partner can demonstrate that its regulations are more effective or protective.

The World Trade Organization (WTO) is a useful international body but, by itself, it is not very effective at preventing or eliminating the non-tariff barriers that that raise the cost to businesses of operating around the world. WTO operates only after abuses occur; the proceedings take years to reach resolution; and WTO has only limited powers to enforce compliance with its decisions. For example, the U.S. has won at least two cases against Europe in the agricultural sector (one case on hormone-treatment of animals to boost dairy production and one on genetic modification of seeds to enhance corn and soybean production) but Europe has been very slow to open its markets in response to these WTO decisions. Another U.S. case against Europe concerning a ban on importation of U.S. poultry is underway but resolution is years away.

Congress needs to push the executive branch to minimize regulatory conflicts from the outset (when new regulations are developed) and work steadily to harmonize the existing regulatory systems. Congress itself needs to consider trade ramifications when it adopts new regulatory legislation. For example, the Toxic Substances Control Act of 1976 is currently a suitable topic for modernization. Careful thought needs to be given to how a new federal regulatory system for industrial chemicals should be designed to protect public health while facilitating trade with Canada, Europe, and Japan, where chemical regulatory systems have already been redesigned and are being implemented. Since many of the same chemicals and products are used in all these countries, it does not make sense to reinvent the wheel in each country or region.

President Obama should be applauded for moving in this direction with his call for a new free trade agreement with Europe. The Obama administration recognizes that there are only a few remaining tariff barriers that obstruct trade between Europe and the United States. The key obstacles to trade are primarily non-tariff barriers created by inconsistent regulatory systems.

The complexity of this challenge is now being confronted by Europe and the US in the field of automobile regulation. European and U.S. regulators have gone in different directions on hundreds of regulations covering tires, lights, brakes, safety belts, airbags, fuel economy, carbon emissions, and diesel engine exhaust, to name a just a few areas. EU and U.S. regulators disagree not only on the precise stringency of the regulatory requirements but the test procedures used to define compliance (e.g., how should a crash dummy used in a compliance test be designed? Should the dummy be wearing a safety belt when the compliance test is conducted – Europe says "yes", the US says "no"?). Sometimes the EU rules are more stringent (carbon emissions); sometimes the U.S. rules are more stringent (diesel exhaust, especially in California).

Despite the numerous differences, no one has ever demonstrated that, overall, US vehicles are safer or cleaner than European vehicles or vice versa. Under these conditions, it may make sense for Europe and the USA to explore a mutual recognition agreement that allows European-certified vehicles to be sold in the USA and American vehicles to be sold in Europe. Since automotive manufacturers are striving to use a single production platform for vehicles sold around the world, mutual recognition systems would be compatible with the efficient trend toward globalized manufacturing. In the long run, more efficient automotive production systems mean not only lower prices for cars in Europe and the United States but more affordable vehicles for consumers in emerging economies, whose needs can also be served with a single global production platform.

Thank you for the opportunity to submit this testimony.

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