

Summary of the Statement of Scott H. Segal
The American Energy Initiative: Transparency in Regulatory Analysis
April 7, 2011

- EPA has or will promulgate numerous new rules in 2010 - 2012 with compliance deadlines on, before or near 2015. In 2015, due to the timetables established by EPA, the industry will face perhaps its costliest and most pressing challenge in Utility MACT. See chart.
- EPA is proposing controls which are extraordinarily costly with profound impacts on electricity supply and price, and job creation, and is doing this with no new data that asserts any specific benefits to regulating non-mercury HAPs.
- EPA's cost estimates do not include indirect costs nor does the Agency attempt to estimate the total cost associated with overlapping rules due to be adopted at or around the same time.
- EPA's upcoming regulations will impact roughly 400,000 MWs of oil and coal-fired generation, which is about 40 percent of the current available capacity in the U.S., and makes up nearly 50 percent of the U.S. total electricity generation.
- EPA's regulations will force plants to retrofit or go into retirement, creating the need to spend about \$300 billion in the next five years. Adaptation to all the proposed rules, with Utility MACT being the most immediate threat, constitutes an extraordinary threat to the power sector – particularly the half of U.S. electricity derived from coal-fired generation.
- US employment income is estimated to drop by an amount equivalent to the earnings of about 2-2.5 million full-time workers. This estimate includes an estimated increase in offsetting compliance-related employment income equivalent to about 0.2-1 million full-time workers limited to the early years of implementation.
- Without these regulations, by 2015, the power sector would contribute \$1.05 trillion (2005 \$) in gross economic output; \$362 billion in annual household incomes, and 6.8 million jobs.
- Retail electricity price is estimated to increase by 20 to 25% to cover the costs of complying with the new environmental requirements and the average US household is estimated to lose buying power of \$400 to \$500 per year due to these increases, with adverse impacts on business, minority and elderly communities, and the health care sector.
- By 2015, coal-fueled power plants in the U.S. will have invested as much \$125 billion in advanced emission control technologies, reducing air emissions substantially under existing programs, despite the demand for electricity having tripled the industry's coal use between 1970 and 2005.
- Industry is committed to working with EPA on sensible mercury regulations in order to achieve those benefits properly identified.
- President Obama's Jan. 18th Executive Order stated that Agency's must "consider costs and how best to reduce burdens for American businesses and consumers."
- EPA has not honored the spirit of the President's position, so it is imperative for Congress to address the timeframe and content of overlapping rules for the power sector. It can begin with adopting the Transparency in Regulatory Analysis of Impacts on the Nation, or TRAIN, Act. The Agency must be required to take into account cumulative economic impact if it hopes to understand the real impact of its rules on American businesses and consumers.

Statement of Scott H. Segal
Director, Electric Reliability Coordinating Council
The American Energy Initiative: Transparency in Regulatory Analysis
Hearing Before the Committee on Energy and Commerce
Subcommittee on Energy and Power
U.S. House of Representatives
April 7, 2011

Mr. Chairman and Members of the Subcommittee. Thank you for giving me the opportunity to testify before you today on behalf of the Electric Reliability Coordinating Council. ERCC is a broad-based coalition of power companies who have come together to work to ensure that consumers across the United States continue to have access to reliable and affordable power.

We support generating and distributing electricity in an environmentally responsible manner. But what we do not support, however, are broad, overreaching rules which, in some cases usurp Congressional authority and make no attempt to even conduct a real analysis of their economic impact on, not only the power companies, but the hundreds of millions of Americans who rely on us everyday.

EPA is back at this again, now having signed a proposal to advance a new maximum achievable control technology (MACT) standard for the electric utility industry, known as the Utility MACT. Back in 1998, the EPA made a finding regarding the need to regulate mercury emissions from power plants. At the time, EPA made clear that there were no incremental benefits associated with addressing any other hazardous air pollutants (HAPs) from the power sector other than mercury. Specifically, no health benefits were found from addressing non-mercury HAPs such as acid gases. Such controls are extraordinarily costly with profound impacts on electricity supply and price, and job creation. In the intervening years, no additional data has been added to the Agency record that asserts any specific benefits to regulating for non-mercury HAPs. And yet, in the proposal issued from EPA, the Agency seeks to regulate these non-mercury HAPs at great expense for no incremental benefit.

Utility MACT Is Part of A Wave of Overlapping Regulations

EPA admits the pending proposal will cost at least \$10 billion, making it one of the most expensive rules in the history of the Agency. And this cost does not include indirect costs nor does the Agency attempt to estimate the total cost associated with overlapping rules due to be adopted at or around the same time. Even focusing primarily on Utility MACT itself, other credible analyses have found direct cost estimates literally an order of magnitude higher than EPA, at or near \$100 billion. These other analyses make more realistic assumptions about technologies likely to be required to meet the terms of proposed rule.

EPA has or will promulgate numerous new rules in 2010 - 2012 with compliance deadlines on, before or near 2015. In 2015, due to the timetables established by EPA, the industry will face perhaps its costliest and most pressing challenge in Utility MACT. Other rules include regulations for:

- O Greenhouse Gases (GHG) from new and modified sources;
- O Ash and other residuals from the combustion of coal either under Subtitle C as a hazardous waste or Subtitle D as a solid waste of Resource Conservation and Recovery Act (RCRA);
- O National Ambient Air Quality Standards (NAAQS) for SO₂, NO₂, Ozone, and PM, including a utility-specific SO₂-and-NO_x-emissions-limiting transport rule; and
- O Cooling water intake structure requirements under section 316(b) and new discharge limiting effluent standards under the Clean Water Act.

Taken together, these regulations will impact roughly 400,000 MWs of oil and coal-fired generation, which is about 40 percent of the current available capacity in the U.S., and makes up nearly 50 percent of the U.S. total electricity generation.

Further, a recent ICF International analysis of pending and promulgated EPA regulations prepared for the Edison Electric Institute shows that when a complete environmental future is analyzed, over 150 GWs of coal, half of the U.S. coal fleet, are at risk of being unavailable in 2015 for the needed energy and required reliability due to insufficient time to install controls or

replacement generation. Nearly 80 GWs of coal are retired by 2015 and the remaining coal is subject to an unachievable retrofit program. These retirements and retrofits create the need to spend about \$300 billion in the next five years, over two thirds of which is for replacement generation. These circumstances lead to generation shortages and a rapid run-up in prices creating a reliability and affordability crisis.¹

Total Jobs and Economic Recovery At Risk

Adaptation to the all the proposed rules, with Utility MACT being the most immediate threat, constitutes an extraordinary threat to the power sector – particularly the half of U.S. electricity derived from coal-fired generation. The industry is concerned about the ability to retrofit environmental controls or build replacement capacity in the three years to comply with the Utility MACT rule (and then other rules). Construction timeframes are also expected to increase due to the logistics of simultaneous installations, industry-wide competition for materials and craft labor, and increasing permitting requirements. The North American Electric Reliability Corporation (NERC) report notes that the "overlapping compliance schedules for the air and solid waste regulations, along with required compliance for rule 316(b) following shortly thereafter, may trigger a large influx of environmental construction projects at the same time as new replacement generating capacity is needed. Such a large construction increase could cause potential bottlenecks and delays in engineering, permitting and construction."²

The ICF data referenced above, when subjected to further economic analysis and controlled for appropriate sensitivities, yield substantial NET impacts on job creation and maintenance in the United States. US employment income is estimated to drop by an amount equivalent to the earnings of about 2-2.5 million full-time workers. This estimate includes an estimated increase in offsetting compliance-related employment income equivalent to about 0.2-1 million full-time workers limited to the early years of implementation. Without the offsets, the estimated

¹ EEI, *Potential Impacts of Environmental Regulation on the US Generation Fleet: Final Report*, January 2011.

² NERC, *2010 Special Reliability Scenario Assessment: Resource Adequacy Impacts of Potential U.S. Environmental Regulations*, October 2010.

reduction in worker income would be 2-3.5 million. Offset employment takes into account environmental retrofitting, new power plant construction and energy efficiency improvements.

As a further frame of reference for what the overlapping regulations place at risk, consider the contribution likely to be made by the affected part of the power sector if allowed to continue and to innovate. Adam Rose and Dan Wei of Penn State University set out to estimate the total economic footprint of coal-fueled electric generation by 2015. They found that coal-fueled generation will contribute:

- \$1.05 trillion (2005 \$) in gross economic output;
- \$362 billion in annual household incomes, and
- 6.8 million jobs.³

Impacts Related to the Cost of Electricity

Aside from direct economic impacts to industry and manufacturers, the impact of increased costs on retail and business consumers is particularly troubling. Again, referencing the ICF data and subjecting it to appropriate further analyses yield the following results:

- Particularly in certain regions, retail electricity price is estimated to increase by 20 to 25% to cover the costs of complying with the new environmental requirements. Costs include installing emission control equipment, constructing new generating units, shifting more generation away from less-expensive plants to more-expensive ones and retiring existing coal units.
- The average US household is estimated to lose buying power of \$400 to \$500 per year. This reflects higher prices for energy-intensive goods, fuel shifting, and reduced household income due to both reduced employment income and reduced investment income.

Consumer energy cost impacts are likely to be regressive. Bills paid by the consumers with significant coal resources "will rapidly become the most expensive. Electric bills make up the

³ Adam Z. Rose and Dan Wei, *The Economics of Coal Utilization and Displacement in the Continental United States, 2015* (July 2006).

majority of low-income household expenditures today." In a recent study on Public Opinion on Poverty, it was reported that one-quarter of Americans report having problems paying for several basic necessities. In this study, currently 23% have difficulty in paying their utilities - that is, one out of four Americans."⁴ Further, African-American and Hispanic families will pay almost twice the amount of after-tax income on energy compared to the average and when viewed as a percentage of total household income.⁵ Likewise, elderly households use less per capita energy but still "spend a higher share of their income on energy-related expenditures."⁶

Certain sectors of the economy have become increasingly sensitive to minor changes in the cost of electricity. For example, the health care sector finds that almost all provisions of services are related to energy costs, with hospitals using twice as much electricity per square foot than comparable office space. One recent study found that "electricity used exclusively for medical records is rapidly increasing, by 400-800% in the past four years."⁷

Offsetting Economic Benefits? Not Likely

Some have claimed that the suite of power-sector regulations will stimulate new investment in technology of various descriptions, creating so-called "green jobs." However, the data cited above controls for near-term, temporary job gains, and still finds a jobs deficit of some 2 to 2.5 million jobs due to the overlapping impact of power-sector rules. In any event, heavy regulatory burdens have never been truly conducive to business confidence, investment and job creation. Data has shown that salaries paid for jobs classifiable as "green" are far below the national average. European experience demonstrated that for every four green jobs created, nine higher paying industrial jobs are lost. At the very least, flimsy or overly optimistic economic benefit

⁴ Statement of Daryl Bassett, Director, Empower Consumers, Panel on Allocation Policies to Assist and Benefit Consumers, Subcomm. on Energy and the Environment, House Comm. on Energy and Commerce, April 23, 2009.

⁵ Rising energy costs disproportionately impacting minority households, Louisiana Weekly, Aug. 29, 2008, available at <http://www.louisianaweekly.com/news.php?viewStory=271>.

⁶ Janemarie Mulvey, Impact of rising energy costs on older Americans, CRS Report for Congress No. RS22826 (Mar. 4, 2008), at http://assets.opencrs.com/rpts/RS22826_20080304.pdf.

⁷ Dan Bednarz, Rising energy costs and the future of hospital work, Energy Bulletin, Apr. 29, 2008, available at <http://www.energybulletin.net/node/43514>.

analysis can not be the basis for risking millions of industrial jobs and billions of dollars in GDP.⁸

David Montgomery of Charles River Associates, a noted economist with 40 years of work in energy and environmental policy, recently testified that:

The serious debate in environmental policy is about how the costs of new regulations compare to their benefits, and how to design the regulations to minimize cost, uncertainty and disruption. Claims that regulations that raise the cost of doing business will create new jobs are, at best, a sideshow. Such claims only distract attention from the difficult tradeoffs that must be made between costs and benefits. 'Green jobs' is not a subject that leading economists have usually taken seriously enough to criticize in professional journals.⁹

As most economists agree, a policy of "regulating ourselves to prosperity" seems suspect at best.

Alleged Health Benefits: A Lesson in Double Accounting

The generation of sufficient, affordable and reliable electric power is a complex business. Policy makers in the past have established a balanced approach that allows both health benefits and energy policy goals to be realized. Contrary to the statements of some in the environmental community, this balanced approach has resulted in substantial reductions in critical air emissions.

By 2015, coal-fueled power plants in the U.S. will have invested as much \$125 billion in advanced emission control technologies. Success to date is clear. The U.S. electric power sector has reduced air emissions substantially under existing programs. The industry has cut sulfur dioxide (SO₂) and nitrogen oxides (NO_x) emissions by 57 percent emissions between 1980 and 2008. The power sector also has cut emissions of mercury by about 40 percent through efforts to reduce other pollutants. Electricity use increased 85 percent during this time period. While demand for electricity has tripled the industry's coal use between 1970 and 2005, emissions have

⁸ Editorial, "How Green Is Your Lost Job?," *Investor's Business Daily*, March 1, 2011(citing green jobs data from Denmark, Germany, Scotland and Spain).

⁹ Senate Committee on Environment and Public Works, Subcommittee on Green Jobs and the New Economy hearing entitled, "Green Jobs and Trade," February 15, 2011.

declined significantly, and continue to decline thanks to emissions-reducing programs enacted by electric companies.¹⁰

As was noted above, EPA found benefits attributable only to mercury reductions and has not supplemented the record specifically regarding non-mercury HAPs. Industry, for its part, is committed to working with EPA on sensible mercury regulations in order to achieve those benefits properly indentified. So why then does EPA cite benefits to reducing non-mercury HAPs that form the basis for overblown claims by environmental organizations? The answer may surprise you. Rather than identifying any incremental benefit associated with very costly actual reductions in non-mercury HAPs, the Agency uses reductions in particulate matter, or PM, as a surrogate or a stand-in for real data that might be relevant. The trouble with this approach is that the control of PM has already been addressed by Congress and EPA in specific programs designed to focus on PM directly – like the national ambient air quality standard for PM.¹¹

As in 1998, the Agency still can find no direct or incremental health benefit associated with reduction of non-mercury HAPs. The only real "attribute" of such controls is to increase the cost of power generation while decreasing its reliability. The "benefits" that are alleged – from the control of PM – are already the product of existing, specifically targeted parts of the Clean Air Act unrelated to the MACT program. This is the same kind of double accounting that, frankly, corporations are forbidden to do in their own affairs.

What Can Be Done? Focus on Assessing and Addressing Overlapping Economic Impacts

President Obama himself embraced the need to closely scrutinize the cost and economic impact of new agency regulations. His January 18th Executive Order¹² laid out the new review process for regulations, stated that an agency should "tailor its regulations to impose the least burden on

¹⁰ EEI, Cleaner Air: Great Progress Has Been Made, Even As Demand for Electricity Increases, 2011, available at <http://www.eei.org/ourissues/> (citing EPA Clean Air Trends data).

¹¹ The history of federal PM regulation from 1971, including revisions in 1987, 1997, and 2006 are discussed at EPA, PM Standards, last updated October 28, 2010, available at <http://www.epa.gov/pm/standards.html>.

¹² E.O. 13653, 76 Fed. Reg. 3821, published Jan. 21, 2011

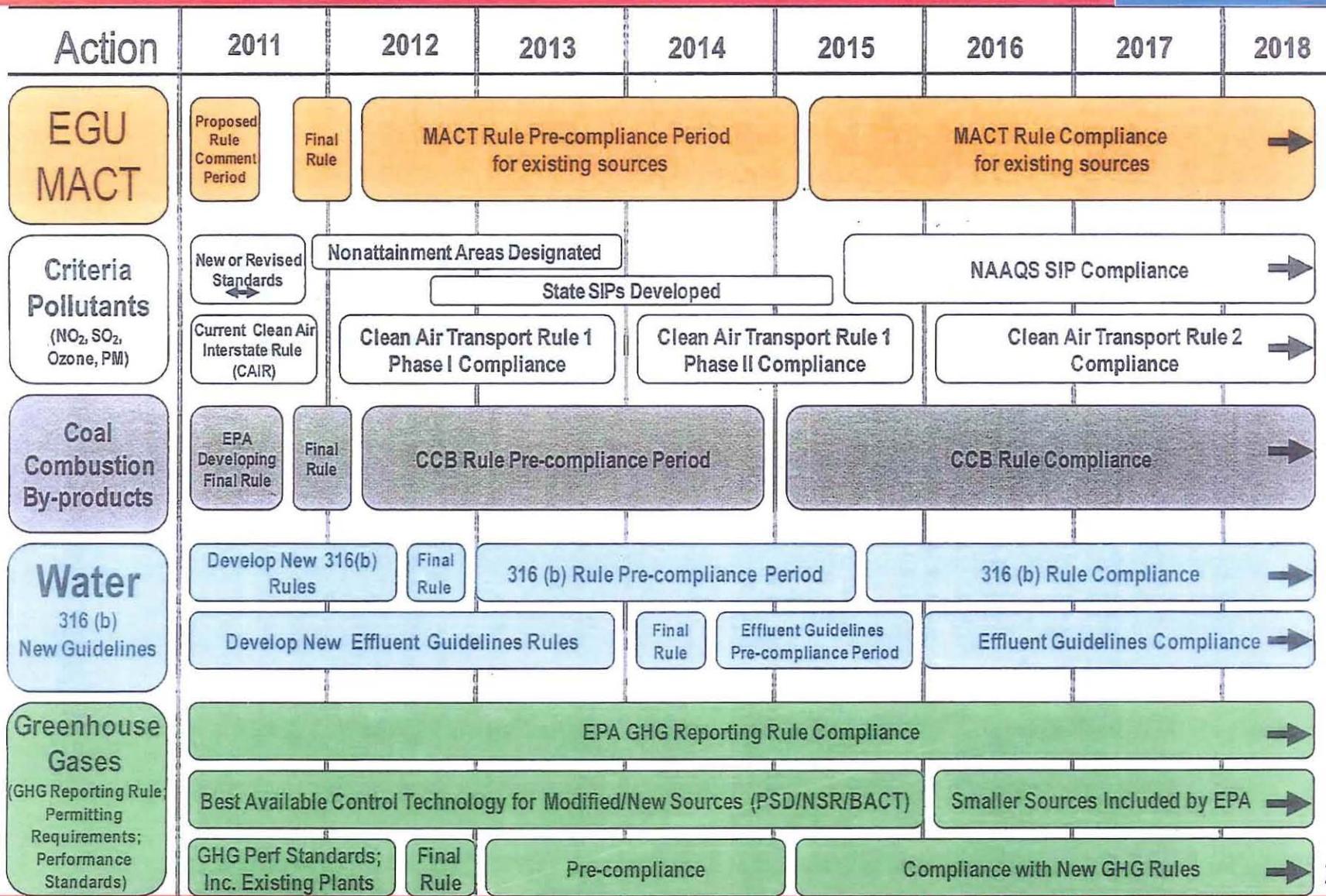
society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations." The accompanying memo issued with the Executive Order sought to clarify the order, by highlighting a basic tenet of the Order; Agency's must "consider costs and how best to reduce burdens for American businesses and consumers." Because EPA does not appear to be doing so, we believe Congress should honor the spirit of the President's position and address the timeframe and content of overlapping rules for the power sector. It can begin with adopting the Transparency in Regulatory Analysis of Impacts on the Nation, or TRAIN, Act.

Having reviewed the TRAIN Act, we regard it as an excellent tool to prevent EPA from hastily adopting guidelines and regulations without careful consideration of their actual benefits and economic impacts. By bringing together an interagency committee to analyze the cumulative impacts of certain significant rules issued by the Environmental Protection Agency, a more macro view of the effects of these regulations can be achieved, and EPA will hopefully better understand how these policies are impacting America's global economic competitiveness, electricity and fuel prices, employment, and reliability of electricity supply.

Taking into account the multiple and overlapping rules facing the power sector, the spirit of the President's Executive Order and the requirements of the TRAIN Act should force EPA to choose a formulation of the proposed Utility MACT and related rules that imposes the "least burden" on society. Where EPA has the capacity for flexibility – such as in the control of non-mercury HAPs, sub-categorization, determination of the MACT floor, and other areas, EPA should do so, particularly in light of the high costs and weak incremental benefit analysis. The Agency has a long distance to travel from the options suggested by the current proposal.

I thank the committee for holding this hearing today and inviting me to testify, and am now happy to answer any questions you may have.

EPA New Regulatory Actions Timeline



Scott Segal

Biographical Statement

Scott Segal serves as the Director of the Electric Reliability Coordinating Council, a group of energy companies working on policies that promote affordable, reliable and environmentally protective generation of electric power from a diverse variety of fuel sources and generation technologies. ERCC members work to provide electricity to millions of American homes, families and businesses in regions throughout the United States.

Scott is also a partner in the law firm of Bracewell & Giuliani LLP and heads the firm's policy resolution group. He formerly has taught at the University of Texas, Georgetown University, and the George Washington University. Scott developed and taught the environmental law and policy development course at the University of Maryland (University College). He received his BA at Emory University (Atlanta, GA) and his JD at the University of Texas College of Law (Austin, TX).

Scott has written several dozen scholarly articles on environmental law and policy-related issues. He has appeared frequently in print, and on radio and television regarding environmental issues.